Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Minor Source Operating Permit (MSOP)
for Fairfield Manufacturing Co., Inc. in Tippecanoe County

MSOP Renewal No.: M157-36481-00007

The Indiana Department of Environmental Management (IDEM) has received an application from Fairfield Manufacturing Co., Inc. located at 2400 Sagamore Parkway South, Lafayette, IN 47903 for a renewal of its MSOP issued on March 11, 2011. If approved by IDEM's Office of Air Quality (OAQ), this proposed renewal would allow Fairfield Manufacturing Co., Inc. to continue to operate its existing source.

This draft MSOP does not contain any new equipment that would emit air pollutants; however, some conditions from previously issued permits/approvals have been corrected, changed, or removed. These corrections, changes, and removals may include Title I changes (e.g., changes that add or modify synthetic minor emission limits). This notice fulfills the public notice procedures to which those conditions are subject. IDEM has reviewed this application and has developed preliminary findings, consisting of a draft permit and several supporting documents, which would allow for these changes.

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

Tippecanoe County Public Library
627 South Street
Lafayette, IN 47901

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

How can you participate in this process?

The date that this notice is published in a newspaper marks the beginning of a 30-day public comment period. If the 30th day of the comment period falls on a day when IDEM offices are closed for business, all comments must be postmarked or delivered in person on the next business day that IDEM is open.

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

Comments and supporting documentation, or a request for a public hearing should be sent in writing to IDEM at the address below. If you comment via e-mail, please include your full U.S. mailing address so that you can be added to IDEM's mailing list to receive notice of future action related to this permit. If you do not want to comment at this time, but would like to receive notice of future action related to this permit application, please contact IDEM at the address below. Please refer to permit number M157-36481-00007 in all correspondence.

Comments should be sent to:

Tamara Havics
IDEM, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
(800) 451-6027, ask for extension 2-8219
Or dial directly: (317) 232-8219
Fax: (317) 232-6749 attn: Tamara Havics
E-mail: THavics@idem.IN.gov

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

For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

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

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

Jason R. Krawczyk, Section Chief
Permits Branch
Office of Air Quality

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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DRAFT

Minor Source Operating Permit Renewal
OFFICE OF AIR QUALITY

Fairfield Manufacturing Company, Inc.
2400 Sagamore Parkway South
Lafayette, Indiana 47903

(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.

This permit is issued to the above mentioned company under the provisions of 326 IAC 2-1.1, 326 IAC 2-6.1 and 40 CFR 52.780, with conditions listed on the attached pages.

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a MSOP under 326 IAC 2-6.1.

Operation Permit No.: M157-36481-00007	
Issued by: Jason R. Krawczyk, Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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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 and A.2 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 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

The Permittee owns and operates a stationary gear manufacturing operation.

Source Address:	2400 Sagamore Parkway South, Lafayette, Indiana 47903
General Source Phone Number:	765-772-4000
SIC Code:	3566 (Speed Changers, Industrial High-Speed Drives, and Gears)
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Minor Source Operating Permit Program Minor Source, under PSD and Emission Offset Rules Minor Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary

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

(a) Paint Booths:

(1) One (1) large spray paint booth, identified as EUP-1, constructed in 1997, equipped with two HVLP spray guns, maximum capacity of painting 40 steel gear housings per hour, controlled with a dry filter which exhausts to stack P-1, and a process throughput of 12,000 lbs/hr of metal containers.

(2) One (1) small spray paint booth, identified as EUP-2, constructed in 1997, equipped with one HVLP spray gun, maximum capacity of painting 2 steel gear housing per hour, controlled with a dry filter which exhausts to stack P-2, and a process throughput of 2,000 lbs/hr of metal gears.

(b) Thirteen (13) Shot Blasters:

(1) One (1) wheelabrator shot blast operation, identified as EUSB1, constructed in 1964, equipped with a voluntary dust collector, DCSB1 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 94,860 lbs/hr, exhausting through stack SSB1, combined throughput is equivalent to 48.33 tons per hour.

(2) One (1) wheelabrator shot blast operation, identified as EUSB2, constructed in 1967, equipped with a voluntary dust collector, DCSB2 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 75,180 lbs/hr, exhausting through stack SSB2.

(3) One (1) wheelabrator shot blast operation, identified as EUSB3, constructed in 1971, equipped with a voluntary dust collector, DCSB3 for particulate control,

with a maximum process throughput of 2,400 lbs per hour, and media 123,660 lbs/hr, exhausting through stack SSB3.

(4) One (1) wheelabrator shot blast operation, identified as EUSB4, constructed in 1974, equipped with a voluntary dust collector, DCSB4 for particulate control, with a maximum process throughput of 2,200 lbs per hour, and media 145,260 lbs/hr, exhausting through stack SSB4.

(5) One (1) wheelabrator shot blast operation, identified as EUSB5, constructed in 1978, equipped with a voluntary dust collector, DCSB5 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 215,160 lbs/hr, exhausting through stack SSB5.

(6) One (1) wheelabrator shot blast operation, identified as EUSB6, constructed in 1978, equipped with a voluntary dust collector, DCSB6 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 79,740 lbs/hr, exhausting through stack SSB6.

(7) One (1) wheelabrator shot blast operation, identified as EUSB7, constructed in 1982, equipped with a voluntary dust collector, DCSB7 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 245,820 lbs/hr, exhausting through stack SSB7.

(8) One (1) wheelabrator shot blast operation, identified as EUSB12, constructed in 2013, equipped with a 1,729 acfm voluntary dust collector, DCSB12, for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 3,000 lbs/hr, exhausting through stack SSB12.

(9) One (1) BCast cleaning shot blast operation, identified as EUSB8b, constructed in 1997, equipped with a voluntary dust collector, DCSB12 for particulate control, with a maximum process throughput of 1,250 lbs per hour, and media 43,260 lbs/hr, exhausting through stack SSB12.

(10) One (1) wheelabrator shot blast operation, identified as EUSB9, constructed in 2005, equipped with a voluntary dust collector, DCSB9 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 213,480 lbs/hr, exhausting through stack SSB9.

(11) One (1) swing table, identified as EUSB10, constructed in 1999, equipped with a voluntary dust collector, DCSB10 for particulate control, with a maximum process throughput of 1,600 lbs per hour, and media 80,820 lbs/hr, exhausting inside.

(12) One (1) blast belt operation, identified as EUSB11, constructed in 1999, equipped with a voluntary dust collector, DCSB11 for particulate control, with a maximum process throughput of 2,600 lbs per hour, and media 106,020 lbs/hr, exhausting through stack SSB11.

(13) One (1) shot peener, identified as EUSB13, constructed in 1999, equipped with a voluntary dust collector, DCSB13 for particulate control, with a maximum process throughput of 3600 lbs per hour, and media 36 lbs/hr, exhausting through stack SSB13.

(c) Two (2) glass bead polishing and bead cleaning operations, collectively identified as EUPB1, constructed in 1995, comprised of two glass bead machines with maximum capacity of 60 lbs of metal gear assembly per hour each, and bead media 8658 lbs/hr each, with particulate controlled by dust collector, exhausting internally.

(d) Two (2) polish lathes and grinding and drilling operation to polish gear assembly using sand paper, collectively identified as EUPB2, constructed in 1993, maximum capacity of 200 lbs per hour of metal gears each, equipped with small hood filters, exhausting inside.

(e) Two hundred twenty-three (223) wet type integrated machining operations, identified as EUIM-1 through EUIM-223, constructed in 2006 through 2014, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(f) RX generators with heat treat ovens

(1) Eight (8) RX Generators, identified as EURX1 through EURX8, constructed in1965 through 2008, each processing natural gas at a feed rate of 395 cf/hr to be converted into 1,111 cubic feet of blanket gas per hour, used in the carburization heat treat ovens to treat metal gear assembly and subsequently combusted, identified as follows:

RX Generator	Associated Burner MMBtu/hr	Stack
EURX1	1.13	SRX1
EURX2	1.54	SRX1
EURX3	1.54	SRX3
EURX4	1.54	SRX4
EURX5	1.54	SRX5
EURX6	1.54	SRX1
EURX7	1.54	SRX4
EURX8	1.54	SRX1

(2) Natural gas fired heat treat ovens used with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (each)
Super 36 Allcase Furnace #1, #2, #4	3	5.10
Super 36 Allcase Furnace #3	1	6.73
Auto Hardeners #1, #2, #3, #4	4	1.00
Gas & Electric Carburizer #8	1	3.06
Gas & Electric Carburizer #9	1	5.00
Gas Carburizers #3, #4	2	4.59
Gas Carburizer #5	1	5.97
Homo Carb Draw #1 West, #2 East	2	1.1
Small Allcase Furnace #1	1	1.00
Small Allcase Furnace#2	1	1.00
Small Allcase Furnace#3	1	1.00
Batch Anneal- Furnace	1	1.3
LT Draw Furnace #1,#2,#3,#4	4	0.50
Nitrogen Generator	1	0.37
Program Draw #1 East and #2 west	2	1.00
Trinider Furnace	1	2.35
Draw Furnace #1 through #6	6	1.0

(3) Electric heat treat ovens associated with carburizing, used to combust CO generated by the RX generators, exhausting inside, and consisting of the following:

(A) One (1) Electric carburizer, identified as #6.

(B) One (1) Electric carburizer, identified as #7.

(C) Two (2) Electric Homo Carb.

(D) Electric Roller Hearth.

(E) Nitrider Furnace

(F) Cycle Annealer #1 and #2

(G) #2 Homo Draw Furnace

(H) #4 Homo Draw Furnace

(I) #6 Homo Draw Furnace

(J) Two (2) Homo Deep Draw

(K) Two (2) Homo Draw

(L) Two (2) Homo Draw Furnace

(M) #1 Homo Draw Furnace

(N) #3 Homo Draw Furnace

(O) # 5 Homo Draw Furnace

(g) Boilers:

(1) One (1) natural gas-fired boiler, identified as EUB3, constructed in 1996, rated at 0.80 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB5, constructed in 2014, rated at 0.50 MMBtu/hr.

(h) Emergency generators used for emergency purposes:

(1) One (1) four stroke, lean burn, 426 hp natural gas-fired emergency generator, constructed in 1993, exhausting outside.

Under 40 CFR 63, Subpart ZZZZ, the 426 hp natural gas-fired emergency generator is considered an existing affected source.

(2) One (1) diesel air compressor, identified as EG8, constructed in 1996, with a maximum power output of 125 horsepower and maximum operating hours of 500 hrs/yr, and exhausting through SEG7.

Under 40 CFR 63, Subpart ZZZZ, the diesel air compressor EG8 is considered an existing affected source.

(3) Six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, constructed in 2005, with a maximum power output of 0.224 MMBtu/hr, each and maximum operating hours of 500 hrs/yr, and exhausting

through SEG1 through SEG6.

Under 40 CFR 63, Subpart ZZZZ, the six (6) emergency generators, identified EG1 through EG6, are considered existing affected sources.

(i) Miscellaneous Natural gas-fired space heaters, and part washers with heat input capacity less than 10 MMBtu/hr each, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (total)
Roof Mount Furnaces	23	54.02
Continental Parts Washer	1	0.80
Ransohoff Parts Washer	1	2.00
Continental Parts Washer	1	1.50
Infrared Tubular Heaters - Heat treat	4	0.80
Infrared Tubular Heaters - Receiving	15	2.25
Heat Towers in Assy Bldg.	3	1.20
Radiant Heaters in Chip Room	4	0.10
Paint Booth Oven	1	0.90
Water Heaters	4	0.90
Kitchen Equipment	1	0.50
Hanson Washer	1	0.50
Misc. Small Space Heaters	12	1.75
Hydraulic Motor Room HVAC Unit	1	0.26
415E Parts Washer	1	2.00
Paint Booth HVAC Unit	1	2.72

(j) Degreasers:

(1) Sixty-six (66) cold solvent cleaning parts washers, constructed in or before 1990.

(2) One (1) open top vapor degreaser, identified as EUVD, installed in 2015, with a surface area of 30 $ft.^2$

(k) Three (3) Cooling Towers, identified as Cooling Towers 1-3, with a total circulating flow rate of 1,000 gal/min, each.

(l) Woodworking operations, identified as WW-1, with emissions controlled by a baghouse and exhausting internally.

(m) Paved Roadways.

SECTION B GENERAL CONDITIONS

B.1 Definitions [326 IAC 2-1.1-1]

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 2-1.1-1) shall prevail.

B.2 Permit Term [326 IAC 2-6.1-7(a)][326 IAC 2-1.1-9.5][IC 13-15-3-6(a)]

(a) This permit, M157-36481-00007, is issued for a fixed term of ten (10) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, until the renewal permit has been issued or denied.

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

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

(a) the condition is modified in a subsequent permit action pursuant to Title I of the Clean Air Act; or

(b) the emission unit to which the condition pertains permanently ceases operation.

B.4 Enforceability

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

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

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

B.7 Duty to Provide Information

(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 Annual Notification [326 IAC 2-6.1-5(a)(5)]

(a) An annual notification shall be submitted by an authorized individual to the Office of Air Quality stating whether or not the source is in operation and in compliance with the terms and conditions contained in this permit.

(b) The annual notice shall be submitted in the format attached no later than March 1 of each year to:

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

(c) The notification 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.

B.9 Preventive Maintenance Plan [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 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.

(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.10 Prior Permits Superseded [326 IAC 2-1.1-9.5]

(a) All terms and conditions of permits established prior to M157-36481-00007 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised, or

(3) deleted.

(b) All previous registrations and permits are superseded by this permit.

B.11 Termination of Right to Operate [326 IAC 2-6.1-7(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 one hundred twenty (120) days prior to the date of expiration of the source's existing permit, consistent with 326 IAC 2-6.1-7.

B.12 Permit Renewal [326 IAC 2-6.1-7]

(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 2-6.1-7. Such information shall be included in the application for each emission unit at this source. The renewal application does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

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

(b) A timely renewal application is one that is:

(1) Submitted at least one hundred twenty (120) days 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 2-6.1 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 2-6.1-4(b), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

B.13 Permit Amendment or Revision [326 IAC 2-5.1-3(e)(3)][326 IAC 2-6.1-6]

(a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-6.1-6 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

(c) The Permittee shall notify the OAQ no later than thirty (30) calendar days of implementing a notice-only change. [326 IAC 2-6.1-6(d)]

B.14 Source Modification Requirement

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

B.15 Inspection and Entry [326 IAC 2-5.1-3(e)(4)(B)][326 IAC 2-6.1-5(a)(4)][IC 13-14-2-2][IC 13-17-3-2][IC 13-30-3-1]

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

(a) Enter upon the Permittee's premises where a permitted source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

(b) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;

(d) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and

(e) As authorized by the Clean Air Act, IC 13-14-2-2, IC 13-17-3-2, and IC 13-30-3-1, utilize any photographic, recording, testing, monitoring, or other equipment for the purpose of assuring compliance with this permit or applicable requirements.

B.16 Transfer of Ownership or Operational Control [326 IAC 2-6.1-6]

(a) The Permittee must comply with the requirements of 326 IAC 2-6.1-6 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

The application which shall be submitted by the Permittee does require an affirmation that the statements in the application are true and complete by an "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(c) The Permittee may implement notice-only changes addressed in the request for a notice-only change immediately upon submittal of the request. [326 IAC 2-6.1-6(d)(3)]

B.17 Annual Fee Payment [326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees due no later than thirty (30) calendar days of receipt of a bill from IDEM, OAQ,.

(b) The Permittee may call the following telephone numbers: 1-800-451-6027 or 317-233-4230 (ask for OAQ, Billing, Licensing, and Training Section), to determine the appropriate permit fee.

B.18 Credible Evidence [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 2-6.1-5(a)(1)]

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

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

C.2 Permit Revocation [326 IAC 2-1.1-9]

Pursuant to 326 IAC 2-1.1-9 (Revocation of Permits), this permit to operate may be revoked for any of the following causes:

(a) Violation of any conditions of this permit.

(b) Failure to disclose all the relevant facts, or misrepresentation in obtaining this permit.

(c) Changes in regulatory requirements that mandate either a temporary or permanent reduction of discharge of contaminants. However, the amendment of appropriate sections of this permit shall not require revocation of this permit.

(d) Noncompliance with orders issued pursuant to 326 IAC 1-5 (Episode Alert Levels) to reduce emissions during an air pollution episode.

(e) For any cause which establishes in the judgment of IDEM, the fact that continuance of this permit is not consistent with purposes of this article.

C.3 Opacity [326 IAC 5-1]

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

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

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

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

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

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

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

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

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions).

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

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

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

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

(2) If there is a change in the following:

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

The notice shall include a signed certification from the owner or operator that the information provided in this notification is correct and that only Indiana licensed workers and project supervisors will be used to implement the asbestos removal project.

(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 2-6.1-5(a)(2)]

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

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

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

no later than thirty-five (35) days prior to the intended test date.

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date.

(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 2-6.1-5(a)(2)]

C.10 Compliance Monitoring [326 IAC 2-1.1-11]

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.11 Instrument Specifications [326 IAC 2-1.1-11]

(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

C.12 Response to Excursions or Exceedances

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

(a) The Permittee shall take reasonable response steps to restore operation of the emissions unit (including any control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing excess emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction. The response may include, but is not limited to, the following:

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test

(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.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

C.14 Malfunctions Report [326 IAC 1-6-2]

Pursuant to 326 IAC 1-6-2 (Records; Notice of Malfunction):

(a) A record of all malfunctions, including startups or shutdowns of any facility or emission control equipment, which result in violations of applicable air pollution control regulations or applicable emission limitations shall be kept and retained for a period of three (3) years and shall be made available to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) or appointed representative upon request.

(b) When a malfunction of any facility or emission control equipment occurs which lasts more than one (1) hour, said condition shall be reported to OAQ, using the Malfunction Report Forms (2 pages). Notification shall be made by telephone or facsimile, as soon as practicable, but in no event later than four (4) daytime business hours after the beginning of said occurrence.

(c) Failure to report a malfunction of any emission control equipment shall constitute a violation of 326 IAC 1-6, and any other applicable rules. Information of the scope and expected duration of the malfunction shall be provided, including the items specified in 326 IAC 1-6-2(a)(1) through (6).

(d) Malfunction is defined as any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner. [326 IAC 1-2-39]

C.15 General Record Keeping Requirements [326 IAC 2-6.1-5]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

C.16 General Reporting Requirements [326 IAC 2-1.1-11][326 IAC 2-6.1-2][IC 13-14-1-13]

(a) Reports required by conditions in Section D of this permit shall be submitted to:

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

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

(b) 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.

(c) 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.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) Paint Booths

(1) One (1) large spray paint booth, identified as EUP-1, constructed in 1997, equipped with two HVLP spray guns, maximum capacity of painting 40 steel gear housings per hour, controlled with a dry filter which exhausts to stack P-1, and a process throughput of 12,000 lbs/hr of metal containers.

(2) One (1) small spray paint booth, identified as EUP-2, constructed in 1997, equipped with one HVLP spray gun, maximum capacity of painting 2 steel gear housing per hour, controlled with a dry filter which exhausts to stack P-2, and a process throughput of 2,000 lbs/hr of metal gears.

(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 2-6.1-5(a)(1)]

D.1.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal and Plastic Parts Coating Operations), when coating metal parts, the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating operation, identified as EUP-1, and EUP-2 shall each be limited to 3.5 pounds per gallon of coating, excluding water, for forced warm air dried coatings, as delivered to the applicator.

D.1.2 Volatile Organic Compounds (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(a) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(b) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(c) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(d) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(e) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

(a) Pursuant to 326 IAC 8-1-2(b), the large spray paint booth, identified as EUP-1, and small spray paint booth, identified as EUP-2, VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in Condition D.1.1.

This equivalency was determined by the following equation:

E = L / (1 - (L/D)

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;

D = Density of VOC in coating in pounds per gallon of VOC;

E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of solvent in the coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

(b) The pounds of VOC per gallon of coating solids shall be limited to less than or equal to 6.67 pounds of VOC per gallon coating solids as applied.

D.1.4 Particulate Emission Limitations [326 IAC 6-3-2(d)]

(a) Particulate emissions from the spray paint booths, identified as EUP-1 and EUP-2, shall be controlled by a dry particulate filters, waterwash, or an equivalent control device and the Permittee shall operate the control device in accordance with manufacturer's specifications.

(b) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

(1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(c) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

D.1.5 Preventive Maintenance Plan

A Preventive Maintenance Plan is required for paint booths EUP-1 and EUP-2 and the associated filters. 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 2-6.1-5(a)(2)]

D.1.6 Volatile Organic Compounds

Compliance with the VOC content limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer the copies of the "as supplied" and "as applied" VOC data sheets. IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

D.1.7 Particulate Control

The dry filters of the paint spray booths, identified as EUP-1, and EUP-2 shall be in operation at all times when paint spray booths are in operation.

Record Keeping and Reporting Requirements [326 IAC 2-6.1-5(a)(2)]

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1 and D.1.3, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken daily and shall be complete and sufficient to establish compliance with the VOC content limits in Conditions D.1.1 and D.1.3.

(1) The VOC content of each coating material and solvent used less water.

(2) The amount of coating material and solvent less water used on a daily basis.

(A) Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used.

(B) Solvent usage records shall differentiate between those added to coatings and those used as cleanup solvents.

(3) If for a given day, all surface coatings and thinning solvents used in a metal surface coating operation are in compliance with the VOC content limit contained in Conditions D.1.1 and D.1.3, then the Permittee shall not be required to maintain records identified in paragraphs (1), and (2) above on that day;

(b) To document the compliance status with Condition D.1.4, the Permittee shall maintain a record of any actions taken if overspray is visibly detected.

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(b) Thirteen (13) Shot Blasters:

(1) One (1) wheelabrator shot blast operation, identified as EUSB1, constructed in 1964, equipped with a voluntary dust collector, DCSB1 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 94,860 lbs/hr, exhausting through stack SSB1.

(2) One (1) wheelabrator shot blast operation, identified as EUSB2, constructed in 1967, equipped with a voluntary dust collector, DCSB2 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 75,180 lbs/hr, exhausting through stack SSB2.

(3) One (1) wheelabrator shot blast operation, identified as EUSB3, constructed in 1971, equipped with a voluntary dust collector, DCSB3 for particulate control, with a maximum process throughput of 2,400 lbs per hour, and media 123,660 lbs/hr, exhausting through stack SSB3.

(4) One (1) wheelabrator shot blast operation, identified as EUSB4, constructed in 1974, equipped with a voluntary dust collector, DCSB4 for particulate control, with a maximum process throughput of 2,200 lbs per hour, and media 145,260 lbs/hr, exhausting through stack SSB4.

(5) One (1) wheelabrator shot blast operation, identified as EUSB5, constructed in 1978, equipped with a voluntary dust collector, DCSB5 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 215,160 lbs/hr, exhausting through stack SSB5.

(6) One (1) wheelabrator shot blast operation, identified as EUSB6, constructed in 1978, equipped with a voluntary dust collector, DCSB6 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 79,740 lbs/hr, exhausting through stack SSB6.

(7) One (1) wheelabrator shot blast operation, identified as EUSB7, constructed in 1982, equipped with a voluntary dust collector, DCSB7 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 245,820 lbs/hr, exhausting through stack SSB7.

(8) One (1) wheelabrator shot blast operation, identified as EUSB12, constructed in 2013, equipped with a 1,729 acfm voluntary dust collector, DCSB12 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 3,000 lbs/hr, exhausting through stack SSB12.

(9) One (1) BCast cleaning shot blast operation, identified as EUSB8b, constructed in 1997, equipped with a voluntary dust collector, DCSB12 for particulate control, with a maximum process throughput of 1,250 lbs per hour, and media 43,260 lbs/hr, exhausting through stack SSB12.

(10) One (1) wheelabrator shot blast operation, identified as EUSB9, constructed in 2005,

equipped with a voluntary dust collector, DCSB9 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 213,480 lbs/hr, exhausting through stack SSB9.

(11) One (1) swing table, identified as EUSB10, constructed in 1999, equipped with a voluntary dust collector, DCSB10 for particulate control, with a maximum process throughput of 1,600 lbs per hour, and media 80,820 lbs/hr, exhausting inside.

(12) One (1) blast belt operation, identified as EUSB11, constructed in 1999, equipped with a voluntary dust collector, DCS11 for particulate control, with a maximum process throughput of 2,600 lbs per hour, and media 106,020 lbs/hr, exhausting through stack SSB11.

(13) One (1) shot peener, identified as EUSB13, constructed in 1999, equipped with a voluntary dust collector, DCSB13 for particulate control, with a maximum process throughput of 3600 lbs per hour, and media 36 lbs/hr, exhausting through stack SSB13.

(c) Two (2) glass bead polishing and bead cleaning operations, collectively identified as EUPB1, constructed in 1995, comprised of two glass bead machines with maximum capacity of 60 lbs of metal gear assembly per hour each, and bead media 8658 lbs/hr each, with particulate controlled by dust collector, exhausting internally.

(d) Two (2) polish lathes and grinding and drilling operation to polish gear assembly using sand paper, collectively identified as EUPB2, constructed in 1993, maximum capacity of 200 lbs per hour of metal gears each, equipped with small hood filters, exhausting inside.

(e) Two hundred twenty-three (223) wet type integrated machining operations, identified as EUIM-1 through EUIM-223, constructed in 2006 through 2014, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(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 2-6.1-5(a)(1)]

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

(a) Pursuant to 326 IAC 6-3-2, the particulate (PM) emission rates from each of the facilities shall not exceed the pound per hour limitations listed in the table below:

Unit ID / Control Device	Stack	Process Weight Rate (ton / hour) P	Allowable Particulate Emission Limits (pound / hour) E
EUSB1/DCSB1	SSB1	48.33	44.26
EUSB2/DCSB2	SSB2	38.99	42.29
EUSB3/DCSB3	SSB3	63.03	46.76
EUSB4/DCSB4	SSB4	73.73	48.27
EUSB5/DCSB5	SSB5	108.98	52.14
EUSB6/DCSB6	SSB6	41.27	42.81
EUSB7/DCSB7	SSB7	123.81	53.45
EUSB12/DCSB12	SSB12	2.40	7.37
EUSB8b/DCSB12	SSB12	22.26	32.78
EUSB9/DCSB9	SSB9	108.14	52.07
EUSB10/DCSB10	inside	41.21	42.80

Unit ID / Control Device	Stack	Process Weight Rate (ton / hour) P	Allowable Particulate Emission Limits (pound / hour) E
EUSB11/DCSB11	SSB11	54.31	45.35
EUSB13/DCSB13	SSB13	1.82	6.12

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

$$E = 55.0\ P^{0.11} - 40$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

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

$$E = (4.10)\ P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the two (2) glass bead polishing and cleaning operation shall not exceed 10.99 pounds per hour, each, when operating at a process weight rate of 8,658 pounds per hour of bead media and 60 pounds per hour of metal throughput per hour each.

(c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the two (2) polish lathes and grinding and drilling operations shall not exceed 0.89 pounds per hour each when operating at a process weight rate of 0.103 tons per hour each.

The pound per hour limitation for (b) and (c) processes was calculated with the following equation:

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

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

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(f) Rx Generators with heat treat ovens:

(1) Eight (8) RX Generators, identified as EURX1 through EURX8, constructed in 1965 through 2008, each processing natural gas at a feed rate of 395 cf/hr to be converted into 1,111 cubic feet of blanket gas per hour, used in the carburization heat treat ovens to treat metal gear assembly and subsequently combusted, identified as follows:

RX Generator	Associated Burner MMBtu/hr	Stack
EURX1	1.13	SRX1
EURX2	1.54	SRX1
EURX3	1.54	SRX3
EURX4	1.54	SRX4
EURX5	1.54	SRX5
EURX6	1.54	SRX1
EURX7	1.54	SRX4
EURX8	1.54	SRX1

(2) Natural gas fired heat treat ovens, with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (each)
Super 36 Allcase Furnace #1, #2, #4	3	5.10
Super 36 Allcase Furnace #3	1	6.73
Auto Hardeners 1#, #2, #3, #4	4	1.00
Gas & Electric Carburizer #8	1	3.06
Gas & Electric Carburizer #9	1	5.00
Gas Carburizers #3, #4	2	4.59
Gas Carburizer #5	1	5.97
Homo Carb Draw #1 West, #2 East	2	1.1
Small Allcase Furnace #1	1	1.00
Small Allcase Furnace#2	1	1.00
Small Allcase Furnace#3	1	1.00
Batch Anneal- Furnace	1	1.3
LT Draw Furnace #1,#2,#3,#4	4	0.50
Nitrogen Generator	1	0.37
Program Draw #1 East and #2 west	2	1.00
Trinider Furnace	1	2.35
Draw Furnace #1 through #6	6	1.0

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

Compliance Determination Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.1 RX generators and heat treat ovens

In order to assure the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable, the presence of flames at the pilot lights shall be provided at all openings of the heat treat ovens to ensure the burn off of excess CO when the RX Generators are in operation.

Compliance with this condition, combined with the potential to emit CO from all other emission units at the source, shall assure the CO emissions from the entire source are less than 100 tons per twelve (12) consecutive month period and shall assure the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.2 Flare Pilot Monitoring

In order to assure compliance with Condition D.3.1, the Permittee shall install and monitor automatic flame recognition audible alarms or any other equivalent devices, at the control panel of each furnace that is equipped with a pilot CO burner to detect the presence of flares at the pilot light when RX generators are in operation.

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(a)(2)]

D.3.3 Record Keeping Requirements

(a) To document the compliance status with D.3.2, the Permittee shall maintain related parameters sufficient to demonstrate the presence of a pilot flame when operating the RX generators including records of the audible alarms and response steps taken.

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

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) Boilers:

(1) One (1) natural gas-fired boiler, identified as EUB3, constructed in 1996, rated at 0.80 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB5, constructed in 2014, rated at 0.50 MMBtu/hr.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

D.4.1 Particulate Matter (PM) [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4, particulate emissions from the natural gas-fired boilers, identified as EUB3 and EUB5, shall not exceed 0.6 pound per million British thermal unit heat input, each.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(k) Degreasers:

(1) Sixty-six (66) cold solvent cleaning parts washers, constructed in or before 1990.

(2) One (1) open top vapor degreaser, identified as EUVD, installed in 2015, with a surface area of 30 $ft.^2$

(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 2-6.1-5(a)(1)]

D.5.1 Cold Cleaner Degreaser Control Equipment and Operating Requirements [326 IAC 8-3-2]

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and 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.5.2 Open Top Vapor Degreaser Operation [326 IAC 8-3-3]

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operation), the Permittee shall:

(a) Ensure the following control and operating requirements are met:

(1) Equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.

(2) Keep the cover closed at all times except when processing workloads through the degreaser.

(3) Minimize solvent carryout by:

(A) racking parts to allow complete drainage;

(B) moving parts in and out of the degreaser at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute);

(C) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal; and

(E) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry.

(4) Prohibit the entrance into the degreaser of porous or absorbent materials, such as cloth, leather, wood or rope.

(5) Prohibit occupation of more than one-half (1/2) of the degreaser's open top area with the workload.

(6) Prohibit the loading of the degreaser in a manner that causes the vapor level to drop more than fifty percent (50%) of the vapor depth when the workload is removed.

(7) Prohibit solvent spraying above the vapor level.

(8) Repair solvent leaks immediately, or shut down the degreaser if leaks cannot be repaired immediately.

(9) Store waste solvent only in closed containers.

(10) Prohibit the disposal or transfer of waste solvent in a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate

into the atmosphere.

(11) Prohibit the use of workplace fans near the degreaser opening.

(12) Prohibit visually detectable water in the solvent exiting the water separator.

(13) Provide the degreaser with a permanent, conspicuous label that lists the operating requirements in subdivisions (2) through (12).

(b) Ensure the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat that shuts off sump heat if the condenser coolant stops circulating or becomes too warm.

(B) A spray safety switch that shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(2) Equip the degreaser with one (1) of the following control devices:

(A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powered cover if the degreaser opening is greater than one (1) square meter (ten and eight-tenths (10.8) square feet).

(B) A refrigerated chiller.

(C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser.

(D) A carbon adsorption system with ventilation that, with the cover open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute per square meter (fifty (50) cubic feet per minute per square foot) of air-to-vapor interface area and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(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.

(3) Prohibit the loading of the degreaser to the point where the vapor level would drop more than ten (10) centimeters (four (4) inches) when the workload is removed.

(4) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meters per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser open area unless a greater ventilation rate is necessary to meet Occupational Safety and Health Administration requirements.

(5) Ensure that the label required under subsection (a) (13) includes the additional operating requirements listed in subdivision (3) and (4).

D.5.3 326 IAC 8-3-8 Material Requirements for Cold Cleaner Degreasers:

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner 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).

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(a)(2)]

D.5.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.3, 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 (or invoice/bill date of contract servicer indicating service date).

(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).

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

SECTION E.1 NESHAP

Emissions Unit Description:

(h) Emergency generators used for emergency purposes:

(1) One (1) four stroke, lean burn, 426 hp natural gas-fired emergency generator, constructed in 1993, exhausting outside.

Under 40 CFR 63, Subpart ZZZZ, the 426 natural gas-fired emergency generator is considered an existing affected source.

(2) One (1) diesel air compressor, identified as EG8, constructed in 1996, with a maximum power output of 125 horsepower and maximum operating hours of 500 hrs/yr, and exhausting through SEG7.

Under the 40 CFR 63, Subpart ZZZZ, the diesel air compressor EG8 is considered an existing affected source.

(3) Six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, constructed in 2005, with a maximum power output of 0.224 MMBtu/hr and maximum operating hours of 500 hrs/yr, and exhausting through SEG1 through SEG6.

Under 40 CFR 63, Subpart ZZZZ, the six (6) emergency generators, identified EG1 through EG6 are considered existing affected sources

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

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements [326 IAC 2-6.1-5(a)(1)]

E.1.1 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

and

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

E.1.2 Stationary Reciprocation 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 A to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

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

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

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Fairfield Manufacturing Company, Inc.
Address:	2400 Sagamore Parkway South
City:	Lafayette, Indiana 47903
Phone #:	765-772-4000
MSOP #:	M157-36481-00007

I hereby certify that Fairfield Manufacturing Company, Inc. :
- ☐ still in operation.
- ☐ no longer in operation.

I hereby certify that Fairfield Manufacturing Company, Inc. :
- ☐ in compliance with the requirements of MSOP M157-36481-00007.
- ☐ not in compliance with the requirements of MSOP M157-36481-00007.

Authorized Individual (typed):
Title:
Signature:
Date:

If there are any conditions or requirements for which the source is not in compliance, provide a narrative description of how the source did or will achieve compliance and the date compliance was, or will be achieved.

Noncompliance:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE AND ENFORCEMENT BRANCH
FAX NUMBER: (317) 233-6865

MALFUNCTION REPORT

This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

THIS FACILITY MEETS THE APPLICABILITY REQUIREMENTS BECAUSE IT HAS POTENTIAL TO EMIT 25 TONS/YEAR PARTICULATE MATTER ?_____, 25 TONS/YEAR SULFUR DIOXIDE ?_____, 25 TONS/YEAR NITROGEN OXIDES?_____, 25 TONS/YEAR VOC ?_____, 25 TONS/YEAR HYDROGEN SULFIDE ?_____, 25 TONS/YEAR TOTAL REDUCED SULFUR ?_____, 25 TONS/YEAR REDUCED SULFUR COMPOUNDS ?_____, 25 TONS/YEAR FLUORIDES ?_____, 100 TONS/YEAR CARBON MONOXIDE ?_____, 10 TONS/YEAR ANY SINGLE HAZARDOUS AIR POLLUTANT ?_____, 25 TONS/YEAR ANY COMBINATION HAZARDOUS AIR POLLUTANT ?_____, 1 TON/YEAR LEAD OR LEAD COMPOUNDS MEASURED AS ELEMENTAL LEAD ?_____, OR IS A SOURCE LISTED UNDER 326 IAC 2-5.1-3(2) ?_____. EMISSIONS FROM MALFUNCTIONING CONTROL EQUIPMENT OR PROCESS EQUIPMENT CAUSED EMISSIONS IN EXCESS OF APPLICABLE LIMITATION _____.

THIS MALFUNCTION RESULTED IN A VIOLATION OF: 326 IAC _____ OR, PERMIT CONDITION # _____ AND/OR PERMIT LIMIT OF _____

THIS INCIDENT MEETS THE DEFINITION OF "MALFUNCTION" AS LISTED ON REVERSE SIDE ? Y N

THIS MALFUNCTION IS OR WILL BE LONGER THAN THE ONE (1) HOUR REPORTING REQUIREMENT ? Y N

COMPANY:_____PHONE NO. ( )_____
LOCATION: (CITY AND COUNTY)_____
PERMIT NO. _____ AFS PLANT ID: _____ AFS POINT ID: _____ INSP:_____
CONTROL/PROCESS DEVICE WHICH MALFUNCTIONED AND REASON:_____
_____

DATE/TIME MALFUNCTION STARTED: _____/_____/ 20____ _____ AM / PM

ESTIMATED HOURS OF OPERATION WITH MALFUNCTION CONDITION: _____

DATE/TIME CONTROL EQUIPMENT BACK-IN SERVICE_____/_____/ 20____ _____ AM/PM

TYPE OF POLLUTANTS EMITTED: TSP, PM-10, SO2, VOC, OTHER:_____

ESTIMATED AMOUNT OF POLLUTANT EMITTED DURING MALFUNCTION: _____
_____

MEASURES TAKEN TO MINIMIZE EMISSIONS:_____
_____

REASONS WHY FACILITY CANNOT BE SHUTDOWN DURING REPAIRS:

CONTINUED OPERATION REQUIRED TO PROVIDE ESSENTIAL* SERVICES:_____
CONTINUED OPERATION NECESSARY TO PREVENT INJURY TO PERSONS:_____
CONTINUED OPERATION NECESSARY TO PREVENT SEVERE DAMAGE TO EQUIPMENT:_____
INTERIM CONTROL MEASURES: (IF APPLICABLE)_____
_____
_____

MALFUNCTION REPORTED BY:_____TITLE:_____
(SIGNATURE IF FAXED)

MALFUNCTION RECORDED BY:_____DATE:_____TIME:_____
*SEE PAGE 2

Please note - This form should only be used to report malfunctions applicable to Rule 326 IAC 1-6 and to qualify for the exemption under 326 IAC 1-6-4.

326 IAC 1-6-1 Applicability of rule

Sec. 1. This rule applies to the owner or operator of any facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

326 IAC 1-2-39 "Malfunction" definition

Sec. 39. Any sudden, unavoidable failure of any air pollution control equipment, process, or combustion or process equipment to operate in a normal and usual manner.

***Essential services** are interpreted to mean those operations, such as, the providing of electricity by power plants. Continued operation solely for the economic benefit of the owner or operator shall not be sufficient reason why a facility cannot be shutdown during a control equipment shutdown.

If this item is checked on the front, please explain rationale:

_____
_____

Attachment A

Minor Source Operating Permit (MSOP) Renewal No: M157-36481-00007

[Downloaded from the eCFR on July 23, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

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

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

What This Subpart Covers

§63.6580 What is the purpose of subpart ZZZZ?

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

[73 FR 3603, Jan. 18, 2008]

§63.6585 Am I subject to this subpart?

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

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

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

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

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

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

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

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

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

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

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

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Emission and Operating Limitations

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

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

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

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

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

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

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

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

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

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

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

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

[78 FR 6701, Jan. 30, 2013]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

[78 FR 6702, Jan. 30, 2013]

General Compliance Requirements

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

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

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

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

Testing and Initial Compliance Requirements

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

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

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

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

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

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

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

(5) The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load.

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

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

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

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

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

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

(a) You must conduct any initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart that apply to you within 180 days after the compliance date that is specified for your stationary RICE in §63.6595 and according to the provisions in §63.7(a)(2).

(b) An owner or operator is not required to conduct an initial performance test on a unit for which a performance test has been previously conducted, but the test must meet all of the conditions described in paragraphs (b)(1) through (4) of this section.

(1) The test must have been conducted using the same methods specified in this subpart, and these methods must have been followed correctly.

(2) The test must not be older than 2 years.

(3) The test must be reviewed and accepted by the Administrator.

(4) Either no process or equipment changes must have been made since the test was performed, or the owner or operator must be able to demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process or equipment changes.

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

§63.6615 When must I conduct subsequent performance tests?

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

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

(a) You must conduct each performance test in Tables 3 and 4 of this subpart that applies to you.

(b) Each performance test must be conducted according to the requirements that this subpart specifies in Table 4 to this subpart. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again. The test must be conducted at any load condition within plus or minus 10 percent of 100 percent load for the stationary RICE listed in paragraphs (b)(1) through (4) of this section.

(1) Non-emergency 4SRB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(2) New non-emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 brake HP located at a major source of HAP emissions.

(3) New non-emergency 2SLB stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(4) New non-emergency CI stationary RICE with a site rating of greater than 500 brake HP located at a major source of HAP emissions.

(c) [Reserved]

(d) You must conduct three separate test runs for each performance test required in this section, as specified in §63.7(e)(3). Each test run must last at least 1 hour, unless otherwise specified in this subpart.

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

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

Where:

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

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

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

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

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

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

Where:

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

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

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

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm3/J (dscf/106 Btu)

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

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

Where:

X_{CO2} = CO_2 correction factor, percent.

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

(iii) Calculate the CO, THC, and formaldehyde gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

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

Where:

C_{adj} = Calculated concentration of CO, THC, or formaldehyde adjusted to 15 percent O_2.

C_d = Measured concentration of CO, THC, or formaldehyde, uncorrected.

X_{CO2} = CO_2 correction factor, percent.

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

(f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.

(g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in paragraphs (g)(1) through (5) of this section.

(1) Identification of the specific parameters you propose to use as operating limitations;

(2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

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

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

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

(h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in paragraphs (h)(1) through (7) of this section.

(1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.,* operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.,* wear and tear, error, etc.) on a routine basis or over time;

(2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions;

(3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions;

(4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;

(5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;

(6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and

(7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.

(i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9676, Mar. 3, 2010; 78 FR 6702, Jan. 30, 2013]

§63.6625 What are my monitoring, installation, collection, operation, and maintenance requirements?

(a) If you elect to install a CEMS as specified in Table 5 of this subpart, you must install, operate, and maintain a CEMS to monitor CO and either O_2 or CO_2 according to the requirements in paragraphs (a)(1) through (4) of this section. If you are meeting a requirement to reduce CO emissions, the CEMS must be installed at both the inlet and outlet of the control device. If you are meeting a requirement to limit the concentration of CO, the CEMS must be installed at the outlet of the control device.

(1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 CFR part 60, appendix B.

(2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in §63.8 and according to the applicable performance specifications of 40 CFR

part 60, appendix B as well as daily and periodic data quality checks in accordance with 40 CFR part 60, appendix F, procedure 1.

(3) As specified in §63.8(c)(4)(ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.

(4) The CEMS data must be reduced as specified in §63.8(g)(2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO_2 concentration.

(b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this subpart, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section. For an affected source that is complying with the emission limitations and operating limitations on March 9, 2011, the requirements in paragraph (b) of this section are applicable September 6, 2011.

(1) You must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements outlined in paragraphs (b)(1)(i) through (v) of this section and in §63.8(d). As specified in §63.8(f)(4), you may request approval of monitoring system quality assurance and quality control procedures alternative to those specified in paragraphs (b)(1) through (5) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations;

(ii) Sampling interface (*e.g.,* thermocouple) location such that the monitoring system will provide representative measurements;

(iii) Equipment performance evaluations, system accuracy audits, or other audit procedures;

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1)(ii) and (c)(3); and

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1), and (e)(2)(i).

(2) You must install, operate, and maintain each CPMS in continuous operation according to the procedures in your site-specific monitoring plan.

(3) The CPMS must collect data at least once every 15 minutes (see also §63.6635).

(4) For a CPMS for measuring temperature range, the temperature sensor must have a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit) or 1 percent of the measurement range, whichever is larger.

(5) You must conduct the CPMS equipment performance evaluation, system accuracy audits, or other audit procedures specified in your site-specific monitoring plan at least annually.

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

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must monitor and record your fuel usage daily with separate fuel meters to measure the volumetric flow rate of each fuel. In addition, you must operate your stationary RICE in a manner which reasonably minimizes HAP emissions.

(d) If you are operating a new or reconstructed emergency 4SLB stationary RICE with a site rating of greater than or equal to 250 and less than or equal to 500 brake HP located at a major source of HAP emissions, you must install a non-resettable hour meter prior to the startup of the engine.

(e) If you own or operate any of the following stationary RICE, you must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions:

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

(2) An existing emergency or black start stationary RICE with a site rating of less than or equal to 500 HP located at a major source of HAP emissions;

(3) An existing emergency or black start stationary RICE located at an area source of HAP emissions;

(4) An existing non-emergency, non-black start stationary CI RICE with a site rating less than or equal to 300 HP located at an area source of HAP emissions;

(5) An existing non-emergency, non-black start 2SLB stationary RICE located at an area source of HAP emissions;

(6) An existing non-emergency, non-black start stationary RICE located at an area source of HAP emissions which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis.

(7) An existing non-emergency, non-black start 4SLB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(8) An existing non-emergency, non-black start 4SRB stationary RICE with a site rating less than or equal to 500 HP located at an area source of HAP emissions;

(9) An existing, non-emergency, non-black start 4SLB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year; and

(10) An existing, non-emergency, non-black start 4SRB stationary RICE with a site rating greater than 500 HP located at an area source of HAP emissions that is operated 24 hours or less per calendar year.

(f) If you own or operate an existing emergency stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions or an existing emergency stationary RICE located at an area source of HAP emissions, you must install a non-resettable hour meter if one is not already installed.

(g) If you own or operate an existing non-emergency, non-black start CI engine greater than or equal to 300 HP that is not equipped with a closed crankcase ventilation system, you must comply with either paragraph (g)(1) or paragraph (2) of this section. Owners and operators must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request the Administrator to approve different maintenance requirements that are as protective as manufacturer requirements. Existing CI engines located at area sources in areas of Alaska that meet either §63.6603(b)(1) or §63.6603(b)(2) do not have to meet the requirements of this paragraph (g). Existing CI engines located on offshore vessels that meet §63.6603(c) do not have to meet the requirements of this paragraph (g).

(1) Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or

(2) Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

(h) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to this subpart apply.

(i) If you own or operate a stationary CI engine that is subject to the work, operation or management practices in items 1 or 2 of Table 2c to this subpart or in items 1 or 4 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Base Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Base Number is less than 30 percent of the Total Base Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

(j) If you own or operate a stationary SI engine that is subject to the work, operation or management practices in items 6, 7, or 8 of Table 2c to this subpart or in items 5, 6, 7, 9, or 11 of Table 2d to this subpart, you have the option of utilizing an oil analysis program in order to extend the specified oil change requirement in Tables 2c and 2d to this subpart. The oil analysis must be performed at the same frequency specified for changing the oil in Table 2c or 2d to this subpart. The analysis program must at a minimum analyze the following three parameters: Total Acid Number, viscosity, and percent water content. The condemning limits for these parameters are as follows: Total Acid Number increases by more than 3.0 milligrams of potassium hydroxide (KOH) per gram from Total Acid Number of the oil when new; viscosity of the oil has changed by more than 20 percent from the viscosity of the oil when new; or percent water content (by volume) is greater than 0.5. If all of these condemning limits are not exceeded, the engine owner or operator is not required to change the oil. If any of the limits are exceeded, the engine owner or operator must change the oil within 2 business days of receiving the results of the analysis; if the engine is not in operation when the results of the analysis are received, the engine owner or operator must change the oil within 2 business days or before commencing operation, whichever is later. The owner or operator must keep records of the parameters that are analyzed as part of the program, the results of the analysis, and the oil changes for the engine. The analysis program must be part of the maintenance plan for the engine.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51589, Aug. 20, 2010; 76 FR 12866, Mar. 9, 2011; 78 FR 6703, Jan. 30, 2013]

§63.6630 How do I demonstrate initial compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate initial compliance with each emission limitation, operating limitation, and other requirement that applies to you according to Table 5 of this subpart.

(b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of this subpart that applies to you.

(c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in §63.6645.

(d) Non-emergency 4SRB stationary RICE complying with the requirement to reduce formaldehyde emissions by 76 percent or more can demonstrate initial compliance with the formaldehyde emission limit by testing for THC instead of formaldehyde. The testing must be conducted according to the requirements in Table 4 of this subpart. The average reduction of emissions of THC determined from the performance test must be equal to or greater than 30 percent.

(e) The initial compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least three test runs.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

[69 FR 33506, June 15, 2004, as amended at 78 FR 6704, Jan. 30, 2013]

Continuous Compliance Requirements

§63.6635 How do I monitor and collect data to demonstrate continuous compliance?

(a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.

(b) Except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, you must monitor continuously at all times that the stationary RICE is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

(c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[69 FR 33506, June 15, 2004, as amended at 76 FR 12867, Mar. 9, 2011]

§63.6640 How do I demonstrate continuous compliance with the emission limitations, operating limitations, and other requirements?

(a) You must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you according to methods specified in Table 6 to this subpart.

(b) You must report each instance in which you did not meet each emission limitation or operating limitation in Tables 1a and 1b, Tables 2a and 2b, Table 2c, and Table 2d to this subpart that apply to you. These instances are deviations from the emission and operating limitations in this subpart. These deviations must be reported according to the requirements in §63.6650. If you change your catalyst, you must reestablish the values of the operating parameters measured during the initial performance test. When you reestablish the values of your operating parameters, you must also conduct a performance test to demonstrate that you are meeting the required emission limitation applicable to your stationary RICE.

(c) The annual compliance demonstration required for existing non-emergency 4SLB and 4SRB stationary RICE with a site rating of more than 500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year must be conducted according to the following requirements:

(1) The compliance demonstration must consist of at least one test run.

(2) Each test run must be of at least 15 minute duration, except that each test conducted using the method in appendix A to this subpart must consist of at least one measurement cycle and include at least 2 minutes of test data phase measurement.

(3) If you are demonstrating compliance with the CO concentration or CO percent reduction requirement, you must measure CO emissions using one of the CO measurement methods specified in Table 4 of this subpart, or using appendix A to this subpart.

(4) If you are demonstrating compliance with the THC percent reduction requirement, you must measure THC emissions using Method 25A, reported as propane, of 40 CFR part 60, appendix A.

(5) You must measure O_2 using one of the O_2 measurement methods specified in Table 4 of this subpart. Measurements to determine O_2 concentration must be made at the same time as the measurements for CO or THC concentration.

(6) If you are demonstrating compliance with the CO or THC percent reduction requirement, you must measure CO or THC emissions and O_2 emissions simultaneously at the inlet and outlet of the control device.

(7) If the results of the annual compliance demonstration show that the emissions exceed the levels specified in Table 6 of this subpart, the stationary RICE must be shut down as soon as safely possible, and appropriate corrective action must be taken (e.g., repairs, catalyst cleaning, catalyst replacement). The stationary RICE must be retested within 7 days of being restarted and the emissions must meet the levels specified in Table 6 of this subpart. If the retest shows that the emissions continue to exceed the specified levels, the stationary RICE must again be shut down as soon as safely possible, and the stationary RICE may not operate, except for purposes of startup and testing, until the owner/operator demonstrates through testing that the emissions do not exceed the levels specified in Table 6 of this subpart.

(d) For new, reconstructed, and rebuilt stationary RICE, deviations from the emission or operating limitations that occur during the first 200 hours of operation from engine startup (engine burn-in period) are not violations. Rebuilt stationary RICE means a stationary RICE that has been rebuilt as that term is defined in 40 CFR 94.11(a).

(e) You must also report each instance in which you did not meet the requirements in Table 8 to this subpart that apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing emergency stationary RICE, an existing limited use stationary RICE, or an existing stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis. If you own or operate any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in Table 8 to this subpart, except for the initial notification requirements: a new or reconstructed stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new or reconstructed emergency stationary RICE, or a new or reconstructed limited use stationary RICE.

(f) If you own or operate an emergency stationary RICE, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1) through (4) of this section. In order for the engine to be considered an emergency stationary RICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1) through (4) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1) through (4) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

(1) There is no time limit on the use of emergency stationary RICE in emergency situations.

(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraphs (f)(2)(i) through (iii) of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.

(3) Emergency stationary RICE located at major sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. The 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to supply power to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(4) Emergency stationary RICE located at area sources of HAP may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in paragraph (f)(2) of this section. Except as provided in paragraphs (f)(4)(i) and (ii) of this section, the 50 hours per year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity.

(i) Prior to May 3, 2014, the 50 hours per year for non-emergency situations can be used for peak shaving or non-emergency demand response to generate income for a facility, or to otherwise supply power as part of a financial arrangement with another entity if the engine is operated as part of a peak shaving (load management program) with the local distribution system operator and the power is provided only to the facility itself or to support the local distribution system.

(ii) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met:

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator.

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region.

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines.

(D) The power is provided only to the facility itself or to support the local transmission and distribution system.

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the

engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3606, Jan. 18, 2008; 75 FR 9676, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6704, Jan. 30, 2013]

Notifications, Reports, and Records

§63.6645 What notifications must I submit and when?

(a) You must submit all of the notifications in §§63.7(b) and (c), 63.8(e), (f)(4) and (f)(6), 63.9(b) through (e), and (g) and (h) that apply to you by the dates specified if you own or operate any of the following;

(1) An existing stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions.

(2) An existing stationary RICE located at an area source of HAP emissions.

(3) A stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions.

(4) A new or reconstructed 4SLB stationary RICE with a site rating of greater than or equal to 250 HP located at a major source of HAP emissions.

(5) This requirement does not apply if you own or operate an existing stationary RICE less than 100 HP, an existing stationary emergency RICE, or an existing stationary RICE that is not subject to any numerical emission standards.

(b) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart, you must submit an Initial Notification not later than December 13, 2004.

(c) If you start up your new or reconstructed stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions on or after August 16, 2004, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(d) As specified in §63.9(b)(2), if you start up your stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions before the effective date of this subpart and you are required to submit an initial notification, you must submit an Initial Notification not later than July 16, 2008.

(e) If you start up your new or reconstructed stationary RICE with a site rating of equal to or less than 500 brake HP located at a major source of HAP emissions on or after March 18, 2008 and you are required to submit an initial notification, you must submit an Initial Notification not later than 120 days after you become subject to this subpart.

(f) If you are required to submit an Initial Notification but are otherwise not affected by the requirements of this subpart, in accordance with §63.6590(b), your notification should include the information in §63.9(b)(2)(i) through (v), and a statement that your stationary RICE has no additional requirements and explain the basis of the exclusion (for example, that it operates exclusively as an emergency stationary RICE if it has a site rating of more than 500 brake HP located at a major source of HAP emissions).

(g) If you are required to conduct a performance test, you must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in §63.7(b)(1).

(h) If you are required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 to this subpart, you must submit a Notification of Compliance Status according to §63.9(h)(2)(ii).

(1) For each initial compliance demonstration required in Table 5 to this subpart that does not include a performance test, you must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

(2) For each initial compliance demonstration required in Table 5 to this subpart that includes a performance test conducted according to the requirements in Table 3 to this subpart, you must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to §63.10(d)(2).

(i) If you own or operate an existing non-emergency CI RICE with a site rating of more than 300 HP located at an area source of HAP emissions that is certified to the Tier 1 or Tier 2 emission standards in Table 1 of 40 CFR 89.112 and subject to an enforceable state or local standard requiring engine replacement and you intend to meet management practices rather than emission limits, as specified in §63.6603(d), you must submit a notification by March 3, 2013, stating that you intend to use the provision in §63.6603(d) and identifying the state or local regulation that the engine is subject to.

[73 FR 3606, Jan. 18, 2008, as amended at 75 FR 9677, Mar. 3, 2010; 75 FR 51591, Aug. 20, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6650 What reports must I submit and when?

(a) You must submit each report in Table 7 of this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under §63.10(a), you must submit each report by the date in Table 7 of this subpart and according to the requirements in paragraphs (b)(1) through (b)(9) of this section.

(1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in §63.6595.

(2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in §63.6595.

(3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.

(5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6 (a)(3)(iii)(A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (b)(4) of this section.

(6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in §63.6595 and ending on December 31.

(7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in §63.6595.

(8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.

(9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

(c) The Compliance report must contain the information in paragraphs (c)(1) through (6) of this section.

(1) Company name and address.

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

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

(4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with §63.6605(b), including actions taken to correct a malfunction.

(5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.

(6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

(d) For each deviation from an emission or operating limitation that occurs for a stationary RICE where you are not using a CMS to comply with the emission or operating limitations in this subpart, the Compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

(1) The total operating time of the stationary RICE at which the deviation occurred during the reporting period.

(2) Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(e) For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

(1) The date and time that each malfunction started and stopped.

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

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

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

(5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.

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

(7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.

(8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.

(9) A brief description of the stationary RICE.

(10) A brief description of the CMS.

(11) The date of the latest CMS certification or audit.

(12) A description of any changes in CMS, processes, or controls since the last reporting period.

(f) Each affected source that has obtained a title V operating permit pursuant to 40 CFR part 70 or 71 must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6 (a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

(g) If you are operating as a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must submit an annual report according to Table 7 of this subpart by the date specified unless the Administrator has approved a different schedule, according to the information described in paragraphs (b)(1) through (b)(5) of this section. You must report the data specified in (g)(1) through (g)(3) of this section.

(1) Fuel flow rate of each fuel and the heating values that were used in your calculations. You must also demonstrate that the percentage of heat input provided by landfill gas or digester gas is equivalent to 10 percent or more of the total fuel consumption on an annual basis.

(2) The operating limits provided in your federally enforceable permit, and any deviations from these limits.

(3) Any problems or errors suspected with the meters.

(h) If you own or operate an emergency stationary RICE with a site rating of more than 100 brake HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operates for the purpose specified in §63.6640(f)(4)(ii), you must submit an annual report according to the requirements in paragraphs (h)(1) through (3) of this section.

(1) The report must contain the following information:

(i) Company name and address where the engine is located.

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

(iii) Engine site rating and model year.

(iv) Latitude and longitude of the engine in decimal degrees reported to the fifth decimal place.

(v) Hours operated for the purposes specified in §63.6640(f)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §63.6640(f)(2)(ii) and (iii).

(vii) Hours spent for operation for the purpose specified in §63.6640(f)(4)(ii), including the date, start time, and end time for engine operation for the purposes specified in §63.6640(f)(4)(ii). The report must also identify the entity that dispatched the engine and the situation that necessitated the dispatch of the engine.

(viii) If there were no deviations from the fuel requirements in §63.6604 that apply to the engine (if any), a statement that there were no deviations from the fuel requirements during the reporting period.

(ix) If there were deviations from the fuel requirements in §63.6604 that apply to the engine (if any), information on the number, duration, and cause of deviations, and the corrective action taken.

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

(3) The annual report must be submitted electronically using the subpart specific reporting form in the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through EPA's Central Data Exchange (CDX) (*www.epa.gov/cdx*). However, if the reporting form specific to this subpart is not available in CEDRI at the time that the report is due, the written report must be submitted to the Administrator at the appropriate address listed in §63.13.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010; 78 FR 6705, Jan. 30, 2013]

§63.6655 What records must I keep?

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

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

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

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

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

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

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

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

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

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

(c) If you are operating a new or reconstructed stationary RICE which fires landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, you must keep the records of your daily fuel usage monitors.

(d) You must keep the records required in Table 6 of this subpart to show continuous compliance with each emission or operating limitation that applies to you.

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

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

(2) An existing stationary emergency RICE.

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

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

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

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

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

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

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

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

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

[69 FR 33506, June 15, 2004, as amended at 75 FR 9678, Mar. 3, 2010]

Other Requirements and Information

§63.6665 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§63.1 through 63.15 apply to you. If you own or operate a new or reconstructed stationary RICE with a site rating of less than or equal to 500 brake HP located at a major source of HAP emissions (except new or reconstructed 4SLB engines greater than or equal to 250 and less than or equal to 500 brake HP), a new or reconstructed stationary RICE located at an area source of HAP emissions, or any of the following RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with any of the requirements of the General Provisions specified in Table 8: An existing 2SLB stationary RICE, an existing 4SLB stationary RICE, an existing stationary RICE that combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, an existing emergency stationary RICE, or an existing limited use stationary RICE. If you own or operate any of the following RICE with a

site rating of more than 500 brake HP located at a major source of HAP emissions, you do not need to comply with the requirements in the General Provisions specified in Table 8 except for the initial notification requirements: A new stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis, a new emergency stationary RICE, or a new limited use stationary RICE.

[75 FR 9678, Mar. 3, 2010]

§63.6670 Who implements and enforces this subpart?

(a) This subpart is implemented and enforced by the U.S. EPA, or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency (as well as the U.S. EPA) has the authority to implement and enforce this subpart. You should contact your U.S. EPA Regional Office to find out whether this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under 40 CFR part 63, subpart E, the authorities contained in paragraph (c) of this section are retained by the Administrator of the U.S. EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are:

(1) Approval of alternatives to the non-opacity emission limitations and operating limitations in §63.6600 under §63.6(g).

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

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

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

(5) Approval of a performance test which was conducted prior to the effective date of the rule, as specified in §63.6610(b).

§63.6675 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act (CAA); in 40 CFR 63.2, the General Provisions of this part; and in this section as follows:

Alaska Railbelt Grid means the service areas of the six regulated public utilities that extend from Fairbanks to Anchorage and the Kenai Peninsula. These utilities are Golden Valley Electric Association; Chugach Electric Association; Matanuska Electric Association; Homer Electric Association; Anchorage Municipal Light & Power; and the City of Seward Electric System.

Area source means any stationary source of HAP that is not a major source as defined in part 63.

Associated equipment as used in this subpart and as referred to in section 112(n)(4) of the CAA, means equipment associated with an oil or natural gas exploration or production well, and includes all equipment from the well bore to the point of custody transfer, except glycol dehydration units, storage vessels with potential for flash emissions, combustion turbines, and stationary RICE.

Backup power for renewable energy means an engine that provides backup power to a facility that generates electricity from renewable energy resources, as that term is defined in Alaska Statute 42.45.045(l)(5) (incorporated by reference, see §63.14).

Black start engine means an engine whose only purpose is to start up a combustion turbine.

CAA means the Clean Air Act (42 U.S.C. 7401 *et seq.,* as amended by Public Law 101-549, 104 Stat. 2399).

Commercial emergency stationary RICE means an emergency stationary RICE used in commercial establishments such as office buildings, hotels, stores, telecommunications facilities, restaurants, financial institutions such as banks, doctor's offices, and sports and performing arts facilities.

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

Custody transfer means the transfer of hydrocarbon liquids or natural gas: After processing and/or treatment in the producing operations, or from storage vessels or automatic transfer facilities or other such equipment, including product loading racks, to pipelines or any other forms of transportation. For the purposes of this subpart, the point at which such liquids or natural gas enters a natural gas processing plant is a point of custody transfer.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation or operating limitation;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation or operating limitation in this subpart during malfunction, regardless or whether or not such failure is permitted by this subpart.

(4) Fails to satisfy the general duty to minimize emissions established by §63.6(e)(1)(i).

Diesel engine means any stationary RICE in which a high boiling point liquid fuel injected into the combustion chamber ignites when the air charge has been compressed to a temperature sufficiently high for auto-ignition. This process is also known as compression ignition.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is fuel oil number 2. Diesel fuel also includes any non-distillate fuel with comparable physical and chemical properties (*e.g.* biodiesel) that is suitable for use in compression ignition engines.

Digester gas means any gaseous by-product of wastewater treatment typically formed through the anaerobic decomposition of organic waste materials and composed principally of methane and CO_2.

Dual-fuel engine means any stationary RICE in which a liquid fuel (typically diesel fuel) is used for compression ignition and gaseous fuel (typically natural gas) is used as the primary fuel.

Emergency stationary RICE means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary RICE must comply with the requirements specified in §63.6640(f) in order to be considered emergency stationary RICE. If the engine does not comply with the requirements specified in §63.6640(f), then it is not considered to be an emergency stationary RICE under this subpart.

(1) The stationary RICE is operated to provide electrical power or mechanical work during an emergency situation. Examples include stationary RICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary RICE used to pump water in the case of fire or flood, etc.

(2) The stationary RICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §63.6640(f).

(3) The stationary RICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §63.6640(f)(2)(ii) or (iii) and §63.6640(f)(4)(i) or (ii).

Engine startup means the time from initial start until applied load and engine and associated equipment reaches steady state or normal operation. For stationary engine with catalytic controls, engine startup means the time from initial start until applied load and engine and associated equipment, including the catalyst, reaches steady state or normal operation.

Four-stroke engine means any type of engine which completes the power cycle in two crankshaft revolutions, with intake and compression strokes in the first revolution and power and exhaust strokes in the second revolution.

Gaseous fuel means a material used for combustion which is in the gaseous state at standard atmospheric temperature and pressure conditions.

Gasoline means any fuel sold in any State for use in motor vehicles and motor vehicle engines, or nonroad or stationary engines, and commonly or commercially known or sold as gasoline.

Glycol dehydration unit means a device in which a liquid glycol (including, but not limited to, ethylene glycol, diethylene glycol, or triethylene glycol) absorbent directly contacts a natural gas stream and absorbs water in a contact tower or absorption column (absorber). The glycol contacts and absorbs water vapor and other gas stream constituents from the natural gas and becomes “rich” glycol. This glycol is then regenerated in the glycol dehydration unit reboiler. The “lean” glycol is then recycled.

Hazardous air pollutants (HAP) means any air pollutants listed in or pursuant to section 112(b) of the CAA.

Institutional emergency stationary RICE means an emergency stationary RICE used in institutional establishments such as medical centers, nursing homes, research centers, institutions of higher education, correctional facilities, elementary and secondary schools, libraries, religious establishments, police stations, and fire stations.

ISO standard day conditions means 288 degrees Kelvin (15 degrees Celsius), 60 percent relative humidity and 101.3 kilopascals pressure.

Landfill gas means a gaseous by-product of the land application of municipal refuse typically formed through the anaerobic decomposition of waste materials and composed principally of methane and CO_2.

Lean burn engine means any two-stroke or four-stroke spark ignited engine that does not meet the definition of a rich burn engine.

Limited use stationary RICE means any stationary RICE that operates less than 100 hours per year.

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

Liquid fuel means any fuel in liquid form at standard temperature and pressure, including but not limited to diesel, residual/crude oil, kerosene/naphtha (jet fuel), and gasoline.

Major Source, as used in this subpart, shall have the same meaning as in §63.2, except that:

(1) Emissions from any oil or gas exploration or production well (with its associated equipment (as defined in this section)) and emissions from any pipeline compressor station or pump station shall not be aggregated with emissions from other similar units, to determine whether such emission points or stations are major sources, even when emission points are in a contiguous area or under common control;

(2) For oil and gas production facilities, emissions from processes, operations, or equipment that are not part of the same oil and gas production facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated;

(3) For production field facilities, only HAP emissions from glycol dehydration units, storage vessel with the potential for flash emissions, combustion turbines and reciprocating internal combustion engines shall be aggregated for a major source determination; and

(4) Emissions from processes, operations, and equipment that are not part of the same natural gas transmission and storage facility, as defined in §63.1271 of subpart HHH of this part, shall not be aggregated.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused in part by poor maintenance or careless operation are not malfunctions.

Natural gas means a naturally occurring mixture of hydrocarbon and non-hydrocarbon gases found in geologic formations beneath the Earth's surface, of which the principal constituent is methane. Natural gas may be field or pipeline quality.

Non-selective catalytic reduction (NSCR) means an add-on catalytic nitrogen oxides (NO_X) control device for rich burn engines that, in a two-step reaction, promotes the conversion of excess oxygen, NO_X, CO, and volatile organic compounds (VOC) into CO_2, nitrogen, and water.

Oil and gas production facility as used in this subpart means any grouping of equipment where hydrocarbon liquids are processed, upgraded (*i.e.,* remove impurities or other constituents to meet contract specifications), or stored prior to the point of custody transfer; or where natural gas is processed, upgraded, or stored prior to entering the natural gas transmission and storage source category. For purposes of a major source determination, facility (including a building, structure, or installation) means oil and natural gas production and processing equipment that is located within the boundaries of an individual surface site as defined in this section. Equipment that is part of a facility will typically be located within close proximity to other equipment located at the same facility. Pieces of production equipment or groupings of equipment located on different oil and gas leases, mineral fee tracts, lease tracts, subsurface or surface unit areas, surface fee tracts, surface lease tracts, or separate surface sites, whether or not connected by a road, waterway, power line or pipeline, shall not be considered part of the same facility. Examples of facilities in the oil and natural gas production source category include, but are not limited to, well sites, satellite tank batteries, central tank batteries, a compressor station that transports natural gas to a natural gas processing plant, and natural gas processing plants.

Oxidation catalyst means an add-on catalytic control device that controls CO and VOC by oxidation.

Peaking unit or engine means any standby engine intended for use during periods of high demand that are not emergencies.

Percent load means the fractional power of an engine compared to its maximum manufacturer's design capacity at engine site conditions. Percent load may range between 0 percent to above 100 percent.

Potential to emit means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the stationary source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable. For oil and natural gas production facilities subject to subpart HH of this part, the potential to emit provisions in §63.760(a) may be used. For natural gas transmission and storage facilities subject to subpart HHH of this part, the maximum annual facility gas throughput for storage facilities may be determined according to §63.1270(a)(1) and the maximum annual throughput for transmission facilities may be determined according to §63.1270(a)(2).

Production field facility means those oil and gas production facilities located prior to the point of custody transfer.

Production well means any hole drilled in the earth from which crude oil, condensate, or field natural gas is extracted.

Propane means a colorless gas derived from petroleum and natural gas, with the molecular structure C_3H_8.

Remote stationary RICE means stationary RICE meeting any of the following criteria:

(1) Stationary RICE located in an offshore area that is beyond the line of ordinary low water along that portion of the coast of the United States that is in direct contact with the open seas and beyond the line marking the seaward limit of inland waters.

(2) Stationary RICE located on a pipeline segment that meets both of the criteria in paragraphs (2)(i) and (ii) of this definition.

(i) A pipeline segment with 10 or fewer buildings intended for human occupancy and no buildings with four or more stories within 220 yards (200 meters) on either side of the centerline of any continuous 1-mile (1.6 kilometers) length of pipeline. Each separate dwelling unit in a multiple dwelling unit building is counted as a separate building intended for human occupancy.

(ii) The pipeline segment does not lie within 100 yards (91 meters) of either a building or a small, well-defined outside area (such as a playground, recreation area, outdoor theater, or other place of public assembly) that is occupied by 20 or more persons on at least 5 days a week for 10 weeks in any 12-month period. The days and weeks need not be consecutive. The building or area is considered occupied for a full day if it is occupied for any portion of the day.

(iii) For purposes of this paragraph (2), the term pipeline segment means all parts of those physical facilities through which gas moves in transportation, including but not limited to pipe, valves, and other appurtenance attached to pipe, compressor units, metering stations, regulator stations, delivery stations, holders, and fabricated assemblies. Stationary RICE located within 50 yards (46 meters) of the pipeline segment providing power for equipment on a pipeline segment are part of the pipeline segment. Transportation of gas means the gathering, transmission, or distribution of gas by pipeline, or the storage of gas. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

(3) Stationary RICE that are not located on gas pipelines and that have 5 or fewer buildings intended for human occupancy and no buildings with four or more stories within a 0.25 mile radius around the engine. A building is intended for human occupancy if its primary use is for a purpose involving the presence of humans.

Residential emergency stationary RICE means an emergency stationary RICE used in residential establishments such as homes or apartment buildings.

Responsible official means responsible official as defined in 40 CFR 70.2.

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to December 19, 2002 with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Site-rated HP means the maximum manufacturer's design capacity at engine site conditions.

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

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

Stationary RICE test cell/stand means an engine test cell/stand, as defined in subpart PPPPP of this part, that tests stationary RICE.

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

Storage vessel with the potential for flash emissions means any storage vessel that contains a hydrocarbon liquid with a stock tank gas-to-oil ratio equal to or greater than 0.31 cubic meters per liter and an American Petroleum Institute gravity equal to or greater than 40 degrees and an actual annual average hydrocarbon liquid throughput equal to or greater than 79,500 liters per day. Flash emissions occur when dissolved hydrocarbons in the fluid evolve from solution when the fluid pressure is reduced.

Subpart means 40 CFR part 63, subpart ZZZZ.

Surface site means any combination of one or more graded pad sites, gravel pad sites, foundations, platforms, or the immediate physical location upon which equipment is physically affixed.

Two-stroke engine means a type of engine which completes the power cycle in single crankshaft revolution by combining the intake and compression operations into one stroke and the power and exhaust operations into a second stroke. This system requires auxiliary scavenging and inherently runs lean of stoichiometric.

[69 FR 33506, June 15, 2004, as amended at 71 FR 20467, Apr. 20, 2006; 73 FR 3607, Jan. 18, 2008; 75 FR 9679, Mar. 3, 2010; 75 FR 51592, Aug. 20, 2010; 76 FR 12867, Mar. 9, 2011; 78 FR 6706, Jan. 30, 2013]

Table 1a to Subpart ZZZZ of Part 63—Emission Limitations for Existing, New, and Reconstructed Spark Ignition, 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations at 100 percent load plus or minus 10 percent for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 4SRB stationary RICE	a. Reduce formaldehyde emissions by 76 percent or more. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may reduce formaldehyde emissions by 75 percent or more until June 15, 2007 or	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
	b. Limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2	

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

[75 FR 9679, Mar. 3, 2010, as amended at 75 FR 51592, Aug. 20, 2010]

Table 1b to Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed SI 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6603, 63.6630 and 63.6640, you must comply with the following operating limitations for existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and using NSCR; or existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and using NSCR;	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 750 °F and less than or equal to 1250 °F.[1]
2. existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to reduce formaldehyde emissions by 76 percent or more (or by 75 percent or more, if applicable) and not using NSCR; or	Comply with any operating limitations approved by the Administrator.
existing, new and reconstructed 4SRB stationary RICE >500 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O_2 and not using NSCR.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6706, Jan. 30, 2013]

Table 2a to Subpart ZZZZ of Part 63—Emission Limitations for New and Reconstructed 2SLB and Compression Ignition Stationary RICE >500 HP and New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600 and 63.6640, you must comply with the following emission limitations for new and reconstructed lean burn and new and reconstructed compression ignition stationary RICE at 100 percent load plus or minus 10 percent:

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
1. 2SLB stationary RICE	a. Reduce CO emissions by 58 percent or more; or b. Limit concentration of formaldehyde in the stationary RICE exhaust to 12 ppmvd or less at 15 percent O_2. If you commenced construction or reconstruction between December 19, 2002 and June 15, 2004, you may limit concentration of formaldehyde to 17 ppmvd or less at 15 percent O_2 until June 15, 2007	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[1]
2. 4SLB stationary RICE	a. Reduce CO emissions by 93 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 14 ppmvd or less at 15 percent O_2	

For each . . .	You must meet the following emission limitation, except during periods of startup . . .	During periods of startup you must . . .
3. CI stationary RICE	a. Reduce CO emissions by 70 percent or more; or	
	b. Limit concentration of formaldehyde in the stationary RICE exhaust to 580 ppbvd or less at 15 percent O_2	

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

[75 FR 9680, Mar. 3, 2010]

Table 2b to Subpart ZZZZ of Part 63—Operating Limitations for New and Reconstructed 2SLB and CI Stationary RICE >500 HP Located at a Major Source of HAP Emissions, New and Reconstructed 4SLB Stationary RICE ≥250 HP Located at a Major Source of HAP Emissions, Existing CI Stationary RICE >500 HP

As stated in §§63.6600, 63.6601, 63.6603, 63.6630, and 63.6640, you must comply with the following operating limitations for new and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions; new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions; and existing CI stationary RICE >500 HP:

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
1. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and using an oxidation catalyst; and New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst.	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water at 100 percent load plus or minus 10 percent from the pressure drop across the catalyst that was measured during the initial performance test; and b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
2. Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst	a. maintain your catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the initial performance test; and
	b. maintain the temperature of your stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.[1]
3. New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to reduce CO emissions and not using an oxidation catalyst; and	Comply with any operating limitations approved by the Administrator.
New and reconstructed 2SLB and CI stationary RICE >500 HP located at a major source of HAP emissions and new and reconstructed 4SLB stationary RICE ≥250 HP located at a major source of HAP emissions complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; and	

For each . . .	You must meet the following operating limitation, except during periods of startup . . .
existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst.	

[1]Sources can petition the Administrator pursuant to the requirements of 40 CFR 63.8(f) for a different temperature range.

[78 FR 6707, Jan. 30, 2013]

Table 2c to Subpart ZZZZ of Part 63—Requirements for Existing Compression Ignition Stationary RICE Located at a Major Source of HAP Emissions and Existing Spark Ignition Stationary RICE ≤500 HP Located at a Major Source of HAP Emissions

As stated in §§63.6600, 63.6602, and 63.6640, you must comply with the following requirements for existing compression ignition stationary RICE located at a major source of HAP emissions and existing spark ignition stationary RICE ≤500 HP located at a major source of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Emergency stationary CI RICE and black start stationary CI RICE[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.[3]
2. Non-Emergency, non-black start stationary CI RICE <100 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first.[2] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
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.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
5. Non-Emergency, non-black start stationary CI RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd or less at 15 percent O_2; or b. Reduce CO emissions by 70 percent or more.	
6. Emergency stationary SI RICE and black start stationary SI RICE.[1]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
7. Non-Emergency, non-black start stationary SI RICE <100 HP that are not 2SLB stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[2] b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary;	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
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]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
9. Non-emergency, non-black start 2SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 225 ppmvd or less at 15 percent O_2.	
10. Non-emergency, non-black start 4SLB stationary RICE 100≤HP≤500	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd or less at 15 percent O_2.	
11. Non-emergency, non-black start 4SRB stationary RICE 100≤HP≤500	Limit concentration of formaldehyde in the stationary RICE exhaust to 10.3 ppmvd or less at 15 percent O_2.	
12. Non-emergency, non-black start stationary RICE 100≤HP≤500 which combusts landfill or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Limit concentration of CO in the stationary RICE exhaust to 177 ppmvd or less at 15 percent O_2.	

[1]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the work practice requirements on the schedule required in Table 2c of this subpart, or if performing the work practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the work practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The work practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the work practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[2]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2c of this subpart.

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

[78 FR 6708, Jan. 30, 2013, as amended at 78 FR 14457, Mar. 6, 2013]

Table 2d to Subpart ZZZZ of Part 63—Requirements for Existing Stationary RICE Located at Area Sources of HAP Emissions

As stated in §§63.6603 and 63.6640, you must comply with the following requirements for existing stationary RICE located at area sources of HAP emissions:

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
1. Non-Emergency, non-black start CI stationary RICE ≤300 HP	a. Change oil and filter every 1,000 hours of operation or annually, whichever comes first;[1] b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	Minimize the engine's time spent at idle and minimize the engine's startup time at startup to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the non-startup emission limitations apply.
2. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
3. Non-Emergency, non-black start CI stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	
4. Emergency stationary CI RICE and black start stationary CI RICE.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]	
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
5. Emergency stationary SI RICE; black start stationary SI RICE; non-emergency, non-black start 4SLB stationary RICE >500 HP that operate 24 hours or less per calendar year; non-emergency, non-black start 4SRB stationary RICE >500 HP that operate 24 hours or less per calendar year.[2]	a. Change oil and filter every 500 hours of operation or annually, whichever comes first;[1]; b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first, and replace as necessary; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
6. Non-emergency, non-black start 2SLB stationary RICE	a. Change oil and filter every 4,320 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 4,320 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first, and replace as necessary.	
7. Non-emergency, non-black start 4SLB stationary RICE ≤500 HP	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first, and replace as necessary; and	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
8. Non-emergency, non-black start 4SLB remote stationary RICE >500 HP	a. Change oil and filter every 2,160 hours of operation or annually, whichever comes first;[1]	
	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.	

[1]Sources have the option to utilize an oil analysis program as described in §63.6625(i) or (j) in order to extend the specified oil change requirement in Table 2d of this subpart.

[2]If an emergency engine is operating during an emergency and it is not possible to shut down the engine in order to perform the management practice requirements on the schedule required in Table 2d of this subpart, or if performing the management practice on the required schedule would otherwise pose an unacceptable risk under federal, state, or local law, the management practice can be delayed until the emergency is over or the unacceptable risk under federal, state, or local law has abated. The management practice should be performed as soon as practicable after the emergency has ended or the unacceptable risk under federal, state, or local law has abated. Sources must report any failure to perform the management practice on the schedule required and the federal, state or local law under which the risk was deemed unacceptable.

[78 FR 6709, Jan. 30, 2013]

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

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

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

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

[78 FR 6711, Jan. 30, 2013]

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

As stated in §§63.6610, 63.6611, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

Table 4 to Subpart ZZZZ of Part 63—Requirements for Performance Tests

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

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 *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A.
		ii. Measure O_2 at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time as the measurements for formaldehyde or THC concentration.
		iii. Measure moisture content at the inlet and outlet of the control device; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or THC concentration.
		iv. If demonstrating compliance with the formaldehyde percent reduction requirement, measure formalde-hyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		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 concentra-tion of formalde-hyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary RICE; and		(a) For formaldehyde, CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *and* the sampling port location meets the two and half-diameter criterion of Section 11.1.1 of Method 1 of 40 CFR part 60, appendix A, the duct may be sampled at `3-point long line'; otherwise, conduct the stratification testing and select sampling points according to Section 8.1.2 of Method 7E of 40 CFR part 60, appendix A. If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2 concentration of the stationary RICE exhaust at the sampling port location; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A-2, or ASTM Method D6522-00 (Reapproved 2005)[a] (heated probe not necessary)	(a) Measurements to determine O_2 concentration must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iii. Measure moisture content of the station-ary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A-3, or Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348-03[a]	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde or CO concentration.
		iv. Measure formalde-hyde at the exhaust of the station-ary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348-03[a], provided in ASTM D6348-03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. measure CO at the exhaust of the station-ary RICE	(1) Method 10 of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (2005)[ac], Method 320 of 40 CFR part 63, appendix A, or ASTM D6348-03[a]	(a) CO concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.

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

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

[79 FR 11290, Feb. 27, 2014]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations, Operating Limitations, and Other Requirements

As stated in §§63.6612, 63.6625 and 63.6630, you must initially comply with the emission and operating limitations as required by the following:

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Reduce CO emissions and using oxidation catalyst, and using a CPMS	i. The average reduction of emissions of CO determined from the initial performance test achieves the required CO percent reduction; and ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
2. Non-emergency stationary CI RICE >500 HP located at a major source of HAP, and existing non-emergency stationary CI RICE >500 HP located at an area source of HAP	a. Limit the concentration of CO, using oxidation catalyst, and using a CPMS	i. The average CO concentration determined from the initial performance test is less than or equal to the CO emission limitation; and
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b); and
		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≤HP≤500 located at a major source of HAP, and existing non-emergency stationary CI RICE 300<HP≤500 located at an area source of HAP	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. The average formaldehyde or CO concentration, as applicable, corrected to 15 percent O_2, dry basis, from the three test runs is less than or equal to the formaldehyde or CO emission limitation, as applicable.
13. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1350 °F.
14. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. You have conducted an initial compliance demonstration as specified in §63.6630(e) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more;
		ii. You have installed a CPMS to continuously monitor catalyst inlet temperature according to the requirements in §63.6625(b), or you have installed equipment to automatically shut down the engine if the catalyst inlet temperature exceeds 1250 °F.

[78 FR 6712, Jan. 30, 2013]

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

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved[a]; and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and

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

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

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the 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.
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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
14. Existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install an oxidation catalyst	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 93 percent or more, or the average CO concentration is less than or equal to 47 ppmvd at 15 percent O_2; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than 450 °F and less than or equal to 1350 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1350 °F.
15. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are not remote stationary RICE and that are operated more than 24 hours per calendar year	a. Install NSCR	i. Conducting annual compliance demonstrations as specified in §63.6640(c) to show that the average reduction of emissions of CO is 75 percent or more, the average CO concentration is less than or equal to 270 ppmvd at 15 percent O_2, or the average reduction of emissions of THC is 30 percent or more; and either ii. Collecting the catalyst inlet temperature data according to §63.6625(b), reducing these data to 4-hour rolling averages; and maintaining the 4-hour rolling averages within the limitation of greater than or equal to 750 °F and less than or equal to 1250 °F for the catalyst inlet temperature; or iii. Immediately shutting down the engine if the catalyst inlet temperature exceeds 1250 °F.

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

[78 FR 6715, Jan. 30, 2013]

Table 7 to Subpart ZZZZ of Part 63—Requirements for Reports

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

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
1. Existing non-emergency, non-black start stationary RICE 100≤HP≤500 located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >500 HP located at a major source of HAP; existing non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP; existing non-emergency, non-black start stationary CI RICE >300 HP located at an area source of HAP; new or reconstructed non-emergency stationary RICE >500 HP located at a major source of HAP; and new or reconstructed non-emergency 4SLB stationary RICE 250≤HP≤500 located at a major source of HAP	Compliance report	a. If there are no deviations from any emission limitations or operating limitations that apply to you, a statement that there were no deviations from the emission limitations or operating limitations during the reporting period. If there were no periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), a statement that there were not periods during which the CMS was out-of-control during the reporting period; or	i. Semiannually according to the requirements in §63.6650(b)(1)-(5) for engines that are not limited use stationary RICE subject to numerical emission limitations; and ii. Annually according to the requirements in §63.6650(b)(6)-(9) for engines that are limited use stationary RICE subject to numerical emission limitations.
		b. If you had a deviation from any emission limitation or operating limitation during the reporting period, the information in §63.6650(d). If there were periods during which the CMS, including CEMS and CPMS, was out-of-control, as specified in §63.8(c)(7), the information in §63.6650(e); or	i. Semiannually according to the requirements in §63.6650(b).
		c. If you had a malfunction during the reporting period, the information in §63.6650(c)(4).	i. Semiannually according to the requirements in §63.6650(b).
2. New or reconstructed non-emergency stationary RICE that combusts landfill gas or digester gas equivalent to 10 percent or more of the gross heat input on an annual basis	Report	a. The fuel flow rate of each fuel and the heating values that were used in your calculations, and you must demonstrate that the percentage of heat input provided by landfill gas or digester gas, is equivalent to 10 percent or more of the gross heat input on an annual basis; and	i. Annually, according to the requirements in §63.6650.
		b. The operating limits provided in your federally enforceable permit, and any deviations from these limits; and	i. See item 2.a.i.
		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).

For each . . .	You must submit a . . .	The report must contain . . .	You must submit the report . . .
4. Emergency stationary RICE that operate or are contractually obligated to be available for more than 15 hours per year for the purposes specified in §63.6640(f)(2)(ii) and (iii) or that operate for the purposes specified in §63.6640(f)(4)(ii)	Report	a. The information in §63.6650(h)(1)	i. annually according to the requirements in §63.6650(h)(2)-(3).

[78 FR 6719, Jan. 30, 2013]

Table 8 to Subpart ZZZZ of Part 63—Applicability of General Provisions to Subpart ZZZZ.

As stated in §63.6665, you must comply with the following applicable general provisions.

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.	
§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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.6(j)	Presidential compliance exemption	Yes.	
§63.7(a)(1)-(2)	Performance test dates	Yes	Subpart ZZZZ contains performance test dates at §§63.6610, 63.6611, and 63.6612.
§63.7(a)(3)	CAA section 114 authority	Yes.	
§63.7(b)(1)	Notification of performance test	Yes	Except that §63.7(b)(1) only applies as specified in §63.6645.
§63.7(b)(2)	Notification of rescheduling	Yes	Except that §63.7(b)(2) only applies as specified in §63.6645.
§63.7(c)	Quality assurance/test plan	Yes	Except that §63.7(c) only applies as specified in §63.6645.
§63.7(d)	Testing facilities	Yes.	
§63.7(e)(1)	Conditions for conducting performance tests	No.	Subpart ZZZZ specifies conditions for conducting performance tests at §63.6620.
§63.7(e)(2)	Conduct of performance tests and reduction of data	Yes	Subpart ZZZZ specifies test methods at §63.6620.
§63.7(e)(3)	Test run duration	Yes.	
§63.7(e)(4)	Administrator may require other testing under section 114 of the CAA	Yes.	
§63.7(f)	Alternative test method provisions	Yes.	
§63.7(g)	Performance test data analysis, recordkeeping, and reporting	Yes.	
§63.7(h)	Waiver of tests	Yes.	
§63.8(a)(1)	Applicability of monitoring requirements	Yes	Subpart ZZZZ contains specific requirements for monitoring at §63.6625.
§63.8(a)(2)	Performance specifications	Yes.	
§63.8(a)(3)	[Reserved]		
§63.8(a)(4)	Monitoring for control devices	No.	
§63.8(b)(1)	Monitoring	Yes.	
§63.8(b)(2)-(3)	Multiple effluents and multiple monitoring systems	Yes.	
§63.8(c)(1)	Monitoring system operation and maintenance	Yes.	
§63.8(c)(1)(i)	Routine and predictable SSM	No	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	No	
§63.8(c)(2)-(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)-(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.
		Except that §63.8(e) only applies as specified in §63.6645.	
§63.8(f)(1)-(5)	Alternative monitoring method	Yes	Except that §63.8(f)(4) only applies as specified in §63.6645.
§63.8(f)(6)	Alternative to relative accuracy test	Yes	Except that §63.8(f)(6) only applies as specified in §63.6645.
§63.8(g)	Data reduction	Yes	Except that provisions for COMS are not applicable. Averaging periods for demonstrating compliance are specified at §§63.6635 and 63.6640.
§63.9(a)	Applicability and State delegation of notification requirements	Yes.	
§63.9(b)(1)-(5)	Initial notifications	Yes	Except that §63.9(b)(3) is reserved.
		Except that §63.9(b) only applies as specified in §63.6645.	
§63.9(c)	Request for compliance extension	Yes	Except that §63.9(c) only applies as specified in §63.6645.
§63.9(d)	Notification of special compliance requirements for new sources	Yes	Except that §63.9(d) only applies as specified in §63.6645.
§63.9(e)	Notification of performance test	Yes	Except that §63.9(e) only applies as specified in §63.6645.
§63.9(f)	Notification of visible emission (VE)/opacity test	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(1)	Notification of performance evaluation	Yes	Except that §63.9(g) only applies as specified in §63.6645.
§63.9(g)(2)	Notification of use of COMS data	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.9(g)(3)	Notification that criterion for alternative to RATA is exceeded	Yes	If alternative is in use.
		Except that §63.9(g) only applies as specified in §63.6645.	
§63.9(h)(1)-(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm,

whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

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

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

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

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

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

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

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

Table 1: Appendix A—Sampling Run Data.

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

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Minor Source Operating Permit (MSOP) Renewal

Source Background and Description

Source Name:	**Fairfield Manufacturing Co., Inc.**
Source Location:	**2400 Sagamore Parkway South, Lafayette, IN 47903**
County:	**Tippecanoe**
SIC Code:	**3566 (Speed Changers, Industrial High-Speed Drives, and Gears)**
Permit Renewal No.:	**M157-36481-00007**
Permit Reviewer:	**Tamara Havics**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Fairfield Manufacturing Co., Inc. relating to the operation of an existing stationary source involved with various machining and manufacturing processes for gears and gear assemblies. On November 12, 2015, Fairfield Manufacturing Co., Inc. submitted an application to the OAQ requesting to renew its operating permit. The source was issued a Minor Source Operating Permit (MSOP) No. M157-28863-00007 on March 11, 2011.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) Paint Booths:

(1) One (1) large spray paint booth, identified as EUP-1, constructed in 1997, equipped with two HVLP spray guns, maximum capacity of painting 40 steel gear housings per hour, controlled with a dry filter which exhausts to stack P-1, and a process throughput of 12,000 lbs/hr of metal containers.

(2) One (1) small spray paint booth, identified as EUP-2, constructed in 1997, equipped with one HVLP spray gun, maximum capacity of painting 2 steel gear housing per hour, controlled with a dry filter which exhausts to stack P-2, and a process throughput of 2,000 lbs/hr of metal gears.

(b) Twelve (12) Shot Blasters:

(1) One (1) wheelabrator shot blast operation, identified as EUSB1, constructed in 1964, equipped with a voluntary dust collector, DCSB1 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 94,860 lbs/hr, exhausting through stack SSB1, combined throughput is equivalent to 48.33 tons per hour.

(2) One (1) wheelabrator shot blast operation, identified as EUSB2, constructed in 1967, equipped with a voluntary dust collector, DCSB2 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 75,180 lbs/hr, exhausting through stack SSB2.

(3) One (1) wheelabrator shot blast operation, identified as EUSB3, constructed in 1971, equipped with a voluntary dust collector, DCSB3 for particulate control, with a maximum process throughput of 2,400 lbs per hour, and media 123,660 lbs/hr, exhausting through

stack SSB3.

(4) One (1) wheelabrator shot blast operation, identified as EUSB4, constructed in 1974, equipped with a voluntary dust collector, DCSB4 for particulate control, with a maximum process throughput of 2,200 lbs per hour, and media 145,260 lbs/hr, exhausting through stack SSB4.

(5) One (1) wheelabrator shot blast operation, identified as EUSB5, constructed in 1978, equipped with a voluntary dust collector, DCSB5 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 215,160 lbs/hr, exhausting through stack SSB5.

(6) One (1) wheelabrator shot blast operation, identified as EUSB6, constructed in 1978, equipped with a voluntary dust collector, DCSB6 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 79,740 lbs/hr, exhausting through stack SSB6.

(7) One (1) wheelabrator shot blast operation, identified as EUSB7, constructed in 1982, equipped with a voluntary dust collector, DCSB7 for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 245,820 lbs/hr, exhausting through stack SSB7.

(8) One (1) wheelabrator shot blast operation, identified as EUSB12, constructed in 2013, equipped with a 1,729 acfm voluntary dust collector, DCSB12, for particulate control, with a maximum process throughput of 1,800 lbs per hour, and media 3,000 lbs/hr, exhausting through stack SSB12.

(9) One (1) BCast cleaning shot blast operation, identified as EUSB8b, constructed in 1997, equipped with a voluntary dust collector, DCSB12 for particulate control, with a maximum process throughput of 1,250 lbs per hour, and media 43,260 lbs/hr, exhausting through stack SSB12.

(10) One (1) wheelabrator shot blast operation, identified as EUSB9, constructed in 2005, equipped with a voluntary dust collector, DCSB9 for particulate control, with a maximum process throughput of 2,800 lbs per hour, and media 213,480 lbs/hr, exhausting through stack SSB9.

(11) One (1) swing table, identified as EUSB10, constructed in 1999, equipped with a voluntary dust collector, DCSB10 for particulate control, with a maximum process throughput of 1,600 lbs per hour, and media 80,820 lbs/hr, exhausting inside.

(12) One (1) blast belt operation, identified as EUSB11, constructed in 1999, equipped with a voluntary dust collector, DCS11 for particulate control, with a maximum process throughput of 2,600 lbs per hour, and media 106,020 lbs/hr, exhausting through stack SSB11.

(c) Two (2) glass bead polishing and bead cleaning operations, collectively identified as EUPB1, constructed in 1995, comprised of two glass bead machines with maximum capacity of 60 lbs of metal gear assembly per hour each, and bead media 8658 lbs/hr each, with particulate controlled by dust collector, exhausting internally.

(d) Two (2) polish lathes and grinding and drilling operation to polish gear assembly using sand paper, collectively identified as EUPB2, constructed in 1993, maximum capacity of 200 lbs per hour of metal gears each, equipped with small hood filters, exhausting inside.

(e) Ten (10) wet type integrated machining operations, identified as EUIM-1 through EUIM-10, constructed in 2006 through 2008, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(f) RX generators with heat treat ovens

(1) Eight (8) RX Generators, identified as EURX1 through EURX8, constructed in1965 through 2008, each processing natural gas at a feed rate of 395 cf/hr to be converted into 1,111 cubic feet of blanket gas per hour, used in the carburization heat treat ovens to treat metal gear assembly and subsequently combusted, identified as follows:

RX Generator	Associated Burner MMBtu/hr	Stack
EURX1	1.13	SRX1
EURX2	1.54	SRX1
EURX3	1.54	SRX3
EURX4	1.54	SRX4
EURX5	1.54	SRX5
EURX6	1.54	SRX1
EURX7	1.54	SRX4
EURX8	1.54	SRX1

(2) Natural gas fired heat treat ovens used with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (each)
Super 36 Allcase Furnace #1, #2, #4	3	5.10
Super 36 Allcase Furnace #3	1	6.73
Auto Hardeners #2, #3, #4	3	1.00
Gas & Electric Carburizer #8	1	3.06
Gas & Electric Carburizer #9	1	5.00
Gas Carburizers #3, #4	2	4.59
Gas Carburizer #5	1	5.97
Homo Carb Draw #1 West, #2 East	2	1.25
Rotary Hardening Furnace #6	1	1.00
Small Allcase Furnace #1	1	1.00
Small Allcase Furnace#2	1	1.00
Small Allcase Furnace#3	1	1.00
Batch Anneal- Furnace	1	0.50
Lead Pot	1	1.15
LT Draw Furnace #1,#2,#3,#4	4	0.50
Nitrogen Generator	1	0.37
Program Draw #1 East and #2 west	2	1.00
Trinider Furnace	1	2.35
Draw Furnace #1 through #7	7	0.353

(3) Electric heat treat ovens associated with carburizing, used to combust CO generated by the RX generators, exhausting inside, and consisting of the following:

(A) One (1) Electric carburizer, identified as #6.

(B) One (1) Electric carburizer, identified as #7.

(C) Two (2) Electric Homo Carb.

(D) Electric Roller Hearth.

(E) Nitrider Furnace

(F) Cycle Annealer #1 and #2

(g) Boilers:

(1) One (1) natural gas-fired boiler, identified as EUB1, constructed in 1967, rated at 0.918 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB2, constructed in 1995, rated at 1.22 MMBtu/hr.

(h) Emergency generators used for emergency purposes:

(1) One (1) 426 hp natural gas-fired emergency generator, constructed in 1993, exhausting outside.

Under 40 CFR 63, Subpart ZZZZ, the 426 hp natural gas-fired emergency generator is considered an existing affected source.

(2) One (1) diesel air compressor, identified as EG8, constructed in 1996, with a maximum power output of 125 horsepower and maximum operating hours of 500 hrs/yr, and exhausting through SEG7.

Under 40 CFR 63, Subpart ZZZZ, the diesel air compressor EG8 is considered an existing affected source.

(3) Six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, constructed in 2005, with a maximum power output of 0.224 MMBtu/hr, each and maximum operating hours of 500 hrs/yr, and exhausting through SEG1 through SEG6.

Under 40 CFR 63, Subpart ZZZZ, the six (6) emergency generators, identified EG1 through EG6 are considered existing affected sources.

(i) Miscellaneous Natural gas-fired space heaters, and part washers with heat input capacity less than 10 MMBtu/hr each, and consisting of the following:

Combustion Units	No. of Units	MMBtu/hr (each)
Roof Mount Furnaces	13	3.25
Parts Washer	1	0.80
Ransohoff Parts Washer	1	1.50
Continental Parts Washer	1	1.50
Infrared Tubular Heaters - Heat treat	4	2.00
Infrared Tubular Heaters - Receiving	15	0.10
Heat Towers in Assy Bldg.	3	5.25
Radiant Heaters in Chip Room	2	0.20
Draw Furnaces	7	0.50

(j) One (1) Nickel electroplating station, using dip coating and brushing the solution onto the metal gear assemblies, maximum capacity 60 lbs of metal parts/hr.

(k) Degreasers:

(1) Sixty-six (66) cold solvent cleaning parts washers, constructed in or before 1990.

(2) One (1) open top vapor degreaser, identified as EUVD, installed in 2006, with a surface area of 30 $ft.^2$

(l) One (1) TIG Welding Operation, with a maximum capacity of 12 gear assemblies per hour, with a maximum throughput of 12,000 pounds per hour of gears, and less than 625 pounds of rod per day, exhausting indoors.

The source also identified the following emission units that were constructed and/or are operating but which haven't yet been inlcuded in the permit:

(a) One (1) shot peener, identified as EUSB13, constructed in 1999, equipped with a voluntary dust collector, DCSB13 for particulate control, with a maximum process throughput of 3600 lbs per hour, and media 36 lbs/hr, exhausting through stack SSB13.

(b) Electric heat treat ovens associated with carburizing, used to combust CO generated by the RX generators, exhausting inside, and consisting of the following:

(1) #2 Homo Draw Furnace
(2) #4 Homo Draw Furnace
(3) #6 Homo Draw Furnace
(4) Two (2) Homo Deep Draw
(5) Two (2) Homo Draw
(6) Two (2) Homo Draw Furnace
(7) #1 Homo Draw Furnace
(8) #3 Homo Draw Furnace
(9) #5 Homo Draw Furnace

(c) Boilers:

(1) One (1) natural gas-fired boiler, identified as EUB3, constructed in 1996, rated at 0.80 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB5, constructed in 2014, rated at 0.50 MMBtu/hr.

(d) Miscellaneous Natural gas-fired space heaters and part washers with heat input capacity less than 10 MMBtu/hr each, and consisting of the following:

Combustion Units	No. of Units	MMBtu/hr (total)	Year of Installation
Roof Mount Furnaces	10	11.77	1972 (2) 1994 (2) 1998 (6)
Paint Booth Oven	1	0.90	1997
Water Heaters	4	0.90	2014
#1 Auto Hardener	1	1.00	1959
Kitchen Equipment	1	0.50	1951
Hanson Washer	1	0.50	2014
Misc. Small Space Heaters	12	1.75	1967 (10) 2015 (2)

Hydraulic Motor Room HVAC Unit	1	0.26	2014
415E Parts Washer	1	2.00	prior to 1992
Paint Booth HVAC Unit	1	2.72	1997

(e) Three (3) Cooling Towers, identified as Cooling Towers 1-3, constructed in 1964, 2008 and 2010, respectively, with a total circulating flow rate of 1,000 gal/min, each.

(f) Two hundred thirteen (213) wet type integrated machining operations, identified as EUIM-11 through EUIM-223, constructed in 2008 through 2014, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(g) Woodworking operations, identified as WW-1, with emissions controlled by a baghouse and exhausting internally.

Emission Units and Pollution Control Equipment Removed From the Source

The source has removed the following emission units:

(a) Natural gas fired heat treat ovens used with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion Units	No. of Units	MMBtu/hr (total)
Rotary Hardening Furnace #6	1	1.00
Lead Pot	1	1.15
Draw Furnace #7	1	0.353

(b) Boilers:

(1) One (1) natural gas-fired boiler, identified as EUB1, constructed in 1967, rated at 0.918 MMBtu/hr, removed in 2014.

(2) One (1) natural gas-fired boiler, identified as EUB2, constructed in 1995, rated at 1.22 MMBtu/hr, removed in 2011.

(c) One (1) Nickel electroplating station, using dip coating and brushing the solution onto the metal gear assemblies, maximum capacity 60 lbs of metal parts/hr.

(d) One (1) TIG Welding Operation, with a maximum capacity of 12 gear assemblies per hour, with a maximum throughput of 12,000 pounds per hour of gears, and less than 625 pounds of rod per day, exhausting indoors.

Existing Approvals

Since the issuance of the MSOP No.: M157-28863-00007 on March 11, 2011, the source has constructed or has been operating under the following additional approvals:

(a) Administrative Amendment No. 157-36481-00007 issued August 29, 2013.

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.

Air Pollution Control Justification as an Integral Part of the Process

As part of MSOP No.: M157-28863-00007, issued on March 11, 2011, IDEM, OAQ previously determined that heat treat ovens are an integral part of the eight (8) RX Generators.

IDEM, OAQ is not reevaluating this integral justification at this time. Therefore, the potential CO emissions from the RX Generators will continue to be calculated after consideration of the heat treat ovens for purposes of determining permitting level and applicability of 326 IAC 2-7 and 326 IAC 2-2. Operating conditions in the proposed permit will specify that the heat treat ovens shall operate at all times when the RX Generators are in operation.

Enforcement Issue

There are no enforcement actions pending.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located Tippecanoe County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.

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

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

(b) $PM_{2.5}$
Tippecanoe County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

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

Fugitive Emissions

The fugitive emissions of criteria pollutants and hazardous air pollutants are counted toward the determination of 326 IAC 2-6.1 (Minor Source Operating Permits) applicability.

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	
Pollutant	Tons/year
PM	102.86
PM_{10}	73.22
$PM_{2.5}$	43.67
SO_2	0.45
NO_x	70.57
VOC	54.50
CO	82.43
Single HAP	3.40 (Toluene)
Total HAP	7.73

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(30)) of all regulated pollutants is less than 100 tons per year. However, PM10, PM2.5, NOx, VOC and CO are equal to or greater than twenty-five (25) tons per year. The source is not subject to the provisions of 326 IAC 2-7. Therefore, the source will be issued an MSOP Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is less 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 less than twenty-five (25) tons per year. Therefore, the source will be issued an MSOP Renewal.

Permit Level Determination – MSOP Amendment

The following tables are used to determine the appropriate permit level under 326 IAC 2-6.1-6. This table reflects the PTE before controls of the proposed amendment. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of 2014 Modifications (tons/year)								
	PM	PM10*	PM2.5	NOx	SO_2	VOC	CO	Total HAPs	Worst Single HAP
Natural Gas Combustion (2014)	0.01	0.05	0.05	0.71	Negl.	0.04	0.60	0.01	0.01 (Hexane)
Boiler EUB5 (2014)	Negl.	0.02	0.02	0.21	Negl.	0.01	0.18	Negl.	Negl.
Integrated Machines, 213 additional (2014)	4.11	2.05	2.05	-	-	-	-	-	-
Total PTE of Modified and New Insignificant Activities in 2014	**4.12**	**2.12**	**2.12**	**0.93**	**Negl**.	**0.05**	**0.78**	**0.02**	**0.02 (Hexane)**
Exemption Threshold	5	5	5	10	10	10	25	25	10

Pursuant to 326 IAC 2-6.1-6(d)(11), this change to the permit is considered an administrative amendment because the permit is amended to add emissions units, subject to 326 IAC 2-1.1-3 (Exemptions), at the request of the applicant. Therefore, these units are being incorporated into the permit through this MSOP Renewal.

Process/ Emission Unit	Uncontrolled/Unlimited Potential To Emit of 2015 Modifications (tons/year)								
	PM	PM10*	PM2.5	NOx	SO_2	VOC	CO	Total HAPs	Worst Single HAP
Natural Gas Combustion	0.12	0.48	0.48	6.34	0.04	0.35	5.33	0.12	0.11 (Hexane)
Total PTE of Modified and New Insignificant Activities in 2015	**0.12**	**0.48**	**0.48**	**6.34**	**0.04**	**0.35**	**5.33**	**0.12**	**0.11 (Hexane)**
Exemption Threshold	5	5	5	10	10	10	25	25	10

Pursuant to 326 IAC 2-6.1-6(d)(11), this change to the permit is considered an administrative amendment because the permit is amended to add emissions units, subject to 326 IAC 2-1.1-3 (Exemptions), at the request of the applicant. Therefore, these units are being incorporated into the permit through this MSOP Renewal.

Potential to Emit After Issuance

The table below summarizes the potential to emit of the entire source after issuance of this MSOP Renewal.

Process/ Emission Unit	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)								
	PM	PM_{10}*	$PM_{2.5}$**	NO_x	SO_2	VOC	CO	Total HAPs	Worst Single HAP
Spray paint booth, EUP-1 and EUP-2	18.89	18.89	18.89	0.00	0.00	27.36	0.00	6.09	3.40 Toluene
13 Shot Blast Units	59.13	39.22	11.81	0.00	0.00	0.00	0.00	0.00	0.00
Polishing and Bead Cleaning (EUBP2)	2.42	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00
223 Integrated Machines	4.30	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00
8 RXN Generators	0.03	0.11	0.11	1.38	0.01	0.08	28.45	0.03	0.02 Hexane
NG - Heat Treat Operations	0.61	2.43	2.40	32.03	0.19	1.74	26.90	0.60	0.58 Hexane
NG - Non Heat Treat Operations	0.59	2.36	2.36	31.00	0.19	1.71	26.04	0.59	0.56 Hexane
NG Boilers - EUB3 and EUB5	0.01	0.04	0.04	0.56	0.00	0.03	0.47	0.01	0.01 Hexane

EG8 - Emergency Air Compressor (Diesel)	0.07	0.07	0.07	0.97	0.06	0.08	0.21	negl.	negl.
EG1 - EG6, NG Emergency Generators	negl.	negl.	negl.	1.37	negl.	0.04	0.11	0.02	0.02 Formaldehyde
NG EG, 426 hp	negl.	0.01	0.01	3.26	negl.	0.09	0.25	0.06	0.04 Formaldehyde
Open Top Vapor Degreaser, EUVD	0.00	0.00	0.00	0.00	0.00	6.54	0.00	0.33	0.33 1,2 Butylene Oxide
Parts Washers	0.00	0.00	0.00	0.00	0.00	16.82	0.00	0.00	0.00
Woodworking	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Cooling Towers	2.37	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions	14.12	2.82	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Total PTE of Entire Source	**102.86**	**73.22**	**43.67**	**70.57**	**0.45**	**54.50**	**82.43**	**7.73**	**3.40 Toluene**
Title V Major Source Thresholds	NA	100	100	100	100	100	100	25	10
PSD Major Source Thresholds	250	250	250	250	250	250	250	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a "regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant is emitted at a rate of two hundred fifty (250) tons per year or more and it is not one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are less than ten (10) tons per year for any single HAP and less than twenty-five (25) tons per year of a combination of HAPs. Therefore, this source is an area source under Section 112 of the Clean Air Act (CAA).

Federal Rule Applicability

New Source Performance Standards (NSPS)

(a) Boilers EUB3 and EUB5

The requirements of the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units, 40 CFR 60, Subpart Dc (326 IAC 12), are not included in the permit because natural gas-fired boilers, EUB3 and EUB5, each, have a maximum heat input capacity of less than 10 MMBtu per hour.

(b) Emergency Generators

(1) The requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII (326 IAC 12), are not included in the permit since the one (1) 426 hp natural gas-fired emergency generator and the six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, are not compression ignition engines.

(2) The requirements of the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII, (326 IAC 12), are not included for this permit since the one (1) diesel air compressor, identified as EG8, was constructed before July 11, 2005.

(3) The requirements of the Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (326 IAC 12), are not included for this permit since the one (1) diesel air compressor, identified as EG8, is not a spark ignition engine.

(4) The requirements of the Standards of Peformance for Stationary Spark Ignition Internal Combustion Engines, 40 CFR 60, Subpart JJJJ (326 IAC 12), are not included for this permit since the one (1) 426 hp natural gas-fired emergency generator and the six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, were constructed prior to June 12, 2006.

(c) This source is not subject to the requirements of the Standards of Performance for Metallic Mineral Processing Plants, 40 CFR 60, Subpart LL ((326 IAC 12), since it does not meet the definition of a metallic mineral processing plant per 40 CFR 60.380, and therefore is not subject to this rule.

(d) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(a) Boilers EUB3 and EUB5

(1) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart DDDDD, are not included in the permit because the source is not a major source, located at a major source, or part of a major source of emissions of HAP.

(2) The requirements of the NESHAP for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, are not included in the permit for the boilers because they are exempt from this subpart, pursuant to 40 CFR 63.11195(e), since each boiler meets the definition of a gas-fired boiler as defined in 40 CFR 63.11237.

(b) Emergency Generators

(1) The one (1) 426 hp natural gas-fired emergency generator, and the six (6) natural gas-fired electric emergency generators, identified as EG1 through EG6, are subject the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because they are considered existing stationary reciprocating internal combustion engines (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the one (1) 426 natural gas-fired emergency generator commenced in 1993 and construction of the six (6) emergency generators, identified as EG1 through EG6 commenced in 2005.

The 426 hp natural gas-fired emergency generator and the six (6) natural gas-fired electric emergency generators, identified as EG1 through EG6, are subject to the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605

(7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670
(16) 40 CFR 63.6675
(17) Table 2d (item 5)
(18) Table 6 (item 9)
(19) Table 8

Note: Existing emergency spark ignition (SI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

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

(2) The one (1) diesel generator, identified as EG8, is subject the requirements of the 40 CFR 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines (326 IAC 20-82), because it is considered an existing stationary reciprocating internal combustion engine (RICE) (construction commenced before June 12, 2006) at an area source of hazardous air pollutants (HAP). Construction of the diesel generator, identified as EG8, commenced in 1996.

The diesel generator, identified as EG8, is subject the following applicable portions of the NESHAP for existing emergency stationary RICE (construction commenced before June 12, 2006) at an area source of HAP:

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

Note: Existing emergency compression ignition (CI) stationary RICE located at an area source of HAP are not subject to numerical CO or formaldehyde emission limitations, but are only subject to work and management practices under Table 2d and Table 6.

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

Based on the existing permit, this source is subject to 40 CFR 63, Subpart ZZZZ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 63.6640(f)(2)(ii) - (iii) of NESHAP Subpart ZZZZ. Therefore, these paragraphs no longer have any legal effect and any engine that is operated for purposes specified in these paragraphs becomes a non-emergency engine and must comply with all applicable requirements for a non-emergency engine.

For additional information, please refer to the USEPA's Guidance Memo: https://www3.epa.gov/airtoxics/icengines/docs/RICEVacaturGuidance041516.pdf

Since the federal rule has not been updated to remove these vacated requirements, the text below shows the vacated language as ~~strikethrough~~ text. At this time, IDEM is not making any changes to the permit's attachment due to this vacatur. However, the permit will not reference the vacated requirements, as applicable.

40 CFR 63.6640(f)(2) You may operate your emergency stationary RICE for any combination of the purposes specified in paragraph~~s~~ (f)(2)(i) ~~through (iii)~~ of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraphs (f)(3) and (4) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (f)(2).

(i) Emergency stationary RICE may be operated for maintenance checks and readiness testing, provided that the tests are recommended by federal, state or local government, the manufacturer, the vendor, the regional transmission organization or equivalent balancing authority and transmission operator, or the insurance company associated with the engine. The owner or operator may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency RICE beyond 100 hours per calendar year.

~~(ii) Emergency stationary RICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §63.14), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.~~

~~(iii) Emergency stationary RICE may be operated for periods where there is a deviation of voltage or frequency of 5 percent or greater below standard voltage or frequency.~~

(c) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Halogenated Solvent Cleaning, 40 CFR 63, Subpart T, because the source does not use halogenated solvents.

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Surface Coating of Miscellaneous Metal Parts and Products, 40 CFR 63, Subpart MMMM

(326 IAC 20-80) are not included in the permit, since this source is not a major source of HAPs as defined in 40 CFR 63.

(e) This source is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS), 40 CFR 63, Subpart HHHHHH, Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources, because the source does not use chemical strippers that contain methyl chloride (MeCl) in paint removal process, the source is not an autobody refinishing operation, and the surface coatings used at this source do not contain chromium (Cr), lead (Pb), manganese (Mn), nickel (Ni), or cadmium (Cd).

(f) This source is subject to the requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS) for Nine Metal Fabrication and Finishing Source Categories, 40 CFR 63, Subpart XXXXXX, because this source is not primarily engaged in one of the nine source categories listed in 40 CFR 63.11514(a)(1) through (9).

(g) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPS), Area Source Standards for Plating and Polishing, 40 CFR 63, Subpart WWWWWW are not included in the permit, because the source does not have plating operations.

(h) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAP) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in this permit renewal.

Compliance Assurance Monitoring (CAM)

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is not included in the permit, because the unlimited potential to emit of the source is less than the Title V major source thresholds and the source is not required to obtain a Part 70 or Part 71 permit.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration(PSD))
See discussion under Potential to Emit After Issuance section above.

326 IAC 2-6.1 (Minor Source Operating Permits (MSOP))
The potential to emit (PTE) (as defined in 326 IAC 2-1.1-1(16)) of PM10, PM2.5, NOx, VOC, and CO are each less than one hundred (100) tons per year, but greater than or equal to twenty-five (25) tons per year. The PTE of all other regulated criteria pollutants are less than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-6.1. Therefore, the source will be issued an MSOP Renewal Permit.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
See discussion under Potential to Emit After Issuance section above.

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

(1) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(2) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

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)
The source is not subject to the requirements of 326 IAC 6-5, because there are no fugitive particulate emissions greater than 25 tons per year.

326 IAC 7 (Sulfur Dioxide Emission Limitations)
Each of the emission units at this source has potential SO2 emissions of less than twenty-five (25) tons per year and ten (10) pounds per hour. Therefore, 326 IAC 7 does not apply.

326 IAC 12 (New Source Performance Standards)
See Federal Rule Applicability Section of this TSD.

326 IAC 20 (Hazardous Air Pollutants)
See Federal Rule Applicability Section of this TSD.

State Rule Applicability - Individual Facilities

Paint booths EUP-1 and EUP-2

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2(d), particulate emissions from the paint shop spray booths EUP-1 and EUP-2 must be controlled by dry filters, waterwash, or an equivalent control device operated in accordance with manufacturer's specifications, subject to the following:

(a) If overspray is visibly detected at the exhaust or accumulates on the ground, the Permittee shall inspect the control device and do either of the following no later than four (4) hours after such observation:

(1) Repair control device so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(2) Operate equipment so that no overspray is visibly detectable at the exhaust or accumulates on the ground.

(b) If overspray is visibly detected, the Permittee shall maintain a record of the action taken as a result of the inspection, any repairs of the control device, or change in operations, so that overspray is not visibly detected at the exhaust or accumulates on the ground. These records must be maintained for five (5) years.

326 IAC 8-2-9 (Miscellaneous metal and plastic parts coating operation)
Pursuant to 326 IAC 8-2-1 (Applicability), this rule applies to facilities constructed after July 1, 1990 located in any county, and with actual VOC emissions of greater than fifteen (15) pounds per day before add-on controls. This source performs miscellaneous metal coating operations as described in 326 IAC 8-2-1(a)(4), was constructed after July 1, 1990, and has actual emissions of greater than fifteen (15) pounds of VOC per day before add-on controls and is therefore subject to 326 IAC 8-2-9.

(a) Pursuant to 326 IAC 8-2-9, the volatile organic compound (VOC) content of coating delivered to the applicators at EUP-1 and EUP-2 paint booths shall each be limited to 3.5 pounds of VOCs per gallon of coating less water, for extreme performance coatings. Alternatively, the coatings delivered to EUP-1 and EUP-2 shall be limited to 6.7 lbs of VOCs per gallon of solids, based on the daily weighted average of the coatings.

(b) Pursuant to 326 IAC 8-1-2(b), the paint booths, identified as EUP-1 and EUP-2, the VOC emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids, allowed in (a).

This equivalency was determined by the following equation:

E = L / (1- (L/D)

E = [3.5/(1-3.5/7.36)] = 6.7 lbs VOC/gal solids

Where:

L = Applicable emission limit from 326 IAC 8 in pounds of VOC per gallon of coating;
D = Density of VOC in coating in pounds per gallon of VOC;
E = Equivalent emission limit in pounds of VOC per gallon of coating solids as applied.

A solvent density of 7.36 pounds of VOC per gallon of solvent in the coating shall be used to determine equivalent pounds of VOC per gallon of solids for the applicable emission limit contained in this article.

Actual solvent density shall be used to determine compliance of the surface coating operation using the compliance methods in 326 IAC 8-1-2(a).

(c) Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(1) Store all VOC containing coatings, thinners, coating related waste, and cleaning materials in closed containers.

(2) Ensure that mixing and storage containers used for VOC containing coatings, thinners, coating related waste, and cleaning materials are kept closed at all times except when depositing or removing these materials.

(3) Minimize spills of VOC containing coatings, thinners, coating related waste, and cleaning materials.

(4) Convey VOC containing coatings, thinners, coating related waste, and cleaning materials from one (1) location to another in closed containers or pipes.

(5) Minimize VOC emissions from the cleaning application, storage, mixing, and conveying equipment by ensuring that equipment cleaning is performed without atomizing the cleaning solvent and all spent solvent is captured in closed containers.

Thirteen (13) Shot blasters, Two (2) glass bead polishing and cleaning, Two (2) polish lathes and grinding and drilling operations

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

(a) Pursuant to 326 IAC 6-3-2, the particulate (PM) emission rates from each of the facilities shall not exceed the pound per hour limitations listed in the table below:

Unit ID / Control Device Shot blasters	Process Weight Rate (ton / hour) P	Allowable Particulate Emission Limits (pound / hour) E
EUSB1/DCSB1	48.33	44.26
EUSB2/DCSB2	38.99	42.29
EUSB3/DCSB3	63.03	46.76
EUSB4/DCSB4	73.73	48.27
EUSB5/DCSB5	108.98	52.14
EUSB6/DCSB6	41.27	42.81
EUSB7/DCSB7	123.81	53.45
EUSB12/DCSB12	2.40	7.37
EUSB8b/DCSB12	22.26	32.78
EUSB9/DCSB9	108.14	52.07
EUSB10/DCSB10	41.21	42.80
EUSB11/DCSB11	54.31	45.35
EUSB13/DCSB13	1.82	6.12

Based on calculations, the control devices for the shot blasters are not needed to comply with these limits.

For PM Emission Limits for all blasters <u>except</u> EUSB8b, EUSB12, and EUSB13:
Interpolation and extrapolation of the data for process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 55.0\ P^{0.11} - 40$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

For PM Emission Limits for blasters EUSB8b, EUSB12, and EUSB13:
Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = (4.10)\ P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(b) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the two glass bead polishing and cleaning operations shall not exceed 10.99 pounds per hour each, when operating at a process weight rate of 8,658 pounds per hour of bead media and 60 pounds per hour of metal throughput per hour each, which is equivalent to 4.36 tons per hour throughput each machine.

Note: The source claims that the two glass bead polishing and cleaning operations have equal maximum process throughput.

(c) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the two (2) polish lathes and grinding and drilling operations shall not exceed 0.89 pounds per hour each when

operating at a process weight rate of 0.103 tons per hour each, which is equivalent to 204.93 pounds per hour each.

The pound per hour limitations for (b) and (c) were calculated with the following equation:

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

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

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

Based on calculations, the dust collectors in bead polishing and cleaning operations are not needed to comply with this limit. The potential particulate emissions from each of the bead polishing and cleaning operations are 0.55 lbs/hr without control, and are less than allowable. Also, the dust from the polish lathes and grinding operation is negligible.

Emergency Generators- 426 hp, EG8, and EG1 through EG6

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The natural gas-fired emergency generators and diesel generators are not subject to the requirements 326 IAC 6-2 as they are not a source of indirect heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the natural gas-fired emergency generators and diesel generators are exempt from the requirements of 326 IAC 6-3, because each has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 8-1-6 (VOC rules: General Reduction Requirements for New Facilities)
Pursuant to 326 IAC 8-1-6, this rule applies to new facilities, which have potential VOC emissions of 25 tons or greater per year, located anywhere in the state, which are not otherwise regulated by other provisions of 326 IAC 8. The requirements of 326 IAC 8-1-6 are not applicable to the natural gas-fired emergency generators and diesel generators, since each does not have the potential to emit VOC greater than twenty-five (25) tons per year.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The diesel air compressors, 125 hp and EG8 are not subject to 326 IAC 9-1 (Carbon Monoxide Emission Limits) because there is no applicable emission limit for the source under 326 IAC 9-1-2.

326 IAC 10-1-1 (Nitrogen Oxides Control)
The diesel air compressors, 125 hp and EG8 are not subject to 326 IAC 10-1-1 (Nitrogen Oxides Control) because the source is not located in Clark or Floyd counties.

326 IAC 10-5-1 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE))
The diesel air compressors, 125 hp and EG8 are not subject to 326 IAC 10-5-1 (Nitrogen Oxide Reduction Program for Internal Combustion Engines (ICE)) because it is not a large NOx SIP Call engine, as defined in 326 IAC 10-5-2(4).

Natural Gas Boilers EUB3 and EUB5

326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating)
Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating), particulate emissions from natural gas boilers EUB3 and EUB5 shall be limited to 0.6 lb/MMBtu heat input.

The natural gas-fired water heaters, identified as EUB3 and EUB5, have potential PM emissions of

0.0019 lb/MMBtu, each, therefore, they are in compliance 326 IAC 6-2 without the use of a control device.

Natural Gas space heaters, Furnaces and RX Generator units:

326 IAC 6-2 (Particulate Emissions from Indirect Heating Units)
The natural gas-fired space heaters and furnaces, are each not subject to 326 IAC 6-2 as they are not sources of indirect heating.

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), the source-wide space heaters are not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), because each has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

326 IAC 9-1 (Carbon Monoxide Emission Limits)
The RX generators are not subject to the requirements of 326 IAC 9-1, because there is no applicable emission limit for the source under 326 IAC 9-1-2.

Integrated Machines

326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-1(b)(14), each of the two hundred twenty-three (223) integrated machines is not subject to the requirements of 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes), because each has a potential particulate emissions less than five hundred fifty-one thousandths (0.551) pound per hour.

Cold Cleaners Degreasers (Parts Washers)

326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements)
Pursuant to 326 IAC 8-3-1 (Organic Solvent Degreasing Operations), the sixty-six (66) cold cleaner degreasers are each subject to the requirements of 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements) and 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers), since each of the units meet the definition of a cold cleaner degreaser under 326 IAC 1-2-18.5, utilize an organic solvent containing volatile organic compounds (VOCs) (as defined by 326 IAC 1-2-90), were constructed after the July 1, 1990, and do not have remote solvent reservoirs.

Pursuant to 326 IAC 8-3-2 (Cold Cleaner Degreaser Control Equipment and Operating Requirements) for the sixty-six (66) cold cleaner degreasers, 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

326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers)
Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner Degreasers) for the sixty-six (66) cold cleaner degreasers, the Permittee shall:

(a) 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).

(b) 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 (or invoice/bill dates of contract servicer indicating service date).

(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).

Open Top Vapor Degreaser, EUVD

326 IAC 8-3-3 Open top vapor degreaser operation:
Pursuant to 326 IAC 8-3-3, the open top vapor degreaser, identified as EUVD, installed in 2006, is subject to the requirements of 326 IAC 8-3-3 (Open top vapor degreaser operation), since the unit meets the definition of an open top vapor degreaser operation under 326 IAC 1-2-49.5, utilizes an organic solvent containing volatile organic compounds (VOCs) (as defined by 326 IAC 1-2-90), was constructed after the July 1, 1990, and does not have a remote solvent reservoir.

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operation), the Permittee shall:

(a) Ensure the following control equipment and operating requirements are met:

(1) Equip the vapor degreaser with a cover that can be opened and closed easily without disturbing the vapor zone.

(2) Keep the cover closed at all times except when processing workloads through the degreaser.

(3) Minimize solvent carryout by:

(A) racking parts to allow complete drainage;

(B) moving parts in and out of the degreaser at less than three and three-tenths (3.3) meters per minute (eleven (11) feet per minute);

(C) degreasing the workload in the vapor zone at least thirty (30) seconds or until condensation ceases;

(D) tipping out any pools of solvent on the cleaned parts before removal;

(E) allowing parts to dry within the degreaser for at least fifteen (15) seconds or until visually dry.

(4) Prohibit the entrance into the degreaser of porous or absorbent materials, such as cloth, leather, wood or rope.

(5) Prohibit the occupation of more than one-half (1/2) of the degreaser's open top area with the workload.

(6) Prohibit the loading of the degreaser in a manner that causes the vapor level to drop more than fifty percent (50%) of the vapor depth when the workload is removed.

(7) Prohibit solvent spraying above the vapor level.

(8) Repair solvent leaks immediately, or shut down the degreaser if leaks cannot be repaired immediately.

(9) Store waste solvent only in closed containers.

(10) Prohibit the disposal or transfer of waste solvent in a manner that could allow greater than twenty percent (20%) of the waste solvent (by weight) to evaporate into the atmosphere.

(11) Prohibit the use of workplace fans near the degreaser opening.

(12) Prohibit visually detectable water in the solvent exiting the water separator.

(13) Provide the degreaser with a permanent, conspicuous label that lists the operating requirements in subdivisions (2) through (12).

(b) The Permittee shall ensure that the following additional control equipment and operating requirements are met:

(1) Equip the degreaser with the following switches:

(A) A condenser flow switch and thermostat that shuts off sump heat if condenser coolant stops circulating or becomes too warm.

(B) A spray safety switch that shuts off spray pump if the vapor level drops more than ten (10) centimeters (four (4) inches).

(2) Equip the degreaser with one (1) of the following control devices:

(A) A freeboard ratio of seventy-five hundredths (0.75) or greater and a powdered cover if the degreaser opening is greater than one (1) square meter (ten and eight-tenths (10.8) square feet).

(B) A refrigerated chiller.

(C) An enclosed design in which the cover opens only when the article is actually entering or exiting the degreaser.

(D) A carbon adsorption system with ventilation that, with the cover open, achieves a ventilation rate of greater than or equal to fifteen (15) cubic meters per minute (fifty (50) cubic feet per minute per square foot) of air-to-vapor interface area and an average of less than twenty-five (25) parts per million of solvent is exhausted over one (1) complete adsorption cycle.

(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.

(3) Prohibit the loading of the degreaser to the point where the vapor level would drop more than ten (10) centimeters (four (4) inches) when the workload is removed.

(4) Prohibit the exhaust ventilation rate from exceeding twenty (20) cubic meters per minute per square meter (sixty-five (65) cubic feet per minute per square foot) of degreaser open are unless a greater ventilation rate is necessary to meet Occupational Safety Health Administration requirements.

(5) Ensure that the label required under subsection (a)(13) includes the additional operating requirements listed in subdivisions (3) and (4).

Compliance Determination and Monitoring Requirements

Compliance Determination Requirements

Paint Booths:

IDEM has determined that compliance with the VOC content limits in 326 IAC 8 can be established by using the data contained in the relevant MSDS and through calculations performed by the Permittee. The compliance determination and monitoring requirements for the paint booths applicable are as follows:

(1) Compliance with the VOC content limit shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) by preparing or obtaining from the manufacturer copies of "as supplied" and "as applied" VOC data sheets. IDEM, OAQ, reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

(2) Records necessary to demonstrate compliance shall be available within 30 days of the end of each compliance period.

No stack test is required for this facility because compliance with the MSOP limit for VOC can be determined by evaluating MSDSs and keeping records of the amount of VOC applied. The use of dry filters ensures compliance with 326 IAC 2-6.1 (MSOP) and 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes). The compliance monitoring requirements included in the permit should assure compliance with these rules.

Compliance Monitoring Requirements

The Compliance monitoring requirements applicable to the emission facilities are as follows:

The following monitoring conditions are necessary because the two (2) surface coating operations, and heat treat units integral to RX generators, must operate properly to assure compliance with 326 IAC 6-3 (Particulate Emission Limitations for Manufacturing Processes) and 326 IAC 2-6.1 (MSOP). Compliance monitoring requirements applies to units listed in the following table.

Emission Unit/Control	Operating Parameters	Frequency	Excursions and Exceedances
Surface Coating			
Surface Coating EUP-1 and EUP-2	Filter Check	Once per day	Response steps
Surface Coating EUP-1 and EUP-2	Overspray Observations	Once per week	Response steps
Surface Coating EUP-1 and EUP-2	Stack Exhaust Observations	Once per month	Response steps
RX generators/Heat treat ovens			
RX Generators/Heat Treat ovens	Presence of flare	Continuous	Response steps

Proposed Changes

Section A.1 - General Information
IDEM, OAQ has added the SIC code description.

Section A.2 - Emission Units and Pollution Control Equipment Summary
The emission unit descriptions have been updated to include changes identified by the source.

Sections B and C
IDEM, OAQ has revised these sections to reflect the current model language. No bold and strikethrough are shown for these revisions.

Section D
1. The emission unit descriptions have been updated to include changes identified by the source.
2. IDEM, OAQ has added the applicable rule citation to Subsection "Compliance Determination Requirements".

3. IDEM, OAQ has corrected typographical errors in Condition D.2.1.
4. IDEM, OAQ has added particulate emission limits for boilers EUB3 and EUB5 in Section D.4.
5. IDEM, OAQ has updated 326 IAC 8-3 rule applicability language in Section D.5 for the degreasers.

Section E.1 - NESHAP

1. IDEM, OAQ has updated language to reflect the current model language.
2. IDEM, OAQ has updated NESHAP Subpart ZZZZ requirements to reflect USEPA's interpretation of *commercial emergency engine* as put forth in a guidance document issued September 30, 2010. The rule applicability has been revised for the eight (8) emergency generators.

Report Form for Annual Notification

The permit number has been revised.

The changes listed below have been made to the MSOP Renewal. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

A.1 General Information [326 IAC 2-5.1-3(c)][326 IAC 2-6.1-4(a)]

....

SIC Code: 3566 **(Speed Changers, Industrial High-Speed Drives, and Gears)**

....

A.2 Emission Units and Pollution Control Equipment Summary

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

....

(b) ~~Twelve (12)~~ **Thirteen (13)** Shot Blasters:

....

(12) One (1) blast belt operation, identified as EUSB11, constructed in 1999, equipped with a voluntary dust collector, DCS**B**11 for particulate control, with a maximum process throughput of 2,600 lbs per hour, and media 106,020 lbs/hr, exhausting through stack SSB11.

(13) One (1) shot peener, identified as EUSB13, constructed in 1999, equipped with a voluntary dust collector, DCSB13 for particulate control, with a maximum process throughput of 3600 lbs per hour, and media 36 lbs/hr, exhausting through stack SSB13.

....

(e) ~~Ten~~ **Two hundred twenty-three** (**223**~~10~~) wet type integrated machining operations, identified as EUIM-1 through EUIM-**223**~~10~~, constructed in 2006 through ~~2008~~**2014**, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(f) RX generators with heat treat ovens

....

(2) Natural gas fired heat treat ovens used with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (each)
-Super 36 Allcase Furnace #1, #2, #4	3	5.10
Super 36 Allcase Furnace #3	1	6.73

-Auto Hardeners **#1,** #2, #3, #4	~~34~~	1.00
-Gas & Electric Carburizer #8	1	3.06
Gas & Electric Carburizer #9	1	5.00
-Gas Carburizers #3, #4	2	4.59
Gas Carburizer #5	1	5.97
-Homo Carb Draw #1 West, #2 East	2	~~1.25~~**1.1**
~~Rotary Hardening Furnace #6~~	~~1~~	~~1.00~~
-Small Allcase Furnace #1	1	1.00
-Small Allcase Furnace#2	1	1.00
Small Allcase Furnace#3	1	1.00
Batch Anneal- Furnace	1	~~0.50~~**1.3**
~~Lead Pot~~	~~1~~	~~1.15~~
LT Draw ~~Furance~~**Furnace** #1,#2,#3,#4	4	0.50
Nitrogen Generator	1	0.37
-Program Draw #1 East and #2 west	2	1.00
Trinider ~~Furance~~ **Furnace**	1	2.35
Draw Furnace #1 through #~~7~~**6**	~~7~~**6**	~~0.353~~**1.0**

(3) Electric heat treat ovens associated with carburizing, used to combust CO generated by the RX generators, exhausting inside, and consisting of the following:

(A) One (1) Electric carburizer, identified as #6.

....

(G) #2 Homo Draw Furnace

(H) #4 Homo Draw Furnace

(I) #6 Homo Draw Furnace

(J) Two (2) Homo Deep Draw

(K) Two (2) Homo Draw

(L) Two (2) Homo Draw Furnace

(M) #1 Homo Draw Furnace

(N) #3 Homo Draw Furnace

(O) # 5 Homo Draw Furnace

(g) Boilers:

~~(1) One (1) natural gas-fired boiler, identified as EUB1, constructed in 1967, rated at 0.918 MMBtu/hr .~~

~~(2) One (1) natural gas-fired boiler, identified as EUB2, constructed in 1995, rated at 1.22 MMBtu/hr.~~

(1) One (1) natural gas-fired boiler, identified as EUB3, constructed in 1996, rated at 0.80 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB5, constructed in 2014, rated at 0.50 MMBtu/hr.

(h) Emergency generators used for emergency purposes:

(1) One (1) **four stroke, lean burn,** 426 hp natural gas-fired emergency generator, constructed in 1993, exhausting outside.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ**,**~~)~~ the 426 hp natural gas-fired emergency generator is considered an existing affected **source** ~~facility because it was constructed before June 12, 2006~~.

(2) One (1) diesel air compressor, identified as EG8, constructed in 1996, with a maximum power output of 125 horsepower and maximum operating hours of 500 hrs/yr, and exhausting through SEG7.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ**,**~~)~~ the diesel air compressor EG8 is considered **an** existing affected **source** ~~facilities because it was constructed before June 12, 2006~~.

(3) Six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, constructed in 2005, with a maximum power output of 0.224 MMBtu/hr, each and maximum operating hours of 500 hrs/yr, and exhausting through SEG1 through SEG6.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ**,**~~)~~ the six (6) emergency generators, identified EG1 through EG6, are considered existing affected **sources**~~facilities because each were constructed before June 12, 2006~~.

....

(i) Miscellaneous Natural gas-fired space heaters, and part washers with heat input capacity less than 10 MMBtu/hr each, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (~~each~~**total**)
Roof Mount Furnaces	~~13~~**23**	~~3.25~~**54.02**
Continental Parts Washer	1	0.80
Ransohoff Parts Washer	1	~~1.50~~**2.00**
Continental Parts Washer	1	1.50
Infrared Tubular Heaters - Heat treat	4	~~2.0~~**0.80**
Infrared Tubular Heaters - Receiving	15	~~0.1~~**2.25**
Heat Towers in Assy Bldg.	3	~~5.25~~**1.20**
Radiant Heaters in Chip Room	~~2~~**4**	~~0.20~~**0.10**
~~Draw Furnaces~~	~~7~~	~~0.5~~
Paint Booth Oven	**1**	**0.90**
Water Heaters	**4**	**0.90**
Kitchen Equipment	**1**	**0.50**

Hanson Washer	**1**	**0.50**
Misc. Small Space Heaters	**12**	**1.75**
Hydraulic Motor Room HVAC Unit	**1**	**0.26**
415E Parts Washer	**1**	**2.00**
Paint Booth HVAC Unit	**1**	**2.72**

~~(j) One (1) Nickel electroplating station, using dip coating and brushing the solution onto the metal gear assemblies, maximum capacity 60 lbs of metal parts/hr.~~

(j~~k~~) Degreasers:

(1) Sixty-six (~~65~~**66**) cold solvent cleaning parts washers, constructed in or before 1990.

(2) One (1) open top vapor degreaser, identified as EUVD, installed in ~~2006~~**2015**, with a surface area of 30 ft.^{2}

~~(l) One (1) TIG Welding Operation, with a maximum capacity of 12 gear assemblies per hour, with a maximum throughput of 12,000 pounds per hour of gears, and less than 625 pounds of rod per day, exhausting indoors.~~

(k) Three (3) Cooling Towers, identified as Cooling Towers 1-3, with a total circulating flow rate of 1,000 gal/min, each.

(l) Woodworking operations, identified as WW-1, with emissions controlled by a baghouse and exhausting internally.

(m) Paved Roadways.

....

D.1.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9 (Volatile Organic Compounds, Miscellaneous Metal and Plastic Parts Coating Operations), when coating metal parts, the volatile organic compound (VOC) content of the coating delivered to the applicator at the surface coating operation, identified as EUP-1, and EUP-2 shall each be limited to 3.5 pounds per gallon of coating, excluding water, for forced warm air dried coatings**, as delivered to the applicator**.

D.1.2 Volatile Organic Compounds (VOC) Limitations, Clean-up Requirements [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9(f), work practices shall be used to minimize VOC emissions from mixing operations, storage tanks, and other containers, and handling operations for coatings, thinners, cleaning materials, and waste materials. Work practices shall include, but not limited to, the following:

(**a**~~1~~) ...
(**b**~~2~~) ...
(**c**~~3~~) ...
(**d**~~4~~) ...
(**e**~~5~~) ...

D.1.3 Volatile Organic Compounds (VOC) [326 IAC 8-1-2]

(a) ~~In order to comply with D.1.1 and p~~**P**ursuant to 326 IAC 8-1-2(b), the large spray paint booth, identified as EUP-1, and small spray paint booth, identified as EUP-2, ~~the~~ VOC

emissions shall be limited to no greater than the equivalent emissions, expressed as pounds of VOC per gallon of coating solids**, allowed in Condition D.1.1**.

...

Compliance Determination Requirements **[326 IAC 2-6.1-5(a)(2)]**

D.1.6 Volatile Organic Compounds

Compliance with the VOC content ~~and usage~~ limitations contained in Condition D.1.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3)(A) **and 326 IAC 8-1-2(a) by preparing or** ~~using formulation data supplied by the coating~~ **obtaining from the** manufacturer **the copies of the "as supplied" and "as applied" VOC data sheets**. ~~However,~~ IDEM, OAQ reserves the authority to determine compliance using Method 24 in conjunction with the analytical procedures specified in 326 IAC 8-1-4.

....

D.1.8 Record Keeping Requirements

(a) To document the compliance status with Conditions D.1.1 and D.1.3, the Permittee shall maintain records in accordance with (1) through (3) below. Records maintained for (1) through (3) shall be taken daily and shall be complete and sufficient to establish compliance **with the VOC content limits** in Conditions D.1.1 and D.1.3. ~~Records necessary to demonstrate compliance shall be available no later than 30 days of the end of each Compliance period.~~

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

....

(b) ~~Twelve (12)~~ **Thirteen (13)** Shot Blasters:

....

(13) One (1) shot peener, identified as EUSB13, constructed in 1999, equipped with a voluntary dust collector, DCSB13 for particulate control, with a maximum process throughput of 3600 lbs per hour, and media 36 lbs/hr, exhausting through stack SSB13.

....

(e) ~~Ten~~ **Two hundred twenty-three** (**213**~~10~~) wet type integrated machining operations, identified as EUIM-1 through EUIM-**223**~~10~~, constructed in 2006 through ~~2008~~**2014**, each equipped with a mist collector to control oil mist generated by the process, maximum metal process throughput of 204.93 lbs/hr each, and exhausting internally.

(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 2-6.1-5(a)(1)]

D.2.1 Particulate [326 IAC 6-3-2~~(d)~~]

(a) Pursuant to 326 IAC 6-3-2, the particulate (PM) emission rates from each of the facilities shall not exceed the pound per hour limitations listed in the table below:

Unit ID / Control Device	Stack	Process Weight Rate (ton / hour) P	Allowable Particulate Emission Limits (pound / hour) E
EUSB1/DCSB1	SSB1	48.33	44.26
EUSB2/DCSB2	SSB2	38.99	42.29
EUSB3/DCSB3	SSB3	63.03	46.76
EUSB4/DCSB4	SSB4	73.73	48.27~~6~~
EUSB5/DCSB5	SSB5	108.98	52.14
EUSB6/DCSB6	SSB6	41.27	42.8**1**
EUSB7/DCSB7	SSB7	123.81	53.4**5**~~4~~
EUSB12/DCSB12	SSB12	2.4**0**	7.37
EUSB8b/DCSB12	SSB12	22.2~~55~~**26**	32.78
EUSB9/DCSB9	SSB9	108**.14**	52.0**7**
EUSB10/DCSB10	inside	41.2**1**~~0~~	42.**80**~~79~~
EUSB11/DCSB11	SSB11	54.31	45.35
EUSB13/DCSB13	**SSB13**	**1.82**	**6.12**

~~Use for PM Emission Limits for all blasters except EUSB8b & EUSB12:~~
Interpolation ~~and extrapolation~~ of the data for process weight rates in excess of sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$E = 55.0\ P^{0.11} - 40$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

~~Use for PM Emission Limits for blasters EUSB8b & EUSB12:~~
Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

....

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:
....

(2) Natural gas fired heat treat ovens, with a maximum heat input capacity of less than 10.0 MMBtu per hour each, exhausting inside, and consisting of the following:

Combustion units	No. of Units	MMBtu/hr (each)
Super 36 Allcase Furnace #1, #2, #4	3	5.10
Super 36 Allcase Furnace #3	1	6.73
Auto Hardeners **#1,** #2, #3, #4	~~3~~**4**	1.00
Gas & Electric Carburizer #8	1	3.06
Gas & Electric Carburizer #9	1	5.00
Gas Carburizers #3, #4	2	4.59
Gas Carburizer #5	1	5.97
Homo Carb Draw #1 West, #2 East	2	~~1.25~~**1.1**
~~Rotary Hardening Furnace #6~~	~~1~~	~~1.00~~
Small Allcase Furnace #1	1	1.00
Small Allcase Furnace#2	1	1.00
Small Allcase Furnace#3	1	1.00

Batch Anneal- Furnace	1	~~0.50~~**1.3**
~~Lead Pot~~	~~1~~	~~1.15~~
LT Draw ~~Furance~~**Furnace** #1,#2,#3,#4	4	0.50
Nitrogen Generator	1	0.37
Program Draw #1 East and #2 west	2	1.00
Trinider ~~Furance~~**Furnace**	1	2.35
Draw Furnace #1 through #~~7~~**6**	~~7~~**6**	~~0.353~~**1.0**

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

....

D.3.1 RX generators and heat treat ovens

~~Pursuant to 326 IAC 2-6.1-5, and i~~**I**n order to ~~comply with CO emissions,~~ **assure the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable**, the presence of flames at the pilot lights shall be provided at all openings of the **heat treat** oven**s** to **e~~i~~**nsure the burn off of excess CO when **the** RX ~~g~~**G**enerators are in operation.

Compliance with this condition, combined with the potential to emit CO from all other emission units at the source, shall assure the CO emissions from the entire source are less than 100 tons per twelve (12) consecutive month period and shall assure the requirements of 326 IAC 2-7 (Part 70 Permits) and 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) are not applicable.

Compliance Monitoring Requirements [326 IAC 2-6.1-5(a)(2)]

D.3.2 Flare Pilot Monitoring

~~Pursuant to 326 IAC 2-6.1-5, and in order to comply with CO emissions,~~ **In order to assure compliance with Condition D.3.1,** the Permittee shall install and monitor automatic flame recognition audible alarm**s** or any other equivalent device**s**, at the control panel of each furnace that is equipped with a pilot CO burner to detect the presence of flares at the pilot light when RX generators are in operation.

Record Keeping and Reporting Requirement ~~[326 IAC 2-8-4(3)]~~ **[326 IAC 2-6.1-5(a)(2)]**

...

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(g) Boilers:

~~(1) One (1) natural gas-fired boiler, identified as EUB1, constructed in 1967, rated at 0.918 MMBtu/hr .~~

~~(2) One (1) natural gas-fired boiler, identified as EUB2, constructed in 1995, rated at 1.22 MMBtu/hr.~~

(1) One (1) natural gas-fired boiler, identified as EUB3, constructed in 1996, rated at 0.80 MMBtu/hr.

(2) One (1) natural gas-fired boiler, identified as EUB5, constructed in 2014, rated at 0.50 MMBtu/hr.

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

Emission Limitations and Standards [326 IAC 2-6.1-5(a)(1)]

~~D.4.1 Particulate Emission Limitations [326 IAC 6-2-3]~~

~~Pursuant to 326 IAC 6-2-3(d), particulate emissions from the one (1) boiler identified as EUB1, shall not exceed 0.8 pound per million British thermal units.~~

D.4.**1**~~2~~ Particulate Matter (PM) [326 IAC 6-2-4]

~~Pursuant to 326 IAC 6-2-4, particulate emissions from the one (1) boiler, identified as EUB2, shall not exceed 0.6pound per million British thermal units.~~

Pursuant to 326 IAC 6-2-4, particulate emissions from the natural gas-fired boilers, identified as EUB3 and EUB5, shall not exceed 0.6 pound per million British thermal unit heat input, each.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(k) Degreasers:

(1) Sixty-~~five~~ **six** (~~65~~**66**) cold solvent cleaning parts washers, constructed in or before 1990.

(2) One (1) open top vapor degreaser, identified as EUVD, installed in 20**15**~~06~~, with a surface area of 30 ft.^{2}

(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 2-6.1-5(a)(1)]

D.5.1 **Cold Cleaner Degreaser Control Equipment and Operating Requirements** ~~Volatile Organic Compounds (VOC)~~ [326 IAC 8-3-2]

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

~~Pursuant to 326 IAC 8-3-2, for each of the sixty-six (65) Cold Cleaners,~~

(a) ~~the owner or operator of a cold cleaner degreaser shall e~~**E**nsure the following control equipment and operating requirements are met:

...

(b) ~~The owner or operator of a cold cleaner degreaser subject to this subsection shall e~~**E**nsure the following additional control equipment and operating requirements are met:

....

D.5.2 **Open Top Vapor Degreaser Operation** ~~Volatile Organic Compounds (VOC)~~ [326 IAC 8-3-3]

Pursuant to 326 IAC 8-3-3 (Open Top Vapor Degreasing Operation), the Permittee shall:

~~Pursuant to 326 IAC 8-3-3, for open top vapor degreaser EUVD,~~

(a) ~~the owner or operator of an open top vapor degreaser shall e~~**E**nsure the following control and operating requirements are met:

...

(b) ~~The owner or operator of an open top vapor degreaser subject to this subsection shall e~~**E**nsure the following additional control equipment and operating requirements are met:

....

D.5.3 326 IAC 8-3-8 Material Requirements for Cold Cleaner Degreasers:

Pursuant to 326 IAC 8-3-8 (Material Requirements for Cold Cleaner 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).

~~(a) Pursuant to 326 IAC 8-3-8, material requirements specified in this section for use in cold cleaner degreasers apply as follows:~~

~~(1) Before January 1, 2015, in Clark, Floyd, Lake, and Porter counties.~~

~~(2) On and after January 1, 2015, anywhere in the state.~~

~~(b) Material requirements are as follows:~~

~~(1) No person shall cause or allow the sale of solvents for use in cold cleaner degreasing operations with a VOC composite partial vapor pressure, when diluted at the manufacturer's recommended blend and dilution, 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) 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 cleaner 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).~~

Record Keeping and Reporting Requirement [326 IAC 2-6.1-5(a)(2)]

D.5.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.5.3, 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.

~~(c) Record keeping requirements are as follows:~~

~~(1) All persons subject to the requirements of subsection (b)(1) shall maintain all of the following records for each sale:~~

~~(A) The name and address of the solvent purchaser.~~

~~(B) The date of sale (or invoice/bill date of contract servicer indicating service date).~~

~~(C) The type of solvent sold.~~

~~(D) The volume of each unit of solvent sold.~~

~~(E) The total volume of the solvent sold.~~

~~(F) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).~~

~~(2) All persons subject to the requirements of subsection (b)(2) shall maintain each of the following records for each purchase:~~

(**1**~~A~~) The name and address of the solvent supplier.

(**2**~~B~~) The date of purchase (or invoice/bill date of contract servicer indicating service date).

(**3**~~C~~) The type of solvent purchased.

(**4**~~D~~) The total volume of the solvent purchased.

(**5**~~E~~) The true vapor pressure of the solvent measured in millimeters of mercury at twenty (20) degrees Celsius (sixty-eight (68) degrees Fahrenheit).

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

~~(d) All records required by subsection (c) shall be:~~

~~(1) retained on-site or accessible electronically from the site for the most recent three (3) year period; and~~

~~(2) reasonably accessible for an additional two (2) year period.~~

....

SECTION E.1 ~~EMISSIONS UNIT OPERATION CONDITIONS~~**NESHAP**

Emissions Unit Description: ~~NESHAPS~~

(h) Emergency generators used for emergency purposes:

(1) One (1) **four stroke, lean burn,** 426 hp natural gas-fired emergency generator, constructed in 1993, exhausting outside.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ~~,)~~ the 426 hp natural gas-fired emergency generator is considered an existing affected **source** ~~facility because it was constructed before June 12, 2006~~.

(2) One (1) diesel air compressor, identified as EG8, constructed in 1996, with a maximum power output of 125 horsepower and maximum operating hours of 500 hrs/yr, and exhausting through SEG7.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ~~,)~~ the diesel air compressor EG8 is considered **an** existing affected **source** ~~facilities because it was constructed before June 12, 2006~~.

(3) Six (6) natural gas-fired, electric emergency generators, identified as EG1 through EG6, constructed in 2005, with a maximum power output of 0.224 MMBtu/hr, each and

maximum operating hours of 500 hrs/yr, and exhausting through SEG1 through SEG6.

Under ~~the NESHAP for Stationary Reciprocating Internal Combustion Engines (~~40 CFR 63, Subpart ZZZZ~~,)~~ the six (6) emergency generators, identified EG1 through EG6 are considered existing affected **sources**~~facilities because each were constructed before June 12, 2006~~.

....

National Emission Standards for Hazardous Air Pollutants (NESHAP) Requirements ~~-~~**[326 IAC 2-6.1-5(a)(1)]** ~~[40 CFR 63]~~

E.1.1 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

and

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

E.1.2 Stationary Reciprocation 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 A to the operating permit), which are incorporated by reference as 326 IAC 20-82, for the emission unit(s) listed above:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585
(3) 40 CFR 63.6590(a)(1)(iii) and (iv)
(4) 40 CFR 63.6595(a)(1), (b), and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6605
(7) 40 CFR 63.6625(e)(3), (f), (h), and (j)
(8) 40 CFR 63.6635
(9) 40 CFR 63.6640(a), (b), (e), and (f)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650
(12) 40 CFR 63.6655
(13) 40 CFR 63.6660
(14) 40 CFR 63.6665
(15) 40 CFR 63.6670

(16) 40 CFR 63.6675
(17) Table 2d (item 4, 5)
(18) Table 6 (item 9)
(19) Table 8

~~E.1.1 NESHAP for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]~~

~~The one (1) 426 hp natural gas-fired emergency generator, diesel compresser EG8, six (6) natural gas-fired emergency generators EG1 through EG6 (constructed before June 12, 2006) are subject to the requirements of the 40 CFR Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary reciprocating internal combustion engine (RICE), which are incorporated by reference as 326 IAC 20-82, except as otherwise specified in 40 CFR Part 63, Subpart ZZZZ (included as Attachment A of this permit):~~

- ~~63.6585(a), (c), (d)~~
- ~~63.6590(a)(1)(iii)~~
- ~~63.6603(a)~~

....

MINOR SOURCE OPERATING PERMIT
ANNUAL NOTIFICATION

This form should be used to comply with the notification requirements under 326 IAC 2-6.1-5(a)(5).

Company Name:	Fairfield Manufacturing Company, Inc.
Address:	2400 Sagamore Parkway South
City:	Lafayette, Indiana 47903
Phone #:	765-772-4000
MSOP #:	M157-~~28863~~**36481**-00007

....

Recommendation

The staff recommends to the Commissioner that the MSOP Renewal be approved. This recommendation is based on the following facts and conditions:

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 November 12, 2015.

Conclusion

The operation of this stationary source involved with various machining and manufacturing processes for gears and gear assemblies shall be subject to the conditions of the attached MSOP Renewal No. M157-36481-00007.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Tamara Havics at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8219 or toll free at 1-800-451-6027 extension 2-8219.

(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 Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

Appendix A - Emission Calculations
Emissions Summary

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Emission Unit	Uncontrolled Potential Emissions (tons/yr)									
	PM	PM10	PM2.5	NOx	SO2	VOC	CO	Total HAPs	Worst Single HAP	
Spray paint booth, EUP-1 and EUP-2	18.89	18.89	18.89	0.00	0.00	27.36	0.00	6.09	3.40	Toluene
*13 Shot Blast Units	59.13	39.22	11.81	0.00	0.00	0.00	0.00	0.00	0.00	
Polishing and Bead Cleaning (EUBP2)	2.42	2.42	2.42	0.00	0.00	0.00	0.00	0.00	0.00	
223 Integrated Machines	4.30	2.15	2.15	0.00	0.00	0.00	0.00	0.00	0.00	
**8 RXN Generators	0.03	0.11	0.11	1.38	0.01	0.08	28.45	0.03	0.02	Hexane
NG - Heat Treat Operations	0.61	2.43	2.43	32.03	0.19	1.76	26.90	0.60	0.58	Hexane
NG - Non Heat Treat Operations	0.59	2.36	2.36	31.00	0.19	1.71	26.04	0.59	0.56	Hexane
NG Boilers - EUB3 and EUB5	0.01	0.04	0.04	0.56	0.00	0.03	0.47	0.01	0.01	Hexane
EG8 - Emergency Air Compressor (Diesel)	0.07	0.07	0.07	0.97	0.06	0.08	0.21	8.47E-04	2.58E-04	Formaldehyde
EG1 - EG6, NG Emergency Generators	2.59E-05	3.36E-03	3.36E-03	1.37	1.98E-04	0.04	0.11	0.02	0.02	Formaldehyde
NG Emergency Gen, 426 hp	6.16E-05	0.01	0.01	3.26	4.70E-04	0.09	0.25	0.06	0.04	Formaldehyde
Open Top Vapor Degreaser, EUVD	0.00	0.00	0.00	0.00	0.00	6.54	0.00	0.33	0.33	1,2 Butylene Oxide
Parts Washers	0.00	0.00	0.00	0.00	0.00	16.82	0.00	0.00	0.00	
Woodworking	0.33	0.33	0.33	0.00	0.00	0.00	0.00	0.00	0.00	
Cooling Towers	2.37	2.37	2.37	0.00	0.00	0.00	0.00	0.00	0.00	
Fugitive Roadway	14.12	2.82	0.69	0.00	0.00	0.00	0.00	0.00	0.00	
Total	**102.86**	**73.22**	**43.67**	**70.57**	**0.45**	**54.50**	**82.43**	**7.73**	**3.40**	**Toluene**
Title V Threshold	**NA**	**100**	**100**	**100**	**100**	**100**	**100**	**25**	**10**	

* Each shot blaster is equipped with dust collector. The source claims the overall control efficiency to be 99%. There are no emission factors in AP-42, PM10 = PM2.5

**IDEM, OAQ has used a conservative estimate of 95% control efficiency for the 8 RXN generators, as included in permit M157-28863-00007.

Appendix A: Emissions Calculations
2014 and 2015 Modification Summaries

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Emission Unit	2014 Uncontrolled Potential Emissions (tons/yr)									
	PM	PM10	PM2.5	NOx	SOx	VOC	CO	Total HAPs	Worst Single	
Natural Gas Combustion (2014 Modification)	0.01	0.05	0.05	0.71	4.28E-03	0.04	0.60	0.01	0.01	Hexane
Boiler EUB5 (2014)	0.00	0.02	0.02	0.21	1.29E-03	0.01	0.18	4.05E-03	3.86E-03	Hexane
Integrated Machines, 213 additional (2014)	4.11	2.05	2.05	-	-	-	-	-	-	
Total (2014)	**4.12**	**2.12**	**2.12**	**0.93**	**5.57E-03**	**0.05**	**0.78**	**0.02**	**0.02**	Hexane
Exemption Threshold	**5**	**5**	**5**	**10**	**10**	**10**	**25**	**25**	**10**	

Emission Unit	2015 Uncontrolled Potential Emissions (tons/yr)									
	PM	PM10	PM2.5	NOx	SOx	VOC	CO	Total HAPs	Worst Single	
Natural Gas Combustion (2015 Modification)	0.12	0.48	0.48	6.34	0.04	0.35	5.33	0.12	0.11	Hexane
Total (2015)	**0.12**	**0.48**	**0.48**	**6.34**	**0.04**	**0.35**	**5.33**	**0.12**	**0.11**	Hexane
Exemption Threshold	**5**	**5**	**5**	**10**	**10**	**10**	**25**	**25**	**10**	

Appendix A: Emissions Calculations
Natural Gas Combustion Only
2014 Modification - Natural Gas Combustion

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Total Heat Input capacity Increase due to modifications MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
1.66	1020	14.3

	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 (2015)	0.01	0.05	0.05	0.00	0.71	0.04	0.60

*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

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

HAPS Calculations

	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	1.497E-05	8.554E-06	5.346E-04	1.283E-02	2.424E-05	**1.341E-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	3.564E-06	7.841E-06	9.980E-06	2.709E-06	1.497E-05	**3.906E-05**

Total HAPs	**1.345E-02**
Worst HAP	**1.283E-02**
Hexane	

Methodology is the same as above.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Emission Unit	Original Heat Input Capacity (MMBtu/hr)	Modified Heat Input capacity (MMBtu/hr)	Change in Heat Input capacity (MMBtu/hr)
Non-Heat Treat Units			
Water Heaters	0	0.90	0.90
Hanson Washer	0	0.50	0.50
Hydraulic Motor Room HVAC Unit	0	0.26	0.26
		Total	**1.66**

Combined Increase in Heat Input capacity due to 2014 modifications (MMBtu/hr)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
2015 Modification - Natural Gas Combustion

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Total Heat Input capacity Increase due to modifications MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
14.77	1020	126.8

	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	0.12	0.48	0.48	0.04	6.34	0.35	5.33

*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

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

HAPS Calculations

	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	1.332E-04	7.611E-05	4.757E-03	1.142E-01	2.156E-04	**1.193E-01**

	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	3.171E-05	6.977E-05	8.879E-05	2.410E-05	1.332E-04	**3.476E-04**

Total HAPs	**1.197E-01**
Worst HAP	**1.142E-01**
Hexane	

Methodology is the same as above.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Emission Unit	Original Heat Input Capacity (MMBtu/hr)	Modified Heat Input capacity (MMBtu/hr)	Change in Heat Input capacity (MMBtu/hr)
Non-Heat Treat Units			
Roof Mount Furnaces	42.25	54.02	11.77
Ransohoff Parts Washer	1.5	2.00	0.50
Infrared Tubular Heaters-Receiving	1.5	2.25	0.75
Misc. Small Space Heaters	0	1.75	1.75
		Total	**14.77**

Combined Increase in Heat Input capacity due to 2015 modifications (MMBtu/hr)

Appendix A: Emissions Calculations
Paint Useage - Booths EUP-1 and EUP-2

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Hours Operated in 2014 1377

Coating	Density (lb/gal)	Weight % VOC	VOC Content (lb/gal)	Wt % Solids	wt% Xylene	wt % Methyl Methacrylate	wt% Ethyl Benzene	wt% MIBK	wt% Cumene	wt% Toluene	wt% Hexamethylene di-isocyanate
Coatings											
71748 Black Topcoat	8.36	36.37%	3.04	52.76%							
71694 Gray Topcoat	9.50	35.79%	3.40	63.60%		0.50%					
71866 Yellow (tan) Primer	13.60	25.74%	3.50	75.60%	0.50%						
GHXH1080 Catalyst	9.11	20.09%	1.83	80.00%	0.50%				0.50%		0.50%
Q3955-7975 Gray Urethane	10.35	32.76%	3.39	67.24%	0.50%						
B58B600 6403-1020	10.71	19.89%	2.13	80.11%	17.00%	0.50%	3.00%				
B58VX600-6403-44982	13.46	12.11%	1.63	87.89%	2.00%		0.30%	10.00%			
B58XXA21813-4311	12.13	18.05%	2.19	81.95%	14.00%		3.00%				
SPU73286	8.35	46.00%	3.84	53.70%							
1400506	6.51	40.91%	2.66	59.09%						17.00%	
				Clean-up Solvents							
MEK Clean-up	6.68	100.00%	6.68	0.00%							
Superior L1274	6.94	50.00%	3.47	0.00%						50.00%	
K169	7.04	100.00%	7.04	0.00%	52.00%		9.00%	24.00%		15.00%	

The booths EUP-1 and EUP-2 use identical paints. The source does not track the paint usage per booth.
Paint Booths operated for 1,377 hours in 2014.

				Potential Emissions (tons/yr)									
Coating	2014 Usage (gal)	*Potential Usage (gal/yr)	Tranfer Efficiency	VOC (ton/yr)	PM/PM10 (ton/yr)	Xylene	Methyl Methacrylate	Ethyl Benzene	MIBK	Cumene	Toluene	Hexamethylene di-isocyanate	Total HAP
Coatings													
71748 Black Topcoat	1055	6711.55	65.00%	10.20	5.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
71694 Gray Topcoat	93	591.63	65.00%	1.01	0.63	0.00	0.01	0.00	0.00	0.00	0.00	0.00	0.01
71866 Yellow (tan) Primer	720	4580.39	65.00%	8.02	8.24	0.16	0.00	0.00	0.00	0.00	0.00	0.00	0.16
GHXH1080 Catalyst	120	763.40	65.00%	0.70	0.97	0.02	0.00	0.00	0.00	0.02	0.00	0.02	0.05
Q3955-7975 Gray Urethane	0	0.00	65.00%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
B58B600 6403-1020	28	178.13	65.00%	0.19	0.27	0.16	0.00	0.03	0.00	0.00	0.00	0.00	0.20
B58VX600-6403-44982	223	1418.65	65.00%	1.16	2.94	0.19	0.00	0.03	0.95	0.00	0.00	0.00	1.17
B58XXA21813-4311	28	178.13	65.00%	0.20	0.31	0.15	0.00	0.03	0.00	0.00	0.00	0.00	0.18
SPU73286	50	318.08	65.00%	0.61	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1400506	24	152.68	65.00%	0.20	0.10	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.08
				Clean-up Solvents									
MEK Clean-up	40	254.47	65.00%	0.85	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Superior L1274	286	1819.43	65.00%	3.16	0.00	0.00	0.00	0.00	0.00	0.00	3.16	0.00	3.16
K169	48	305.36	65.00%	1.07	0.00	0.56	0.00	0.10	0.26	0.00	0.16	0.00	1.07
Totals				**27.36**	**18.89**	**1.24**	**0.02**	**0.19**	**1.21**	**0.02**	**3.40**	**0.02**	**6.09**

Worst HAP	**3.40**
	Toluene

Potential Usage (gal/yr)= Actual Usage (gal/yr) / Hours Operated in 2014 (hrs) * 8760 hr/year
*Potential Usage was determined by scaling up 2014 usage, using 2014 actual hours of operation.
VOC Emissions (tons/yr) = Potential Usage (gal/yr) x Density (lb/gal) x wt% VOC x 1 ton/2000 lbs
HAP Emissions (tons/yr) = Potential Usage (gal/yr) x Density (lb/gal) x wt% HAP x 1 ton/2000 lbs
PM Emissions (tons/yr) = Potential Usage (gal/yr) x Density (lb/gal) x wt% solids x (1- Transfer Efficiency) x 1 ton/2000 lbs

Appendix A: Emissions Calculations
Shot Blast Operations

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Emission Unit	*Throughput (lb/hr)	Control Efficiency	Emission Factor (lb/ton of metal processed)**			Uncontrolled Potential Emission (lb/hr)			Uncontrolled Potential Emissions (ton/yr)			Controlled Potential Emission (lb/hr)			Controlled Potential Emissions (ton/yr)		
			PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5	PM	PM10	PM2.5
Facility Shotblast Operation	9000	99.00%	3.00	1.99	0.599	13.500	8.955	2.696	**59.130**	**39.223**	**11.806**	0.14	0.09	0.03	0.59	0.39	0.12

Methodology:
Emissions (lb/hr) = Throughput (lb/hr) x1 ton/2,000 lbs x Emission Factor (lb/ton of metal processed)
Emissions (ton/yr) = Throughput (lb/hr) x1 ton/2,000 lbs x Emission Factor (lb/ton of metal processed) x 8760 hr/yr x 1 ton/2,000 lbs
Each shot blaster is equipped with dust collector. The source claims the overall control efficiency to be 99%.

Note:

*In 2009, Fairfield applied for a Minor Source Operating Permit (MSOP No. M157-28863-00007) and a total throughput of 9,000 lbs/hr was used in the shot blasting/peening operations. This value was based on a potential throughput of metal through the facility, plant operational hours, and ramping the throughput up to 8760 hrs/yr. Fairfield believes that this throughput represented total metal through the facility, not throughput through the blast/peening operations.

During the permitting for MSOP Renewal No. M157-36481-00007, Fairfield reviewed actual metal throughput records for the blast/peening operations and actual hours of operation. This showed a potential throughput of 2,049 lbs/hr, based on the worst-case year when looking at the past six years. As stated above, the 9,000 lb/hr throughput represents all metal processed in the plant; however, not all of the metal is processed in the blast/peening operations.

There are three types of incoming materials to the facility: castings, forgings, and bar stock. The castings are not processed in either the blast or peening machines. The forgings are processed in the shot blasting operations to remove scale prior to machining and heat treatment; however, the forgings are not processed in the peening machines. The bar stock is not processed in the shot blast operations because they do not need to be cleaned prior to being processed; however, they are processed in the shot peening machines after heat treat to harden the material.

The permit lists 13 shot blast and peening machines. This is due to the operational design of Fairfield. Fairfield is a custom job-shop operation. Each part requires different processes and different blast media. To change out the media to meet the customer specifications would be a huge undertaking. Therefore, Fairfield has multiple blast/peening operations that use dedicated blast material so that Fairfield does not need to change out the media each time a different part requires a different media. Currently, Fairfield is utilizing four different types of blast media in their shot blasting machines and four different type of blast media in the peening operations.

Therefore, the potential to emit for all blast units at the facility is limited by the maximum potential material throughput to the shotblast machines of 9,000 lbs/hr. This represents the maximum production level of parts sent to the shotblast operation from the various machining operations.

**The potential to emit of PM/PM10/PM2.5 for the shotblast units has been determined based on stack test results obtained through testing conducted July 20, 2011. The results of this testing showed emission factors of 3.0, 1.99, and 0.599 lb/ton (of metal processed) for PM, PM10, and PM2.5 respectively (filterable and condensable).

Appendix A - Emissions Calculations

Calculation of PM Limits for all Abrasive Blasters

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

PM Emission Factor (lb/ton metal)

3.00

Blaster Unit ID	Metal Throughput Capacity (lb metal/hr)	Blast Media Throughput Rate (lb/hr)	Process Weight Rate (lbs/hr), (Maximum Metal Throughput plus Media Rate)	Process Weight Rate (tons/hr)	PM Emission Limit (lbs/hr) [326 IAC 6-3-2]	Uncontrolled PM PTE (lb/hr)	Control device needed?
EUSB1	1800	94860	96660	48.33	44.26	2.70	No
EUSB2	2800	75180	77980	38.99	42.29	4.20	No
EUSB3	2400	123660	126060	63.03	46.76	3.60	No
EUSB4	2200	145260	147460	73.73	48.27	3.30	No
EUSB5	2800	215160	217960	108.98	52.14	4.20	No
EUSB6	2800	79740	82540	41.27	42.81	4.20	No
EUSB7	1800	245820	247620	123.81	53.45	2.70	No
EUSB8b	1250	43260	44510	22.26	32.78	1.88	No
EUSB9	2800	213480	216280	108.14	52.07	4.20	No
EUSB10	1600	80820	82420	41.21	42.80	2.40	No
EUSB11	2600	106020	108620	54.31	45.35	3.90	No
EUSB12	1800	3000	4800	2.40	7.37	2.70	No
EUSB13	3600	36	3636	1.82	6.12	5.40	No

METHODOLOGY & NOTES:

Source provided PM Emission Factor for shotblast units = 3.0 lb/ton

The PM limits for blasters EUSB8b and EUSB12 are determined using E=(4.1)*P^0.67 from [326 IAC 6-3-2], since the process weight rate is less than 60,000 lbs/hr.

The PM limits for the remaining blasters are determined using E=((55)*P^0.11) - 40 from [326 IAC 6-3-2], since the process weight rate is greater than 60,000 lbs/hr.

Uncontrolled PM Emissions (lb/hr) = Throughput (lb/hr) x1 ton/2,000 lbs x Emission Factor (lb/ton of metal processed)

The source notes that the potential to emit for all blast units at the facility is limited by the maximum potential material throughput to the shotblast machines of 9,000 lbs/hr. This represents the maximum production level of parts sent to the shotblast operation from the various machining operations.

Appendix A: Emissions Calculations
Polishing and Bead Cleaning

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Hours Operated in 2014 15

Actual Bead Usage (lb/yr)	*Potential Bead Usage (lb/yr)	Control Efficiency	PM/PM10 Emission Factor (lb/1000 lb)	PM/PM10 Actual Emissions (tons/yr)	PM/PM10 PTE (tons/yr)	PM/PM10 PTE after control (tons/yr)
600	350400	95%	0.69	0.004	**2.418**	0.121

*Potential Usage was determined by scaling up 2014 usage, using 2014 actual hours of operation.
Potential Usage (lb/yr)= Actual Usage (lb/yr) / Hours Operated in 2014 (hrs) * 8760 hr/year

Note: Emission Factor is from AP-42, Table 13.2.6-1 for Abrasive blasting of unspecified metal parts, controlled with a fabric filter.

Emissions (tons/yr) = Bead Usage (lb/yr) x EF (lb/1000 lb) x 1/(1 - Control Efficiency) x 1 ton/2,000 lbs
There are no emission factor in AP42 for PM2.5, assume PM10 = PM2.5

Abrasive blasting of unspecified metal parts, controlled with fabric filter SCC 3-09-002-04

Appendix A: Emissions Calculations
Eight (8) EURX Reaction Generators

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Natural gas Combustion Emissions from Eight RX generators

Emission Factors (lb/10^6 scf)							
PM	**PM10**	**PM2.5**	**NOx**	**SOx**	**VOC**	**CO**	**Pb**
1.9	7.6	7.6	100	0.6	5.5	84	0.0005

*Emissions Unit	Installation Date	Heat Input (ft^3/hr)	Potential Combustion Emissions (tons/yr)						
			PM	**PM10**	**PM2.5**	**NOx**	**SOx**	**VOC**	**CO**
EURX Generator 1	1965	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 2	1966	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 3	1966	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 4	1970	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 5	1976	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 6	1978	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 7	1981	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
EURX Generator 8	2008	395	0.003	0.013	0.013	0.173	0.001	0.010	0.145
Total		3160	**0.026**	**0.105**	**0.105**	**1.384**	**0.008**	**0.076**	**1.163**

Methodology:
*Each generator capacity is with a reaction gas rate of 1,111 cubic feet of CO per hour.
Emissions (tons/yr) = Heat Input (ft^3/yr) x EF (lb/10^6 ft^3) x 8760 hrs/yr x 1 ton/2,000 lbs
Emission Factors are from AP-42, Tables 1.4-1 and 1.4-2.

HAPS Calculations

	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	2.91E-05	1.66E-05	1.04E-03	2.49E-02	4.71E-05	**2.604E-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	6.92E-06	1.52E-05	1.94E-05	5.26E-06	2.91E-05	**7.585E-05**
					Total HAPs	**2.612E-02**
					Worst HAP	**2.491E-02**

Methodology:
Emissions (tons/yr) = Heat Input (ft^3/yr) x EF (lb/10^6 ft^3) x 8760 hrs/yr x 1 ton/2,000 lbs
Emission Factors are from AP-42, Tables 1.4-2, 1.4-3, and 1.4-4.
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Carburization Process CO Reaction Rate Emissions

%CO in RXN Gas	18%	
CO Conversion Factor (lb/MMcf)	77871	lb /MMcf of gas of 100% CO
CO Emission Factor	14017	lb /MMcf of gas of 18% of CO

Emissions Unit	CO Reaction Gas Rate (ft^3/hr)	Heat Input Capacity Reaction Gas (MMBtu/hr)	Potential Throughput (MMcf/yr)	Reaction CO Emissions (tons/yr)	*Reaction CO Emissions after Combustion (tons/yr)	**Reaction CO Emissions after Combustion (tons/yr)
EURX Generator 1	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 2	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 3	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 4	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 5	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 6	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 7	1111	1.09	9.73	68.21	0.34	3.41
EURX Generator 8	1111	1.09	9.73	68.21	0.34	3.41
Total		8.71		**545.66**	**2.73**	**27.28**

Methodology:
CO Conversion Factor (lb/MMcf) = 1.25 g/L x 2.2 lb/1000g x 1 L/0.035315 ft^3 x 1,000,000 ft^3/MMcf
CO Emission Factor = CO% in Reaction Gas x CO Conversion Factor (lb/MMcf)
Emissions (tons/yr) = RXN Gas Throughput (MMcf/yr) x CO Emission Factor (lb/MMcf) x 1 ton/2,000 lbs
CO Emissions After Combustion (tons/yr) = Potential Emissions (tons/yr) x (1 - Control Efficiency)

Total Potential to Emit

Emissions Unit	Potential Emissions (tons/yr)							
	PM	**PM10**	**PM2.5**	**NOx**	**SOx**	**VOC**	***CO**	***CO**
EURX Generator 1	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 2	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 3	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 4	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 5	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 6	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 7	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
EURX Generator 8	3.29E-03	1.31E-02	1.31E-02	1.73E-01	1.04E-03	9.52E-03	0.49	3.56
Total	**0.03**	**0.11**	**0.11**	**1.38**	**0.01**	**0.08**	**3.89**	**28.4**

NOTES:
* Source claimed over all CO reaction control efficiency (Capture and destruction efficiency) for each of the RX generator = 99.5%.
**IDEM, OAQ has used a conservative estimate of 95% control efficiency, as included in permit M157-28863-00007.
***CO Potential Emissions = Reaction Emissions + Combustion Emissions
RX generators do not function as emergency generators, they are used to treat metal parts in conjunction with the heat treat ovens.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Non-Heat Treat Operations

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Combined Total Heat Input capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
72.20	1020	620.1

	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	0.59	2.36	2.36	0.19	31.00	1.71	26.04

*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

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

HAPS Calculations

	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	6.511E-04	3.720E-04	2.325E-02	5.581E-01	1.054E-03	**5.834E-01**

	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	1.550E-04	3.410E-04	4.340E-04	1.178E-04	6.511E-04	**1.699E-03**

Total HAPs	**0.585**
Worst HAP	**0.558**
Hexane	

Methodology is the same as above.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Emission Unit	Number Of Units	Unit Heat Input Capacity (MMBtu/hr)	Combined Total Heat Input capacity (MMBtu/hr)	
Non-Heat Treat Units				
Roof Mount Furnaces	23		54.02	
Continental Parts Washer	1	0.80	0.80	
Ransohoff Parts Washer 1	1	2.00	2.00	
Continental Parts Washer	1	1.50	1.50	
Infrared Tubular Heaters- heat treat	4	0.20	0.80	
Infrared Tubular Heaters-Receiving	15	0.15	2.25	
Heat Towers in Assy Bldg.	3	0.40	1.20	
Radiant Heaters in Chip Room	4	0.025	0.10	
Paint Booth Oven	1	0.90	0.90	
Water Heaters	4		0.90	
Kitchen Equipment	1	0.50	0.50	
Hanson Washer	1	0.50	0.50	
Misc. Small Space Heaters	12		1.75	
Hydraulic Motor Room HVAC Unit	1	0.26	0.26	
415E Parts Washer	1	2.00	2.00	
Paint Booth HVAC Unit	1	2.72	2.72	
		Total	**72.20**	**Combined Total Heat Input capacity (MMBtu/hr)**

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Heat Treat Operations

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Combined Total Heat Input capacity MMBtu/hr	HHV mmBtu / mmscf	Potential Throughput MMCF/yr
74.58	1020	640.5

	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	0.61	2.43	2.43	0.19	32.03	1.76	26.90

*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

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

HAPS Calculations

	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	6.725E-04	3.843E-04	2.402E-02	5.765E-01	1.089E-03	**6.026E-01**

	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	1.601E-04	3.523E-04	4.484E-04	1.217E-04	6.725E-04	**1.755E-03**

Total HAPs	**6.044E-01**
Worst HAP	**5.765E-01**
Hexane	

Methodology is the same as above.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

Emission Unit	Number Of Units	Unit Heat Input Capacity (MMBtu/hr)	Combined Total Heat Input capacity (MMBtu/hr)
Heat Treat Units			
Batch Anneal Furnace	1	1.30	1.30
Program Draw #1 East and #2 west	2	1.00	2.00
Draw Furnaces #1 through -#6	6	1.00	6.00
Homo Carb #1 West, #2 East	2	1.10	2.20
Super 36 Allcase Furnace #3	1	6.73	6.73
Gas Carburizer #5	1	5.97	5.97
Gas & Electric Carburizer #9	1	5.00	5.00
Gas Carburizers #3, #4	2	4.59	9.18
Gas & Electric Carburizer #8	3	3.06	9.18
Trinider Furance	1	2.35	2.35
Nitrogen Generator	1	0.37	0.37
Small Allcase Furnace #1	1	1.00	1.00
Super 36 Allcase Furnace #1, #2, #4	3	5.10	15.30
Small Allcase Furnace#2	1	1.00	1.00
Auto Hardeners #1 - #4	4	1.00	4.00
Small Allcase Furnace#3	1	1.00	1.00
LT Draw Furance #1,#2,#3,#4	4	0.500	2.00
			74.58 **Combined Total Heat Input capacity (MMBtu/hr)**

Appendix A: Emissions Calculations
Integrated Machines

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

Assumed Gr loading gr/dscf 0.01
Assumed Efficiency 95%
Emission Units: EUIM-1 through EUIM-223

Number of Emission Units	Air Flow Rate (cfm)	Uncontrolled PM Emissions (lbs/hr)	Uncontrolled PM Emissions (tons/yr)	Uncontrolled PM10 Emissions (tons/yr)	Controlled PM10 Emissions (tons/yr)	Controlled PM2.5 Emissions (tons/yr)
223	1500	9.81E-01	4.30	2.15	0.11	0.11
Total		9.81E-01	**4.30**	**2.15**	0.11	0.11

Uncontrolled PM emission factor is based an experiment to determine the amount of mist actually removed during the typical operation of an integrated machine and mist collector.

The amount removed during the 53 hour experiment was 0.65 L with a concentration of 17% Trimsol e-206 and RO water.

*Assuming the density of Trimsol e-206 is 8 lb/gal, the amount of oily material was found to be:

0.65L x 17% Trimsol e-206 x 1 gal/3.79 L x 8 lb/gal =	0.233	lbs of material
	53	hours
Uncontrolled PM Emissions (lb/hr) =	4.40E-03	lbs/hr

Uncontrolled PM Emissions (tons/yr) = Uncontrolled PM Emissions (lb/hr) x 8760 hr/yr x 1 ton/2000 lbs

Assume PM10 = 50% PM
Assume PM10 = PM2.5

Note: Integrated Machines do not process Steel Bar Stock and are after Shot Blasting process. Not all of the 9000 lb/hr metal shot blast throughput is processed by the Integrated Machines.

* Corrected in Permit No. M157-36481-00007 to include the 8 lbs/gal in the calculations.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Boilers EUB3 and EUB5

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: January 25, 2016

	Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
EUB3	0.80	1020	6.9
EUB5	0.50	1020	4.3

		Pollutant						
Emission Factor in lb/MMCF		PM* 1.9	PM10* 7.6	direct PM2.5* 7.6	SO2 0.6	NOx 100 **see below	VOC 5.5	CO 84
EUB3 Potential Emission in tons/yr		**0.01**	**0.03**	**0.03**	**0.00**	**0.34**	**0.02**	**0.29**
EUB5 Potential Emission in tons/yr		**0.00**	**0.02**	**0.02**	**0.00**	**0.21**	**0.01**	**0.18**
	Total	**0.01**	**0.04**	**0.04**	**0.00**	**0.56**	**0.03**	**0.47**

*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

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

HAPS Calculations

	HAPs - Organics					
Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03	**Total - Organics**
EUB3 Potential Emission in tons/yr	7.214E-06	4.122E-06	2.576E-04	6.184E-03	1.168E-05	**6.464E-03**
EUB5 Potential Emission in tons/yr	4.509E-06	2.576E-06	1.610E-04	3.865E-03	7.300E-06	**4.040E-03**

	HAPs - Metals						
Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	**Total - Metals**	
EUB3 Potential Emission in tons/yr	1.718E-06	3.779E-06	4.809E-06	1.305E-06	7.214E-06	**1.883E-05**	**6.483E-03** Total EUB3
EUB5 Potential Emission in tons/yr	1.074E-06	2.362E-06	3.006E-06	8.159E-07	4.509E-06	**1.177E-05**	**4.052E-03** Total EUB4
					Total HAPs	**1.053E-02**	
					Worst HAP	**1.005E-02**	
					Hexane		

Methodology is the same as above.
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-2, 1.4-3, and 1.4-4
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 - Diesel Fuel
One (1) Emergency Diesel Air Compressor, EG8 - 125 hp

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	125.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	62,500

	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	**0.07**	**0.07**	**0.07**	**0.06**	**0.97**	**0.08**	**0.21**

*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.
Emission Factors from AP-42, Table 3.3-1.

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	2.04E-04	8.95E-05	6.23E-05	8.55E-06	**2.58E-04**	1.68E-04	2.02E-05	3.68E-05

***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 3.3-2).

Potential Emission of Total HAPs (tons/yr)	**8.47E-04**

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: Emission Calculations
Emergency Reciprocating Internal Combustion Engines - Natural Gas
Six (6) Emergency Generators Designated EG1 through EG6 (0.224 MMBtu/hr, each)
4-Stroke Lean-Burn (4SLB) Engines

Company Name: Fairfield Manufacturing Company, Inc.
Source Address: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Maximum Heat Input Capacity (MMBtu/hr)	1.344
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	672
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	0.66

	Pollutant						
Criteria Pollutants	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emissions (tons/yr)	**0.00**	**0.00**	**0.00**	**0.000**	**1.37**	**0.04**	**0.11**

*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.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	0.003
Acrolein	5.14E-03	0.002
Benzene	4.40E-04	0.000
Biphenyl	2.12E-04	0.000
1,3-Butadiene	2.67E-04	0.000
Formaldehyde	**5.28E-02**	**0.018**
Methanol	2.50E-03	0.001
Hexane	1.10E-03	0.000
Toluene	4.08E-04	0.000
2,2,4-Trimethylpentane	2.50E-04	0.000
Xylene	1.84E-04	0.000
	HAP Total	**0.02**

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Methodology
Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2
Potential Fuel Usage (MMBtu/yr) = [Maximum Heat Input Capacity (MMBtu/hr)] * [Maximum Hours Operating per Year (hr/yr)]
Potential Emissions (tons/yr) = [Potential Fuel Usage (MMBtu/yr)] * [Emission Factor (lb/MMBtu)] / [2000 lb/ton]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Natural Gas
One (1) 426 hp NG Emergency Generator
4-Stroke Lean-Burn (4SLB) Engines

Company Name: Fairfield Manufacturing Company, Inc.
Source Address: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Maximum Output Horsepower Rating (hp)	426
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	500
Potential Fuel Usage (MMBtu/yr)	1598
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	1.57

	Pollutant						
Criteria Pollutants	PM*	PM10*	PM2.5*	SO2	NOx	VOC	CO
Emission Factor (lb/MMBtu)	7.71E-05	9.99E-03	9.99E-03	5.88E-04	4.08E+00	1.18E-01	3.17E-01
Potential Emissions (tons/yr)	**0.00**	**0.01**	**0.01**	**0.000**	**3.26**	**0.09**	**0.25**

*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.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	0.007
Acrolein	5.14E-03	0.004
Benzene	4.40E-04	0.000
Biphenyl	2.12E-04	0.000
1,3-Butadiene	2.67E-04	0.000
Formaldehyde	**5.28E-02**	**0.042**
Methanol	2.50E-03	0.002
Hexane	1.10E-03	0.001
Toluene	4.08E-04	0.000
2,2,4-Trimethylpentane	2.50E-04	0.000
Xylene	1.84E-04	0.000
	HAP Total	**0.06**

HAP pollutants consist of the eleven highest HAPs included in AP-42 Table 3.2-2.

Methodology
Emission Factors are from AP-42 (Supplement F, July 2000), Table 3.2-2
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]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
SO2 = Sulfur Dioxide
NOx = Nitrous Oxides
VOC - Volatile Organic Compounds
CO = Carbon Monoxide

Appendix A: Emissions Calculations
One (1) Open Top Vapor Degreaser - EUVD

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Hours Operated 2014: 8760

* Material (gal/yr)	Gallons Returned	Recovery Rate	Gallons Evaporated	Potential Gallons Evaporated	Density (lb/gal)	wt% VOC	wt% 1,2 Butylene Oxide	Potential Emissions			
								VOC (lb/yr)	VOC (ton/yr)	1,2 Butylene Oxide (lb/yr)	1,2 Butylene Oxide (ton/yr)
1320	380.00	0.35	1187.00	1187.00	11.02	100%	5%	13075.91	**6.54**	653.80	**0.33**

Note:* Potential usage was determined by scaling up 2014 usage using 2014 actual

Methodology :
Gallons Evaporated = Purchased Material (gal) - Gallons Returned x Recovery Rate
Emissions (lbs/yr) = Gallons Evaporated x Density (lb/gal) x wt% VOC
Emissions (tons/yr) = Emissions (lbs/yr) x 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Sixty-six (66) Cold Cleaner Degreaser (Parts Washers)

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Hours Operated 2014	6815

Material	2014 Purchased Material (gal/yr)	Potential usage Material (gal/yr)	Density (lb/gal)	wt% VOC	Potential Emissions	
					VOC (lb/day)	VOC (ton/yr)
Chem Station 1854	1003	1,289	8.80	20%	6.21	1.13
Chem Station 5143	1874	2,409	9.00	10%	5.94	1.08
Safety Kleen Premium Solv	3211	4,127	6.55	100%	74.07	13.52
Henkel CP4275	330	424	8.85	31%	3.19	0.58
Henkel G-AK 319	1188	1,527	10.43	5%	2.18	0.40
Henkel M-NT-4700	220	283	9.60	7.50%	0.56	0.10
Bonderite C-AK-ZX-3	55	71	11.10	0.00%	0.00	0.00
Bonderite 5175	8545.2	10,984	9.68	5.00%	14.57	2.66
Total					91.59	**16.82**

Note:
The emissions presentd above are conservative. The facility does not track the amount of fluid recovered from the washers, because the washers discharge directly to the waste water systems and run at a constant overflow.
The potential usage was determined by scaling up 2014 usage using 2014 actual hours of operation.
Emissions (lbs/yr) = Potential usage material (gal/yr) x Density (lb/gal) x wt% VOC
Emissions (tons/yr) = Emissions (lbs/yr) x 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Woodworking

Company Name: Fairfield Manufacturing Company, Inc.
Source Address: 2309 Concord Road, Lafayette, Indiana 47903
Permit Number: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Hours Operated in 2014: 6815

Actual Amount of Wood Waste Generated (lbs/week)	Actual Amount of Wood Waste Generated (tons/yr)	Potential Amount of Wood Waste Genertated (tons/yr)
10	0.26	0.33

Woodworking Emissions are based on capturing actual wood waste generated and ramping up to 8760 hrs of operation per year.

TSD Appendix A: Emission Calculations
Contact Cooling Towers

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

Cooling Tower Unit	Flow Rate (gal/min)	Total Dissolved Solids (TDS) (ppm)*	Cooling Fluid Density (lbs/gal)	Total Liquid Drift (%)**	PM10 Emission Rate (lb/hr)	PM10 Emission Rate (tons/yr)	PM Emission Rate (tons/yr)	PM2.5 Emission Rate (tons/yr)
Cooling Tower 1	1,000	1800	8.34	0.020	0.18	0.79	0.79	0.79
Cooling Tower 2	1,000	1800	8.34	0.020	0.18	0.79	0.79	0.79
Cooling Tower 3	1,000	1800	8.34	0.020	0.18	0.79	0.79	0.79
Total				**Total**	0.54	**2.37**	**2.37**	**2.37**

Note:
TDS = total dissolved solids
*TDS content = 1800 ppm provided by source
**Total liquid drift = 0.02% in reciruclating flow from AP-42, Table 13.4-1 1/95
Assumed PM10 = PM2.5 and PM

Methodology:

PM10 (lb/hr) = Flow Rate (gal fluid/minute) x Fluid Density (lb fluid/ gal fluid) x (Drift Rate (%)/100) x Total Dissolved Solids (lbs of solids/ 1,000,000 gal fluid) x 60 minutes/hour

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Fairfield Manufacturing Company, Inc.
Address City IN Zip: 2309 Concord Road, Lafayette, Indiana 47903
Permit No.: M157-36481-00007
Reviewer: Tamara Havics
Date: 1/25/2016

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 Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Semi-Trucks (entering plant) (one-way trip)	60.0	1.0	60.0	17.0	1020.0	1600	0.303	18.2	6636.4
Semi-Trucks (leaving plant) (one-way trip)	60.0	1.0	60.0	40.0	2400.0	1600	0.303	18.2	6636.4
Box Trucks (entering plant) (one-way trip)	20.0	1.0	20.0	17.0	340.0	1600	0.303	6.1	2212.1
Box Trucks (leaving plant) (one-way trip)	20.0	1.0	20.0	17.0	340.0	1600	0.303	6.1	2212.1
Cars (entering plant) (one-way trip)	15.0	1.0	15.0	3.0	45.0	900	0.170	2.6	933.2
Cars (leaving plant) (one-way trip)	15.0	1.0	15.0	3.0	45.0	900	0.170	2.6	933.2
		Totals	**190.0**		**4190.0**			**53.6**	**19563.4**

Average Vehicle Weight Per Trip = 22.1 tons/trip
Average Miles Per Trip = 0.28 miles/trip

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 =	22.1	22.1	22.1	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads, Iron and Steel Production (AP-42 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 =	2.040	0.408	0.1002	lb/mile
Mitigated Emission Factor, Eext =	1.866	0.373	0.0916	lb/mile

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)
Trucks (entering plant) (one-way trip)	6.77	1.35	3.32E-01	6.19E+00	1.24	3.04E-01
Trucks (leaving plant) (one-way trip)	6.77	1.35	3.32E-01	6.19E+00	1.24	3.04E-01
Cars (entering plant) (one-way trip)	0.95	0.19	4.67E-02	0.87	0.17	4.27E-02
Cars (leaving plant) (one-way trip)	0.95	0.19	4.67E-02	0.87	0.17	4.27E-02
Totals	15.44	3.09	0.76	**14.12**	**2.82**	**0.69**

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)

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

Indiana Department of Environmental Management
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Carol S. Comer
Commissioner

November 3, 2016

Mr. Bob Anderson
Fairfield Manufacturing Co., Inc.
Senior Paint Process Engineer
2400 Sagamore Parkway South
P. O. Box 7940
Lafayette, Indiana 47903-7940

Re: Public Notice
Fairfield Manufacturing Co., Inc.
Permit Level: MSOP - Renewal
Permit Number: 157-36481-00007

Dear Mr. Anderson:

Enclosed is a copy of your draft MSOP - Renewal, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has prepared two versions of the Public Notice Document. The abbreviated version will be published in the newspaper, and the more detailed version will be made available on the IDEM's website and provided to interested parties. Both versions are included for your reference. The OAQ has requested that the Journal & Courier in Lafayette, Indiana publish the abbreviated version of the public notice no later than November 5, 2016. You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper.

OAQ has submitted the draft permit package to the Tippecanoe County Public Library, 627 South Street in Lafayette, Indiana. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Tamara Havics, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, Indianapolis, Indiana, 46204 or call (800) 451- 6027, and ask for extension 2-8219 or dial (317) 232-8219.

Sincerely,

Vicki Biddle

Vicki Biddle
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter 2/17/2016

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Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

November 3, 2016

Journal & Courier
823 Park East Blvd., Suite C
Lafayette, Indiana 47905

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for Fairfield Manufacturing Co., Inc., Tippecanoe County, Indiana.

Since our agency must comply with requirements which call for a Notice of Public Comment, we request that you print this notice one time, no later than November 5, 2016.

Please send a notarized form, clippings showing the date of publication, and the billing to the Indiana Department of Environmental Management, Accounting, Room N1345, 100 North Senate Avenue, Indianapolis, Indiana, 46204.

To ensure proper payment, please reference account # 100174737.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Vicki Biddle at 800-451-6027 and ask for extension 3-6867 or dial 317-233-6867.

Sincerely,

Vicki Biddle

Vicki Biddle
Permit Branch
Office of Air Quality

Permit Level: MSOP - Renewal
Permit Number: 157-36481-00007

Enclosure

PN Newspaper.dot 2/17/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

November 3, 2016

To: Tippecanoe County Public Library

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

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Fairfield Manufacturing Co., Inc.
Permit Number: 157-36481-00007

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 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.dot 2/16/2016

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Michael R. Pence
Governor

Carol S. Comer
Commissioner

Notice of Public Comment

November 3, 2016
Fairfield Manufacturing Co., Inc
157-36481-00007

Dear Concerned Citizen(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Patricia Pear with the Air Permits Administration Section at 1-800-451-6027, ext. 3-6875 or via e-mail at PPEAR@IDEM.IN.GOV. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 2/17/2016

Mail Code 61-53

IDEM Staff	VBIDDLE 11/3/2016 Fairfield Manufacturing Co., Inc. 157-36481-00007 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		Bob Anderson Fairfield Manufacturing Co., Inc. 2400 Sagamore Pkwy S PO Box 7940 Lafayette IN 47903-7940 (Source CAATS)									
2		Philip Rogers VP Fairfield Manufacturing Co., Inc. 2400 Sagamore Pkwy S PO Box 79 Lafayette IN 47903-7940 *(RO CAATS)*									
3		Tippecanoe County Commissioners 20 N 3rd St, County Office Building Lafayette IN 47901 *(Local Official)*									
4		Tippecanoe County Health Department 20 N. 3rd St Lafayette IN 47901-1211 *(Health Department)*									
5		Tippecanoe County Public Library 627 South Street Lafayette IN 47901-1470 *(Library)*									
6		Ms. Geneva Werner 3212 Longlois Drive Lafayette IN 47904-1718 *(Affected Party)*									
7		Mrs. Phyllis Owens 3600 Cypress Lane Lafayette IN 47905 *(Affected Party)*									
8		Mr. Jerry White 4317 Amesbury Drive West Lafayette IN 47906 *(Affected Party)*									
9		Ms. Rose Filley 5839 Lookout Drive West Lafayette IN 47906 *(Affected Party)*									
10		Mr. William Cramer 128 Seminole Drive West Lafayette IN 47906 *(Affected Party)*									
11		West Lafayette City Council and Mayors Office 609 W. Navajo West Lafayette IN 47906 *(Local Official)*									
12		Holly Argiris Environmental Resources Management (ERM) 8425 Woodfield Crossing Blvd., #560-W Indianapolis IN 43240 *(Consultant)*									
13		Mr. Allen Hoffman 4740 Masons Ridge Rd. Lafayette IN 47909 (Affected Party)									
14											
15											

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