INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT

Preliminary Findings Regarding the Renewal of a
Part 70 Operating Permit

for Arconic, Inc. in Tippecanoe County

Part 70 Operating Permit Renewal No.: T157-38267-00001

The Indiana Department of Environmental Management (IDEM) has received an application from Arconic, Inc. located at 3131 East Main Street, Lafayette, IN 47905 for a renewal of its Part 70 Operating Permit issued on November 28, 2012. If approved by IDEM's Office of Air Quality (OAQ), this proposed renewal would allow Arconic, Inc. to continue to operate its existing source.

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

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

Tippecanoe County Library
627 South Street
Lafayette, IN 47901-1470

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

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

How can you participate in this process?

The date that this notice is 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 T157-38267-00001 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 Air Permits page on the Internet at: http://www.in.gov/idem/airquality/2356.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

What will happen after IDEM makes a decision?

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

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

Tripurari Sinha

Tripurari P. Sinha, Ph.D., Section Chief
Permits Branch
Office of Air Quality

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Commissioner

DRAFT

Part 70 Operating Permit Renewal
OFFICE OF AIR QUALITY

Arconic, Inc.
3131 East Main Street
Lafayette, Indiana 47905

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

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

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

Operation Permit No.: T157-38267-00001 Master Agency Interest ID: 11814	
Issued by: Tripurari P. Sinha, Ph. D., 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 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

The Permittee owns and operates a stationary secondary aluminum production facility.

Source Address:	3131 East Main Street, Lafayette, Indiana 47905
General Source Phone Number:	(765) 771-3600
SIC Code:	3341 (Secondary Smelting and Refining of Nonferrous Metals), 3354 (Aluminum Extruded Products)
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Major Source, under PSD Rules Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

Ingot Department

(a) One (1) #2-2 tilting-melting-holding furnace, identified as emission unit 2, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 89-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(b) One (1) #2-3 tilting-melting-holding furnace, identified as emission unit 3, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 90-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(c) One (1) #2-4 tilting-melting-holding furnace, identified as emission unit 4, constructed in 1991, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 88-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(d) One (1) #2-5 tilting-melting-holding furnace, identified as emission unit 5, constructed in 1988, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 87-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(e) One (1) #2-6 tilting-melting-holding furnace, identified as emission unit 6, constructed in 1995, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 94-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(f) One (1) #4 melting furnace, identified as emission unit 7, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 5-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(g) One (1) #3 ingot preheater, identified as emission unit 20, constructed in 1985, with a maximum heat input capacity of 17.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 29-7;

(h) One (1) #4 ingot preheater, identified as emission unit 21, constructed in 1980, with a maximum heat input capacity of 12.3 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 30-7;

(i) One (1) #7 ingot preheater, identified as emission unit 23, constructed in 1997, with a maximum heat input capacity of 20.0 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 24-7;

(j) One (1) #10 ingot preheater, identified as emission unit 24, constructed in 1966, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 24-7;

(k) One (1) #11 ingot preheater, identified as emission unit 25, constructed in 1966, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 23-7;

(l) One (1) #12 ingot preheater, identified as emission unit 26, constructed in 1967, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 22-7;

(m) One (1) #13 ingot preheater, identified as emission unit 27, constructed in 1967, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 21-7;

Extrusion - 1

(a) One (1) #5 press reheat furnace, identified as emission unit 35, constructed in 1975, with a maximum heat input capacity of 18.0 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 56-12;

(b) One (1) #2 press reheat furnace, identified as emission unit 37, constructed in 1987, with a maximum heat input capacity of 16.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(c) One (1) #12 press reheat furnace, identified as emission unit 38, constructed in 1989, with a maximum heat input capacity of 16.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(d) One (1) #6 age oven, identified as emission unit 50, constructed in 1996, with a maximum heat input capacity of 14.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(e) One (1) #3 billet reheat furnace, identified as 3BRF, permitted in 2016, with a maximum heat input capacity of 11.35 MMBtu/hr, natural gas-fired, with emissions uncontrolled and exhausting to stack S-3BRF;

Extrusion - 2

(a) One (1) #1 horizontal heat treat furnace, identified as emission unit 71, constructed in 1957, with a maximum heat input capacity of 13.2 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 68-112;

Tube Mill

(a) One (1) tube mill solvent dip tank, identified as emission unit 94, constructed in 1942, with a maximum capacity of 5,000 gallons, with emissions uncontrolled;

(b) One (1) tube mill solvent dip tank, identified as emission unit 95, constructed in 1942, with a maximum capacity of 10,000 gallons, with emission uncontrolled;

(c) One (1) tube mill solvent tank farm, identified as emission unit 98, constructed in 1942, consisting of four (4) active tanks and three (3) closed tanks, with emission uncontrolled;

(d) Bronx 10 Roll Tube Straightener, identified as unit 142, approved in 2018 for construction, with a maximum capacity of less than 10 tons per year of VOC solvent used for cleaning and lubricating metal, using no control, and exhausting internally;

(e) #6 Pre-Roll Machine, identified as unit 145, installed in 1973, using no control, and exhausting internally;

(f) #4 Roll Machine, identified as unit 146, installed in 1984, using no control, and exhausting internally;

(g) Wyko Tube Straightener, identified as unit 144, installed in 1995, using no control and exhausting to internally.

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, constructed in 2014, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs per nine (9) hour cycle), with a natural gas-fired furnace rated at 12.8 MMBtu/hr, exhausting to stack ALLI-S1;

(b) Two (2) natural gas-fired homogenizing ovens, identified as ALLI-27 and ALLI-28, constructed in 2014, each with a maximum time-weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 21.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Plant Miscellaneous

(a) One (1) diesel air compressor, identified as emission unit EUDAC#1, constructed in 2005, with a maximum capacity of 450 brake horsepower, exhausting through stack DAC#1.

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

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

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

Ingot Department

(a) “622" filter boxes for transferring metal from #41 holding furnace to #11 casting pit, identified as emission unit 9, constructed prior to 1970, with a maximum time-weighted throughput of 6.2 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux with a maximum heat input capacity of 0.8 million Btu per hour;

(b) “622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #12 casting pit, identified as emission unit 10, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(c) “622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 11, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(d) “622" filter boxes for transferring metal from 2-3 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 12, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(e) “622" filter boxes for transferring metal from 2-4 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 13, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(f) “622" filter boxes for transferring metal from 2-5 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 14, constructed prior to 1970, with a maximum time-weighted throughput of 9.6tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(g) "622" filter boxes for transferring metal from 2-6 tilting-melting-holding furnace to #15 casting pit, identified as emission unit 15, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(h) One (1) north skim cooling operation, identified as emission unit 16, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 3-8F;

(i) One (1) south skim cooling operation, identified as emission unit 17, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 4-8F;

(j) One (1) Niles lathe operation, identified as emission unit 31, constructed in 2004, with a maximum capacity of 47.0 tons per hour, with emissions controlled by the Ingot Rotoclone (130) with a maximum capacity of 4,000 CFM, exhausting to stack S31;

(k) One (1) diesel-fired emergency generator for Ingot Department water recirculation, identified as emission unit 136, constructed in 1990, with a maximum capacity of 469 HP (350 kW), exhausting to stack S136;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(l) One (1) #41 holding furnace, identified as emission unit 8, constructed prior to 1970, with a maximum time-weighted capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, with emissions exhausting to stack 6-8;

(m) One (1) #5 ingot preheater, identified as emission unit 22, constructed prior to 1970, with a maximum heat input capacity of 7.4 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting internally;

(n) One (1) ingot pig drying oven, identified as emission unit 28, constructed prior to 1970, with a maximum capacity of 4.7 MMBtu/hr, natural gas fired, exhausting internally;

(o) One (1) ingot cooling recovery operation, identified as emission unit 29, constructed prior to 1970, with a maximum capacity of 0.4 MMBtu/hr, natural gas fired, exhausting internally;

(p) One (1) refractory basin dry out oven, identified as emission unit 30, constructed prior to 1970, with a maximum capacity of 2.00 MMBtu/hr, natural gas fired, exhausting internally;

(q) One (1) #2 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(r) One (1) #5 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(s) One (1) #6 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(t) One (1) #7 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(u) One (1) #1 boring machine, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(v) One (1) #9 boring machine, constructed 2010 with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(w) One (1) Ingersoll boring machine, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(x) One (1) Medart peeler, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(y) One (1) Springfield lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(z) One (1) Monarch lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(aa) One (1) Gisholt lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(bb) One (1) LaBlond lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

Extrusion - 1

(a) One (1) clear coating applicator, constructed in 1999, identified as emission unit 141, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started;

(b) One (1) #1 press, runout table saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(c) One (1) #1 press, #17 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(d) One (1) #2 press, puller saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(e) One (1) #2 press, #2 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(f) One (1) #15 press, west rough cut saw 1, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(g) One (1) #15 press, west rough cut saw 2, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(h) One (1) #18 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(i) One (1) #1 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone exhausting internally;

(j) One (1) #2 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone exhausting internally;

(k) One (1) #11 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, exhausting internally;

(l) One (1) #12 Oliver saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(m) One (1) #13 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, exhausting internally;

(n) One (1) #20 stretcher saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(o) One (1) #20 finish saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(p) One (1) #3 extrusion press saw operation, identified as emission unit 135, permitted in 2018, with a maximum throughput capacity of 5,000 tons per year, with emissions controlled by dust collector 135DC with a maximum capacity of 7,500 CFM, exhausting to stack S135;

(q) One (1) diesel emergency generator for the wastewater treatment plant, identified as emission unit 137, constructed in 1990, with a maximum capacity of 241.2 HP (180 kW), exhausting externally through a stack;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(r) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3A, constructed prior to 1970, exhausting internally;

(s) One (1) #1 vertical Swindell Heat Treat furnace, identified as emission unit 32, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(t) One (1) #2 vertical Swindell Heat Treat furnace, identified as emission unit 33, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(u) One (1) #3 vertical Swindell Heat Treat furnace, identified as emission unit 34, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(v) One (1) #1-1A reheat furnace, identified as emission unit 39, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(w) One (1) #10-10A reheat furnace, identified as emission unit 41, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(x) One (1) #13 press billet reheat furnace, identified as emission unit 43, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(y) One (1) #1 age anneal extrusion oven, identified as emission unit 44, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(z) One (1) #3 age anneal extrusion oven, identified as emission unit 45, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(aa) One (1) #4 age anneal extrusion oven, identified as emission unit 46, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(bb) One (1) #1 age oven, identified as emission unit 47, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(cc) One (1) #2 age oven, identified as emission unit 48, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(dd) One (1) #5 age oven, identified as emission unit 49, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(ee) One (1) #13 press hot box die heating oven furnace, identified as emission unit 51, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(ff) One (1) #14 press reheat furnace, identified as emission unit 51-1, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(gg) One (1) #15 press reheat furnace, identified as emission unit 51-2, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(hh) One (1) caustic die cleaning system, identified as emission unit 52, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting externally;

(ii) One (1) #4 heat treat furnace, identified as emission unit 134, constructed prior to 1970, and each with a maximum heat input capacity of 3.0 million Btu per hour, exhausting to stack S134;

(jj) One (1) extrusion etch sampling operation, identified as emission unit 53, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr, with a maximum capacity of 1,500 CFM, and exhausting to stack S53;

(kk) One (1) #1 press, runout table saws, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(ll) One (1) #1 press, #17 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(mm) One (1) #2 press, puller saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled discharging internally;

(nn) One (1) #2 press, #2 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(oo) One (1) #15 press, west rough cut saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(pp) One (1) #15 press, east rough cut saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(qq) One (1) #18 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(rr) One (1) #1 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone discharging internally;

(ss) One (1) #2 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone discharging internally;

(tt) One (1) #20 stretcher finish saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled discharging internally;

(uu) One (1) #12 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(vv) One (1) #11 saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, discharging internally;

(ww) One (1) #13 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, discharging internally;

Die Shop

(a) One (1) caustic die cleaning system, identified as emission unit 124, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and with a maximum capacity of 6,000 CFM, exhausting externally;

(b) One (1) die etch system, identified as emission unit 125, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and with a maximum capacity of 1,500 CFM, exhausting externally;

(h) One (1) #20 weld furnace, identified as emission unit 59, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(i) One (1) #21 high heat furnace, identified as emission unit 60, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(j) One (1) #22 high heat furnace, identified as emission unit 61, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(k) One (1) #23 draw furnace, identified as emission unit 62, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(m) One (1) #43 salt pot furnace, identified as emission unit 64, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(n) One (1) #42 vertical heat treat endo gas furnace, identified as emission unit 65, constructed prior to 1970, with a maximum heat input capacity of 1.8 million Btu per hour, exhausting internally;

(o) One (1) #10 lead pot furnace, identified as emission unit 66, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

Extrusion - 2

(a) One (1) #21 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(b) One (1) #22 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(c) One (1) #23 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled and exhausting internally;

(d) One (1) #23 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(e) One (1) #24 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(f) One (1) #28 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(g) One (1) #34 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(h) One (1) #27 sawing operation, identified as emission unit 131, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(i) One (1) #37 band saw, identified as emission unit 132, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(j) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3B, constructed prior to 1970, exhausting internally;

(k) One (1) parts washer supporting Extrusion 2, constructed after January 1, 1980, with a maximum solvent usage of 145 gallons per twelve (12) months, and emissions uncontrolled and equipped with a cover;

(l) One (1) #21 vertical Swindell heat treat furnace, identified as emission unit 68, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(m) One (1) #22 vertical Swindell heat treat furnace, identified as emission unit 69, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(n) One (1) #23 vertical Swindell heat treat furnace, identified as emission unit 70, constructed prior to 1970, with a maximum heat input capacity of 8.0 million Btu per hour, exhausting internally;

(o) One (1) #2 horizontal heat treat furnace, identified as emission unit 72, constructed prior to 1970, with a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, exhausting internally;

(p) One (1) #21 age oven, identified as emission unit 73, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(q) One (1) #22 age oven, identified as emission unit 74, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(r) One (1) #24 age oven, identified as emission unit 75, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(s) One (1) #25 age oven, identified as emission unit 76, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(t) One (1) #23 anneal furnace, identified as emission unit 77, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(u) One (1) #29-29A reheat furnace, identified as emission unit 77-2, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(v) Two (2) Dreaver die heating ovens, identified as emission unit 77-3, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, each, exhausting internally;

(w) One (1) 22 press Swindell die heating oven #1, identified as emission unit 77-4, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(x) One (1) 22 press Swindell die heating oven #2, identified as emission unit 77-5, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(y) One (1) 23 press Rockwell die heating oven, identified as emission unit 78, constructed prior to 1970, with a maximum heat input capacity of 6.0 million Btu per hour, exhausting internally;

(z) One (1) 21 press Granco die oven, identified as emission unit 77-1, constructed prior to 1970, with a maximum heat input capacity of 2.5 million Btu per hour, exhausting internally;

(aa) One (1) 21 press mandrel heater oven, with a maximum heat input capacity of 2.5 million Btu per hour, exhausting internally;

Tube Mill

(a) One (1) Lochnivar mineral spirits reclamation boiler, identified as emission unit 90, constructed in 1995, with a maximum heat input capacity of 0.4 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(b) One (1) Cleaver Brooks boiler, identified as emission unit 93, constructed in 2008, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(c) One (1) polishing wheel operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 126, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(d) One (1) wheel repair operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 127, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(e) One (1) flap wheel grinders operation, with particulate emission controlled by a Rotoclone, identified as emission unit 128, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(f) One (1) belt grinders operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 129, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(g) One (1) Grind Cell area saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(h) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3C, constructed prior to 1970, exhausting internally;

(i) Eighteen (18) parts washers supporting Tube Mill operations, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

(j) One (1) #30 age anneal furnace, identified as emission unit 79, constructed prior to 1970, with a maximum heat input capacity of 6.0 million Btu per hour, exhausting internally;

(k) One (1) #31 Swindell vertical heat treat furnace, identified as emission unit 80, constructed prior to 1970, with a maximum heat input capacity of 3.0 million Btu per hour, exhausting internally;

(l) One (1) #32 Swindell vertical heat treat furnace, identified as emission unit 81, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(m) One (1) #31 age anneal furnace, identified as emission unit 82, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(n) One (1) #32 age anneal furnace, identified as emission unit 83, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(o) One (1) #33 age anneal furnace, identified as emission unit 84, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(p) One (1) #34 age anneal furnace, identified as emission unit 85, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(q) One (1) #34 age anneal furnace afterburner, identified as emission unit 86, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(r) One (1) #35 age anneal furnace, identified as emission unit 87, constructed prior to 1970, with a maximum heat input capacity of 7.0 million Btu per hour, exhausting internally;

(s) One (1) #37 age anneal furnace, identified as emission unit 88, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(t) One (1) #39 age oven, identified as emission unit 89, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(u) One (1) #43 age anneal furnace, identified as emission unit 91, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(v) One (1) #44 age anneal furnace, identified as emission unit 96, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(w) One (1) natural gas-fired water heater for the wash unit at the 6 Cell Drive shaft production facility, permitted in 2016 with a maximum rated capacity of 0.42 MMBtu/hr;

(x) Sutton 2KT Roll Tube Straightener, identified as unit 143, installed in 1948, using no control, and exhausting to internally;

(y) One (1) #3 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(z) One (1) #3 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(aa) One (1) #4 DSC chipless cutter sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(bb) One (1) #4 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(cc) One (1) #5 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(dd) One (1) #5 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(ee) One (1) #6 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ff) One (1) #6 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(gg) One (1) Small Cell, #10 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(hh) One (1) #7 Short Cut Cell saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ii) One (1) #3 saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(jj) One (1) Large Cell, #12 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(kk) One (1) “T” Cell saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ll) One (1) #4 saw east, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(mm) One (1) #4A saw west, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(nn) One (1) #11 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a Rotoclone exhausting internally;

(oo) One (1) #10 Oliver saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(pp) One (1) #10 Draw Bench saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(qq) One (1) natural gas-fired wash unit water heater, identified as emission unit 97, constructed prior to 1970, with a maximum heat input capacity of 0.4 million Btu per hour, exhausting internally.

(rr) One (1) #7 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ss) One (1) #7 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

Aluminum-Lithium Alloy Cast House

(a) Two (2) scrap drying ovens, identified as ALLI-22 and ALLI-23, constructed in 2014, each rated at 4.4 MMBtu/hr, natural gas fired, exhausting to stacks ALLI-S22 and ALLI-S23;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, constructed in 2014, each with a maximum time-weighted average throughput of 5.18 lb of molten lithium per hour (44.0 lb of molten lithium per cycle);

(c) Three (3) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-19, constructed in 2014, each with a maximum time-weighted average throughput capacity of 37.5 lb of molten lithium per hour (900.0 lb of molten lithium per cycle);

(d) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, constructed in 2014 and approved in 2018 for modification, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle), using a maximum of 1.0 lb of Amlox 90F flux (or equivalent) per ton of metal melted, using no control and exhausting to internally;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(e) One (1) skim cooling operation, identified as ALLI-32, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(f) One (1) skim loadout operation, identified as ALLI-33, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(g) One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34;

[Under 40 CFR 60, Subpart JJJJ, this is an affected facility]
[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(h) Natural gas-fired space heaters, permitted in 2012, each rated at a maximum of 10.0 MMBtu/hr, with a total heat input capacity of 100.0 MMBtu/hr, exhausting internally;

(i) One (1) natural gas-fired hot water heater, identified as ALLI-37, constructed in 2014, with maximum heat input capacity of 4.0 MMBtu/hr and tank capacity of 100 gallons, and exhausting internally;

(j) One (1) 2-stage A622 filter, identified as ALLI-26, permitted in 2012 and approved in 2018 for modification, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle), using a maximum of 0.258 lbs of Amlox 90F (or equivalent) flux per ton of metal melted, using no control and exhausting to internally;

(k) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput of 7,233 pounds per hour, exhausting internally;

(l) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour, with emissions controlled by dust collector ALLI-30DC with a maximum capacity of 1,500 CFM, exhausting internally;

(m) One (1) dog bone band saw, identified as ALLI-31, permitted in 2018, with a maximum throughput of 7,233 pounds per hour, exhausting internally;

(n) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput capacity of 1,200 gallons per minute;

Shipping

(a) One (1) clear coating applicator, identified as emission unit 112, constructed in 1997, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started;

(b) Four (4) clear coating applicators, identified as emission unit 112, constructed in 1997, consisting of a hand held spray applicator wand and pressurized reservoir. The protective coating is applied to the aluminum pieces by hand to minimize overspray.

Plant Miscellaneous

(a) One (1) rented boiler, identified as TB, constructed in 2011, with a maximum heat input capacity of 2.5 million Btu per hour, natural gas-fired;

(b) One (1) Pacific boiler, identified as emission unit 103, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(c) One (1) Pacific boiler, identified as emission unit 104, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(d) One (1) steam pad heater, identified as emission unit 135, constructed prior to 1970, with a maximum capacity of 0.3 MMBtu/hr, natural gas-fired.

(e) One hundred four (104) space heaters, identified as emission unit 133, constructed between 2001 and 2011, with a total maximum design capacity of 137.1 million British thermal units per hour (MMBtu/hr), natural gas-fired;

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of the following:

(1) One (1) gasoline fuel tank, identified as emission unit 119, constructed prior to 1970, with a maximum capacity of 6,000 gallons and a throughput of 1,400 gallons per month;

[Under 40 CFR 63, Subpart CCCCCC, this is an affected facility]

(g) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 101, constructed in 1960, with emissions controlled by an integral cyclone, identified as the #1 sawdust collector, and exhausting to stack 73-57;

(h) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 102, constructed in 1960, with emissions controlled by an integral baghouse, identified as the #2 sawdust collector and exhausting to stack 72-57;

(i) Sawing activities located in the Quality Lab, constructed prior to 1970, with particulate emissions controlled by cyclones, and exhausting internally;

(j) Paved and unpaved roads;

(k) Eleven (11) parts washers supporting Maintenance, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

(l) One (1) diesel fuel tank, identified as emission unit 116, constructed prior to 1970, with a maximum capacity of 500 gallons;

(m) One (1) #2 diesel fuel tank, identified as emission unit 117, constructed prior to 1970, with a maximum capacity of 3,000 gallons;

(n) One (1) distillate fuel oil tank, identified as emission unit 118, constructed prior to 1970, with a maximum capacity of 300,000 gallons;

(o) One (1) propane emergency generator, identified as emission unit 138, constructed in 1990, with a maximum capacity of 80 kW;

(p) One (1) physical laboratory, identified as emission unit 140, constructed prior to 1970;

Miscellaneous Water Cooling Towers:

(a) One (1) Evaporative Contact Cooling Tower, identified as Ingot Tower, installed in 1970, with a maximum throughput of 5,400 gallons per minute;

(b) One (1) Evaporative Non- Contact Cooling Tower, identified as North Tower, installed in 1989, with a maximum throughput of 360 gallons per minute;

(c) One (1) Evaporative Non- Contact Cooling Tower, identified as South East Tower, installed in 1989, with a maximum throughput of 390 gallons per minute;

(d) One (1) Evaporative Non- Contact Cooling Tower, identified as #1 Press Tower, installed in 1995, with a maximum throughput of 506 gallons per minute;

(e) One (1) Evaporative Non- Contact Cooling Tower, identified as South West Tower, installed in 1999, with a maximum throughput of 360 gallons per minute;

(f) One (1) Evaporative Non- Contact Cooling Tower, identified as Swindell Tower, installed in 1999, with a maximum throughput of 280 gallons per minute;

(g) One (1) Evaporative Non- Contact Cooling Tower, identified as Tube Mill Tower, installed in 2000, with a maximum throughput of 450 gallons per minute;

(h) One (1) Evaporative Non- Contact Cooling Tower, identified as Abar Tower, installed in 2001, with a maximum throughput of 200 gallons per minute;

(i) One (1) Evaporative Non- Contact Cooling Tower, identified as Induction Tower, installed in 2001, with a maximum throughput of 1,260 gallons per minute;

(j) One (1) Evaporative Non- Contact Cooling Tower, identified as HHT Tower, installed in 2001, with a maximum throughput of 900 gallons per minute;

(k) One (1) Evaporative Non- Contact Cooling Tower, identified as #23 Tower, installed in 2001, with a maximum throughput of 265 gallons per minute;

(l) One (1) Portable Cooling Tower, installed in 2016, with a maximum throughput of 280 gallons per minute;

(m) One (1) #3 cooling tower, identified as 3CT, permitted in 2016, with a maximum capacity of 285 gallons/minute.

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

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

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

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

SECTION B GENERAL CONDITIONS

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

Terms in this permit shall have the definition assigned to such terms in the referenced regulation. In the absence of definitions in the referenced regulation, the applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

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

(a) This permit, T157-38267-00001, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

(b) If IDEM, OAQ, upon receiving a timely and complete renewal permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect, including any permit shield provided in 326 IAC 2-7-15, until the renewal permit has been issued or denied.

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

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

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

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

B.4 Enforceability [326 IAC 2-7-7][IC 13-17-12]

Unless otherwise stated, all terms and conditions in this permit, including any provisions designed to limit the source's potential to emit, are enforceable by IDEM, the United States Environmental Protection Agency (U.S. EPA) and by citizens in accordance with the Clean Air Act.

B.5 Severability [326 IAC 2-7-5(5)]

The provisions of this permit are severable; a determination that any portion of this permit is invalid shall not affect the validity of the remainder of the permit.

B.6 Property Rights or Exclusive Privilege [326 IAC 2-7-5(6)(D)]

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

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

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

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

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

(a) A certification required by this permit meets the requirements of 326 IAC 2-7-6(1) if:

(1) it contains a certification by a "responsible official" as defined by 326 IAC 2-7-1(35), and

(2) the certification states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) The Permittee may use the attached Certification Form, or its equivalent with each submittal requiring certification. One (1) certification may cover multiple forms in one (1) submittal.

(c) A "responsible official" is defined at 326 IAC 2-7-1(35).

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

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than July 1 of each year to:

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

and

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

(b) The annual compliance certification report required by this permit shall be considered timely if the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

(c) The annual compliance certification report shall include the following:

(1) The appropriate identification of each term or condition of this permit that is the basis of the certification;

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

(4) The methods used for determining the compliance status of the source, currently and over the reporting period consistent with 326 IAC 2-7-5(3); and

(5) Such other facts, as specified in Sections D of this permit, as IDEM, OAQ may require to determine the compliance status of the source.

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

B.10 Preventive Maintenance Plan [326 IAC 2-7-5(12)][326 IAC 1-6-3]

(a) A Preventive Maintenance Plan (PMP) 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 PMPs no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

(1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;

(2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions; and

(3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If, due to circumstances beyond the Permittee's control, the PMPs cannot be prepared and maintained within the above time frame, the Permittee may extend the date an additional ninety (90) days provided the Permittee notifies:

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

The Permittee shall implement the PMPs.

(c) A copy of the PMPs shall be submitted to IDEM, OAQ upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions. The PMPs and their submittal do not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

B.11 Emergency Provisions [326 IAC 2-7-16]

(a) An emergency, as defined in 326 IAC 2-7-1(12), is not an affirmative defense for an action brought for noncompliance with a federal or state health-based emission limitation.

(b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describe the following:

(1) An emergency occurred and the Permittee can, to the extent possible, identify the causes of the emergency;

(2) The permitted facility was at the time being properly operated;

(3) During the period of an emergency, the Permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit;

(4) For each emergency lasting one (1) hour or more, the Permittee notified IDEM, OAQ within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered;

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for Office of Air Quality, Compliance and Enforcement Branch)
Facsimile Number: 317-233-6865

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

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

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

The notice fulfills the requirement of 326 IAC 2-7-5(3)(C)(ii) and must contain the following:

(A) A description of the emergency;

(B) Any steps taken to mitigate the emissions; and

(C) Corrective actions taken.

The notification which shall be submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(6) The Permittee immediately took all reasonable steps to correct the emergency.

(c) In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.

(d) This emergency provision supersedes 326 IAC 1-6 (Malfunctions). This permit condition is in addition to any emergency or upset provision contained in any applicable requirement.

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(8) be revised in response to an emergency.

(f) Failure to notify IDEM, OAQ by telephone or facsimile of an emergency lasting more than one (1) hour in accordance with (b)(4) and (5) of this condition shall constitute a violation of 326 IAC 2-7 and any other applicable rules.

(g) If the emergency situation causes a deviation from a technology-based limit, the Permittee may continue to operate the affected emitting facilities during the emergency provided the Permittee immediately takes all reasonable steps to correct the emergency and minimize emissions.

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

(a) Pursuant to 326 IAC 2-7-15, the Permittee has been granted a permit shield. The permit shield provides that compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that either the applicable requirements are included and specifically identified in this permit or the permit contains an explicit determination or concise summary of a determination that other specifically identified requirements are not applicable. The Indiana statutes from IC 13 and rules from 326 IAC, referenced in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a Part 70 permit under 326 IAC 2-7 or for applicable requirements for which a permit shield has been granted.

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T157-38267-00001 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

(2) revised under 326 IAC 2-7-10.5, or

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit. [326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) This permit shall be reopened and revised under any of the circumstances listed in IC 13-15-7-2 or if IDEM, OAQ determines any of the following:

(1) That this permit contains a material mistake.

(2) That inaccurate statements were made in establishing the emissions standards or other terms or conditions.

(3) That this permit must be revised or revoked to assure compliance with an applicable requirement. [326 IAC 2-7-9(a)(3)]

(c) Proceedings by IDEM, OAQ to reopen and revise this permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of this permit for which cause to reopen exists. Such reopening and revision shall be made as expeditiously as practicable. [326 IAC 2-7-9(b)]

(d) The reopening and revision of this permit, under 326 IAC 2-7-9(a), shall not be initiated before notice of such intent is provided to the Permittee by IDEM, OAQ at least thirty (30) days in advance of the date this permit is to be reopened, except that IDEM, OAQ may provide a shorter time period in the case of an emergency. [326 IAC 2-7-9(c)]

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

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

Request for renewal shall be submitted to:

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

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

(1) Submitted at least nine (9) months prior to the date of the expiration of this permit; and

(2) If the date postmarked on the envelope or certified mail receipt, or affixed by the shipper on the private shipping receipt, is on or before the date it is due. If the document is submitted by any other means, it shall be considered timely if received by IDEM, OAQ on or before the date it is due.

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

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

(a) Permit amendments and modifications are governed by the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this permit.

(b) Any application requesting an amendment or modification of this permit shall be submitted to:

Indiana Department of Environmental Management
Permit Administration and Support Section, Office of Air Quality
100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251
Any such application does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

(a) The Permittee may make any change or changes at the source that are described in 326 IAC 2-7-20(b) or (c) without a prior permit revision, if each of the following conditions is met:

(1) The changes are not modifications under any provision of Title I of the Clean Air Act;

(2) Any preconstruction approval required by 326 IAC 2-7-10.5 has been obtained;

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

(4) The Permittee notifies the:

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

and

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

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

(5) The Permittee maintains records on-site, on a rolling five (5) year basis, which document all such changes and emission trades that are subject to 326 IAC 2-7-20(b)(1) and (c)(1). The Permittee shall make such records available, upon reasonable request, for public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ in the notices specified in 326 IAC 2-7-20(b)(1) and (c)(1).

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

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

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

(3) Any change in emissions; and

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

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

(c) Emission Trades [326 IAC 2-7-20(c)]
The Permittee may trade emissions increases and decreases at the source, where the applicable SIP provides for such emission trades without requiring a permit revision, subject to the constraints of Section (a) of this condition and those in 326 IAC 2-7-20(c).

(d) Alternative Operating Scenarios [326 IAC 2-7-20(d)]
The Permittee may make changes at the source within the range of alternative operating scenarios that are described in the terms and conditions of this permit in accordance with 326 IAC 2-7-5(9). No prior notification of IDEM, OAQ or U.S. EPA is required.

(e) Backup fuel switches specifically addressed in, and limited under, Section D of this permit shall not be considered alternative operating scenarios. Therefore, the notification requirements of part (a) of this condition do not apply.

B.20 Source Modification Requirement [326 IAC 2-7-10.5]

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

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

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

(a) Enter upon the Permittee's premises where a Part 70 source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;

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

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

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

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

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

(a) The Permittee must comply with the requirements of 326 IAC 2-7-11 whenever the Permittee seeks to change the ownership or operational control of the source and no other change in the permit is necessary.

(b) Any application requesting a change in the ownership or operational control of the source shall contain a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new Permittee. The application shall be submitted to:

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

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

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

B.23 Annual Fee Payment [326 IAC 2-7-19][326 IAC 2-7-5(7)][326 IAC 2-1.1-7]

(a) The Permittee shall pay annual fees to IDEM, OAQ within thirty (30) calendar days of receipt of a billing. Pursuant to 326 IAC 2-7-19(b), if the Permittee does not receive a bill from IDEM, OAQ the applicable fee is due April 1 of each year.

(b) Except as provided in 326 IAC 2-7-19(e), failure to pay may result in administrative enforcement action or revocation of this permit.

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

C.3 Open Burning [326 IAC 4-1][IC 13-17-9]

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

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

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

C.5 Fugitive Dust Emissions [326 IAC 6-4]

The Permittee shall not allow fugitive dust to escape beyond the property line or boundaries of the property, right-of-way, or easement on which the source is located, in a manner that would violate 326 IAC 6-4 (Fugitive Dust Emissions). 326 IAC 6-4-2(4) is not federally enforceable.

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

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

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

(a) Notification requirements apply to each owner or operator. If the combined amount of regulated asbestos containing material (RACM) to be stripped, removed or disturbed is at least 260 linear feet on pipes or 160 square feet on other facility components, or at least thirty-five (35) cubic feet on all facility components, then the notification requirements of

326 IAC 14-10-3 are mandatory. All demolition projects require notification whether or not asbestos is present.

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

(e) Procedures for Asbestos Emission Control
The Permittee shall comply with the applicable emission control procedures in 326 IAC 14-10-4 and 40 CFR 61.145(c). Per 326 IAC 14-10-1, emission control requirements are applicable for any removal or disturbance of RACM greater than three (3) linear feet on pipes or three (3) square feet on any other facility components or a total of at least 0.75 cubic feet on all facility components.

(f) Demolition and Renovation
The Permittee shall thoroughly inspect the affected facility or part of the facility where the demolition or renovation will occur for the presence of asbestos pursuant to 40 CFR 61.145(a).

(g) Indiana Licensed Asbestos Inspector
The Permittee shall comply with 326 IAC 14-10-1(a) that requires the owner or operator, prior to a renovation/demolition, to use an Indiana Licensed Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement to use an Indiana Licensed Asbestos inspector is not federally enforceable.

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

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

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

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

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

Compliance Requirements [326 IAC 2-1.1-11]

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

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

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

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

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

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

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

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

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

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

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

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

C.11 Instrument Specifications [326 IAC 2-1.1-11][326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) When required by any condition of this permit, an analog instrument used to measure a parameter related to the operation of an air pollution control device shall have a scale such that the expected maximum reading for the normal range shall be no less than twenty percent (20%) of full scale. The analog instrument shall be capable of measuring values outside of the normal range.

(b) The Permittee may request that the IDEM, OAQ approve the use of an instrument that does not meet the above specifications provided the Permittee can demonstrate that an alternative instrument specification will adequately ensure compliance with permit conditions requiring the measurement of the parameters.

Corrective Actions and Response Steps [326 IAC 2-7-5][326 IAC 2-7-6]

C.12 Emergency Reduction Plans [326 IAC 1-5-2][326 IAC 1-5-3]

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

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

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

C.13 Risk Management Plan [326 IAC 2-7-5(11)][40 CFR 68]

If a regulated substance, as defined in 40 CFR 68, is present at a source in more than a threshold quantity, the Permittee must comply with the applicable requirements of 40 CFR 68.

C.14 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

(a) CAM *Response to excursions or exceedances.*

(1) Upon detecting an excursion or exceedance, subject to CAM, the Permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(2) Determination of whether the Permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

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

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

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(c) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or

records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

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

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

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall submit a description of its response actions to IDEM, OAQ no later than seventy-five (75) days after the date of the test.

(b) A retest to demonstrate compliance shall be performed no later than one hundred eighty (180) days after the date of the test. Should the Permittee demonstrate to IDEM, OAQ that retesting in one hundred eighty (180) days is not practicable, IDEM, OAQ may extend the retesting deadline.

(c) IDEM, OAQ reserves the authority to take any actions allowed under law in response to noncompliant stack tests.

The response action documents submitted pursuant to this condition do require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

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

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

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

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

The statement must be submitted to:

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

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

C.17 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6][326 IAC 2-2][326 IAC 2-3]

(a) Records of all required monitoring data, reports and support information required by this permit shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. Support information includes the following, where applicable:
  - (AA) All calibration and maintenance records.
  - (BB) All original strip chart recordings for continuous monitoring instrumentation.
  - (CC) Copies of all reports required by the Part 70 permit.

Records of required monitoring information include the following, where applicable:
  - (AA) The date, place, as defined in this permit, and time of sampling or measurements.
  - (BB) The dates analyses were performed.
  - (CC) The company or entity that performed the analyses.
  - (DD) The analytical techniques or methods used.
  - (EE) The results of such analyses.
  - (FF) The operating conditions as existing at the time of sampling or measurement.

These records shall be physically present or electronically accessible at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.

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

(c) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A), 326 IAC 2-2-8 (b)(6)(B), 326 IAC 2-3-2 (l)(6)(A), and/or 326 IAC 2-3-2 (l)(6)(B)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

  (1) Before beginning actual construction of the “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, document and maintain the following records:

    (A) A description of the project.

    (B) Identification of any emissions unit whose emissions of a regulated new source review pollutant could be affected by the project.

    (C) A description of the applicability test used to determine that the project is not a major modification for any regulated NSR pollutant, including:

      (i) Baseline actual emissions;

      (ii) Projected actual emissions;

(iii) Amount of emissions excluded under section 326 IAC 2-2-1(pp)(2)(A)(iii) and/or 326 IAC 2-3-1 (kk)(2)(A)(iii); and

(iv) An explanation for why the amount was excluded, and any netting calculations, if applicable.

(d) If there is a reasonable possibility (as defined in 326 IAC 2-2-8 (b)(6)(A) and/or 326 IAC 2-3-2 (l)(6)(A)) that a “project” (as defined in 326 IAC 2-2-1(oo) and/or 326 IAC 2-3-1(jj)) at an existing emissions unit, other than projects at a source with a Plantwide Applicability Limitation (PAL), which is not part of a “major modification” (as defined in 326 IAC 2-2-1(dd) and/or 326 IAC 2-3-1(y)) may result in significant emissions increase and the Permittee elects to utilize the “projected actual emissions” (as defined in 326 IAC 2-2-1(pp) and/or 326 IAC 2-3-1(kk)), the Permittee shall comply with following:

(1) Monitor the emissions of any regulated NSR pollutant that could increase as a result of the project and that is emitted by any existing emissions unit identified in (1)(B) above; and

(2) Calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of five (5) years following resumption of regular operations after the change, or for a period of ten (10) years following resumption of regular operations after the change if the project increases the design capacity of or the potential to emit that regulated NSR pollutant at the emissions unit.

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

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

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

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

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

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

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

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

(b) The address for report submittal is:

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

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

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

(e) If the Permittee is required to comply with the recordkeeping provisions of (d) in Section C - General Record Keeping Requirements for any “project” (as defined in 326 IAC 2-2-1 (oo) and/or 326 IAC 2-3-1 (jj)) at an existing emissions unit, and the project meets the following criteria, then the Permittee shall submit a report to IDEM, OAQ:

(1) The annual emissions, in tons per year, from the project identified in (c)(1) in Section C- General Record Keeping Requirements exceed the baseline actual emissions, as documented and maintained under Section C- General Record Keeping Requirements (c)(1)(C)(i), by a significant amount, as defined in 326 IAC 2-2-1 (ww) and/or 326 IAC 2-3-1 (pp), for that regulated NSR pollutant, and

(2) The emissions differ from the preconstruction projection as documented and maintained under Section C - General Record Keeping Requirements (c)(1)(C)(ii).

(f) The report for project at an existing emissions unit shall be submitted no later than sixty (60) days after the end of the year and contain the following:

(1) The name, address, and telephone number of the major stationary source.

(2) The annual emissions calculated in accordance with (d)(1) and (2) in Section C - General Record Keeping Requirements.

(3) The emissions calculated under the actual-to-projected actual test stated in 326 IAC 2-2-2(d)(3) and/or 326 IAC 2-3-2(c)(3).

(4) Any other information that the Permittee wishes to include in this report such as an explanation as to why the emissions differ from the preconstruction projection.

Reports required in this part shall be submitted to:

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

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

Stratospheric Ozone Protection

C.19 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.0 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: Source-wide HAP limits

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

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

D.0.1 Hazardous Air Pollutants (HAPs) Area Source Limit [40 CFR Part 63]

In order that the source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The source-wide combined usage of ammonium fluoroborate (AFB or NH_4BF_4) and A-130 flux (or equivalent) shall not exceed one of the following correlated limits per twelve (12) consecutive month period with compliance determined at the end of each month:

AFB Flux Limited Usage (ton per twelve (12) consecutive month period)		A-130 (or equivalent) Flux Limited Usage (ton per twelve (12) consecutive month period)
13.00	and	20.0
12.75	and	25.5
12.00	and	30.0
11.00	and	64.0
10.50	and	75.0
10.00	and	85.0
9.50	and	97.0
9.00	and	108.0

(1) Hydrogen fluoride (HF) emissions shall not exceed 0.76 pounds per pound of AFB flux.

(2) Hydrogen chloride (HCl) emissions shall not exceed 32.18 pounds per 1000 pounds of A-130 (or equivalent) flux.

(3) Chlorine (Cl2) emissions shall not exceed 1.03 pounds per 1000 pounds of A-130 (or equivalent) flux.

(4) Hydrogen fluoride (HF) emissions shall not exceed 1.43 pounds per 1000 pounds of A-130 (or equivalent) flux.

(b) The total source-wide natural gas usage shall not exceed 6,000 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month.

(1) Hexane emissions shall not exceed 1.8 pounds per million cubic feet of natural gas.

Compliance with these limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide total potential to emit any single HAP to less than ten (10) tons per twelve (12) consecutive month period, total HAPs to less than twenty-five (25) tons per twelve (12) consecutive month period, and shall render the source an area source under Section 112 of the Clean Air Act.

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

D.0.2 Record Keeping Requirements

(a) To document the compliance status with Condition D.0.1(a), the Permittee shall maintain monthly records of AFB and A-130 (or equivalent) flux usage.

(b) To document the compliance status with Condition D.0.1(b), the Permittee shall maintain monthly records of source-wide natural gas usage.

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

D.0.3 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.0.1(a) and D.0.1(b) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days following the end of each quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

(a) One (1) #2-2 tilting-melting-holding furnace, identified as emission unit 2, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 89-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(b) One (1) #2-3 tilting-melting-holding furnace, identified as emission unit 3, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 90-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(c) One (1) #2-4 tilting-melting-holding furnace, identified as emission unit 4, constructed in 1991, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 88-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(d) One (1) #2-5 tilting-melting-holding furnace, identified as emission unit 5, constructed in 1988, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 87-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(e) One (1) #2-6 tilting-melting-holding furnace, identified as emission unit 6, constructed in 1995, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 94-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(f) One (1) #4 melting furnace, identified as emission unit 7, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 5-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

Insignificant Activities

Ingot Department

(l) One (1) #41 holding furnace, identified as emission unit 8, constructed prior to 1970, with a maximum time-weighted capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, with emissions exhausting to stack 6-8;

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

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

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

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

(a) The PM emission rate from the tilting-melting-holding furnaces #2-2 and #2-3 shall not exceed 2.84 pounds per hour, each.

Compliance with this emission limit will limit the potential to emit to less than twenty-five (25) tons per year of PM, and will render the requirements of 326 IAC 2-2 (PSD) not applicable to the modifications covered by CP 157-2316, issued April 9, 1992.

(b) The following conditions shall apply to the tilting-melting-holding furnace #2-6:

(1) The PM emissions from the tilting-melting-holding furnace #2-6 shall not exceed 5.69 pounds per hour.

(2) The NOx emissions from the tilting-melting-holding furnace #2-6 shall not exceed 5.0 pounds per hour.

(3) The charge shall consist of only alloys, pig, slabs, purchased scrap, or process scrap and chips that are essentially free of contaminants and has demonstrated to be acceptable based on successful performance tests required under Section D.1.7.

Compliance with these emission limits will limit the potential to emit to less than twenty-five (25) tons per year of PM and less than forty (40) tons per year of NO_X, and will render the requirements of 326 IAC 2-2 (PSD) not applicable to the modifications covered by CP 157-4219, issued June 12, 1995.

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

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes):

(a) The allowable particulate emission rate from each of the tilting-melting-holding furnaces #2-2 and #2-3 shall not exceed 13.62 pounds per hour when operating at a process weight rate of 6.0 tons per hour.

(b) The allowable particulate emission rate from each of the melting furnace #4 and #41 holding furnace shall not exceed 13.92 pounds per hour when operating at a process weight rate of 6.2 tons per hour.

(c) The allowable particulate emission rate from each of the tilting-melting-holding furnaces #2-4, #2-5 and #2-6 shall not exceed 18.63 pounds per hour when operating at a process weight rate of 9.58 tons per hour.

The pounds per hour limitations were calculated with the following equation:

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

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

D.1.3 Work Practices [Agreed Order A-3659, issued April 15, 1997]

Pursuant to A-3659, issued April 15, 1997, the following conditions shall apply to each of the tilting-melting-holding furnaces #2-2, #2-3, #2-4, #2-5 and #2-6, the #4 melting furnace and the #41 holding furnace:

(a) The furnaces shall be skimmed after alloying if skim is over approximately one (1) inch thick and covers more than fifty percent (50%) of the bath.

(b) The furnaces shall be skimmed before a heat stir if the skim is over approximately one (1) inch thick and covers more than fifty percent (50%) of the bath.

(c) The work practices stated in (a) and (b) above shall be incorporated into the plant standard operating practice manual as environmental air quality requirements.

(d) The work practices stated in (a) and (b) above shall be reviewed with the respondent's appropriate operating personnel on an annual basis.

D.1.4 Fluxing [Agreed Order A-3121, issued July 1, 1997]

Pursuant to Agreed Order A-3121, issued July 1, 1997, the following conditions shall apply to the tilting-melting-holding furnaces #2-3 and #2-6:

(a) When it is deemed necessary to add salt flux to furnaces #2-3 and #2-6, only salt flux in the solid briquette form shall be used.

(b) Arconic Inc. may perform additional stack testing to demonstrate compliance using the granular flux method.

(c) The OAQ agrees to consider a request from Arconic Inc. to modify agreed order A-3121 to allow the use of salt flux in the granular form in the event that salt flux in the briquette form becomes unavailable.

(d) Arconic Inc. must demonstrate that compliance with the permit conditions will be maintained using granular flux.

(e) When granular flux is used, notification shall be made to the OAQ within fourteen (14) working days.

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

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

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

D.1.6 Testing Requirements [326 IAC 2-1.1-11]

(a) In order to demonstrate compliance with Condition D.1.1(a), the Permittee shall conduct PM testing for melting furnaces #2-2 and #2-3, utilizing methods as approved by the Commissioner.

(b) In order to demonstrate compliance with Condition D.1.1(b), the Permittee shall conduct PM and NO_X testing for furnace #2-6, utilizing methods as approved by the Commissioner.

Testing shall be repeated at least once every five (5) years from the date of the most recent valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the testing required by this condition.

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

D.1.7 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.1(b)(3), the Permittee shall maintain records of visual inspections of the materials added to the furnace consistent with the provisions of the approved Site-Specific Monitoring Plan.

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

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, constructed in 2014, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs per nine (9) hour cycle), with a natural gas-fired furnace rated at 12.8 MMBtu/hr, exhausting to stack ALLI-S1;

(b) Two (2) natural gas-fired homogenizing ovens, identified as ALLI-27 and ALLI-28, constructed in 2014, each with a maximum time-weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 21.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Insignificant Activities

Aluminum-Lithium Alloy Cast House

(a) Two (2) scrap drying ovens, identified as ALLI-22 and ALLI-23, constructed in 2014, each rated at 4.4 MMBtu/hr, natural gas fired, exhausting to stacks ALLI-S22 and ALLI-S23;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, constructed in 2014, each with a maximum time-weighted average throughput of 5.18 lb of molten lithium per hour (44.0 lb of molten lithium per cycle);

(c) Three (3) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-19, constructed in 2014, each with a maximum time-weighted average throughput capacity of 37.5 lb of molten lithium per hour (900.0 lb of molten lithium per cycle);

(d) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, constructed in 2014 and approved in 2018 for modification, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle), using a maximum of 1.0 lb of Amlox 90F flux (or equivalent) per ton of metal melted, using no control and exhausting internally;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(e) One (1) skim cooling operation, identified as ALLI-32, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(f) One (1) skim loadout operation, identified as ALLI-33, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(g) One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34;

[Under 40 CFR 60, Subpart JJJJ, this is an affected facility]
[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(h) Natural gas-fired space heaters, permitted in 2012, each rated at a maximum of 10.0

MMBtu/hr, with a total heat input capacity of 100.0 MMBtu/hr, exhausting internally;

(i) One (1) natural gas-fired hot water heater, identified as ALLI-37, constructed in 2014, with maximum heat input capacity of 4.0 MMBtu/hr and tank capacity of 100 gallons, 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 2-7-5(1)]

D.2.1 PSD Minor Limits - Combustion [326 IAC 2-2]

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

(a) The total natural gas usage for the primary aluminum melter furnace (ALLI-1), scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), hot water heater (ALLI-37) and space heaters associated with the aluminum-lithium cast house modification shall not exceed 736.15 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NO_X emissions from natural gas combustion shall not exceed 100 pounds per million cubic feet (lb/MMCF).

(c) PM emissions from natural gas combustion shall not exceed 1.9 pounds per million cubic feet (lb/MMCF).

(d) PM_{10} emissions from natural gas combustion shall not exceed 7.6 pounds per million cubic feet (lb/MMCF).

(e) $PM_{2.5}$ emissions from natural gas combustion shall not exceed 7.6 pounds per million cubic feet (lb/MMCF).

Emergency Generator

(f) The operating hours for the natural gas-fired emergency generator (ALLI-34) shall not exceed 150 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(g) NOx emissions from the natural gas-fired emergency generator (ALLI-34) shall not exceed 19.5 pounds per hour.

Compliance with these emission limits and the limits in Condition D.2.2, combined with the potential to emit NO_X, PM, PM_{10}, and $PM_{2.5}$ emissions from all other emission units associated with the aluminum-lithium cast house 2012 modification, will limit the potential to emit from the modification to less than forty (40) tons of NO_X, less than twenty-five (25) tons of PM, less than fifteen (15) tons of PM_{10}, and less than ten (10) tons of $PM_{2.5}$ per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2012 modification.

D.2.2 PSD and HAP Minor Limits - Melting [326 IAC 2-2] [40 CFR Part 63]

In order to render the requirements of 326 IAC 2-2 (PSD) not applicable, and in order that the source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

Electric Induction Melting/holding Furnaces ALLI-24 and ALLI-25 and A622 Filter ALLI-26

(a) The combined total metal charged to the two electric induction melter furnaces, identified as ALLI-24 and ALLI-25, and the total metal charged to the 2-stage A622 filter, identified as ALLI-26, shall not exceed 35,585 tons, each, per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) PM emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.4 pounds of PM per ton of charge of molten aluminum-lithium.

(c) PM_{10} emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.12 pounds of PM_{10} per ton of charge of molten aluminum-lithium.

(d) $PM_{2.5}$ emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge of molten aluminum-lithium.

(e) HCl (HAP) emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) and A622 filter (ALLI-24) shall not exceed 0.04 pounds of HCl per ton of charge of molten aluminum-lithium.

Primary Aluminum Melter (ALLI-1)

(f) The total metal charged to the primary aluminum melter (ALLI-1) shall not exceed 68.13 million pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(g) PM emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.4 pounds of PM per ton of metal charged.

(h) PM_{10} emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.2 pounds of PM_{10} per ton of metal charged.

(i) $PM_{2.5}$ emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.2 pounds of $PM_{2.5}$ per ton of metal charged.

Skim Cooling and Loadout (ALLI-32 and ALLI-33)

(j) The total skim generated shall not exceed 2,479 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(k) PM emissions from the skim cooling (ALLI-32) shall not exceed 1.3 pounds of PM per ton of total skim generated.

(l) PM_{10} emissions from the skim cooling (ALLI-32) shall not exceed 0.15 pounds of PM_{10} per ton of total skim generated.

(m) $PM_{2.5}$ emissions from the skim cooling (ALLI-32) shall not exceed 0.15 pounds of $PM_{2.5}$ per ton of total skim generated.

(n) PM emissions from the skim loadout (ALLI-33) shall not exceed 1.3 pounds of PM per ton of total skim generated.

(o) PM_{10} emissions from the skim loadout (ALLI-33) shall not exceed 0.06 pounds of PM_{10} per ton of total skim generated.

(p) $PM_{2.5}$ emissions from the skim loadout (ALLI-33) shall not exceed 0.06 pounds of $PM_{2.5}$ per ton of total skim generated.

Compliance with these emission limits and the limits in Condition D.2.1, combined with the potential to emit NO_X, PM, PM_{10}, and $PM_{2.5}$ emissions from all other emission units associated with the aluminum-lithium cast house 2012 modification, will limit the potential to emit from the modification to less than forty (40) tons of NO_X, less than twenty-five (25) tons of PM, less than fifteen (15) tons of PM_{10}, and less than ten (10) tons of $PM_{2.5}$ per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2012 modification.

Compliance with these limits, combined with the potential to emit HAPs from all other emission units at this source, shall limit the source-wide potential to emit of any single HAP to less than ten (10) tons per twelve (12) consecutive month period for a single HAP, total HAPs to less than twenty five (25) tons per twelve (12) consecutive month period, and shall render the source an area source under Section 112 of the Clean Air Act (CAA).

D.2.3 PSD Minor Limits - Flux [326 IAC 2-2]

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

(a) The ammonium fluoroborate (AFB or NH_4BF_4) usage for the homogenizing ovens (ALLI-27 and ALLI-28) shall not exceed 4,191 pounds of AFB per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) Fluoride (F) emissions from AFB usage in the homogenizing ovens (ALLI-27 and ALLI-28) shall not exceed 0.722 pounds of F per pound of AFB.

Compliance with these emission limits, combined with the potential to emit fluoride (F) emissions from all other emission units associated with the aluminum-lithium cast house 2012 modification, will limit the potential to emit from the modification to less three (3) tons of fluoride per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2012 modification.

D.2.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the following emission units shall not exceed the pounds per hour limits, when operating at the process weight rates shown below.

Table 1: Summary of Process Weight Rate Limits

Unit ID	**Process**	**P** (ton/hr)	**E** (lb/hr)
ALLI-32	Skim Cooling	0.30	1.83
ALLI-33	Skim Loadout	0.30	1.83

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

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

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

D.2.5 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.2.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1(a), the Permittee shall maintain monthly records of the natural gas usage for the aluminum-lithium cast house emissions units.

(b) To document the compliance status with Condition D.2.1(f), the Permittee shall maintain monthly records of the operating hours for the natural gas-fired emergency generator (ALLI-34).

(c) To document the compliance status with Condition D.2.2(a), the Permittee shall maintain monthly records of the total charge of molten aluminum-lithium to the electric induction melting/holding furnaces (ALLI-24 and ALLI-25).

(d) To document the compliance status with Condition D.2.2(f), the Permittee shall maintain monthly records of the total metal charged to the primary aluminum melter (ALLI-1).

(e) To document the compliance status with Condition D.2.2(j), the Permittee shall maintain monthly records of the total skim generated.

(f) To document the compliance status with Condition D.2.3(a), the Permittee shall maintain monthly records of the AFB usage for the homogenizing ovens (ALLI-27 and ALLI-28).

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

D.2.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.2.1(a), D.2.1(f), and D.2.3(a) shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days following the end of each quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Plant Miscellaneous

(a) One (1) diesel air compressor, identified as emission unit EUDAC#1, constructed in 2005, with a maximum capacity of 450 brake horsepower, exhausting through stack DAC#1.

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

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

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

D.3.1 Minor Source Modifications [326 IAC 2-7-10.5(d)] and PSD Minor Limit [326 IAC 2-2]

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

(a) Emission unit EUDAC#1 shall not operate more than 3,575 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NOx emissions shall not exceed 13.89 pounds per hour.

Compliance with these limits shall limit the modification potential to emit of NOx to less twenty-five (25) tons per twelve (12) consecutive month period, and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7-10.5(g) (Significant Source Modification) not applicable to the modification covered by MSM 157-20762-00001.

D.3.2 Preventative Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan (PMP) is required for this unit. Section B - Preventive Maintenance Plan contains the Permittee's obligations with regard to the preventive maintenance plan required by this condition.

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

D.3.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.3.1, the Permittee shall maintain records in accordance with (1) through (2) below.

(1) Calendar dates covered in the compliance determination period;

(2) Monthly record of hours of operation.

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

D.3.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.3.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days following the end of each quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-

7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:
Plant Miscellaneous

(e) One hundred four (104) space heaters, identified as emission unit 133, constructed between 2001 and 2011, with a total maximum design capacity of 137.1 million British thermal units per hour (MMBtu/hr), natural gas-fired;

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

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

D.4.1 PSD Minor Limit [326 IAC 2-2]

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

(a) The total usage of natural gas fuel for the one hundred four (104) space heaters, identified as emission unit 133, shall be limited not exceed 1,177.30 million cubic feet per twelve (12) consecutive month period.

(b) Natural gas heat content shall not exceed 1020 Btu per cubic feet.

(c) NOx emissions shall not exceed 0.1 lb/MMBtu.

Compliance with these limits shall limit NO_x emissions to less than forty (40) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the modification covered by SSM 157-14486-00001, issued September 18, 2001.

D.4.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.4.3 Record Keeping Requirements

(a) To document the compliance status with Condition D.4.1, the Permittee shall maintain records of the natural gas usage for each month.

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

D.4.4 Reporting Requirements

A quarterly summary of the information to document the compliance status with Condition D.4.1 shall be submitted using the reporting forms located at the end of this permit, or their equivalent, no later than thirty (30) days following the end of each quarter being reported. The report submitted by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Ingot Department

(a) "622" filter boxes for transferring metal from #41 holding furnace to #11 casting pit, identified as emission unit 9, constructed prior to 1970, with a maximum time-weighted throughput of 6.2 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux with a maximum heat input capacity of 0.8 million Btu per hour;

(b) "622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #12 casting pit, identified as emission unit 10, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(c) "622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 11, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(d) "622" filter boxes for transferring metal from 2-3 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 12, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(e) "622" filter boxes for transferring metal from 2-4 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 13, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(f) "622" filter boxes for transferring metal from 2-5 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 14, constructed prior to 1970, with a maximum time-weighted throughput of 9.6tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(g) "622" filter boxes for transferring metal from 2-6 tilting-melting-holding furnace to #15 casting pit, identified as emission unit 15, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(h) One (1) north skim cooling operation, identified as emission unit 16, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 3-8F;

(i) One (1) south skim cooling operation, identified as emission unit 17, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 4-8F;

(j) One (1) Niles lathe operation, identified as emission unit 31, constructed in 2004, with a maximum capacity of 47.0 tons per hour, with emissions controlled by the Ingot Rotoclone (130) with a maximum capacity of 4,000 CFM, exhausting to stack S31;

(l) One (1) #41 holding furnace, identified as emission unit 8, constructed prior to 1970, with a maximum time-weighted capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, with emissions exhausting to stack 6-8;

Extrusion - 2

(a) One (1) #21 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(b) One (1) #22 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(c) One (1) #23 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled and exhausting internally;

(d) One (1) #23 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(e) One (1) #24 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(f) One (1) #28 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(g) One (1) #34 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(h) One (1) #27 sawing operation, identified as emission unit 131, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(i) One (1) #37 band saw, identified as emission unit 132, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

Plant Miscellaneous

(g) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 101, constructed in 1960, with emissions controlled by an integral cyclone, identified as the #1 sawdust collector, and exhausting to stack 73-57;

(h) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 102, constructed in 1960, with emissions controlled by an integral baghouse, identified as the #2 sawdust collector and exhausting to stack 72-57;

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

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

D.5.1 Particulate Emissions Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from each of the emission units above shall not exceed the following pounds per hour limits, when operating at the process weight rates shown below.

Emission Unit	Process Weight Rate (tons/hr)	PM Emissions Limit (lb/hr)
Ingot 622 Filter box #41 -> #11	6.2	13.92
Ingot 622 Filter box #2-2 -> #12	6.0	13.62
Ingot 622 Filter box #2-2 -> #13	6.0	13.62
Ingot 622 Filter box #2-3 -> #13	6.0	13.62
Ingot 622 Filter box #2-4 -> #14	9.6	18.66
Ingot 622 Filter box #2-5 -> #14	9.6	18.66
Ingot 622 Filter box #2-6 -> #15	9.6	18.66
Ingot north skim cooling	2.0	6.52
Ingot south skim cooling	2.0	6.52
Ingot Niles Lathe Operation - unit 31	47.0	44.00
Ingot #41 NG holding furnace - unit 8	6.2	13.92
Ext-2 #21 press DoAll band saw	47.0	44.00
Ext-2 #22 press DoAll band saw	47.0	44.00
Ext-2 #23 press DoAll band saw	47.0	44.00
Ext-2 #23 sawing operation	47.0	44.00
Ext-2 #24 sawing operation	47.0	44.00
Ext-2 #28 sawing operation	47.0	44.00
Ext-2 #34 sawing operation	47.0	44.00
Ext-2 #27 sawing operation	47.0	44.00
Ext-2 #37 band saw	47.0	44.00
Plant Misc. Wood sawing operation - carpenter shop - unit 101	47.0	44.00
Plant Misc. Wood sawing operation - carpenter shop - unit 102	47.0	44.00

The pounds per hour limitations were calculated using the following equations:

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

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

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

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

D.5.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.5.3 Particulate Control

(a) In order to comply with Condition D.5.1, the integral cyclone for particulate control shall be in operation and control emissions from the wood sawing operation located in the carpenter shop, identified as emission unit 101, at all times the wood sawing operation is in operation.

(b) In order to comply with Condition D.5.1, the integral baghouse for particulate control shall be in operation and control emissions from the wood sawing operation located in the carpenter shop, identified as emission unit 102, at all times the wood sawing operation is in operation.

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

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

Tube Mill

(a) One (1) Lochnivar mineral spirits reclamation boiler, identified as emission unit 90, constructed in 1995, with a maximum heat input capacity of 0.4 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(b) One (1) Cleaver Brooks boiler, identified as emission unit 93, constructed in 2008, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(w) One (1) natural gas-fired water heater for the wash unit at the 6 Cell Drive shaft production facility, permitted in 2016, with a maximum rated capacity of 0.42 MMBtu/hr.

(qq) One (1) natural gas-fired wash unit water heater, identified as emission unit 97, constructed prior to 1970, with a maximum heat input capacity of 0.4 million Btu per hour, exhausting internally;

Aluminum-Lithium Alloy Cast House

(i) One (1) natural gas-fired hot water heater, identified as ALLI-37, constructed in 2014, with maximum heat input capacity of 4.0 MMBtu/hr and tank capacity of 100 gallons, and exhausting internally.

Plant Miscellaneous

(a) One (1) rented boiler, identified as TB, constructed in 2011, with a maximum heat input capacity of 2.5 million Btu per hour, natural gas-fired;

(b) One (1) Pacific boiler, identified as emission unit 103, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(c) One (1) Pacific boiler, identified as emission unit 104, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(d) One (1) steam pad heater, identified as emission unit 135, constructed prior to 1970, with a maximum capacity of 0.3 MMBtu/hr, natural gas-fired.

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

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

D.6.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-3]

Pursuant to 326 IAC 6-2-3 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from Units 97, 103, 104, and 135 shall be limited to 0.8 pounds per MMBtu heat input, each.

D.6.2 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

Pursuant to 326 IAC 6-2-4(a) (Particulate Limitations for Sources of Indirect Heating) the particulate emissions from units 90, 93, TB, ALLI-37, and the wash unit, constructed after September 21, 1983, shall not exceed 0.6, 0.60, 0.56, 0.53, and 0.52 pound per million British thermal unit heat input, respectively.

These limitations are based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:

P_t = pounds of particulate matter emitted per million Btu heat input (lb/MMBtu)
Q = total source operating capacity

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

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

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

Extrusion - 1

(a) One (1) clear coating applicator, identified as emission unit 141, constructed in 1999, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started.

Shipping

(a) One (1) clear coating applicator, identified as emission unit 112, constructed in 1997, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started;

(b) Four (4) clear coating applicators, identified as emission unit 112, constructed in 1997, consisting of a hand held spray applicator wand and pressurized reservoir. The protective coating is applied to the aluminum pieces by hand to minimize overspray.

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

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

D.7.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

(a) Pursuant to 326 IAC 8-2-9, the Permittee shall not allow the discharge into the atmosphere VOC in excess of four and three-tenths (4.3) pounds of VOC per gallon of coating, excluding water, as delivered to the applicator for clear coating.

(b) 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.

D.7.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.7.3 Volatile Organic Compounds (VOC)[326 IAC 8-1-2][326 IAC 8-1-4]

Compliance with the VOC content and usage limits contained in Conditions D.7.1 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 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.

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

D.7.4 Record Keeping Requirements

(a) To document the compliance status with Conditions D.7.1 and D.7.3, the Permittee shall maintain records of the VOC content, less water, of each coating materials used. Records shall be complete and sufficient to establish compliance with the VOC content limit established in Condition D.7.1. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the VOC content.

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

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Extrusion - 2

(k) One (1) parts washer supporting Extrusion 2, constructed after January 1, 1980, with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

Tube Mill

(i) Eighteen (18) parts washers supporting Tube Mill operations, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

Plant Miscellaneous

(k) Eleven (11) parts washers supporting Maintenance, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

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

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

D.8.1 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), for cold cleaning operations constructed after January 1, 1980, 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.8.2 Material Requirements for Cold Cleaner Degreasers [326 IAC 8-3-8]

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).

D.8.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

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

D.8.4 Record Keeping Requirements

(a) To document the compliance status with Condition D.8.2, the Permittee shall maintain the following records. 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 facility wide for all applications.

(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:

Ingot Department

(a) One (1) #2-2 tilting-melting-holding furnace, identified as emission unit 2, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 89-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(b) One (1) #2-3 tilting-melting-holding furnace, identified as emission unit 3, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 90-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(c) One (1) #2-4 tilting-melting-holding furnace, identified as emission unit 4, constructed in 1991, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 88-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(d) One (1) #2-5 tilting-melting-holding furnace, identified as emission unit 5, constructed in 1988, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 87-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(e) One (1) #2-6 tilting-melting-holding furnace, identified as emission unit 6, constructed in 1995, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 94-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(f) One (1) #4 melting furnace, identified as emission unit 7, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 5-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

Aluminum-Lithium Alloy Casthouse

(a) One (1) primary aluminum melter, identified as ALLI-1, constructed in 2014, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs per nine (9) hour cycle), with a natural gas-fired furnace rated at 12.8 MMBtu/hr, exhausting to stack ALLI-S1;

Insignificant Activities:

Aluminum-Lithium Alloy Casthouse:

(a) Two (2) scrap drying ovens, identified as ALLI-22 and ALLI-23, constructed in 2014, each rated at 4.4 MMBtu/hr, natural gas fired, exhausting to stacks ALLI-S22 and ALLI-S23;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(d) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, constructed in 2014 and approved in 2018 for modification, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle), using a maximum of 1.0 lb of Amlox 90F flux (or equivalent) per ton of metal melted, using no control and exhausting internally;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

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

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

E.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 RRR.

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

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

E.1.2 Secondary Aluminum Production NESHAP [40 CFR Part 63, Subpart RRR] [326 IAC 20-70]

The Permittee shall comply with the following provisions of 40 CFR Part 63, Subpart RRR (included as Attachment A to the operating permit) which are incorporated by reference as 326 IAC 20-70:

(a) for the #2-2, #2-3, #2-4, #2-5, and #2-6 tilting-melting-holding furnaces, and the #4 melting furnace:

(1) 40 CFR 63.1500 (a), (c), (c)(4), (e), (f)

(2) 40 CFR 63.1501 (a), (b)
(3) 40 CFR 63.1503
(4) 40 CFR 63.1505 (a), (i), (i)(3)
(5) 40 CFR 63.1506 (a)(1), (a)(4-5), (b), (b)(1-2), (d), (d)(1-3), (n), (n)(1-3), (p)
(6) 40 CFR 63.1510 (a), (a)(1-2), (a)(4), (a)(9), (a)(13), (b), (c), (e), (j), (o), (p), (s), (u), (w)
(7) 40 CFR 63.1511 (a), (b), (c), (f), (g)
(8) 40 CFR 63.1512 (e), (e)(1), (k), (o), (o)(2-3), (o)(4), (o)(5), (r)
(9) 40 CFR 63.1513(b), (d), (f), (f)(1-2)
(10) 40 CFR 63.1515 (a), (a)(1), (a)(6), (b), (b)(1-4), (b)(9)
(11) 40 CFR 63.1516 (b), (b)(1)(iv-vi), (b)(2)(vii), (b)(3), (c)(1-2), (d), (e)
(12) 40 CFR 63.1517 (a), (a)(1-3), (b), (b)(5), (b)(7-8), (b)(13), (b)(15-16), (b)(18-19)
(13) 40 CFR 63.1518
(14) 40 CFR 63.1519
(15) Table 1 to Subpart RRR
(16) Table 2 to Subpart RRR
(17) Table 3 to Subpart RRR
(18) Appendix A to Subpart RRR

(b) for the scrap drying ovens (ALLI-22 & ALLI-23):

(1) 40 CFR 63.1500(a), (c), (c)(2), (e), and (f)
(2) 40 CFR 63.1501(e)
(3) 40 CFR 63.1503
(4) 40 CFR 63.1505(a), (d)(1(iii)
(5) 40 CFR 63.1506(a)(1), (a)(4-5), (b)(1-2), (d), (g), and (p)
(6) 40 CFR 63.1510(a), (a)(1-2), (a)(4), (b), (c), (e), and (w)
(7) 40 CFR 63.1511(a), (b), (c), (d)
(8) 40 CFR 63.1512(c), (k), and (r)
(9) 40 CFR 63.1513(b), (d), (f)
(10) 40 CFR 63.1515(a), (b)
(11) 40 CFR 63.1516(b), (b)(1)(iv), (b)(2)(vii), (b)(3), (c), (d), (e)
(12) 40 CFR 63.1517(a), (b), (b)(7), (b)(13), (b)(15), (b)(16)(ii), (b)(18-19)
(13) 40 CFR 63.1518
(14) 40 CFR 63.1519
(15) Table 1 to 40 CFR 63, Subpart RRR
(16) Table 2 to 40 CFR 63, Subpart RRR
(17) Table 3 to 40 CFR 63, Subpart RRR
(18) Appendix A to 40 CFR 63, Subpart RRR

SECTION E.2 **NSPS**

Emissions Unit Description:

Aluminum-Lithium Alloy Casthouse

(g) One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34;

[Under 40 CFR 60, Subpart JJJJ, this is an affected facility]
[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

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

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

E.2.1 General Provisions Relating to New Source Performance Standards [326 IAC 12-1][40 CFR Part 60, Subpart A]

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

(b) Pursuant to 40 CFR 60.4, the Permittee shall submit all required notifications and reports to:

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

E.2.2 Standards of Performance for Stationary Spark Ignition Internal Combustion Engines NSPS [326 IAC 12][40 CFR Part 60, Subpart JJJJ]

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

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4236
(5) 40 CFR 60.4243(a), (a)(1), (a)(2)(iii), (b)(1), (d), (e)
(6) 40 CFR 60.4245
(7) 40 CFR 60.4246
(8) 40 CFR 60.4248
(9) Table 1
(10) Table 2
(11) Table 3

SECTION E.3 **NESHAP**

Emissions Unit Description:

Plant Miscellaneous

(a) One (1) diesel air compressor, identified as emission unit EUDAC#1, constructed in 2005, with a maximum capacity of 450 brake horsepower, exhausting through stack DAC#1.

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

Insignificant Activities:

Ingot Department

(k) One (1) diesel-fired emergency generator for Ingot Department water recirculation, identified as emission unit 136, constructed in 1990, with a maximum capacity of 469 HP (350 kW), exhausting to stack S136;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

Extrusion - 1

(q) One (1) diesel emergency generator for the wastewater treatment plant, identified as emission unit 137, constructed in 1990, with a maximum capacity of 241.2 HP (180 kW), exhausting externally through a stack;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

Aluminum-Lithium Alloy Casthouse

(g) One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34;

[Under 40 CFR 60, Subpart JJJJ, this is an affected facility]
[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

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

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

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

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

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

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

E.3.2 Stationary Reciprocating Internal Combustion Engines NESHAP [40 CFR Part 63, Subpart ZZZZ][326 IAC 20-82]

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

(a) for the diesel air compressor (EUDAC#1):

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (c), and (d)
(3) 40 CFR 63.6590(a), (a)(1)(iii) and (iv)
(4) 40 CFR 63.6595 (a)(1), (b) and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6604(a)
(7) 40 CFR 63.6605
(8) 40 CFR 63.6612
(9) 40 CFR 63.6620(a), (b), (d), (e), (f), (g), (h) and (i)
(10) 40 CFR 63.6625(g) and (h)
(11) 40 CFR 63.6630(a) and (c)
(12) 40 CFR 63.6635
(13) 40 CFR 63.6640(a), (b), and (e)
(14) 40 CFR 63.6645(a)(2), (g), (h) and (h)(2)
(15) 40 CFR 63.6650(a), (b)(1-5), (c), (d), (f)
(16) 40 CFR 63.6655(a), (a)(1-5), (e)(3)
(17) 40 CFR 63.6660
(18) 40 CFR 63.6665
(19) 40 CFR 63.6670
(20) 40 CFR 63.6675
(21) Table 2d (item 2)
(22) Table 4 (items 1 and 3)
(23) Table 5 (items 11 and 12)
(24) Table 7 (item 1)
(25) Table 8

(b) for the emergency generators (136 and 137):

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (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),(f)(1-2), (f)(4)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650(a)
(12) 40 CFR 63.6655(a)(4)
(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

(c) for the emergency generator (ALLI-34):

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (c), (d)
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

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

E.3.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

SECTION E.4 NESHAP

Emissions Unit Description:

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of the following:

(1) One (1) gasoline fuel tank, identified as emission unit 119, constructed prior to 1970, with a maximum capacity of 6,000 gallons and a throughput of 1,400 gallons per month;

[Under 40 CFR 63, Subpart CCCCCC, this is an affected facility]

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

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

E.4.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants [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 CCCCCC.

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

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

E.4.2 Gasoline Dispensing Facilities NESHAP [40 CFR Part 63, Subpart CCCCCC]

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

(1) 40 CFR 63.11110
(2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j), and (k)
(3) 40 CFR 63.11112
(4) 40 CFR 63.11113(b) and (c)
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)
(8) 40 CFR 63.11126(b)
(9) 40 CFR 63.11130
(10) 40 CFR 63.11131
(11) 40 CFR 63.11132
(12) Table 3 to 40 CFR 63 Subpart CCCCCC

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

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

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

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

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

☐ Annual Compliance Certification Letter

☐ Test Result (specify)

☐ Report (specify)

☐ Notification (specify)

☐ Affidavit (specify)

☐ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
Signature:
Printed Name:
Title/Position:
Phone:
Date:

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001

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

☐ This is an emergency as defined in 326 IAC 2-7-1(12)

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

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

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

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

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

Form Completed by:______________________________

Title / Position: ________________________________

Date:____

Phone: ____

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: Source-wide
Parameter: AFB and A-130 (or equivalent) Flux Usage
Limit: Shall not exceed one of the following correlated limits per twelve (12) consecutive month period with compliance determined at the end of each month.

AFB Flux Limited Usage (ton per twelve (12) consecutive month period)		A-130 (or equivalent) Flux Limited Usage (ton per twelve (12) consecutive month period)
13.00	and	20.0
12.75	and	25.5
12.00	and	30.0
11.00	and	64.0
10.50	and	75.0
10.00	and	85.0
9.50	and	97.0
9.00	and	108.0

QUARTER : _______________ YEAR: ____________________

Month		Column 1	Column 2	Column 1 + Column 2
	Flux Type	Flux Usage for This Month (tons)	Flux Usage for Previous 11 Months (tons)	Flux Usage for 12 Month Total (tons)
	AFB			
	A-130 (or equivalent)			
	AFB			
	A-130 (or equivalent)			
	AFB			
	A-130 (or equivalent)			

☐ No deviation occurred in this quarter.

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

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

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: Source-wide
Parameter: Natural gas usage
Limit: Shall not exceed 6,000 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas Usage for This Month (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for 12 Month Total (MMCF)

☐ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: Primary aluminum melter furnace (ALLI-1), scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), hot water heater (ALLI-37), and space heaters associated with the AL-LI cast house modification
Parameter: Natural gas usage
Limit: Shall not exceed 736.15 MMCF per twelve (12) consecutive month period, with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas Usage for This Month (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for 12 Month Total (MMCF)

☐ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: Natural Gas-Fired Emergency Generator (ALLI-34)
Parameter: Operating Hours
Limit: Shall not operate more than 150 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	Hours of Operation for This Month (hrs)	Hours of Operation for Previous 11 Months (hrs)	Hours of Operation for 12 Month Total (hrs)

☐ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: homogenizing ovens (ALLI-27 and ALLI-28)
Parameter: AFB usage
Limit: Shall not exceed 4,191 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	AFB Usage for This Month (pounds)	AFB Usage for Previous 11 Months (pounds)	AFB Usage for 12-Month Period (pounds)

☐ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Part 70 Quarterly Report

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001
Facility: Diesel Air Compressor (EUDAC#1)
Parameter: Hours of Operation
Limit: Shall not operate more than 3,575 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	Hours of Operation for This Month (hrs)	Hours of Operation for Previous 11 Months (hrs)	Hours of Operation for 12 Month Total (hrs)

□ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Part 70 Quarterly Report

Source Name:	Arconic, Inc.
Source Address:	3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.:	T157-38267-00001
Facility:	One hundred four (104) natural gas-fired units, identified as emission unit 133
Parameter:	Natural gas usage
Limit:	Shall not exceed 1,177.3 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER : ________________ YEAR: ____________________

Month	Column 1	Column 2	Column 1 + Column 2
	Natural Gas Usage for This Month (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for 12 Month Total (MMCF)

☐ No deviation occurred in this quarter.

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

Submitted by: ____

Title / Position: ____

Signature: ____

Date: ____

Phone: ____

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

Source Name: Arconic, Inc.
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-38267-00001

Months: _________ to __________ Year: ___________

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Proper notice submittal under Section B -Emergency Provisions satisfies the reporting requirements of paragraph (a) of Section C-General Reporting. Any deviation from the requirements of this permit, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. A deviation required to be reported pursuant to an applicable requirement that exists independent of the permit, shall be reported according to the schedule stated in the applicable requirement and does not need to be included in this report. Additional pages may be attached if necessary. If no deviations occurred, please specify in the box marked "No deviations occurred this reporting period".	
☐ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.	
☐ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	
Permit Requirement (specify permit condition #)	
Date of Deviation:	**Duration of Deviation:**
Number of Deviations:	
Probable Cause of Deviation:	
Response Steps Taken:	

Page 2 of 2

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

Form Completed by:______________________________

Title / Position: _________________________________

Date:____

Phone: ____

Attachment A

Part 70 Operating Permit No: T157-38267-00001

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart RRR—National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

SOURCE: 65 FR 15710, Mar. 23, 2000, unless otherwise noted.

General

§63.1500 Applicability.

(a) The requirements of this subpart apply to the owner or operator of each secondary aluminum production facility as defined in §63.1503.

(b) The requirements of this subpart apply to the following affected sources, located at a secondary aluminum production facility that is a major source of hazardous air pollutants (HAPs) as defined in §63.2:

(1) Each new and existing aluminum scrap shredder;

(2) Each new and existing thermal chip dryer;

(3) Each new and existing scrap dryer/delacquering kiln/decoating kiln;

(4) Each new and existing group 2 furnace;

(5) Each new and existing sweat furnace;

(6) Each new and existing dross-only furnace;

(7) Each new and existing rotary dross cooler; and

(8) Each new and existing secondary aluminum processing unit.

(c) The requirements of this subpart pertaining to dioxin and furan (D/F) emissions and associated operating, monitoring, reporting and recordkeeping requirements apply to the following affected sources, located at a secondary aluminum production facility that is an area source of HAPs as defined in §63.2:

(1) Each new and existing thermal chip dryer;

(2) Each new and existing scrap dryer/delacquering kiln/decoating kiln;

(3) Each new and existing sweat furnace;

(4) Each new and existing secondary aluminum processing unit, containing one or more group 1 furnace emission units processing other than clean charge.

(d) The requirements of this subpart do not apply to facilities and equipment used for research and development that are not used to produce a saleable product.

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

(f) An aluminum die casting facility, aluminum foundry, or aluminum extrusion facility shall be considered to be an area source if it does not emit, or have the potential to emit considering controls, 10 tons per year or more of any single listed HAP or 25 tons per year of any combination of listed HAP from all emission sources which are located in a contiguous area and under common control, without regard to whether or not such sources are regulated under this subpart or any other subpart. In the case of an aluminum die casting facility, aluminum foundry, or aluminum extrusion facility which is an area source and is subject to regulation under this subpart only because it operates a thermal chip dryer, no furnace operated by such a facility shall be deemed to be subject to the requirements of this subpart if it melts only clean charge, internal scrap, or customer returns.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79814, Dec. 30, 2002; 70 FR 75346, Dec. 19, 2005]

§63.1501 Dates.

(a) An affected source constructed before February 11, 1999, must comply with the requirements of this subpart by March 24, 2003, except as provided in paragraphs (b) and (c).

(b) The owner or operator of an affected source constructed before February 14, 2012, must comply with the following requirements of this subpart by March 16, 2016: §63.1505(k) introductory text, (k)(1) through (k)(5), other than the emission standards for HF in (k)(2); §63.1506 (a)(1), (c)(1), (g)(5), (k)(3), (m)(4), (m)(7), (n)(1); §63.1510 (b)(5), (b)(9), (d)(2), (d)(3),(f)(1)(ii), (i)(4), (j)(4), (n)(1), (o)(1), (o)(1)(ii), (s)(2)(iv), (t) introductory text, (t)(2)(i), (t)(2)(ii), (t)(4), (t)(5); §63.1511(a) introductory text, (b) introductory text, (b)(1), (b)(3), (b)(6), (c)(9), (g)(5); §63.1512(e)(1), (e)(2), (e)(3), (h)(2), (j), (j)(1)(i), (j)(2)(i), (o) introductory text, (o)(1), (o)(3), (p)(2); §63.1513 (b)(1), (e)(1), (e)(2), (e)(3), (f); §63.1516 (b) introductory text, (b)(2)(vii), (b)(3)(i); §63.1517(b)(1)(iii), (b)(4)(ii), (b)(14), (b)(19).

(c) The owner or operator of an affected source constructed before February 14, 2012, must comply with the following requirements of this subpart by September 18, 2017: §63.1505(i)(4) and (k)(2) emission standards for HF; §63.1512(e)(4) through (7) requirements for testing existing uncontrolled group 1 furnaces (that is, group 1 furnaces without add-on air pollution control devices); and §63.1514 requirements for change of furnace classification.

(d) An affected source that commenced construction or reconstruction after February 11, 1999 but before February 14, 2012 must comply with the requirements of this subpart by March 24, 2000 or upon startup, whichever is later, except as provided in paragraphs (b), (c), (e), and (f) of this section.

(e) The owner or operator of an affected source that commences construction or reconstruction after February 14, 2012, must comply with all the requirements of this subpart by September 18, 2015 or upon startup, whichever is later.

(f) The owner or operator of any affected source which is constructed or reconstructed after February 11, 1999, but before February 14, 2012 at any existing aluminum die casting facility, aluminum foundry, or aluminum extrusion facility which otherwise meets the applicability criteria set forth in §63.1500 must comply with the requirements of this subpart by March 24, 2003 or upon startup, whichever is later, except as provided in paragraphs (b) and (c) of this section. The owner or operator of any affected source which is constructed or reconstructed after February 14, 2012, at any existing aluminum die casting facility, aluminum foundry, or aluminum extrusion facility which otherwise meets the applicability criteria set forth in §63.1500 must comply with the requirements by September 18, 2015 or upon startup, whichever is later.

[80 FR 56738, Sept. 18, 2015]

§63.1502 [Reserved]

§63.1503 Definitions.

Terms used in this subpart are defined in the Clean Air Act as amended (CAA), in §63.2, or in this section as follows:

ACGIH Guidelines means chapters 3 and 5 of *Industrial Ventilation: A Manual of Recommended Practice* 23rd edition or appropriate chapters of *Industrial Ventilation: A Manual of Recommended Practice for Design* 27th edition (incorporated by reference, see §63.14).

Add-on air pollution control device means equipment installed on a process vent that reduces the quantity of a pollutant that is emitted to the air.

Afterburner means an air pollution control device that uses controlled flame combustion to convert combustible materials to noncombustible gases; also known as an incinerator or a thermal oxidizer.

Aluminum scrap means fragments of aluminum stock removed during manufacturing (*i.e.,* machining), manufactured aluminum articles or parts rejected or discarded and useful only as material for reprocessing, and waste and discarded material made of aluminum.

Aluminum scrap shredder means a high speed or low speed unit that crushes, grinds, granulates, shears or breaks aluminum scrap into a more uniform size prior to processing or charging to a *scrap dryer/delacquering kiln/decoating kiln,* or furnace. A *bale breaker* is not an *aluminum scrap shredder.* Shearing and cutting operations performed at rolling mills and aluminum finishing operations (such as slitters) are not aluminum scrap shredders.

Bag leak detection system means an instrument that is capable of monitoring particulate matter loadings in the exhaust of a fabric filter (*i.e.,* baghouse) in order to detect bag failures. A *bag leak detection system* includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effect to monitor relative particulate matter loadings.

Bale breaker means a device used to break apart a bale of aluminum scrap for further processing. Bale breakers are not used to crush, grind, granulate, shear or break aluminum scrap into more uniform size pieces.

Capture and collection system means the system, including duct systems and fans, and, in some cases, hoods, used to collect a contaminant at or near its source, and for affected sources equipped with an air pollution control device, transport the contaminated air to the air cleaning device.

Chips means small, uniformly-sized, unpainted pieces of aluminum scrap, typically below 1¼ inches in any dimension, primarily generated by turning, milling, boring, and machining of aluminum parts.

Clean charge means furnace charge materials, including molten aluminum; T-bar; sow; ingot; billet; pig; alloying elements; aluminum scrap known by the owner or operator to be entirely free of paints, coatings, and lubricants; uncoated/unpainted aluminum chips that have been thermally dried or treated by a centrifugal cleaner; aluminum scrap dried at 343 °C (650 °F) or higher; aluminum scrap delacquered/decoated at 482 °C (900 °F) or higher; and runaround scrap. Anodized aluminum that contains dyes or sealants containing organic compounds is not clean charge.

Cover flux means salt added to the surface of molten aluminum in a *group 1* or *group 2 furnace,* without surface agitation of the molten aluminum, for the purpose of preventing oxidation. Any flux added to a rotary furnace is not a cover flux.

Customer returns means any aluminum product which is returned by a customer to the aluminum company that originally manufactured the product prior to resale of the product or further distribution in commerce, and which contains no paint or other solid coatings (*i.e.,* lacquers).

D/F means dioxins and furans.

Dioxins and furans means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans.

Dross means the slags and skimmings from aluminum melting and refining operations consisting of fluxing agent(s), impurities, and/or oxidized and non-oxidized aluminum, from scrap aluminum charged into the furnace.

Dross-only furnace means a furnace, typically of rotary barrel design, dedicated to the reclamation of aluminum from dross formed during melting, holding, fluxing, or alloying operations carried out in other process units. Dross and salt flux are the sole feedstocks to this type of furnace.

Emission unit means a *group 1 furnace* or *in-line fluxer* at a *secondary aluminum production facility.*

Fabric filter means an add-on air pollution control device used to capture particulate matter by filtering gas streams through filter media; also known as a baghouse.

Feed/charge means, for a furnace or other process unit that operates in batch mode, the total weight of material (including molten aluminum, T-bar, sow, ingot, etc.) and alloying agents that enter the furnace during an operating cycle. For a furnace or other process unit that operates continuously, *feed/charge* means the weight of material (including molten aluminum, T-bar, sow, ingot, etc.) and alloying agents that enter the process unit within a specified time period (*e.g.,* a time period equal to the performance test period). The *feed/charge* for a dross only furnace includes the total weight of dross and solid flux.

Fluxing means refining of molten aluminum to improve product quality, achieve product specifications, or reduce material loss, including the addition of solvents to remove impurities (solvent flux); and the injection of gases such as chlorine, or chlorine mixtures, to remove magnesium (demagging) or hydrogen bubbles (degassing). *Fluxing* may be performed in the furnace or outside the furnace by an *in-line fluxer.*

Furnace hearth means the combustion zone of a furnace in which the molten metal is contained.

Group 1 furnace means a furnace of any design that melts, holds, or processes aluminum that contains paint, lubricants, coatings, or other foreign materials with or without *reactive fluxing,* or processes *clean charge* with *reactive fluxing.*

Group 2 furnace means a furnace of any design that melts, holds, or processes only *clean charge* and that performs no *fluxing* or performs *fluxing* using only nonreactive, non-HAP-containing/non-HAP-generating gases or agents. Unheated pots, to which no flux is added and that are used to transport metal, are not furnaces.

HCl means hydrogen chloride.

HF means hydrogen fluoride.

In-line fluxer means a device exterior to a furnace, located in a transfer line from a furnace, used to refine (flux) molten aluminum; also known as a flux box, degassing box, or demagging box.

Internal scrap means all aluminum scrap regardless of the level of contamination which originates from castings or extrusions produced by an aluminum die casting facility, aluminum foundry, or aluminum extrusion facility, and which remains at all times within the control of the company that produced the castings or extrusions.

Lime means calcium oxide or other alkaline reagent.

Lime-injection means the continuous addition of lime upstream of a *fabric filter.*

Melting/holding furnace means a *group 1 furnace* that processes only *clean charge,* performs melting, holding, and fluxing functions, and does not transfer molten aluminum to or from another furnace except for purposes of alloy changes, off-specification product drains, or maintenance activities.

Operating cycle means for a batch process, the period beginning when the feed material is first charged to the operation and ending when all feed material charged to the operation has been processed. For a batch melting or holding furnace process, *operating cycle* means the period including the charging and melting of scrap aluminum and the fluxing, refining, alloying, and tapping of molten aluminum (the period from tap-to-tap).

PM means, for the purposes of this subpart, emissions of particulate matter that serve as a measure of total particulate emissions and as a surrogate for metal HAPs contained in the particulates, including but not limited to, antimony, arsenic, beryllium, cadmium, chromium, cobalt, lead, manganese, mercury, nickel, and selenium.

Pollution prevention means source reduction as defined under the Pollution Prevention Act of 1990 (*e.g.,* equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training, or inventory control), and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water, or other resources, or protection of natural resources by conservation.

Reactive fluxing means the use of any gas, liquid, or solid flux (other than cover flux) that results in a HAP emission. Argon and nitrogen are not reactive and do not produce HAP.

Reconstruction means the replacement of components of an affected source or *emission unit* such that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new affected source, and it is technologically and economically feasible for the reconstructed source to meet relevant standard(s) established in this subpart. Replacement of the refractory in a furnace is routine maintenance and is not a *reconstruction.* The repair and replacement of *in-line fluxer* components (*e.g.,* rotors/shafts, burner tubes, refractory, warped steel) is considered to be routine maintenance and is not considered a *reconstruction. In-line fluxers* are typically removed to a maintenance/repair area and are replaced with repaired units. The replacement of an existing *in-line fluxer* with a repaired unit is not considered a *reconstruction.*

Residence time means, for an *afterburner,* the duration of time required for gases to pass through the *afterburner* combustion zone. *Residence time* is calculated by dividing the *afterburner* combustion zone volume in cubic feet by the volumetric flow rate of the gas stream in actual cubic feet per second. The combustion zone volume includes the reaction chamber of the afterburner in which the waste gas stream is exposed to the direct combustion flame and the complete refractory lined portion of the furnace stack up to the measurement thermocouple.

Rotary dross cooler means a water-cooled rotary barrel device that accelerates cooling of dross.

Round top furnace means a cylindrically-shaped reverberatory furnace that has a top that is removed for charging and other furnace operations.

Runaround scrap means scrap materials generated on-site by aluminum casting, extruding, rolling, scalping, forging, forming/stamping, cutting, and trimming operations and that do not contain paint or solid coatings. Uncoated/unpainted aluminum chips generated by turning, boring, milling, and similar machining operations may be clean charge if they have been thermally dried or treated by a centrifugal cleaner, but are not considered to be *runaround scrap.*

Scrap dryer/delacquering kiln/decoating kiln means a unit used primarily to remove various organic contaminants such as oil, paint, lacquer, ink, plastic, and/or rubber from *aluminum scrap* (including used beverage containers) prior to melting, or that separates aluminum foil from paper and plastic in scrap.

Secondary aluminum processing unit (SAPU). An existing SAPU means all existing group 1 furnaces and all existing in-line fluxers within a secondary aluminum production facility. Each existing group 1 furnace or existing in-line fluxer is considered an emission unit within a secondary aluminum processing unit. A new SAPU means any combination of individual group 1 furnaces and in-line fluxers within a secondary aluminum processing facility which either were constructed or reconstructed after February 11, 1999, or have been permanently redesignated as new emission units pursuant to §63.1505(k)(6). Each of the group 1 furnaces or in-line fluxers within a new SAPU is considered an emission unit within that secondary aluminum processing unit. A secondary aluminum production facility may have more than one new SAPU.

Secondary aluminum production facility means any establishment using *clean charge, aluminum scrap,* or dross from aluminum production, as the raw material and performing one or more of the following processes: scrap shredding, scrap drying/delacquering/decoating, thermal chip drying, furnace operations (*i.e.,* melting, holding, sweating, refining, fluxing, or alloying), recovery of aluminum from dross, in-line fluxing, or dross cooling. A *secondary aluminum production facility* may be independent or part of a primary aluminum production facility. For purposes of this subpart, aluminum die casting facilities, aluminum foundries, and aluminum extrusion facilities are not considered to be secondary aluminum production facilities if the only materials they melt are *clean charge,* customer returns, or internal scrap, and if they do not operate sweat furnaces, thermal chip dryers, or scrap dryers/delacquering kilns/decoating kilns. The determination of whether a facility is a *secondary aluminum production facility* is only for purposes of this subpart and any regulatory requirements which are derived from the applicability of this subpart, and is separate from any determination which may be made under other environmental laws and regulations, including whether the same facility is a "secondary metal production facility" as that term is used in 42 U.S.C. §7479(1) and 40 CFR 52.21(b)(1)(i)(A) ("prevention of significant deterioration of air quality").

Shutdown means the period of operation for thermal chip dryers, scrap dryers/delacquering kilns, decoating kilns, dross-only furnaces, group 1 furnaces, in-line fluxers, sweat furnaces and group 2 furnaces that begins when the introduction of feed/charge is intentionally halted, the source of heat to the emissions unit is turned off, and product has been removed from the emission unit to the greatest extent practicable (*e.g.*, by tapping a furnace). Shutdown ends when the emission unit is near ambient temperature.

Sidewell means an open well adjacent to the hearth of a furnace with connecting arches between the hearth and the open well through which molten aluminum is circulated between the hearth, where heat is applied by burners, and the open well, which is used for charging scrap and solid flux or salt to the furnace, injecting fluxing agents, and skimming dross.

Startup means the period of operation for thermal chip dryers, scrap dryers/delacquering kilns, decoating kilns, dross-only furnaces, group 1 furnaces, in-line fluxers, sweat furnaces and group 2 furnaces that begins with equipment warming from a shutdown, that is, the equipment is at or near ambient temperature. Startup ends at the point that flux or feed/charge is introduced.

Sweat furnace means a furnace used exclusively to reclaim aluminum from scrap that contains substantial quantities of iron by using heat to separate the low-melting point aluminum from the scrap while the higher melting-point iron remains in solid form.

Tap means the end of an operating cycle of any individual furnace when processed molten aluminum is poured from that furnace.

TEQ means the international method of expressing toxicity equivalents for dioxins and furans as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update" (EPA-625/3-89-016), available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia 22161, NTIS no. PB 90-145756.

THC means, for the purposes of this subpart, total hydrocarbon emissions that also serve as a surrogate for the emissions of organic HAP compounds.

Thermal chip dryer means a device that uses heat to evaporate oil or oil/water mixtures from unpainted/uncoated aluminum chips. Pre-heating boxes or other dryers which are used solely to remove water from aluminum scrap are not considered to be thermal chip dryers for purposes of this subpart.

Three-day, 24-hour rolling average means daily calculations of the average 24-hour emission rate (lbs/ton of feed/charge), over the 3 most recent consecutive 24-hour periods, for a *secondary aluminum processing unit.*

Total reactive chlorine flux injection rate means the sum of the total weight of chlorine in the gaseous or liquid reactive flux and the total weight of chlorine in the solid reactive chloride flux, divided by the total weight of feed/charge, as determined by the procedure in §63.1512(o).

Total reactive fluorine flux injection rate means the sum of the total weight of fluorine in the gaseous or liquid reactive flux added to an uncontrolled group 1 furnace, and the total weight of fluorine in the solid reactive flux added to an uncontrolled group 1 furnace, divided by the total weight of feed/charge, as determined by the procedure in §63.1512(o).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79814, Dec. 30, 2002; 69 FR 18803, Apr. 9, 2004; 69 FR 53984, Sept. 3, 2004; 70 FR 57517, Oct. 3, 2005; 80 FR 56738, Sept. 18, 2015]

§63.1504 [Reserved]

Emission Standards and Operating Requirements

§63.1505 Emission standards for affected sources and emission units.

(a) *Summary*. The owner or operator of a new or existing affected source must comply at all times with each applicable limit in this section, including periods of startup and shutdown. Table 1 to this subpart summarizes the emission standards for each type of source.

(b) *Aluminum scrap shredder.* On and after the compliance date established by §63.1501, the owner or operator of an aluminum scrap shredder at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

(1) Emissions in excess of 0.023 grams (g) of PM per dry standard cubic meter (dscm) (0.010 grain (gr) of PM per dry standard cubic foot (dscf)); and

(2) Visible emissions (VE) in excess of 10 percent opacity from any PM add-on air pollution control device if a continuous opacity monitor (COM) or visible emissions monitoring is chosen as the monitoring option.

(c) *Thermal chip dryer.* On and after the compliance date established by §63.1501, the owner or operator of a thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of:

(1) 0.40 kilogram (kg) of THC, as propane, per megagram (Mg) (0.80 lb of THC, as propane, per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major source; and

(2) 2.50 micrograms (µg) of D/F TEQ per Mg (3.5×10^{-5} gr per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major or area source.

(d) *Scrap dryer/delacquering kiln/decoating kiln.* On and after the compliance date established by §63.1501:

(1) The owner or operator of a scrap dryer/delacquering kiln/decoating kiln must not discharge or cause to be discharged to the atmosphere emissions in excess of:

(i) 0.03 kg of THC, as propane, per Mg (0.06 lb of THC, as propane, per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

(ii) 0.04 kg of PM per Mg (0.08 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

(iii) 0.25 µg of D/F TEQ per Mg (3.5×10^{-6} gr of D/F TEQ per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major or area source; and

(iv) 0.40 kg of HCl per Mg (0.80 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source.

(2) The owner or operator of a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(e) *Scrap dryer/delacquering kiln/decoating kiln: alternative limits.* The owner or operator of a scrap dryer/ delacquering kiln/decoating kiln may choose to comply with the emission limits in this paragraph (e) as an alternative to the limits in paragraph (d) of this section if the scrap dryer/delacquering kiln/decoating kiln is equipped with an afterburner having a design residence time of at least 1 second and the afterburner is operated at a temperature of at least 760 °C (1400 °F) at all times. On and after the compliance date established by §63.1501:

(1) The owner or operator of a scrap dryer/delacquering kiln/decoating kiln must not discharge or cause to be discharged to the atmosphere emissions in excess of:

(i) 0.10 kg of THC, as propane, per Mg (0.20 lb of THC, as propane, per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

(ii) 0.15 kg of PM per Mg (0.30 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source;

(iii) 5.0 µg of D/F TEQ per Mg (7.0×10^{-5} gr of D/F TEQ per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major or area source; and

(iv) 0.75 kg of HCl per Mg (1.50 lb per ton) of feed/charge from a scrap dryer/delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source.

(2) The owner or operator of a scrap dryer/ delacquering kiln/decoating kiln at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(f) *Sweat furnace.* The owner or operator of a sweat furnace shall comply with the emission standard of paragraph (f)(2) of this section.

(1) The owner or operator is not required to conduct a performance test to demonstrate compliance with the emission standard of paragraph (f)(2) of this section, provided that, on and after the compliance date of this rule, the owner or operator operates and maintains an afterburner with a design residence time of 0.8 seconds or greater and an operating temperature of 1600 °F or greater.

(2) On and after the compliance date established by §63.1501, the owner or operator of a sweat furnace at a secondary aluminum production facility that is a major or area source must not discharge or cause to be discharged to the atmosphere emissions in excess of 0.80 nanogram (ng) of D/F TEQ per dscm (3.5×10^{-10} gr per dscf) at 11 percent oxygen (O^2).

(g) *Dross-only furnace.* On and after the compliance date established by §63.1501, the owner or operator of a dross-only furnace at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

(1) Emissions in excess of 0.15 kg of PM per Mg (0.30 lb of PM per ton) of feed/charge.

(2) Visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(h) *Rotary dross cooler.* On and after the compliance date established by §63.1501, the owner or operator of a rotary dross cooler at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere:

(1) Emissions in excess of 0.09 g of PM per dscm (0.04 gr per dscf).

(2) Visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(i) *Group 1 furnace.* The owner or operator of a group 1 furnace must use the limits in this paragraph to determine the emission standards for a SAPU.

(1) 0.20 kg of PM per Mg (0.40 lb of PM per ton) of feed/charge from a group 1 furnace, that is not a melting/holding furnace processing only clean charge, at a secondary aluminum production facility that is a major source;

(2) 0.40 kg of PM per Mg (0.80 lb of PM per ton) of feed/charge from a group 1 melting/holding furnace processing only clean charge at a secondary aluminum production facility that is a major source;

(3) 15 µg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge from a group 1 furnace at a secondary aluminum production facility that is a major or area source. This limit does not apply if the furnace processes only clean charge; and

(4) 0.20 kg of HF per Mg (0.40 lb of HF per ton) of feed/charge from an uncontrolled group 1 furnace and 0.20 kg of HCl per Mg (0.40 lb of HCl per ton) of feed/charge or, if the furnace is equipped with an add-on air pollution control device, 10 percent of the uncontrolled HCl emissions, by weight, for a group 1 furnace at a secondary aluminum production facility that is a major source.

(5) The owner or operator of a group 1 furnace at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device if a COM is chosen as the monitoring option.

(6) The owner or operator may determine the emission standards for a SAPU by applying the group 1 furnace limits on the basis of the aluminum production weight in each group 1 furnace, rather than on the basis of feed/charge.

(7) The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must comply with the emission limits of paragraphs (i)(1) through (4) of this section on the basis of the combined emissions from the sidewell and the hearth.

(j) *In-line fluxer.* Except as provided in paragraph (j)(3) of this section for an in-line fluxer using no reactive flux material, the owner or operator of an in-line fluxer must use the limits in this paragraph to determine the emission standards for a SAPU.

(1) 0.02 kg of HCl per Mg (0.04 lb of HCl per ton) of feed/charge;

(2) 0.005 kg of PM per Mg (0.01 lb of PM per ton) of feed/charge.

(3) The emission limits in paragraphs (j)(1) and (j)(2) of this section do not apply to an in-line fluxer that uses no reactive flux materials.

(4) The owner or operator of an in-line fluxer at a secondary aluminum production facility that is a major source must not discharge or cause to be discharged to the atmosphere visible emissions in excess of 10 percent opacity from any PM add-on air pollution control device used to control emissions from the in-line fluxer, if a COM is chosen as the monitoring option.

(5) The owner or operator may determine the emission standards for a SAPU by applying the in-line fluxer limits on the basis of the aluminum production weight in each in-line fluxer, rather than on the basis of feed/charge.

(k) *Secondary aluminum processing unit*. The owner or operator must comply with the emission limits calculated using the equations for PM, HCl and HF in paragraphs (k)(1) and (2) of this section for each secondary aluminum processing unit at a secondary aluminum production facility that is a major source. The owner or operator must comply with the emission limit calculated using the equation for D/F in paragraph (k)(3) of this section for each secondary aluminum processing unit at a secondary aluminum production facility that is a major or area source.

(1) The owner or operator must not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of PM in excess of:

$$L_{c_{PM}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{PM}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 1)}$$

Where:

L_{tiPM} = The PM emission limit for individual emission unit i in paragraph (i)(1) and (2) of this section for a group 1 furnace or in paragraph (j)(2) of this section for an in-line fluxer;

T_{ti} = The mass of feed/charge for 24 hours for individual emission unit i; and

L_{cPM} = The daily PM emission limit for the secondary aluminum processing unit which is used to calculate the 3-day, 24-hour PM emission limit applicable to the SAPU.

NOTE: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.

(2) The owner or operator must not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of HCl or HF in excess of:

$$L_{c_{HCl/HF}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{HCl/HF}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 2)}$$

Where:

$L_{tiHCl/HF}$ = The HCl emission limit for individual emission unit i in paragraph (i)(4) of this section for a group 1 furnace or in paragraph (j)(1) of this section for an in-line fluxer; or the HF emission limit for individual emission unit i in paragraph (i)(4) of this section for an uncontrolled group 1 furnace; and

$L_{cHCl/HF}$ = The daily HCl or HF emission limit for the secondary aluminum processing unit which is used to calculate the 3-day, 24-hour HCl or HF emission limit applicable to the SAPU.

NOTE: Only uncontrolled group 1 furnaces are included in this HF limit calculation. In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl or HF limit.

(3) The owner or operator must not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D/F in excess of:

$$L_{c_{D/F}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{D/F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 3)}$$

Where:

$L_{tiD/F}$ = The D/F emission limit for individual emission unit i in paragraph (i)(3) of this section for a group 1 furnace; and

$L_{cD/F}$ = The daily D/F emission limit for the secondary aluminum processing unit which is used to calculate the 3-day, 24-hour D/F emission limit applicable to the SAPU.

NOTE: Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

(4) The owner or operator of a SAPU at a secondary aluminum production facility that is a major source may demonstrate compliance with the emission limits of paragraphs (k)(1) through (3) of this section by demonstrating that each emission unit within the SAPU is in compliance with the applicable emission limits of paragraphs (i) and (j) of this section.

(5) The owner or operator of a SAPU at a secondary aluminum production facility that is an area source may demonstrate compliance with the emission limits of paragraph (k)(3) of this section by demonstrating that each emission unit within the SAPU is in compliance with the emission limit of paragraph (i)(3) of this section.

(6) With the prior approval of the permitting authority for major sources, or the Administrator for area sources, an owner or operator may redesignate any existing group 1 furnace or in-line fluxer at a secondary aluminum production facility as a new emission unit. Any emission unit so redesignated may thereafter be included in a new SAPU at that facility. Any such redesignation will be solely for the purpose of this NESHAP and will be irreversible.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 70 FR 57517, Oct. 3, 2005; 80 FR 56739, Sept. 18, 2015]

§63.1506 Operating requirements.

(a) *Summary.* (1) The owner or operator must operate all new and existing affected sources and control equipment according to the requirements in this section. The affected sources, and their associated control equipment, listed in §63.1500(c)(1) through (4) of this subpart that are located at a secondary aluminum production facility that is an area source are subject to the operating requirements of paragraphs (b), (c), (d), (f), (g), (h), (m), (n), and (p) of this section.

(2) The owner or operator of an existing sweat furnace that meets the specifications of §63.1505(f)(1) must operate the sweat furnace and control equipment according to the requirements of this section on and after the compliance date of this standard.

(3) The owner or operator of a new sweat furnace that meets the specifications of §63.1505(f)(1) must operate the sweat furnace and control equipment according to the requirements of this section by March 23, 2000 or upon startup, whichever is later.

(4) Operating requirements are summarized in Table 2 to this subpart.

(5) At all times, the owner or operator must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) *Labeling.* The owner or operator must provide and maintain easily visible labels posted at each group 1 furnace, group 2 furnace, in-line fluxer and scrap dryer/delacquering kiln/decoating kiln that identifies the applicable emission limits and means of compliance, including:

(1) The type of affected source or emission unit (*e.g.,* scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace, in-line fluxer).

(2) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (*e.g.*, clean scrap only, all scrap, etc.), flux materials and addition practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.

(3) The afterburner operating temperature and design residence time for a scrap dryer/delacquering kiln/decoating kiln.

(c) *Capture/collection systems.* For each affected source or emission unit equipped with an add-on air pollution control device, the owner or operator must:

(1) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates or facial inlet velocities as contained in the ACGIH Guidelines (incorporated by reference, see §63.14);

(2) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and

(3) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

(4) In lieu of paragraph (c)(1) of this section, the owner or operator of a sweat furnace may design, install and operate each sweat furnace in accordance with paragraphs (c)(4)(i) through (iii) of this section.

(i) As demonstrated by an annual negative air flow test conducted in accordance with §63.1510(d)(3), air flow must be into the sweat furnace or towards the plane of the sweat furnace opening.

(ii) The owner or operator must maintain and operate the sweat furnace in a manner consistent with the good practices requirements for minimizing emissions, including unmeasured emissions, in paragraph (a)(5) of this section. Procedures that will minimize unmeasured emissions may include, but are not limited to the following:

(A) Increasing the exhaust rate from the furnace with draft fans, so as to capture emissions that might otherwise escape from the sweat furnace opening;

(B) Minimizing the time the sweat furnace doors are open;

(C) Keeping building doors and other openings closed to the greatest extent possible to minimize drafts that would divert emissions from being drawn into the sweat furnace;

(D) Maintaining burners on low-fire or pilot operation while the doors are open;

(E) Conducting periodic inspections and maintenance of sweat furnace components to ensure their proper operation and performance including but not limited to, door assemblies, seals, combustion chamber refractory material, afterburner and stack refractory, blowers, fans, dampers, burner tubes, door raise cables, pilot light assemblies, baffles, sweat furnace and afterburner shells and other internal structures.

(iii) The owner or operator must document in their operation, maintenance, and monitoring (OM&M) plan the procedures to be used to minimize emissions, including unmeasured emissions, in addition to the procedures to ensure the proper operation and maintenance of the sweat furnace.

(d) *Feed/charge weight.* The owner or operator of each affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed/charge must:

(1) Except as provided in paragraph (d)(3) of this section, install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and

(2) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.

(3) The owner or operator may chose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:

(i) The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units within a SAPU; and

(ii) All calculations to demonstrate compliance with the emission limits for SAPUs are based on aluminum production weight rather than feed/charge weight.

(e) *Aluminum scrap shredder.* The owner or operator of a scrap shredder with emissions controlled by a fabric filter must operate a bag leak detection system, or a continuous opacity monitor, or conduct visible emissions observations.

(1) If a bag leak detection system is used to meet the monitoring requirements in §63.1510, the owner or operator must:

(i) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

(ii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(2) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, the owner or operator must initiate corrective action within 1-hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(3) If visible emission observations are used to meet the monitoring requirements in §63.1510, the owner or operator must initiate corrective action within 1-hour of any observation of visible emissions during a daily visible emissions test and complete the corrective action procedures in accordance with the OM&M plan.

(f) *Thermal chip dryer.* The owner or operator of a thermal chip dryer with emissions controlled by an afterburner must:

(1) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.

(2) Operate each afterburner in accordance with the OM&M plan.

(3) Operate each thermal chip dryer using only unpainted aluminum chips as the feedstock.

(g) *Scrap dryer/delacquering kiln/decoating kiln.* The owner or operator of a scrap dryer/delacquering kiln/decoating kiln with emissions controlled by an afterburner and a lime-injected fabric filter must:

(1) For each afterburner,

(i) Maintain the 3-hour block average operating temperature of each afterburner at or above the average temperature established during the performance test.

(ii) Operate each afterburner in accordance with the OM&M plan.

(2) If a bag leak detection system is used to meet the fabric filter monitoring requirements in §63.1510,

(i) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete any necessary corrective action procedures in accordance with the OM&M plan.

(ii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(3) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, initiate corrective action within 1-hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(4) Maintain the 3-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14 °C (plus 25 °F).

(5) For a continuous injection device, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the performance test.

(h) *Sweat furnace.* The owner or operator of a sweat furnace with emissions controlled by an afterburner must:

(1) Maintain the 3-hour block average operating temperature of each afterburner at or above:

(i) The average temperature established during the performance test; or

(ii) 1600 °F if a performance test was not conducted, and the afterburner meets the specifications of §63.1505(f)(1).

(2) Operate each afterburner in accordance with the OM&M plan.

(i) *Dross-only furnace.* The owner or operator of a dross-only furnace with emissions controlled by a fabric filter must:

(1) If a bag leak detection system is used to meet the monitoring requirements in §63.1510,

(i) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

(ii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(2) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, initiate corrective action within 1-hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(3) Operate each furnace using dross and salt flux as the sole feedstock.

(j) *Rotary dross cooler.* The owner or operator of a rotary dross cooler with emissions controlled by a fabric filter must:

(1) If a bag leak detection system is used to meet the monitoring requirements in §63.1510,

(i) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

(ii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(2) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, initiate corrective action within 1 hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(k) *In-line fluxer.* The owner or operator of an in-line fluxer with emissions controlled by a lime-injected fabric filter must:

(1) If a bag leak detection system is used to meet the monitoring requirements in §63.1510,

(i) Initiate corrective action within 1-hour of a bag leak detection system alarm and complete the corrective action procedures in accordance with the OM&M plan.

(ii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(2) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, initiate corrective action within 1 hour of any 6-minute average reading of 5 percent or more opacity and complete the corrective action procedures in accordance with the OM&M plan.

(3) For a continuous injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the performance test.

(4) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

(l) *In-line fluxer using no reactive flux material.* The owner or operator of a new or existing in-line fluxer using no reactive flux materials must operate each in-line fluxer using no reactive flux materials.

(m) *Group 1 furnace with add-on air pollution control devices.* The owner or operator of a group 1 furnace with emissions controlled by a lime-injected fabric filter must:

(1) If a bag leak detection system is used to meet the monitoring requirements in §63.1510, the owner or operator must:

(i) Initiate corrective action within 1 hour of a bag leak detection system alarm.

(ii) Complete the corrective action procedures in accordance with the OM&M plan.

(iii) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than 5 percent of the operating time during a 6-month block reporting period. In calculating this operating time fraction, if inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted. If corrective action is required, each alarm shall be counted as a minimum of 1 hour. If the owner or operator takes longer than 1 hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the owner or operator to initiate corrective action.

(2) If a continuous opacity monitoring system is used to meet the monitoring requirements in §63.1510, the owner or operator must:

(i) Initiate corrective action within 1 hour of any 6-minute average reading of 5 percent or more opacity; and

(ii) Complete the corrective action procedures in accordance with the OM&M plan.

(3) Maintain the 3-hour block average inlet temperature for each fabric filter at or below the average temperature established during the performance test, plus 14 °C (plus 25 °F).

(4) For a continuous lime injection system, maintain free-flowing lime in the hopper to the feed device at all times and maintain the lime feeder setting at or above the level established during the performance test.

(5) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.

(6) Operate each sidewell furnace such that:

(i) The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits.

(ii) Reactive flux is added only in the sidewell, unless emissions from both the sidewell and the hearth are included in demonstrating compliance with all applicable emission limits.

(7) The operation of capture/collection systems and control devices associated with natural gas-fired, propane-fired or electrically heated group 1 furnaces that will be idled for at least 24 hours after the furnace cycle has been completed may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.

(n) *Group 1 furnace without add-on air pollution control devices.* The owner or operator of a group 1 furnace (including a group 1 furnace that is part of a secondary aluminum processing unit) without add-on air pollution control devices must:

(1) Maintain the total reactive chlorine flux injection rate and fluorine flux injection rate for each operating cycle or time period used in the performance test, at or below the average rate established during the performance test.

(2) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.

(3) Operate each group 1 melting/holding furnace subject to the emission standards in §63.1505(i)(2) using only clean charge as the feedstock.

(o) *Group 2 furnace.* The owner or operator of a new or existing group 2 furnace must:

(1) Operate each furnace using only clean charge as the feedstock.

(2) Operate each furnace using no reactive flux.

(p) *Corrective action.* When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004; 80 FR 56740, Sept. 18, 2015]

§§63.1507-63.1509 [Reserved]

Monitoring and Compliance Requirements

§63.1510 Monitoring requirements.

(a) *Summary.* The owner or operator of a new or existing affected source or emission unit must monitor all control equipment and processes according to the requirements in this section. Monitoring requirements for each type of affected source and emission unit are summarized in Table 3 to this subpart. Area sources are subject to monitoring requirements for those affected sources listed in §63.1500(c)(1) through (4) of this subpart, and associated control equipment as required by paragraphs (b) through (k), (n) through (q), and (s) through (w) of this section, including but not limited to:

(1) The OM&M plan required in paragraph (b) of this section pertaining to each affected source listed in §63.1500(c)(1) through (4) of this subpart,

(2) The labeling requirements described in paragraph (c) of this section pertaining to group 1 furnaces processing other than clean charge, and scrap dryer/delacquering kiln/decoating kilns,

(3) The requirements for capture and collection described in paragraph (d) of this section for each controlled affected source (*i.e.*, affected sources with an add-on air pollution control device), listed in §63.1500(c)(1) through (4) of this subpart,

(4) The feed/charge weight monitoring requirements described in paragraph (e) of this section applicable to group 1 furnaces processing other than clean charge, scrap dryer/delacquering kiln/decoating kilns and thermal chip dryers,

(5) The bag leak detection system requirements described in paragraph (f) of this section applicable to all bag leak detection systems installed on fabric filters and lime injected fabric filters used to control each affected source listed in §63.1500(c)(1)-(4) of this subpart,

(6) The requirements for afterburners described in paragraph (g) of this section applicable to sweat furnaces, thermal chip dryers, and scrap dryer/delacquering kiln/decoating kilns,

(7) The requirements for monitoring fabric filter inlet temperature described in paragraph (h) of this section for all lime injected fabric filters used to control group 1 furnaces processing other than clean charge, sweat furnaces and scrap dryer/delacquering kiln/decoating kilns,

(8) The requirements for monitoring lime injection described in paragraph (i) of this section applicable to all lime injected fabric filters used to control emissions from group 1 furnaces processing other than clean charge, thermal chip dryers, sweat furnaces and scrap dryer/delacquering kiln/decoating kilns,

(9) The requirements for monitoring total reactive flux injection described in paragraph (j) of this section for all group 1 furnaces processing other than clean charge,

(10) The requirements described in paragraph (k) of this section for thermal chip dryers,

(11) The requirements described in paragraph (n) of this section for controlled group 1 sidewell furnaces processing other than clean charge,

(12) The requirements described in paragraph (o) of this section for uncontrolled group 1 sidewell furnaces processing other than clean charge,

(13) The requirements described in paragraph (p) of this section for scrap inspection programs for uncontrolled group 1 furnaces,

(14) The requirements described in paragraph (q) of this section for monitoring scrap contamination level for uncontrolled group 1 furnaces,

(15) The requirements described in paragraph (s) of this section for secondary aluminum processing units, limited to compliance with limits for emissions of D/F from group 1 furnaces processing other than clean charge,

(16) The requirements described in paragraph (t) of this section for secondary aluminum processing units limited to compliance with limits for emissions of D/F from group 1 furnaces processing other than clean charge,

(17) The requirements described in paragraph (u) of this section for secondary aluminum processing units limited to compliance with limits for emissions of D/F from group 1 furnaces processing other than clean charge,

(18) The requirements described in paragraph (v) of this section for alternative lime addition monitoring methods applicable to lime-injected fabric filters used to control emissions from group 1 furnaces processing other than clean charge, thermal chip dryers, sweat furnaces and scrap dryer/delacquering kiln/decoating kilns, and

(19) The requirements described in paragraph (w) of this section for approval of alternate methods for monitoring group 1 furnaces processing other than clean charge, thermal chip dryers, scrap dryer/delacquering kiln/decoating kilns and sweat furnaces and associated control devices for the control of D/F emissions.

(b) *Operation, maintenance, and monitoring (OM&M) plan.* The owner or operator must prepare and implement for each new or existing affected source and emission unit, a written OM&M plan. The owner or operator of an existing affected source must submit the OM&M plan to the permitting authority for major sources, or the Administrator for area sources no later than the compliance date established by §63.1501. The owner or operator of any new affected source must submit the OM&M plan to the permitting authority for major sources, or the Administrator for area sources within 90 days after a successful initial performance test under §63.1511(b), or within 90 days after the compliance date established by §63.1501 if no initial performance test is required. The plan must be accompanied by a written certification by the owner or operator that the OM&M plan satisfies all requirements of this section and is otherwise consistent with the requirements of this subpart. The owner or operator must comply with all of the provisions of the OM&M plan as submitted to the permitting authority for major sources, or the Administrator for area sources, unless and until the plan is revised in accordance with the following procedures. If the permitting authority for major sources, or the Administrator for area sources determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of this section or this subpart, the owner or operator must promptly make all necessary revisions and resubmit the revised plan. If the owner or operator determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the owner or operator submits a description of the changes and a revised plan incorporating them to the permitting authority for major sources, or the Administrator for area sources. Each plan must contain the following information:

(1) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.

(2) A monitoring schedule for each affected source and emission unit.

(3) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in §63.1505.

(4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:

(i) Calibration and certification of accuracy of each monitoring device, at least once every 6 months, according to the manufacturer's instructions; and

(ii) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in subpart A of this part.

(5) Procedures for monitoring process and control device parameters, including lime injection rates, procedures for annual inspections of afterburners, and if applicable, the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

(6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (b)(1) of this section, including:

(i) Procedures to determine and record the cause of any deviation or excursion, and the time the deviation or excursion began and ended; and

(ii) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.

(7) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

(8) Documentation of the work practice and pollution prevention measures used to achieve compliance with the applicable emission limits and a site-specific monitoring plan as required in paragraph (o) of this section for each group 1 furnace not equipped with an add-on air pollution control device.

(9) Procedures to be followed when changing furnace classifications under the provisions of §63.1514.

(c) *Labeling.* The owner or operator must inspect the labels for each group 1 furnace, group 2 furnace, in-line fluxer and scrap dryer/delacquering kiln/decoating kiln at least once per calendar month to confirm that posted labels as required by the operational standard in §63.1506(b) are intact and legible.

(d) *Capture/collection system.* The owner or operator must:

(1) Install, operate, and maintain a capture/collection system for each affected source and emission unit equipped with an add-on air pollution control device; and

(2) Inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in §63.1506(c) and record the results of each inspection. This inspection shall include a volumetric flow rate measurement taken at a location in the ductwork downstream of the hoods that is representative of the actual volumetric flow rate without interference due to leaks, ambient air added for cooling or ducts from other hoods. The flow rate measurement must be performed in accordance with paragraphs (d)(2)(i), (ii), or (iii) of this section. As an alternative to the flow rate measurement specified in this paragraph, the inspection may satisfy the requirements of this paragraph, including the operating requirements in §63.1506(c), by including permanent total enclosure verification in accordance with paragraph (d)(2)(i) or (iv) of this section. Inspections that fail to successfully demonstrate that the requirements of §63.1506(c) are met, must be followed by repair or adjustment to the system operating conditions and a follow up inspection within 45 days to demonstrate that §63.1506(c) requirements are fully met.

(i) Conduct annual flow rate measurements using EPA Methods 1 and 2 in appendix A to 40 CFR part 60, or conduct annual verification of a permanent total enclosure using EPA Method 204; or you may follow one of the three alternate procedures described in paragraphs (ii), (iii), or (iv) of this section to maintain system operations in accordance with an operating limit established during the performance test. The operating limit is determined as the average reading of a parametric monitoring instrument (Magnehelic®, manometer, anemometer, or other parametric monitoring instrument) and technique as described in paragraphs (d)(2)(ii), (iii), and (iv) of this section. A deviation, as defined in paragraphs (ii), (iii), and (iv) of this section, from the parametric monitoring operating limit requires the owner or operator to make repairs or adjustments to restore normal operation within 45 days.

(ii) As an alternative to annual flow rate measurements using EPA Methods 1 and 2, measurement with EPA Methods 1 and 2 can be performed once every 5 years, provided that:

(A) A flow rate indicator consisting of a pitot tube and differential pressure gauge (Magnehelic®, manometer or other differential pressure gauge) is installed with the pitot tube tip located at a representative point of the duct proximate to the location of the Methods 1 and 2 measurement site; and

(B) The flow rate indicator is installed and operated in accordance with the manufacturer's specifications; and

(C) The differential pressure is recorded during the Method 2 performance test series; and

(D) Daily differential pressure readings are made by taking three measurements with at least 5 minutes between each measurement and averaging the three measurements; and readings are recorded daily and maintained at or above 90 percent of the average pressure differential indicated by the flow rate indicator during the most recent Method 2 performance test series; and

(E) An inspection of the pitot tube and associated lines for damage, plugging, leakage and operational integrity is conducted at least once per year; or

(iii) As an alternative to annual flow rate measurements using EPA Methods 1 and 2, measurement with EPA Methods 1 and 2 can be performed once every 5 years, provided that:

(A) Daily measurements of the capture and collection system's fan revolutions per minute (RPM) or fan motor amperage (amps) are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at or above 90 percent of the average RPM or amps measured during the most recent Method 2 performance test series; or

(B) A static pressure measurement device is installed in the duct immediately downstream of the hood exit, and daily pressure readings are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or better of the average vacuum recorded during the most recent Method 2 performance test series; or

(C) A hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple and automated data logging software and associated hardware is installed; and daily readings are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or greater of the average readings during the most recent Method 2 performance test series; or

(D) For booth-type hoods, hotwire anemometer measurements of hood face velocity are performed simultaneously with EPA Method 1 and 2 measurements, and the annual hood face velocity measurements confirm that the enclosure draft is maintained at 90 percent or greater of the average readings during the most recent Method 2 performance test series. Daily readings are made by taking three measurements with at least 5 minutes between each measurement, and averaging the three measurements; and readings are recorded daily and maintained at 90 percent or greater of the average readings during the most recent Method 1 and 2 performance test series.

(iv) As an alternative to the annual verification of a permanent total enclosure using EPA Method 204, verification can be performed once every 5 years, provided that:

(A) Negative pressure in the enclosure is directly monitored by a pressure indicator installed at a representative location;

(B) Pressure readings are recorded daily or the system is interlocked to halt material feed should the system not operate under negative pressure;

(C) An inspection of the pressure indicator for damage and operational integrity is conducted at least once per calendar year.

(3) For sweat furnaces, in lieu of paragraph (d)(2) of this section, the owner or operator of a sweat furnace may inspect each sweat furnace at least once each calendar year to ensure that they are being operated in accordance with the negative air flow requirements in §63.1506(c)(4). The owner or operator of a sweat furnace must demonstrate negative air flow into the sweat furnace in accordance with paragraphs (d)(3)(i) through (iii) of this section.

(i) Perform an annual visual smoke test to demonstrate airflow into the sweat furnace or towards the plane of the sweat furnace opening;

(ii) Perform the smoke test using a smoke source, such as a smoke tube, smoke stick, smoke cartridge, smoke candle or other smoke source that produces a persistent and neutral buoyancy aerosol; and

(iii) Perform the visual smoke test at a safe distance from and near the center of the sweat furnace opening.

(e) *Feed/charge weight.* The owner or operator of an affected source or emission unit subject to an emission limit in kg/Mg (lb/ton) or µg/Mg (gr/ton) of feed/charge must install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the affected source or emission unit over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the permitting authority for major sources, or the Administrator for area sources to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.

(1) The accuracy of the weight measurement device or procedure must be ±1 percent of the weight being measured. The owner or operator may apply to the permitting agency for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.

(2) The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(f) *Fabric filters and lime-injected fabric filters.* The owner or operator of an affected source or emission unit using a fabric filter or lime-injected fabric filter to comply with the requirements of this subpart must install, calibrate, maintain, and continuously operate a bag leak detection system as required in paragraph (f)(1) of this section or a continuous opacity monitoring system as required in paragraph (f)(2) of this section. The owner or operator of an aluminum scrap shredder must install and operate a bag leak detection system as required in paragraph (f)(1) of this section, install and operate a continuous opacity monitoring system as required in paragraph (f)(2) of this section, or conduct visible emission observations as required in paragraph (f)(3) of this section.

(1) These requirements apply to the owner or operator of a new or existing affected source or existing emission unit using a bag leak detection system.

(i) The owner or operator must install and operate a bag leak detection system for each exhaust stack of a fabric filter.

(ii) Each bag leak detection system must be installed, calibrated, operated, and maintained according to the manufacturer's operating instructions.

(iii) The bag leak detection system must be certified by the manufacturer to be capable of detecting PM emissions at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(iv) The bag leak detection system sensor must provide output of relative or absolute PM loadings.

(v) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(vi) The bag leak detection system must be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm must be located where it is easily heard by plant operating personnel.

(vii) For positive pressure fabric filter systems, a bag leak detection system must be installed in each baghouse compartment or cell. For negative pressure or induced air fabric filters, the bag leak detector must be installed downstream of the fabric filter.

(viii) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(ix) The baseline output must be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(x) Following initial adjustment of the system, the owner or operator must not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the OM&M plan. In no case may the sensitivity be increased by more than 100 percent or decreased more than 50 percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(2) These requirements apply to the owner or operator of a new or existing affected source or an existing emission unit using a continuous opacity monitoring system.

(i) The owner or operator must install, calibrate, maintain, and operate a continuous opacity monitoring system to measure and record the opacity of emissions exiting each exhaust stack.

(ii) Each continuous opacity monitoring system must meet the design and installation requirements of Performance Specification 1 in appendix B to 40 CFR part 60.

(3) These requirements apply to the owner or operator of a new or existing aluminum scrap shredder who conducts visible emission observations. The owner or operator must:

(i) Perform a visible emissions test for each aluminum scrap shredder using a certified observer at least once a day according to the requirements of Method 9 in appendix A to 40 CFR part 60. Each Method 9 test must consist of five 6-minute observations in a 30-minute period; and

(ii) Record the results of each test.

(4) As an alternative to the requirements of paragraph (f)(3) of this section, the owner or operator of a new or existing aluminum scrap shredder may measure the opacity of the emissions discharged through a stack or stacks using ASTM Method D7520-13 (incorporated by reference, see §63.14) subject to the requirements of paragraphs §63.1510(f)(4)(i) through (iv) of this section. Each test must consist of five 6-minute observations in a 30-minute period.

(i) During the digital camera opacity technique (DCOT) certification procedure outlined in Section 9.2 of ASTM D7520-13, the owner or operator or the DCOT vendor must present the plumes in front of various backgrounds of color and contrast representing conditions anticipated during field use such as blue sky, trees, and mixed backgrounds (clouds and/or a sparse tree stand).

(ii) The owner or operator must also have standard operating procedures in place including daily or other frequency quality checks to ensure that equipment is within manufacturing specifications as outlined in Section 8.1 of ASTM D7520-13.

(iii) The owner or operator must follow the recordkeeping procedures outlined in §63.10(b)(1) for DCOT certification, compliance report, data sheets and all raw unaltered JPEGs used for opacity and certification determination.

(iv) The owner or operator or the DCOT vendor must have a minimum of four (4) independent technology users apply the software to determine the visible opacity of the 300 certification plumes. For each set of 25 plumes, the user may not exceed 15 percent opacity on any one reading and the average error must not exceed 7.5 percent opacity.

(g) *Afterburner.* These requirements apply to the owner or operator of an affected source using an afterburner to comply with the requirements of this subpart.

(1) The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the operating temperature of the afterburner consistent with the requirements for continuous monitoring systems in subpart A of this part.

(2) The temperature monitoring device must meet each of these performance and equipment specifications:

(i) The temperature monitoring device must be installed at the exit of the combustion zone of each afterburner.

(ii) The monitoring system must record the temperature in 15-minute block averages and determine and record the average temperature for each 3-hour block period.

(iii) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in §63.1512(m).

(iv) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(3) The owner or operator must conduct an inspection of each afterburner at least once a year and record the results. At a minimum, an inspection must include:

(i) Inspection of all burners, pilot assemblies, and pilot sensing devices for proper operation and clean pilot sensor;

(ii) Inspection for proper adjustment of combustion air;

(iii) Inspection of internal structures (*e.g.,* baffles) to ensure structural integrity;

(iv) Inspection of dampers, fans, and blowers for proper operation;

(v) Inspection for proper sealing;

(vi) Inspection of motors for proper operation;

(vii) Inspection of combustion chamber refractory lining and clean and replace lining as necessary;

(viii) Inspection of afterburner shell for corrosion and/or hot spots;

(ix) Documentation, for the burn cycle that follows the inspection, that the afterburner is operating properly and any necessary adjustments have been made; and

(x) Verification that the equipment is maintained in good operating condition.

(xi) Following an equipment inspection, all necessary repairs must be completed in accordance with the requirements of the OM&M plan.

(h) *Fabric filter inlet temperature.* These requirements apply to the owner or operator of a scrap dryer/delacquering kiln/decoating kiln or a group 1 furnace using a lime-injected fabric filter to comply with the requirements of this subpart.

(1) The owner or operator must install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases consistent with the requirements for continuous monitoring systems in subpart A of this part.

(2) The temperature monitoring device must meet each of these performance and equipment specifications:

(i) The monitoring system must record the temperature in 15-minute block averages and calculate and record the average temperature for each 3-hour block period.

(ii) The recorder response range must include zero and 1.5 times the average temperature established according to the requirements in §63.1512(n).

(iii) The reference method must be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

(i) *Lime injection.* These requirements apply to the owner or operator of an affected source or emission unit using a lime-injected fabric filter to comply with the requirements of this subpart.

(1) The owner or operator of a continuous lime injection system must verify that lime is always free-flowing by either:

(i) Inspecting each feed hopper or silo at least once each 8-hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the 8-hour periods, the owner or operator must increase the frequency of inspections to at least once every 4-hour period for the next 3 days. The owner or operator may return to inspections at least once every 8 hour period if corrective action results in no further blockages of lime during the 3-day period; or

(ii) Subject to the approval of the permitting agency, installing, operating and maintaining a load cell, carrier gas/lime flow indicator, carrier gas pressure drop measurement system or other system to confirm that lime is free-flowing. If lime is found not to be free-flowing, the owner or operator must promptly initiate and complete corrective action, or

(iii) Subject to the approval of the permitting agency, installing, operating and maintaining a device to monitor the concentration of HCl at the outlet of the fabric filter. If an increase in the concentration of HCl indicates that the lime is not free-flowing, the owner or operator must promptly initiate and complete corrective action.

(2) The owner or operator of a continuous lime injection system must record the lime feeder setting once each day of operation.

(3) An owner or operator who intermittently adds lime to a lime-injected fabric filter must obtain approval from the permitting authority for major sources, or the Administrator for area sources for a lime addition monitoring procedure. The permitting authority for major sources, or the Administrator for area sources will not approve a monitoring procedure unless data and information are submitted establishing that the procedure is adequate to ensure that relevant emission standards will be met on a continuous basis.

(4) At least once per month, verify that the lime injection rate in pounds per hour (lb/hr) is no less than 90 percent of the lime injection rate used to demonstrate compliance during your most recent performance test. If the monthly check of the lime injection rate is below the 90 percent, the owner or operator must repair or adjust the lime injection system to restore normal operation within 45 days. The owner or operator may request from the permitting authority for major sources, or the Administrator for area sources, an extension of up to an additional 45 days to demonstrate that the lime injection rate is no less than 90 percent of the lime injection rate used to demonstrate compliance during the most recent performance test. In the event that a lime feeder is repaired or replaced, the feeder must be calibrated, and the feed rate must be restored to the lb/hr feed rate operating limit established during the most recent performance test within 45 days. The owner or operator may request from the permitting authority for major sources, or the Administrator for area sources, an extension of up to an additional 45 days to complete the repair or replacement and establishing a new setting. The repair or replacement, and the establishment of the new feeder setting(s) must be documented in accordance with the recordkeeping requirements of §63.1517.

(j) *Total reactive flux injection rate.* These requirements apply to the owner or operator of a group 1 furnace (with or without add-on air pollution control devices) or in-line fluxer. The owner or operator must:

(1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit.

(i) The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.

(ii) The accuracy of the weight measurement device must be ±1 percent of the weight of the reactive component of the flux being measured. The owner or operator may apply to the permitting authority for major sources, or the Administrator for area sources for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ±1 percent impracticable. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards.

(iii) The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.

(2) Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in §63.1512(o).

(3) Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:

(i) Gaseous or liquid reactive flux other than chlorine; and

(ii) Solid reactive flux.

(4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in §63.1512(o). For solid flux that is added intermittently, record the amount added for each operating cycle or time period used in the performance test using the procedures in §63.1512(o).

(5) The owner or operator of a group 1 furnace or in-line fluxer performing reactive fluxing may apply to the Administrator for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(k) *Thermal chip dryer.* These requirements apply to the owner or operator of a thermal chip dryer with emissions controlled by an afterburner. The owner or operator must:

(1) Record the type of materials charged to the unit for each operating cycle or time period used in the performance test.

(2) Submit a certification of compliance with the applicable operational standard for charge materials in §63.1506(f)(3) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(i).

(l) *Dross-only furnace.* These requirements apply to the owner or operator of a dross-only furnace. The owner or operator must:

(1) Record the materials charged to each unit for each operating cycle or time period used in the performance test.

(2) Submit a certification of compliance with the applicable operational standard for charge materials in §63.1506(i)(3) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(ii).

(m) *In-line fluxers using no reactive flux.* The owner or operator of an in-line fluxer that uses no reactive flux materials must submit a certification of compliance with the operational standard for no reactive flux materials in §63.1506(l) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(vi).

(n) *Sidewell group 1 furnace with add-on air pollution control devices.* These requirements apply to the owner or operator of a sidewell group 1 furnace using add-on air pollution control devices. The owner or operator must:

(1) Record in an operating log for each tap of a sidewell furnace whether the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device. If visual inspection of the molten metal level is not possible, the molten metal level must be determined using physical measurement methods.

(2) Submit a certification of compliance with the operational standards in §63.1506(m)(6) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(iii).

(o) *Group 1 furnace without add-on air pollution control devices.* These requirements apply to the owner or operator of a group 1 furnace that is not equipped with an add-on air pollution control device.

(1) The owner or operator must develop, in consultation with the permitting authority for major sources, or the Administrator for area sources, a written site-specific monitoring plan. The site-specific monitoring plan must be submitted to the permitting authority for major sources, or the Administrator for area sources as part of the OM&M plan. The site-specific monitoring plan must contain sufficient procedures to ensure continuing compliance with all applicable emission limits and must demonstrate, based on documented test results, the relationship between emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces), and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) that will be emitted from the furnace in accordance with §63.1511(b)(1). If the permitting authority for major sources, or the Administrator for area sources determines that any revisions of the site-specific monitoring plan are necessary to meet the requirements of this section or this subpart, the owner or operator must promptly make all necessary revisions and resubmit the revised plan.

(i) The owner or operator of an existing affected source must submit the site-specific monitoring plan to the permitting authority for major sources, or the Administrator for area sources for review at least 6 months prior to the compliance date.

(ii) The permitting authority for major sources, or the Administrator for area sources will review and approve or disapprove a proposed plan, or request changes to a plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limits and demonstrates, based on documented test results, the relationship between emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) that will be emitted from the furnace. Subject to approval of the OM&M plan, the highest levels may be determined by conducting performance tests and monitoring operating parameters in accordance with §63.1511(b)(1).

(2) Each site-specific monitoring plan must document each work practice, equipment/design practice, pollution prevention practice, or other measure used to meet the applicable emission standards.

(3) Each site-specific monitoring plan must include provisions for unit labeling as required in paragraph (c) of this section, feed/charge weight measurement (or production weight measurement) as required in paragraph (e) of this section and flux weight measurement as required in paragraph (j) of this section.

(4) Each site-specific monitoring plan for a melting/holding furnace subject to the clean charge emission standard in §63.1505(i)(3) must include these requirements:

(i) The owner or operator must record the type of feed/ charge (*e.g.*, ingot, thermally dried chips, dried scrap, etc.) for each operating cycle or time period used in the performance test; and

(ii) The owner or operator must submit a certification of compliance with the applicable operational standard for clean charge materials in §63.1506(n)(3) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(iv).

(5) If a continuous emission monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of the general provisions in subpart A of this part.

(6) If a continuous opacity monitoring system is included in a site-specific monitoring plan, the plan must include provisions for the installation, operation, and maintenance of the system to provide quality-assured measurements in accordance with all applicable requirements of this subpart.

(7) If a site-specific monitoring plan includes a scrap inspection program for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in paragraph (p) of this section.

(8) If a site-specific monitoring plan includes a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials, the plan must include provisions for the demonstration and implementation of the program in accordance with all applicable requirements in paragraph (q) of this section.

(p) *Scrap inspection program for group 1 furnace without add-on air pollution control devices.* A scrap inspection program must include:

(1) A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples;

(2) A scrap inspector training program;

(3) An established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples;

(4) Periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results;

(5) A system for assuring that only acceptable scrap is charged to an affected group 1 furnace; and

(6) Recordkeeping requirements to document conformance with plan requirements.

(q) *Monitoring of scrap contamination level by calculation method for group 1 furnace without add-on air pollution control devices.* The owner or operator of a group 1 furnace dedicated to processing a distinct type of furnace feed/charge composed of scrap with a uniform composition (such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented) may include a program in the site-specific monitoring plan for determining, monitoring, and certifying the scrap contaminant level using a calculation method rather than a scrap inspection program. A scrap contaminant monitoring program using a calculation method must include:

(1) Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test.

(2) Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test.

(3) Operating, monitoring, recordkeeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.

(r) *Group 2 furnace.* These requirements apply to the owner or operator of a new or existing group 2 furnace. The owner or operator must:

(1) Record a description of the materials charged to each furnace, including any nonreactive, non-HAP-containing/non-HAP-generating fluxing materials or agents.

(2) Submit a certification of compliance with the applicable operational standard for charge materials in §63.1506(o) for each 6-month reporting period. Each certification must contain the information in §63.1516(b)(2)(v).

(s) *Site-specific requirements for secondary aluminum processing units.* (1) An owner or operator of a secondary aluminum processing unit at a facility must include, within the OM&M plan prepared in accordance with §63.1510(b), the following information:

(i) The identification of each emission unit in the secondary aluminum processing unit;

(ii) The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;

(iii) The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit;

(iv) Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of this subpart; and

(v) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in §63.1510(t).

(2) The SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:

(i) Any averaging among emissions of differing pollutants;

(ii) The inclusion of any affected sources other than emission units in a secondary aluminum processing unit;

(iii) The inclusion of any emission unit while it is shutdown; or

(iv) The inclusion of any periods of startup or shutdown in emission calculations.

(3) To revise the SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to the permitting authority for major sources, or the Administrator for area sources containing the information required by paragraph (s)(1) of this section and obtain approval of the permitting authority for major sources, or the Administrator for area sources prior to implementing any revisions.

(t) *Secondary aluminum processing unit*. Except as provided in paragraph (u) of this section, the owner or operator must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) for each secondary aluminum processing unit on a daily basis. To calculate the 3-day, 24-hour rolling average, the owner or operator must:

(1) Calculate and record the total weight of material charged to each emission unit in the secondary aluminum processing unit for each 24-hour day of operation using the feed/charge weight information required in paragraph (e) of this section. If the owner or operator chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the emission unit, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.

(2) Multiply the total feed/charge weight to the emission unit, or the weight of aluminum produced by the emission unit, for each emission unit for the 24-hour period by the emission rate (in lb/ton of feed/charge) for that emission unit (as determined during the performance test) to provide emissions for each emission unit for the 24-hour period, in pounds.

(i) Where no performance test has been conducted, for a particular emission unit, because the owner of operator has, with the approval of the permitting authority for major sources, or the Administrator for area sources, chosen to determine the emission rate of an emission unit by testing a representative unit, in accordance with §63.1511(f), the owner or operator shall use the emission rate determined from the representative unit in the SAPU emission rate calculation required in §63.1510(t)(4).

(ii) Except as provided in paragraph (t)(2)(iii) of this section, if the owner or operator has not conducted performance tests for HCl (and HF for an uncontrolled group 1 furnace) or for HCl for an in-line fluxer, in accordance with the provisions of §63.1512(d)(3), (e)(3), or (h)(2), the calculation required in §63.1510(t)(4) to determine SAPU-wide HCl and HF emissions shall be made under the assumption that all chlorine contained in reactive flux added to the emission unit is emitted as HCl and all fluorine contained in reactive flux added to the emission unit is emitted as HF.

(iii) Prior to the date by which the initial performance test for HF emissions from uncontrolled group 1 furnaces is conducted, or is required to be conducted, the calculation required in §63.1505(k) to determine the SAPU-wide HF emission limit and the calculation required in §63.1510(t)(4) to determine the SAPU-wide HF emission rate must exclude HF emissions from untested uncontrolled group 1 furnaces and feed/charge processed in untested uncontrolled group 1 furnaces.

(3) Divide the total emissions for each SAPU for the 24-hour period by the total material charged to the SAPU, or the weight of aluminum produced by the SAPU over the 24-hour period to provide the daily emission rate for the SAPU.

(4) Compute the 24-hour daily emission rate using Equation 4:

$$E_{day} = \frac{\sum_{i=1}^{n}(T_i \times ER_i)}{\sum_{i=1}^{n} T_i} \qquad \text{(Eq. 4)}$$

Where:

E_{day} = The daily PM, HCl, and D/F (and HF for uncontrolled group 1 furnaces) emission rate for the secondary aluminum processing unit for the 24-hour period;

T_i = The total amount of feed, or aluminum produced, for emission unit i for the 24-hour period (tons or Mg);

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or µg/Mg of feed/charge); and

n = The number of emission units in the secondary aluminum processing unit.

(5) Calculate and record the 3-day, 24-hour rolling average for each pollutant each day by summing the daily emission rates for each pollutant over the 3 most recent consecutive days and dividing by 3. The SAPU is in compliance with an applicable emission limit if the 3-day, 24-hour rolling average for each pollutant is no greater than the applicable SAPU emission limit determined in accordance with §63.1505(k)(1)-(3).

(u) *Secondary aluminum processing unit compliance by individual emission unit demonstration.* As an alternative to the procedures of paragraph (t) of this section, an owner or operator may demonstrate, through performance tests, that each individual emission unit within the secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.

(v) *Alternative monitoring method for lime addition.* The owner or operator of a lime-coated fabric filter that employs intermittent or noncontinuous lime addition may apply to the Administrator for approval of an alternative method for monitoring the lime addition schedule and rate based on monitoring the weight of lime added per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.

(w) *Alternative monitoring methods.* If an owner or operator wishes to use an alternative monitoring method to demonstrate compliance with any emission standard in this subpart, other than those alternative monitoring methods which may be authorized pursuant to §63.1510(j)(5) and §63.1510(v), the owner or operator may submit an application to the Administrator. Any such application will be processed according to the criteria and procedures set forth in paragraphs (w)(1) through (6) of this section.

(1) The Administrator will not approve averaging periods other than those specified in this section.

(2) The owner or operator must continue to use the original monitoring requirement until necessary data are submitted and approval is received to use another monitoring procedure.

(3) The owner or operator shall submit the application for approval of alternate monitoring methods no later than the notification of the performance test. The application must contain the information specified in paragraphs (w)(3) (i) through (iii) of this section:

(i) Data or information justifying the request, such as the technical or economic infeasibility, or the impracticality of using the required approach;

(ii) A description of the proposed alternative monitoring requirements, including the operating parameters to be monitored, the monitoring approach and technique, and how the limit is to be calculated; and

(iii) Data and information documenting that the alternative monitoring requirement(s) would provide equivalent or better assurance of compliance with the relevant emission standard(s).

(4) The Administrator will not approve an alternate monitoring application unless it would provide equivalent or better assurance of compliance with the relevant emission standard(s). Before disapproving any alternate monitoring application, the Administrator will provide:

(i) Notice of the information and findings upon which the intended disapproval is based; and

(ii) Notice of opportunity for the owner or operator to present additional supporting information before final action is taken on the application. This notice will specify how much additional time is allowed for the owner or operator to provide additional supporting information.

(5) The owner or operator is responsible for submitting any supporting information in a timely manner to enable the Administrator to consider the application prior to the performance test. Neither submittal of an application nor the Administrator's failure to approve or disapprove the application relieves the owner or operator of the responsibility to comply with any provisions of this subpart.

(6) The Administrator may decide at any time, on a case-by-case basis, that additional or alternative operating limits, or alternative approaches to establishing operating limits, are necessary to demonstrate compliance with the emission standards of this subpart.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79816, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004; 80 FR 56741, Sept. 18, 2015; 81 FR 38087, June 13, 2016]

§63.1511 Performance test/compliance demonstration general requirements.

(a) *Site-specific test plan.* Prior to conducting any performance test required by this subpart, the owner or operator must prepare a site-specific test plan which satisfies all of the rule requirements, and must obtain approval of the plan pursuant to the procedures set forth in §63.7. Performance tests shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(b) *Initial performance test.* Following approval of the site-specific test plan, the owner or operator must demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each affected source and emission unit, and report the results in the notification of compliance status report as described in §63.1515(b). The owner or operator of any affected source constructed before February 14, 2012, for which an initial performance test is required to demonstrate compliance must conduct this initial performance test no later than the date for compliance established by §63.1501. The owner or operator of any affected source constructed or reconstructed after February 14, 2012, for which an initial performance test is required must conduct this initial performance test within 180 days after the date for compliance established by §63.1501. Except for the date by which the performance test must be conducted, the owner or operator must conduct each performance test in accordance with the requirements and procedures set forth in §63.7(c). Owners or operators of affected sources located at facilities which are area sources are subject only to those performance testing requirements pertaining to D/F. Owners or operators of sweat furnaces meeting the specifications of §63.1505(f)(1) are not required to conduct a performance test.

(1) The performance tests must be conducted under representative conditions expected to produce the highest level of HAP emissions expressed in the units of the emission standards for the HAP (considering the extent of feed/charge contamination, reactive flux addition rate and feed/charge rate). If a single test condition is not expected to produce the highest level of emissions for all HAP, testing under two or more sets of conditions (for example high contamination at low feed/charge rate, and low contamination at high feed/charge rate) may be required. Any subsequent performance tests for the purposes of establishing new or revised parametric limits shall be allowed upon pre-approval from the permitting authority for major sources, or the Administrator for area sources. These new parametric settings shall be used to demonstrate compliance for the period being tested.

(2) Each performance test for a continuous process must consist of 3 separate runs; pollutant sampling for each run must be conducted for the time period specified in the applicable method or, in the absence of a specific time period in the test method, for a minimum of 3 hours.

(3) Each performance test for a batch process must consist of three separate runs; pollutant sampling for each run must be conducted over the entire process operating cycle. Additionally, for batch processes where the length of the process operating cycle is not known in advance, and where isokinetic sampling must be conducted based on the procedures in Method 5 in appendix A to part 60, use the following procedure to ensure that sampling is conducted over the entire process operating cycle:

(i) Choose a minimum operating cycle length and begin sampling assuming this minimum length will be the run time (*e.g.*, if the process operating cycle is known to last from four to six hours, then assume a sampling time of four hours and divide the sampling time evenly between the required number of traverse points);

(ii) After each traverse point has been sampled once, begin sampling each point again for the same time per point, in the reverse order, until the operating cycle is complete. All traverse points as required by Method 1 of appendix A to part 60, must be sampled at least once during each test run;

(iii) In order to distribute the sampling time most evenly over all the traverse points, do not perform all runs using the same sampling point order (*e.g.*, if there are four ports and sampling for run 1 began in port 1, then sampling for run 2 could begin in port 4 and continue in reverse order.)

(4) Where multiple affected sources or emission units are exhausted through a common stack, pollutant sampling for each run must be conducted over a period of time during which all affected sources or emission units complete at least 1 entire process operating cycle or for 24 hours, whichever is shorter.

(5) Initial compliance with an applicable emission limit or standard is demonstrated if the average of three runs conducted during the performance test is less than or equal to the applicable emission limit or standard.

(6) Apply paragraphs (b)(1) through (5) of this section for each pollutant separately if a different production rate, charge material or, if applicable, reactive fluxing rate would apply and thereby result in a higher expected emissions rate for that pollutant.

(7) The owner or operator may not conduct performance tests during periods of malfunction.

(c) *Test methods.* The owner or operator must use the following methods in appendix A to 40 CFR part 60 to determine compliance with the applicable emission limits or standards:

(1) Method 1 for sample and velocity traverses.

(2) Method 2 for velocity and volumetric flow rate.

(3) Method 3 for gas analysis.

(4) Method 4 for moisture content of the stack gas.

(5) Method 5 for the concentration of PM.

(6) Method 9 for visible emission observations.

(7) Method 23 for the concentration of D/F.

(8) Method 25A for the concentration of THC, as propane.

(9) Method 26A for the concentration of HCl and HF. Method 26 may also be used, except at sources where entrained water droplets are present in the emission stream. Where a lime-injected fabric filter is used as the control device to comply with the 90 percent reduction standard, the owner or operator must measure the fabric filter inlet concentration of HCl at a point before lime is introduced to the system.

(d) *Alternative methods.* The owner or operator may use alternative test methods as provided in paragraphs (d)(1) through (3) of this section.

(1) The owner or operator may use test method ASTM D7520-13 as an alternative to EPA Method 9 subject to conditions described in §63.1510(f)(4).

(2) In lieu of conducting the annual flow rate measurements using Methods 1 and 2, the owner or operator may use Method 204 in Appendix M to 40 CFR part 51 to conduct annual verification of a permanent total enclosure for the affected source/emission unit.

(3) The owner or operator may use an alternative test method approved by the Administrator.

(e) *Repeat tests.* The owner or operator of new or existing affected sources and emission units located at secondary aluminum production facilities that are major sources must conduct a performance test every 5 years following the initial performance test.

(f) *Testing of representative emission units.* With the prior approval of the permitting authority for major sources, or the Administrator for area sources, an owner or operator may utilize emission rates obtained by testing a particular type of group 1 furnace that does not have an add-on air pollution control device, or by testing an in-line flux box that does not have an add-on air pollution control device, to determine the emission rate for other units of the same type at the same facility. Such emission test results may only be considered to be representative of other units if all of the following criteria are satisfied:

(1) The tested emission unit must use feed materials and charge rates which are comparable to the emission units that it represents;

(2) The tested emission unit must use the same type of flux materials in the same proportions as the emission units it represents;

(3) The tested emission unit must be operated utilizing the same work practices as the emission units that it represents;

(4) The tested emission unit must be of the same design as the emission units that it represents; and

(5) The tested emission unit must be tested under the highest load or capacity reasonably expected to occur for any of the emission units that it represents.

(6) All 3 separate runs of a performance test must be conducted on the same emission unit.

(g) *Establishment of monitoring and operating parameter values.* The owner or operator of new or existing affected sources and emission units must establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by §63.1510 that ensures compliance with the applicable emission limit or standard. To establish the minimum or maximum value or range, the owner or operator must use the appropriate procedures in this section and submit the information required by §63.1515(b)(4) in the notification of compliance status report. The owner or operator may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the following conditions are met to the satisfaction of the permitting authority for major sources, or the Administrator for area sources:

(1) The complete emission test report(s) used as the basis of the parameter(s) is submitted.

(2) The same test methods and procedures as required by this subpart were used in the test.

(3) The owner or operator certifies that no design or work practice changes have been made to the source, process, or emission control equipment since the time of the report.

(4) All process and control equipment operating parameters required to be monitored were monitored as required in this subpart and documented in the test report.

(5) If the owner or operator wants to conduct a new performance test and establish different operating parameter values, they must submit a revised site specific test plan and receive approval in accordance with paragraph (a) of this section. In addition, if an owner or operator wants to use existing data in addition to the results of the new performance test to establish operating parameter values, they must meet the requirements in paragraphs (g)(1) through (4) of this section.

(h) *Testing of commonly-ducted units within a secondary aluminum processing unit.* When group 1 furnaces and/or in-line fluxers are included in a single existing SAPU or new SAPU, and the emissions from more than one emission unit within that existing SAPU or new SAPU are manifolded to a single control device, compliance for all units within the SAPU is demonstrated if the total measured emissions from all controlled and uncontrolled units in the SAPU do not exceed the emission limits calculated for that SAPU based on the applicable equation in §63.1505(k).

(i) *Testing of commonly-ducted units not within a secondary aluminum processing unit.* With the prior approval of the permitting authority for major sources, or the Administrator for area sources, an owner or operator may do combined performance testing of two or more individual affected sources or emission units which are not included in a single existing SAPU or new SAPU, but whose emissions are manifolded to a single control device. Any such performance testing of commonly-ducted units must satisfy the following basic requirements:

(1) All testing must be designed to verify that each affected source or emission unit individually satisfies all emission requirements applicable to that affected source or emission unit;

(2) All emissions of pollutants subject to a standard must be tested at the outlet from each individual affected source or emission unit while operating under the highest load or capacity reasonably expected to occur, and prior to the point that the emissions are manifolded together with emissions from other affected sources or emission units;

(3) The combined emissions from all affected sources and emission units which are manifolded to a single emission control device must be tested at the outlet of the emission control device;

(4) All tests at the outlet of the emission control device must be conducted with all affected sources and emission units whose emissions are manifolded to the control device operating simultaneously under the highest load or capacity reasonably expected to occur; and

(5) For purposes of demonstrating compliance of a commonly-ducted unit with any emission limit for a particular type of pollutant, the emissions of that pollutant by the individual unit shall be presumed to be controlled by the same percentage as total emissions of that pollutant from all commonly-ducted units are controlled at the outlet of the emission control device.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59792, Sept. 24, 2002; 67 FR 79817, Dec. 30, 2002; 79 FR 11284, Feb. 27, 2014; 80 FR 56745, Sept. 18, 2015; 81 FR 38087, June 13, 2016]

§63.1512 Performance test/compliance demonstration requirements and procedures.

(a) *Aluminum scrap shredder*. The owner or operator must conduct performance tests to measure PM emissions at the outlet of the control system. If visible emission observation is the selected monitoring option, the owner or operator must record visible emission observations from each exhaust stack for all consecutive 6-minute periods during the PM emission test according to the requirements of Method 9 in appendix A to 40 CFR part 60. If emissions observations by ASTM Method D7520-13 (incorporated by reference, see §63.14) is the selected monitoring option, the owner or operator must record opacity observations from each exhaust stack for all consecutive 6-minute periods during the PM emission test.

(b) *Thermal chip dryer.* The owner or operator must conduct a performance test to measure THC and D/F emissions at the outlet of the control device while the unit processes only unpainted aluminum chips.

(c) *Scrap dryer/delacquering kiln/decoating kiln.* The owner or operator must conduct performance tests to measure emissions of THC, D/F, HCl, and PM at the outlet of the control device.

(1) If the scrap dryer/delacquering kiln/decoating kiln is subject to the alternative emission limits in §63.1505(e), the average afterburner operating temperature in each 3-hour block period must be maintained at or above 760 °C (1400 °F) for the test.

(2) The owner or operator of a scrap dryer/delacquering kiln/decoating kiln subject to the alternative limits in §63.1505(e) must submit a written certification in the notification of compliance status report containing the information required by §63.1515(b)(7).

(d) *Group 1 furnace with add-on air pollution control devices.* (1) The owner or operator of a group 1 furnace that processes scrap other than clean charge materials with emissions controlled by a lime-injected fabric filter must conduct performance tests to measure emissions of PM and D/F at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).

(2) The owner or operator of a group 1 furnace that processes only clean charge materials with emissions controlled by a lime-injected fabric filter must conduct performance tests to measure emissions of PM at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).

(3) The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all reactive flux added to the group 1 furnace is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.

(4) The owner or operator of a sidewell group 1 furnace that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must conduct the performance tests required by paragraph (d)(1) or (d)(2) of this section, to measure emissions from both the sidewell and the hearth.

(e) *Group 1 furnace (including melting holding furnaces) without add-on air pollution control devices.* In the site-specific monitoring plan required by §63.1510(o), the owner or operator of a group 1 furnace (including a melting/holding furnaces) without add-on air pollution control devices must include data and information demonstrating compliance with the applicable emission limits.

(1) If the group 1 furnace processes other than clean charge material, the owner or operator must conduct emission tests to measure emissions of PM, HCl, HF, and D/F at the furnace exhaust outlet.

(2) If the group 1 furnace processes only clean charge, the owner or operator must conduct emission tests to simultaneously measure emissions of PM, HCl and HF. A D/F test is not required. Each test must be conducted while the group 1 furnace (including a melting/holding furnace) processes only clean charge.

(3) The owner or operator may choose to determine the rate of reactive flux addition to the group 1 furnace and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine and fluorine

contained in reactive flux added to the group 1 furnace is emitted as HCl and HF. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl or HF.

(4) When testing an existing uncontrolled furnace, the owner or operator must comply with the requirements of either paragraphs (e)(4)(i), (ii), or (iii) of this section at the next required performance test required by §63.1511(e).

(i) Install hooding that meets ACGIH Guidelines (incorporated by reference, see §63.14), or

(ii) At least 180 days prior to testing petition the permitting authority for major sources, or the Administrator for area sources, that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to the paragraph (e)(7) of this section, or

(iii) Assume an 80-percent capture efficiency for the furnace exhaust (i.e., multiply emissions measured at the furnace exhaust outlet by 1.25). If the source fails to demonstrate compliance using the 80-percent capture efficiency assumption, the owner or operator must re-test with a hood that meets the ACGIH Guidelines within 180 days, or petition the permitting authority for major sources, or the Administrator for area sources, within 180 days that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to paragraph (e)(7) of this section.

(iv) The 80-percent capture efficiency assumption is not applicable in the event of testing conducted under an approved petition submitted pursuant to paragraphs (e)(4)(ii) or (iii) of this section.

(v) Round top furnaces constructed before February 14, 2012, and reconstructed round top furnaces are exempt from the requirements of paragraphs (e)(4)(i), (ii), and (iii) of this section. Round top furnaces must be operated to minimize unmeasured emissions according to paragraph (e)(7) of this section.

(5) When testing a new uncontrolled furnace, other than a new round top furnace, constructed after February 14, 2012, the owner or operator must comply with the requirements of paragraph (e)(5)(i) or (ii) of this section at the next required performance test required by §63.1511(e). When testing a new round top furnace constructed after February 14, 2012, the owner or operator must comply with the requirements of either paragraphs (e)(5)(i), (ii), or (iii) of this section at the next required performance test required by §63.1511(e).

(i) Install hooding that meets ACGIH Guidelines (incorporated by reference, see §63.14), or

(ii) At least 180 days prior to testing petition the permitting authority for major sources, or the Administrator for area sources, that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to the paragraph (e)(7) of this section, or

(iii) Assume an 80-percent capture efficiency for the furnace exhaust (*i.e.,* multiply emissions measured at the furnace exhaust outlet by 1.25). If the source fails to demonstrate compliance using the 80-percent capture efficiency assumption, the owner or operator must re-test with a hood that meets the ACGIH Guidelines within 180 days, or petition the permitting authority for major sources, or the Administrator for area sources, within 180 days that such hoods are impractical under the provisions of paragraph (e)(6) of this section and propose testing procedures that will minimize unmeasured emissions during the performance test according to paragraph (e)(7) of this section.

(iv) The 80-percent capture efficiency assumption is not applicable in the event of testing conducted under an approved petition submitted pursuant to paragraphs (e)(5)(ii) or (iii) of this section.

(6) The installation of hooding that meets ACGIH Guidelines (incorporated by reference, see §63.14) is considered impractical if any of the following conditions exist:

(i) Building or equipment obstructions (for example, wall, ceiling, roof, structural beams, utilities, overhead crane or other obstructions) are present such that the temporary hood cannot be located consistent with acceptable hood design and installation practices;

(ii) Space limitations or work area constraints exist such that the temporary hood cannot be supported or located to prevent interference with normal furnace operations or avoid unsafe working conditions for the furnace operator; or

(iii) Other obstructions and limitations subject to agreement of the permitting authority for major sources, or the Administrator for area sources.

(7) Testing procedures that will minimize unmeasured emissions may include, but are not limited to the following:

(i) Installing a hood that does not entirely meet ACGIH guidelines;

(ii) Using the building as an enclosure, and measuring emissions exhausted from the building if there are no other furnaces or other significant sources in the building of the pollutants to be measured;

(iii) Installing temporary baffles on those sides or top of furnace opening if it is practical to do so where they will not interfere with material handling or with the furnace door opening and closing;

(iv) Minimizing the time the furnace doors are open or the top is off;

(v) Delaying gaseous reactive fluxing until charging doors are closed and, for round top furnaces, until the top is on;

(vi) Agitating or stirring molten metal as soon as practicable after salt flux addition and closing doors as soon as possible after solid fluxing operations, including mixing and dross removal;

(vii) Keeping building doors and other openings closed to the greatest extent possible to minimize drafts that would divert emissions from being drawn into the furnace;

(viii) Maintaining burners on low-fire or pilot operation while the doors are open or the top is off;

(ix) Use of fans or other device to direct flow into a furnace when door is open; or

(x) Removing the furnace cover one time in order to add a smaller but representative charge and then replacing the cover.

(f) *Sweat furnace.* Except as provided in §63.1505(f)(1), the owner or operator must measure emissions of D/F from each sweat furnace at the outlet of the control device.

(g) *Dross-only furnace.* The owner or operator must conduct a performance test to measure emissions of PM from each dross-only furnace at the outlet of each control device while the unit processes only dross and salt flux as the sole feedstock.

(h) *In-line fluxer.* (1) The owner or operator of an in-line fluxer that uses reactive flux materials must conduct a performance test to measure emissions of HCl and PM or otherwise demonstrate compliance in accordance with paragraph (h)(2) of this section. If the in-line fluxer is equipped with an add-on control device, the emissions must be measured at the outlet of the control device.

(2) The owner or operator may choose to limit the rate at which reactive flux is added to an in-line fluxer and assume, for the purposes of demonstrating compliance with the SAPU emission limit, that all chlorine in the reactive flux added to the in-line fluxer is emitted as HCl. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl. If the owner or operator of any in-line flux box that has no ventilation ductwork manifolded to any outlet or emission control device chooses to demonstrate compliance with the emission limits for HCl by limiting use of reactive flux and assuming that all chlorine in the flux is emitted as HCl, compliance with the HCl limit shall also constitute compliance with the emission limit for PM and no separate emission test for PM is required. In this case, the owner or operator of the unvented in-line flux box must use the maximum permissible PM emission rate for the in-line flux boxes when determining the total emissions for any SAPU which includes the flux box.

(i) *Rotary dross cooler.* The owner or operator must conduct a performance test to measure PM emissions at the outlet of the control device.

(j) *Secondary aluminum processing unit*. The owner or operator must conduct performance tests as described in paragraphs (j)(1) through (3) of this section. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM, HCl and HF and µg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in §63.1510(t). A performance test is required for:

(1) Each group 1 furnace processing only clean charge to measure emissions of PM and either:

(i) Emissions of HF and HCl (for determining the emission limit); or

(ii) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard).

(2) Each group 1 furnace that processes scrap other than clean charge to measure emissions of PM and D/F and either:

(i) Emissions of HF and HCl (for determining the emission limit); or

(ii) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard).

(3) Each in-line fluxer to measure emissions of PM and HCl.

(k) *Feed/charge weight measurement.* During the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of an affected source or emission unit, subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format, must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the emission unit or affected source instead of the feed/charge weight.

(l) *Continuous opacity monitoring system.* The owner or operator of an affected source or emission unit using a continuous opacity monitoring system must conduct a performance evaluation to demonstrate compliance with Performance Specification 1 in appendix B to 40 CFR part 60. Following the performance evaluation, the owner or operator must measure and record the opacity of emissions from each exhaust stack for all consecutive 6-minute periods during the PM emission test.

(m) *Afterburner.* These requirements apply to the owner or operator of an affected source using an afterburner to comply with the requirements of this subpart.

(1) Prior to the initial performance test, the owner or operator must conduct a performance evaluation for the temperature monitoring device according to the requirements of §63.8.

(2) The owner or operator must use these procedures to establish an operating parameter value or range for the afterburner operating temperature.

(i) Continuously measure and record the operating temperature of each afterburner every 15 minutes during the THC and D/F performance tests;

(ii) Determine and record the 15-minute block average temperatures for the three test runs; and

(iii) Determine and record the 3-hour block average temperature measurements for the 3 test runs.

(n) *Inlet gas temperature.* The owner or operator of a scrap dryer/delacquering kiln/decoating kiln or a group 1 furnace using a lime-injected fabric filter must use these procedures to establish an operating parameter value or range for the inlet gas temperature.

(1) Continuously measure and record the temperature at the inlet to the lime-injected fabric filter every 15 minutes during the HCl and D/F performance tests;

(2) Determine and record the 15-minute block average temperatures for the 3 test runs; and

(3) Determine and record the 3-hour block average of the recorded temperature measurements for the 3 test runs.

(o) *Flux injection rate*. The owner or operator must use these procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate and, for uncontrolled furnaces, the total reactive fluorine flux injection rate.

(1) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl, HF and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;

(2) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;

(3) Determine the total reactive chlorine flux injection rate and, for uncontrolled furnaces, the total reactive fluorine flux injection rate by adding the recorded measurement of the total weight of chlorine and, for uncontrolled furnaces, fluorine in the gaseous or liquid reactive flux injected and the total weight of chlorine and, for uncontrolled furnaces, fluorine in the solid reactive flux using Equation 5:

$$W_t = F_1 W_1 + F_2 W_2 \qquad \text{(Eq. 5)}$$

Where:

W_t = Total chlorine or fluorine usage, by weight;

F_1 = Fraction of gaseous or liquid flux that is chlorine or fluorine;

W_1 = Weight of reactive flux gas injected;

F_2 = Fraction of solid reactive chloride flux that is chlorine (*e.g.*, F = 0.75 for magnesium chloride) or fraction of solid reactive fluoride flux that is fluorine (*e.g.*, F = 0.33 for potassium fluoride); and

W_2 = Weight of solid reactive flux;

(4) Divide the weight of total chlorine or fluorine usage (W_t) for the 3 test runs by the recorded measurement of the total weight of feed for the 3 test runs; and

(5) If a solid reactive flux other than magnesium chloride or potassium fluoride is used, the owner or operator must derive the appropriate proportion factor subject to approval by the permitting authority for major sources, or the Administrator for area sources.

(p) *Lime injection.* The owner or operator of an affected source or emission unit using a lime-injected fabric filter system must use these procedures during the HCl and D/F tests to establish an operating parameter value for the feeder setting for each operating cycle or time period used in the performance test.

(1) For continuous lime injection systems, ensure that lime in the feed hopper or silo is free-flowing at all times; and

(2) Record the feeder setting and lime injection rate for the 3 test runs. If the feed rate setting and lime injection rates vary between the runs, determine and record the average feed rate and lime injection rate from the 3 runs.

(q) *Bag leak detection system.* The owner or operator of an affected source or emission unit using a bag leak detection system must submit the information described in §63.1515(b)(6) as part of the notification of compliance status report to document conformance with the specifications and requirements in §63.1510(f).

(r) *Labeling.* The owner or operator of each scrap dryer/delacquering kiln/decoating kiln, group 1 furnace, group 2 furnace and in-line fluxer must submit the information described in §63.1515(b)(3) as part of the notification of compliance status report to document conformance with the operational standard in §63.1506(b).

(s) *Capture/collection system.* The owner or operator of a new or existing affected source or emission unit with an add-on control device must submit the information described in §63.1515(b)(2) as part of the notification of compliance status report to document conformance with the operational standard in §63.1506(c).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79817, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004; 80 FR 56746, Sept. 18, 2015; 81 FR 38087, June 13, 2016]

§63.1513 Equations for determining compliance.

(a) *THC emission limit.* Use Equation 6 to determine compliance with an emission limit for THC:

$$E = \frac{C \times MW \times Q \times K_1 \times K_2}{M_V \times P \times 10^6} \qquad (Eq.\ 6)$$

Where,

E = Emission rate of measured pollutant, kg/Mg (lb/ton) of feed;

C = Measured volume fraction of pollutant, ppmv;

MW = Molecular weight of measured pollutant, g/g-mole (lb/lb-mole): THC (as propane) = 44.11;

Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr);

K_1 = Conversion factor, 1 kg/1,000 g (1 lb/lb);

K_2 = Conversion factor, 1,000 L/m^3 (1 ft^3/ft^3);

M_v = Molar volume, 24.45 L/g-mole (385.3 ft^3/lb-mole); and

P = Production rate, Mg/hr (ton/hr).

(b) *PM, HCl, HF and D/F emission limits*. (1) Use Equation 7 of this section to determine compliance with an emission limit for PM, HCl or HF:

$$E = \frac{C \times Q \times K_1}{P} \qquad (Eq.\ 7)$$

Where:

E = Emission rate of PM, HCl or HF, in kg/Mg (lb/ton) of feed;

C = Concentration of PM, HCl or HF, in g/dscm (gr/dscf);

Q = Volumetric flow rate of exhaust gases, in dscm/hr (dscf/hr);

K_1 = Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and

P = Production rate, in Mg/hr (ton/hr).

(2) Use Equation 7A of this section to determine compliance with an emission limit for D/F:

$$E = \frac{C \times Q}{P} \qquad \text{(Eq. 7A)}$$

Where:

E = Emission rate of D/F, µg/Mg (gr/ton) of feed;

C = Concentration of D/F, µg/dscm (gr/dscf);

Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr); and

P = Production rate, Mg/hr (ton/hr).

(c) *HCl percent reduction standard.* Use Equation 8 to determine compliance with an HCl percent reduction standard:

$$\%R = \frac{L_i - L_o}{L_i} \times 100 \qquad (Eq.\ 8)$$

Where,

%R = Percent reduction of the control device;

L_i = Inlet loading of pollutant, kg/Mg (lb/ton); and

L_o = Outlet loading of pollutant, kg/Mg (lb/ton).

(d) *Conversion of D/F measurements to TEQ units*. To convert D/F measurements to TEQ units, the owner or operator must use the procedures and equations in *Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update*, incorporated by reference see §63.14.

(e) *Secondary aluminum processing unit.* Use the procedures in paragraphs (e)(1), (2), and (3) or the procedure in paragraph (e)(4) of this section to determine compliance with emission limits for a secondary aluminum processing unit.

(1) Use Equation 9 to compute the mass-weighted PM emissions for a secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (E_{cPM}) is less than or equal to the emission limit for the secondary aluminum processing unit (L_{cPM}) calculated using Equation 1 in §63.1505(k).

$$E_{C_{PM}} = \frac{\sum_{i=1}^{n} \left(E_{ti_{PM}} \times T_{ti} \right)}{\sum_{i=1}^{n} \left(T_{ti} \right)} \qquad \text{(Eq. 9)}$$

Where:

E_{cPM} = The mass-weighted PM emissions for the secondary aluminum processing unit;

E_{tiPM} = Measured PM emissions for individual emission unit, or group of co-controlled emission units, i;

T_{ti} = The average feed rate for individual emission unit i during the operating cycle or performance test period, or the sum of the average feed rates for all emission units in the group of co-controlled emission units i; and

n = The number of emission units, and groups of co-controlled emission units in the secondary aluminum processing unit.

(2) Use Equation 10 to compute the aluminum mass-weighted HCl or HF emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit ($E_{cHCl/HF}$) is less than or equal to the emission limit for the secondary aluminum processing unit ($L_{cHCl/HF}$) calculated using Equation 2 in §63.1505(k).

$$E_{C_{HCl/HF}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{HCl/HF}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 10)}$$

Where:

$E_{cHCl/HF}$ = The mass-weighted HCl or HF emissions for the secondary aluminum processing unit; and

$E_{tiHCl/HF}$ = Measured HCl or HF emissions for individual emission unit, or group of co-controlled emission units i.

(3) Use Equation 11 to compute the aluminum mass-weighted D/F emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit is less than or equal to the emission limit for the secondary aluminum processing unit ($L_{cD/F}$) calculated using Equation 3 in §63.1505(k).

$$E_{C_{D/F}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{D/F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 11)}$$

Where:

$E_{cD/F}$ = The mass-weighted D/F emissions for the secondary aluminum processing unit; and

$E_{tiD/F}$ = Measured D/F emissions for individual emission unit, or group of co-controlled emission units i.

(4) As an alternative to using the equations in paragraphs (e)(1), (2), and (3) of this section, the owner or operator may demonstrate compliance for a secondary aluminum processing unit by demonstrating that each existing group 1 furnace is in compliance with the emission limits for a new group 1 furnace in §63.1505(i) and that each existing in-line fluxer is in compliance with the emission limits for a new in-line fluxer in §63.1505(j).

(f) *Periods of startup and shutdown*. For a new or existing affected source, or a new or existing emission unit subject to an emissions limit in paragraphs §63.1505(b) through (j) expressed in units of pounds per ton of feed/charge, or µg TEQ or ng TEQ per Mg of feed/charge, demonstrate compliance during periods of startup and shutdown in accordance with paragraph (f)(1) of this section or determine your emissions per unit of feed/charge during periods of startup and shutdown in accordance with paragraph (f)(2) of this section. Startup and shutdown emissions for group 1 furnaces and in-line fluxers must be calculated individually, and not on the basis of a SAPU. Periods of startup and shutdown are excluded from the calculation of SAPU emission limits in §63.1505(k), the SAPU monitoring requirements in §63.1510(t) and the SAPU emissions calculations in §63.1513(e).

(1) For periods of startup and shutdown, records establishing a feed/charge rate of zero, a flux rate of zero, and that the affected source or emission unit was either heated with electricity, propane or natural gas as the sole sources of heat or was not heated, may be used to demonstrate compliance with the emission limit, or

(2) For periods of startup and shutdown, divide your measured emissions in lb/hr or µg/hr or ng/hr by the feed/charge rate in tons/hr or Mg/hr from your most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data are available.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004; 80 FR 56748, Sept. 18, 2015; 81 FR 38088, June 13, 2016]

§63.1514 Change of furnace classification.

The requirements of this section are in addition to the other requirements of this subpart that apply to group 1 and group 2 furnaces.

(a) *Changing from a group 1 controlled furnace processing other than clean charge to group 1 uncontrolled furnace processing other than clean charge*. An owner or operator wishing to change operating modes must conduct performance tests in accordance with §§63.1511 and 63.1512 to demonstrate to the permitting authority for major sources, or the Administrator for area sources that compliance can be achieved under both modes. Operating parameters relevant to each mode of operation must be established during the performance test.

(1) Operators of major sources must conduct performance tests for PM, HCl and D/F, according to the procedures in §63.1512(d) with the capture system and control device operating normally if compliance has not been previously demonstrated in this operating mode. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in the controlled mode.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(2) Operators of major sources must conduct performance tests for PM, HCl, HF and D/F, according to the procedures in §63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in the uncontrolled mode.

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Operating parameters representing uncontrolled operation must be established during these tests, as required by §63.1511(g). For furnaces in batch (cyclic) operation, the number of tap-to-tap cycles (including zero, if none) elapsed using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode. For furnaces in continuous (non-cyclic) operation, the time period elapsed (including no time, if none) using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode.

(iv) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(3) Operators of area sources must conduct performance tests for D/F, according to the procedures in §63.1512(d) with the capture system and control device operating normally, if compliance has not been previously demonstrated for this operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in the controlled mode.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The D/F emission factor for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(4) Operators of area sources must conduct performance tests for D/F, according to the procedures in §63.1512(e) without operating a control device, if compliance has not been previously demonstrated for this operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1).

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Operating parameters representing uncontrolled operation must be established during these tests, as required by §63.1511(g). For furnaces in batch (cyclic) operation, the number of tap-to-tap cycles (including zero, if none) elapsed using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode. For furnaces in continuous (non-cyclic) operation, the time period elapsed (including no time, if none) using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode.

(iv) The D/F emission factor for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(5) To change modes of operation from uncontrolled to controlled, the owner or operator must perform the following, before charging scrap to the furnace that exceeds the contaminant level established for uncontrolled mode:

(i) Change the label on the furnace to reflect controlled operation;

(ii) Direct the furnace emissions to the control device;

(iii) Turn on the control device and begin lime addition to the control device at the rate established for controlled mode; and

(iv) Ensure the control device is operating properly.

(6) To change modes of operation from controlled to uncontrolled, the owner or operator must perform the following, before turning off or bypassing the control device:

(i) Change the label on the furnace to reflect uncontrolled operation;

(ii) Charge scrap with a level of contamination no greater than that used in the performance test for uncontrolled furnaces for the number of tap-to-tap cycles that elapsed (or, for continuously operated furnaces, the time elapsed) before the uncontrolled mode performance test was conducted; and

(iii) Decrease the flux addition rate to no higher than the flux addition rate used in the uncontrolled mode performance test.

(7) In addition to the recordkeeping requirements of §63.1517, the owner or operator must maintain records of the nature of each mode change (controlled to uncontrolled, or uncontrolled to controlled), the time the change is initiated, and the time the exhaust gas is diverted from control device to bypass or bypass to control device.

(b) *Changing from a group 1 controlled furnace processing other than clean charge to a group 1 uncontrolled furnace processing clean charge.* An owner or operator wishing to change operating modes must conduct performance tests in accordance with §§63.1511 and 63.1512 to demonstrate to the permitting authority for major sources, or the Administrator for area sources that compliance can be achieved in both modes. Operating parameters relevant to each mode of operation must be established during the performance test.

(1) Operators of major sources must conduct performance tests for PM, HCl and D/F, according to the procedures in §63.1512(d) with the capture system and control device operating normally if compliance has not been previously demonstrated in this operating mode. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in the controlled mode.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(2) Operators of major sources must conduct performance tests for PM, HCl, HF and D/F, according to the procedures in §63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph may be conducted at any time after operation with clean charge has commenced.

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Operating parameters representing uncontrolled operation must be established during these tests, as required by §63.1511(g). For furnaces in batch (cyclic) operation, the number of tap-to-tap cycles (including zero, if none) elapsed using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode. For furnaces in continuous (non-cyclic) operation, the time period elapsed (including no time if none) using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode.

(iv) Emissions of D/F during this test must not exceed 1.5 µg TEQ/Mg of feed/charge.

(v) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k), must be determined.

(3) Operators of area sources must conduct performance tests for D/F, according to the procedures in §63.1512(d) with the capture system and control device operating normally, if compliance has not been previously demonstrated for this operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1).

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The D/F emission factor for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(4) Operators of area sources must conduct performance tests for D/F, according to the procedures in §63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode.

(i) Testing under this paragraph must be conducted at any time after operation with clean charge has commenced and must be conducted in accordance with §63.1511(b)(1) and under representative conditions expected to produce the highest level of D/F in the uncontrolled mode.

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Operating parameters representing uncontrolled operation must be established during these tests, as required by §63.1511(g). For furnaces in batch (cyclic) operation, the number of tap-to-tap cycles elapsed (including zero, if none) using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode. For furnaces in continuous (non-cyclic) operation, the time period elapsed (including no time, if none) using the feed/charge type, feed/charge rate and flux rate must be established as a parameter to be met before changing to uncontrolled mode.

(iv) Emissions of D/F during this test must not exceed 1.5 µg TEQ/Mg of feed/charge.

(5) To change modes of operation from uncontrolled to controlled, the owner or operator must perform the following, before charging scrap to the furnace that exceeds the contaminant level established for uncontrolled mode:

(i) Change the label on the furnace to reflect controlled operation;

(ii) Direct the furnace emissions to the control device;

(iii) Turn on the control device and begin lime addition to the control device at the rate established for controlled mode; and

(iv) Ensure the control device is operating properly.

(6) To change modes of operation from controlled to uncontrolled, the owner or operator must perform the following, before turning off or bypassing the control device:

(i) Change the label on the furnace to reflect uncontrolled operation;

(ii) Charge clean charge for the number of tap-to-tap cycles that elapsed (or, for continuously operated furnaces, the time elapsed) before the uncontrolled mode performance test was conducted; and

(iii) Decrease the flux addition rate to no higher than the flux addition rate used in the uncontrolled mode performance test.

(7) In addition to the recordkeeping requirements of §63.1517, the owner or operator must maintain records of the nature of each mode change (controlled to uncontrolled, or uncontrolled to controlled), the time the furnace operating mode change is initiated, and the time the exhaust gas is diverted from control device to bypass or from bypass to control device.

(c) *Changing from a group 1 controlled or uncontrolled furnace to a group 2 furnace.* An owner or operator wishing to change operating modes must conduct performance tests in accordance with §§63.1511 and 63.1512 to demonstrate to the permitting authority for major sources, or the Administrator for area sources that compliance can be achieved under both modes and establish the number of cycles (or time) of operation with clean charge and no reactive flux addition necessary before changing to group 2 mode. Operating parameters relevant to group 1 operation must be established during the performance test.

(1) Operators of major sources must conduct performance tests for PM, HCl and D/F (and HF for uncontrolled group 1 furnaces) according to the procedures in §63.1512 if compliance has not been previously demonstrated for the operating mode. Controlled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(d) with the capture system and control device operating normally. Uncontrolled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(e) without operating a control device.

Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in both modes.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(2) While in compliance with the operating requirements of §63.1506(o) for group 2 furnaces, operators of major sources must conduct performance tests for PM, HCl, HF and D/F, according to the procedures in §63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph may be conducted at any time after the furnace has commenced operation with clean charge and without reactive flux addition.

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Owners or operators must demonstrate that emissions are no greater than:

(A) 1.5 µg D/F (TEQ) per Mg of feed/charge;

(B) 0.040 lb HCl or HF per ton of feed/charge; and

(C) 0.040 lb PM per ton of feed/charge.

(iv) The number of tap-to-tap cycles, or time elapsed between starting operation with clean charge and no reactive flux addition and the group 2 furnace performance test must be established as an operating parameter to be met before changing to group 2 mode.

(3) Operators of area sources must conduct a performance tests for D/F, according to the procedures in §63.1512 if compliance has not been previously demonstrated for the operating mode. Controlled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(d) with the capture system and control device operating normally. Uncontrolled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(e) without operating a control device.

(i) The performance tests must be conducted in accordance with §63.1511(b)(1) under representative conditions expected to produce the highest expected level of D/F in the group 1 mode.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The D/F emission factor for this mode of operation, for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(4) While in compliance with the operating requirements of §63.1506(o) for group 2 furnaces, operators of area sources must conduct performance tests for D/F, according to the procedures in §63.1512(e) without operating a control device if compliance has not been previously demonstrated for this operating mode.

(i) Testing under this paragraph may be conducted at any time after the furnace has commenced operation with clean charge, and without reactive flux addition.

(ii) Testing under this paragraph must be conducted with furnace emissions captured in accordance with the provisions of §63.1506(c) and directed to the stack or vent tested.

(iii) Owners or operators must demonstrate that emissions are no greater than 1.5 µg D/F (TEQ) per Mg of feed/charge.

(iv) The number of tap-to-tap cycles, or time elapsed between starting operation with clean charge and no reactive flux and the group 2 furnace performance tests must be established as an operating parameter to be met before changing to group 2 mode.

(5) To change modes of operation from a group 2 furnace to a group 1 furnace, the owner or operator must perform the following before adding other than clean charge and before adding reactive flux to the furnace:

(i) Change the label on the furnace to reflect group 1 operation;

(ii) Direct the furnace emissions to the control device, if it is equipped with a control device;

(iii) If the furnace is equipped with a control device, turn on the control device and begin lime addition to the control device at the rate established for group 1 mode; and

(iv) Ensure the control device is operating properly.

(6) To change mode of operation from a group 1 furnace to group 2 furnace, the owner or operator must perform the following, before turning off or bypassing the control device:

(i) Change the label on the furnace to reflect group 2 operation;

(ii) Charge clean charge for the number of tap-to-tap cycles that elapsed (or, for continuously operated furnaces, the time elapsed) before the group 2 performance test was conducted; and,

(iii) Use no reactive flux.

(7) In addition to the recordkeeping requirements of §63.1517, the owner or operator must maintain records of the nature of each mode change (controlled or uncontrolled to group 2), the time the change is initiated, and the time the exhaust gas is diverted from control device to bypass or from bypass to control device.

(d) *Changing from a group 1 controlled or uncontrolled furnace to group 2 furnace, for tilting reverberatory furnaces capable of completely removing furnace contents between batches.* An owner or operator of a tilting reverberatory furnace capable of completely removing furnace contents between batches who wishes to change operating modes must conduct performance tests in accordance with §§63.1511 and 63.1512 to demonstrate to the permitting authority for major sources, or the Administrator for area sources that compliance can be achieved under group 1 modes. Operating parameters relevant to group 1 operation must be established during the performance test.

(1) Operators of major sources must conduct performance tests for PM, HCl, and D/F (and HF for uncontrolled furnaces) according to the procedures in §63.1512 if compliance has not been previously demonstrated for this operating mode. Controlled group 1 furnaces must conduct performance tests with the capture system and control device operating normally if compliance has not been previously demonstrated for the operating mode. Controlled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(d) with the capture system and control device operating normally. Uncontrolled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(e) without operating a control device. Performance tests must be repeated at least once every 5 years to demonstrate compliance for each operating mode.

(i) Testing under this paragraph must be conducted in accordance with §63.1511(b)(1) in both modes.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The emission factors for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k), must be determined.

(2) Operators of area sources must conduct performance tests for D/F according to the procedures in §63.1512 if compliance has not been previously demonstrated for this operating mode. Controlled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(d) with the capture system and control device operating normally. Uncontrolled group 1 furnaces must conduct performance tests according to the procedures in §63.1512(e) without operating a control device.

(i) The performance test must be conducted in accordance with §63.1511(b)(1) under representative conditions expected to produce the highest expected level of D/F in the group 1 mode.

(ii) Operating parameters must be established during these tests, as required by §63.1511(g).

(iii) The D/F emission factor for this mode of operation for use in the demonstration of compliance with the emission limits for SAPUs specified in §63.1505(k) must be determined.

(3) To change modes of operation from a group 1 furnace to a group 2 furnace, the owner or operator must perform the following before turning off or bypassing the control device:

(i) Completely remove all aluminum from the furnace;

(ii) Change the label on the furnace to reflect group 2 operation;

(iii) Use only clean charge; and

(iv) Use no reactive flux.

(4) To change modes of operation from a group 2 furnace to a group 1 furnace, the owner or operator must perform the following before adding other than clean charge and before adding reactive flux to the furnace:

(i) Change the label on the furnace to reflect group 1 operation;

(ii) Direct the furnace emissions to the control device, if it is equipped with a control device;,

(iii) If the furnace is equipped with a control device, turn on the control device and begin lime addition to the control device at the rate established for group 1 mode; and

(iv) Ensure the control device is operating properly.

(5) In addition to the recordkeeping requirements of §63.1517, the owner or operator must maintain records of the nature of each mode change (group 1 to group 2, or group 2 to group 1), the time the furnace operating mode change is initiated, and, if the furnace is equipped with a control device, the time the exhaust gas is diverted from control device to bypass or from bypass to control device.

(e) *Limit on frequency of changing furnace operating mode.* (1) A change in furnace operating mode, which consists of changing from one furnace operating mode to another and subsequently back to the initial operating mode, as provided in paragraphs (a) through (d) of this section, may not be done more frequently than 4 times in any 6-month period unless you receive approval from the permitting authority or Administrator for additional changes pursuant to paragraph (e)(2).

(2) If additional changes are needed, the owner or operator must apply in advance to the permitting authority, for major sources, or the Administrator, for area sources, for approval of the additional changes in operating mode.

[80 FR 56749, Sept. 18, 2015, as amended at 81 FR 38088, June 13, 2016]

Notifications, Reports, And Records

§63.1515 Notifications.

(a) *Initial notifications.* The owner or operator must submit initial notifications to the permitting authority for major sources, or the Administrator for area sources as described in paragraphs (a)(1) through (7) of this section.

(1) As required by §63.9(b)(1), the owner or operator must provide notification for an area source that subsequently increases its emissions such that the source is a major source subject to the standard.

(2) As required by §63.9(b)(3), the owner or operator of a new or reconstructed affected source, or a source that has been reconstructed such that it is an affected source, that has an initial startup after the effective date of this subpart and for which an application for approval of construction or reconstruction is not required under §63.5(d), must provide notification that the source is subject to the standard.

(3) As required by §63.9(b)(4), the owner or operator of a new or reconstructed major affected source that has an initial startup after the effective date of this subpart and for which an application for approval of construction or reconstruction is required by §63.5(d) must provide the following notifications:

(i) Intention to construct a new major affected source, reconstruct a major source, or reconstruct a major source such that the source becomes a major affected source;

(ii) Date when construction or reconstruction was commenced (submitted simultaneously with the application for approval of construction or reconstruction if construction or reconstruction was commenced before the effective date of this subpart, or no later than 30 days after the date construction or reconstruction commenced if construction or reconstruction commenced after the effective date of this subpart);

(iii) Anticipated date of startup; and

(iv) Actual date of startup.

(4) As required by §63.9(b)(5), after the effective date of this subpart, an owner or operator who intends to construct a new affected source or reconstruct an affected source subject to this subpart, or reconstruct a source such that it becomes an affected source subject to this subpart, must provide notification of the intended construction or reconstruction. The notification must include all the information required for an application for approval of construction or reconstruction as required by §63.5(d). For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.

(i) The application must be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date) if the construction or reconstruction commences after the effective date of this subpart; or

(ii) The application must be submitted as soon as practicable before startup but no later than 90 days after the effective date of this subpart if the construction or reconstruction had commenced and initial startup had not occurred before the effective date.

(5) As required by §63.9(d), the owner or operator must provide notification of any special compliance obligations for a new source.

(6) As required by §63.9(e) and (f), the owner or operator must provide notification of the anticipated date for conducting performance tests and visible emission observations. The owner or operator must notify the Administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

(7) As required by §63.9(g), the owner or operator must provide additional notifications for sources with continuous emission monitoring systems or continuous opacity monitoring systems.

(b) *Notification of compliance status report.* Each owner or operator of an existing affected source must submit a notification of compliance status report within 60 days after the compliance date established by §63.1501. Each owner or operator of a new affected source must submit a notification of compliance status report within 90 days after conducting the initial performance test required by §63.1511(b), or within 90 days after the compliance date established by §63.1501 if no initial performance test is required. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in paragraphs (a)(1) through (10) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:

(1) All information required in §63.9(h). The owner or operator must provide a complete performance test report for each affected source and emission unit for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).

(2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).

(3) Unit labeling as described in §63.1506(b), including process type or furnace classification and operating requirements.

(4) The compliant operating parameter value or range established for each affected source or emission unit with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, total reactive fluorine flux injection rate for uncontrolled group 1 furnaces, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.

(5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in §63.1506(c).

(6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in §63.1510(f).

(7) Manufacturer's specification or analysis documenting the design residence time of no less than 1 second for each afterburner used to control emissions from a scrap dryer/delacquering kiln/decoating kiln subject to alternative emission standards in §63.1505(e).

(8) Manufacturer's specification or analysis documenting the design residence time of no less than 0.8 seconds and design operating temperature of no less than 1,600 °F for each afterburner used to control emissions from a sweat furnace that is not subject to a performance test.

(9) The OM&M plan (including site-specific monitoring plan for each group 1 furnace with no add-on air pollution control device).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59793, Sept. 24, 2002; 67 FR 79818, Dec. 30, 2002; 80 FR 56752, Sept. 18, 2015; 81 FR 38088, June 13, 2016]

§63.1516 Reports.

(a) [Reserved]

(b) *Excess emissions/summary report.* The owner or operator of a major or area source must submit semiannual reports according to the requirements in §63.10(e)(3). Except, the owner or operator must submit the semiannual reports within 60 days after the end of each 6-month period instead of within 30 days after the calendar half as specified in §63.10(e)(3)(v). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.

(1) A report must be submitted if any of these conditions occur during a 6-month reporting period:

(i) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.

(ii) The corrective action specified in the OM&M plan for a continuous opacity monitoring deviation was not initiated within 1 hour.

(iii) The corrective action specified in the OM&M plan for visible emissions from an aluminum scrap shredder was not initiated within 1 hour.

(iv) An excursion of a compliant process or operating parameter value or range (*e.g.,* lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).

(v) [Reserved]

(vi) An affected source (including an emission unit in a secondary aluminum processing unit) was not operated according to the requirements of this subpart.

(vii) A deviation from the 3-day, 24-hour rolling average emission limit for a secondary aluminum processing unit.

(2) Each report must include each of these certifications, as applicable:

(i) For each thermal chip dryer: “Only unpainted aluminum chips were used as feedstock in any thermal chip dryer during this reporting period.”

(ii) For each dross-only furnace: “Only dross and salt flux were used as the charge materials in any dross-only furnace during this reporting period.”

(iii) For each sidewell group 1 furnace with add-on air pollution control devices: “Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period.”

(iv) For each group 1 melting/holding furnace without add-on air pollution control devices and using pollution prevention measures that processes only clean charge material: “Each group 1 furnace without add-on air pollution control devices subject to emission limits in §63.1505(i)(2) processed only clean charge during this reporting period.”

(v) For each group 2 furnace: “Only clean charge materials were processed in any group 2 furnace during this reporting period, and no fluxing was performed or all fluxing performed was conducted using only nonreactive, non-HAP-containing/non-HAP-generating fluxing gases or agents, except for cover fluxes, during this reporting period.”

(vi) For each in-line fluxer using no reactive flux: “Only nonreactive, non-HAP-containing, non-HAP-generating flux gases, agents, or materials were used at any time during this reporting period.”

(vii) For each affected source choosing to demonstrate compliance during periods of startup and shutdown in accordance with §63.1513(f)(1): “During each startup and shutdown, no flux and no feed/charge were added to the emission unit, and electricity, propane or natural gas were used as the sole source of heat or the emission unit was not heated.”

(3) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.

(i) Within 60 days after the date of completing each performance test (as defined in §63.2) required by this subpart, you must submit the results of the performance tests, including any associated fuel analyses, following the procedure specified in either paragraph (b)(3)(i)(A) or (B) of this section.

(A) For data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT Web site (*https://www3.epa.gov/ttn/chief/ert/ert_info.html*), you must submit the results of the performance test to the EPA via the Compliance and Emissions Data Reporting Interface (CEDRI). (CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*).) Performance test data must be submitted in a file format generated through the use of the EPA's ERT or an alternate electronic file format consistent with the extensible markup language (XML) schema listed on the EPA's ERT Web site. If you claim that some of the performance test information being submitted is confidential business information (CBI), you must submit a complete file generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT Web site, including information claimed to be CBI, on a compact disc, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same ERT or alternate file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph.

(B) For data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT Web site, you must submit the results of the performance test to the Administrator at the appropriate address listed in §63.13.

(ii) [Reserved]

(4) A malfunction report that is required under paragraph (d) of this section shall be submitted simultaneously with the semiannual excess emissions/summary report required by paragraph (b) of this section.

(c) *Annual compliance certifications.* For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator of a major source subject to this subpart must certify continuing compliance based upon, but not limited to, the following conditions:

(1) Any period of excess emissions, as defined in paragraph (b)(1) of this section, that occurred during the year were reported as required by this subpart; and

(2) All monitoring, recordkeeping, and reporting requirements were met during the year.

(d) If there was a malfunction during the reporting period, the owner or operator must submit a report that includes the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken for each malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must include a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions, including, but not limited to, product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. 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 §63.1506(a)(5).

(e) All reports required by this subpart not subject to the requirements in paragraph (b) of this section must be sent to the Administrator at the appropriate address listed in §63.13. If acceptable to both the Administrator and the owner or operator of a source, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraph (b) of this section in paper format.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004; 71 FR 20461, Apr. 20, 2006; 80 FR 56753, Sept. 18, 2015; 81 FR 38088, June 13, 2016]

§63.1517 Records.

(a) As required by §63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart.

(1) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.

(2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and

(3) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

(b) In addition to the general records required by §63.10(b), the owner or operator of a new or existing affected source (including an emission unit in a secondary aluminum processing unit) must maintain records of:

(1) For each affected source and emission unit with emissions controlled by a fabric filter or a lime-injected fabric filter:

(i) If a bag leak detection system is used, the number of total operating hours for the affected source or emission unit during each 6-month reporting period, records of each alarm, the time of the alarm, the time corrective action was initiated and completed, and a brief description of the cause of the alarm and the corrective action(s) taken.

(ii) If a continuous opacity monitoring system is used, records of opacity measurement data, including records where the average opacity of any 6-minute period exceeds 5 percent, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken.

(iii) If an aluminum scrap shredder is subject to visible emission observation requirements, records of all Method 9 observations, including records of any visible emissions during a 30-minute daily test or records of all ASTM D7520-13 observations (incorporated by reference, see §63.14), including data sheets and all raw unaltered JPEGs used for opacity determination, with a brief explanation of the cause of the emissions, the time the emissions occurred, the time corrective action was initiated and completed, and the corrective action taken.

(2) For each affected source with emissions controlled by an afterburner:

(i) Records of 15-minute block average afterburner operating temperature, including any period when the average temperature in any 3-hour block period falls below the compliant operating parameter value with a brief explanation of the cause of the excursion and the corrective action taken; and

(ii) Records of annual afterburner inspections.

(3) For each scrap dryer/delacquering kiln/decoating kiln and group 1 furnace, subject to D/F and HCl emission standards with emissions controlled by a lime-injected fabric filter, records of 15-minute block average inlet temperatures for each lime-injected fabric filter, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value + 14 °C (+ 25 °F), with a brief explanation of the cause of the excursion and the corrective action taken.

(4) For each affected source and emission unit with emissions controlled by a lime-injected fabric filter:

(i) Records of inspections at least once every 8-hour period verifying that lime is present in the feeder hopper or silo and flowing, including any inspection where blockage is found, with a brief explanation of the cause of the blockage and the corrective action taken, and records of inspections at least once every 4-hour period for the subsequent 3 days. If flow monitors, pressure drop sensors or load cells are used to verify that lime is present in the hopper and flowing, records of all monitor or sensor output including any event where blockage was found, with a brief explanation of the cause of the blockage and the corrective action taken;

(ii) If lime feeder setting is monitored, records of daily and monthly inspections of feeder setting, including records of any deviation of the feeder setting from the setting used in the performance test, with a brief explanation of the cause of the deviation and the corrective action taken. If a lime feeder has been repaired or replaced, this action must be documented along with records of the new feeder calibration and the feed mechanism set points necessary to maintain the lb/hr feed rate operating limit. These records must be maintained on site and available upon request.

(iii) If lime addition rate for a noncontinuous lime injection system is monitored pursuant to the approved alternative monitoring requirements in §63.1510(v), records of the time and mass of each lime addition during each operating cycle or time period used in the performance test and calculations of the average lime addition rate (lb/ton of feed/charge).

(5) For each group 1 furnace (with or without add-on air pollution control devices) or in-line fluxer, records of 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.

(6) For each continuous monitoring system, records required by §63.10(c).

(7) For each affected source and emission unit subject to an emission standard in kg/Mg (lb/ton) of feed/charge, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.

(8) Approved site-specific monitoring plan for a group 1 furnace without add-on air pollution control devices with records documenting conformance with the plan.

(9) Records of all charge materials for each thermal chip dryer, dross-only furnace, and group 1 melting/holding furnaces without air pollution control devices processing only clean charge.

(10) Operating logs for each group 1 sidewell furnace with add-on air pollution control devices documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.

(11) For each in-line fluxer for which the owner or operator has certified that no reactive flux was used:

(i) Operating logs which establish that no source of reactive flux was present at the in-line fluxer;

(ii) Labels required pursuant to §63.1506(b) which establish that no reactive flux may be used at the in-line fluxer; or

(iii) Operating logs which document each flux gas, agent, or material used during each operating cycle.

(12) Records of all charge materials and fluxing materials or agents for a group 2 furnace.

(13) Records of monthly inspections for proper unit labeling for each affected source and emission unit subject to labeling requirements.

(14) Records of annual inspections of emission capture/collection and closed vent systems or, if the alternative to the annual flow rate measurements is used, records of differential pressure; fan RPM or fan motor amperage; static pressure measurements; or duct centerline velocity using a hotwire anemometer, ultrasonic flow meter, cross-duct pressure differential sensor, venturi pressure differential monitoring or orifice plate equipped with an associated thermocouple, as appropriate.

(15) Records for any approved alternative monitoring or test procedure.

(16) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:

(i) [Reserved]

(ii) OM&M plan; and

(iii) Site-specific secondary aluminum processing unit emission plan (if applicable).

(17) For each secondary aluminum processing unit, records of total charge weight, or if the owner or operator chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.

(18) For any failure to meet an applicable standard, the owner or operator must maintain the following records;

(i) Records of the emission unit ID, monitor ID, pollutant or parameter monitored, beginning date and time of the event, end date and time of the event, cause of the deviation or exceedance and corrective action taken.

(ii) Records of actions taken during periods of malfunction to minimize emissions in accordance with §63.1506(a)(5), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(19) For each period of startup or shutdown for which the owner or operator chooses to demonstrate compliance for an affected source, the owner or operator must comply with (b)(19)(i) or (ii) of this section.

(i) To demonstrate compliance based on a feed/charge rate of zero, a flux rate of zero and the use of electricity, propane or natural gas as the sole sources of heating or the lack of heating, the owner or operator must submit a semiannual report in accordance with §63.1516(b)(2)(vii) or maintain the following records:

(A) The date and time of each startup and shutdown;

(B) The quantities of feed/charge and flux introduced during each startup and shutdown; and

(C) The types of fuel used to heat the unit, or that no fuel was used, during startup and shutdown; or

(ii) To demonstrate compliance based on performance tests, the owner or operator must maintain the following records:

(A) The date and time of each startup and shutdown;

(B) The measured emissions in lb/hr or µg/hr or ng/hr;

(C) The measured feed/charge rate in tons/hr or Mg/hr from your most recent performance test associated with a production rate greater than zero, or the rated capacity of the affected source if no prior performance test data is available; and

(D) An explanation to support that such conditions are considered representative startup and shutdown operations.

(20) For owners or operators that choose to change furnace operating modes, the following records must be maintained:

(i) The date and time of each change in furnace operating mode, and

(ii)The nature of the change in operating mode (for example, group 1 controlled furnace processing other than clean charge to group 2).

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002; 80 FR 56753, Sept. 18, 2015; 81 FR 38089, June 13, 2016]

Other

§63.1518 Applicability of general provisions.

The requirements of the general provisions in subpart A of this part that are applicable to the owner or operator subject to the requirements of this subpart are shown in appendix A to this subpart.

§63.1519 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this regulation. Contact the applicable U.S. EPA Regional Office to find out if this subpart is delegated to a State, local, or Tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or Tribal agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§63.1500 through 63.1501 and 63.1505 through 63.1506.

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

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

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

[68 FR 37359, June 23, 2003]

§63.1520 [Reserved]

Table 1 to Subpart RRR of Part 63—Emission Standards for New and Existing Affected Sources

Table 1 to Subpart RRR of Part 63—Emission Standards for New and Existing Affected Sources

Affected source/ Emission unit	Pollutant	Limit	Units
All new and existing affected sources and emission units that are controlled with a PM add-on control device and that choose to monitor with a continuous opacity monitor (COM); and all new and existing aluminum scrap shredders that choose to monitor with a COM or to monitor visible emissions	Opacity	10	percent
New and existing aluminum scrap shredder	PM	0.01	gr/dscf
New and existing thermal chip dryer	THC D/F[a]	0.80 2.50	lb/ton of feed µg TEQ/Mg of feed
New and existing scrap dryer/delacquering kiln/decoating kiln Or Alternative limits if afterburner has a design residence time of at least 1 second and operates at a temperature of at least 1400°F	PM HCl THC D/F[a] PM HCl THC D/F[a]	0.08 0.80 0.06 0.25 0.30 1.50 0.20 5.0	lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed
New and existing sweat furnace	D/F[a]	0.80	ng TEQ/dscm 11% O_2[b]
New and existing dross-only furnace	PM	0.30	lb/ton of feed
New and existing in-line fluxer[c]	HCl PM	0.04 0.01	lb/ton of feed lb/ton of feed
New and existing in-line fluxer with no reactive fluxing		No Limit	Work practice: no reactive fluxing
New and existing rotary dross cooler	PM	0.04	gr/dscf
New and existing clean furnace (Group 2)		No Limit	Work practices: clean charge only and no reactive fluxing
New and existing group 1 melting/holding furnace (processing only clean charge)[c]	PM HF[h] HCl	0.80 0.40 0.40 or 10	lb/ton of feed lb/ton of feed lb/ton of feed percent of the HCl upstream of the add-on control device
New and existing group 1 furnace[c]	PM HF[h] HCl	0.40 0.40 0.40 or	lb/ton of feed lb/ton of feed lb/ton of feed

Affected source/ Emission unit	Pollutant	Limit	Units
	    D/F[a]	10 15.0	percent of the HCl upstream of the add-on control device µg TEQ/Mg of feed
New and existing group 1 furnace with clean charge only[c]	PM HF[b] HCl D/F[a]	0.40 0.40 0.40 or 10 No Limit	lb/ton of feed lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device Clean charge only
New and existing secondary aluminum processing unit[a,d] (consists of all existing group 1 furnaces and existing in-line flux boxes at the facility, or any combination of new group 1 furnaces and new in-line fluxers)	PM[e]	$L_{t_{PM}} = \frac{\sum_{i=1}^{n}\left(L_{i_{PM}} \times T_i\right)}{\sum_{i=1}^{n}(T_i)}$ (Eq. 1)	
	HCl and HF[f, h]	$L_{t_{HCl/HF}} = \frac{\sum_{i=1}^{n}\left(L_{i_{HCl/HF}} \times T_i\right)}{\sum_{i=1}^{n}(T_i)}$ (Eq.2)	
	D/F[g]	$L_{t_{D/F}} = \frac{\sum_{i=1}^{n}\left(L_{i_{D/F}} \times T_i\right)}{\sum_{i=1}^{n}(T_i)}$ (Eq. 3)	

[a] D/F limit applies to a unit at a major or area source.
[b] Sweat furnaces equipped with afterburners meeting the specifications of § 63.1505(f)(1) are not required to conduct a performance test.
[c] These limits are also used to calculate the limits applicable to secondary aluminum processing units.
[d] Equation definitions: L_{iPM} = the PM emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; T_i = the feed rate for individual emission unit i in the secondary aluminum processing unit; L_{tPM} = the overall PM emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{iHCl/HF}$ = the HCl or HF emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{tHCl/HF}$ = the overall HCl or HF emission limit for the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; $L_{iD/F}$ = the D/F emission limit for individual emission unit i [µg (TEQ)/Mg (gr TEQ/ton) of feed]; $L_{tD/F}$ = the overall D/F emission limit for the secondary aluminum processing unit [µg TEQ/Mg (gr TEQ/ton) of feed]; n = the number of units in the secondary aluminum processing unit.
[e] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the PM limit.
[f] In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl and HF limit. Controlled group 1 furnaces cannot be included in the HF emissions calculation because they are not subject to HF limits.
[g] Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.
[h] HF limits apply only to uncontrolled group 1 furnaces.

[81 FR 38089, June 13, 2016]

Table 2 to Subpart RRR of Part 63—Summary of Operating Requirements for New and Existing Affected Sources and Emission Units

Affected source/emission unit	Monitor type/operation/process	Operating requirements
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Design and install in accordance with ACGIH Guidelines;[e] operate in accordance with OM&M plan (sweat furnaces may be operated according to 63.1506(c)(4)).[b]

Affected source/emission unit	Monitor type/operation/process	Operating requirements
All affected sources and emission units subject to production-based (lb/ton of feed) emission limits[a]	Charge/feed weight or Production weight	Operate a device that records the weight of each charge; Operate in accordance with OM&M plan.[b]
Group 1 furnace, group 2 furnace, in-line fluxer and scrap dryer/delacquering kiln/decoating kiln	Labeling	Identification, operating parameter ranges and operating requirements posted at affected sources and emission units; control device temperature and residence time requirements posted at scrap dryer/delacquering kiln/decoating kiln.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with OM&M plan[b]; operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM or	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with OM&M plan.[b]
	VE	Initiate corrective action within 1-hr of any observed VE and complete in accordance with the OM&M plan.[b]
Thermal chip dryer with afterburner	Afterburner operating temperature	Maintain average temperature for each 3-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Feed material	Operate using only unpainted aluminum chips.
Scrap dryer/delacquering kiln/decoating kiln with afterburner and lime-injected fabric filter	Afterburner operating temperature	Maintain average temperature for each 3-hr period at or above average operating temperature during the performance test.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each 3-hr period at or below average temperature during the performance test +14 °C (+25 °F).
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at or above the level established during the performance test for continuous injection systems.

Affected source/emission unit	**Monitor type/operation/process**	**Operating requirements**
Sweat furnace with afterburner	Afterburner operating temperature	If a performance test was conducted, maintain average temperature for each 3-hr period at or above average operating temperature during the performance test; if a performance test was not conducted, and afterburner meets specifications of §63.1505(f)(1), maintain average temperature for each 3-hr period at or above 1600 °F.
	Afterburner operation	Operate in accordance with OM&M plan.[b]
Dross-only furnace with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Feed/charge material	Operate using only dross as the feed material.
Rotary dross cooler with fabric filter	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
In-line fluxer with lime-injected fabric filter (including those that are part of a secondary aluminum processing unit)	Bag leak detector or	Initiate corrective action within 1-hr of alarm and complete in accordance with the OM&M plan;[b] operate such that alarm does not sound more than 5% of operating time in 6-month period.
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more and complete in accordance with the OM&M plan.[b]
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at or above the level established during performance test for continuous injection systems.
	Reactive flux injection rate	Maintain reactive flux injection rate at or below rate used during the performance test for each operating cycle or time period used in the performance test.
In-line fluxer (using no reactive flux material)	Flux materials	Use no reactive flux.
Group 1 furnace with lime-injected fabric filter (including those that are part of a secondary of aluminum processing unit)	Bag leak detector or	Initiate corrective action within 1-hr of alarm; operate such that alarm does not sound more than 5% of operating time in 6-month period; complete corrective action in accordance with the OM&M plan.[b]

Affected source/emission unit	Monitor type/operation/process	Operating requirements
	COM	Initiate corrective action within 1-hr of a 6-minute average opacity reading of 5% or more; complete corrective action in accordance with the OM&M plan.[b]
	Fabric filter inlet temperature	Maintain average fabric filter inlet temperature for each 3-hour period at or below average temperature during the performance test +14 °C (+25 °F).
	Natural gas-fired, propane-fired or electrically heated group 1 furnaces that will be idled for at least 24 hours	Operation of associated capture/collection systems and APCD[b] may be temporarily stopped. Operation of these capture/collection systems and control devices must be restarted before feed/charge, flux or alloying materials are added to the furnace.
	Reactive flux injection rate	Maintain reactive flux injection rate (kg/Mg) (lb/ton) at or below rate used during the performance test for each furnace cycle.
	Lime injection rate	Maintain free-flowing lime in the feed hopper or silo at all times for continuous injection systems; maintain feeder setting at or above the level established at performance test for continuous injection systems.
	Maintain molten aluminum level	Operate sidewell furnaces such that the level of molten metal is above the top of the passage between sidewell and hearth during reactive flux injection, unless the hearth is also controlled.
	Fluxing in sidewell furnace hearth	Add reactive flux only to the sidewell of the furnace unless the hearth is also controlled.
Group 1 furnace without add-on air pollution controls (including those that are part of a secondary aluminum processing unit)	Reactive flux injection rate	Maintain the total reactive chlorine flux injection rate and total reactive fluorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
Clean (group 2) furnace	Charge and flux materials	Use only clean charge. Use no reactive flux.

[a]Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces including melting/holding furnaces.

[b]OM&M plan—Operation, maintenance, and monitoring plan.

[c]Site-specific monitoring plan. Owner/operators of group 1 furnaces without add-on APCD must include a section in their OM&M plan that documents work practice and pollution prevention measures, including procedures for scrap inspection, by which compliance is achieved with emission limits and process or feed parameter-based operating requirements. This plan and the testing to demonstrate adequacy of the monitoring plan must be developed in coordination with and approved by the permitting authority for major sources, or the Administrator for area sources.

[d]APCD—Air pollution control device.

[e]Incorporated by reference, see §63.14.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004; 80 FR 56757, Sept. 18, 2015; 81 FR 38092, June 13, 2016]

Table 3 to Subpart RRR of Part 63—Summary of Monitoring Requirements for New and Existing Affected Sources and Emission Units

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
All affected sources and emission units with an add-on air pollution control device	Emission capture and collection system	Annual inspection of all emission capture, collection, and transport systems to ensure that systems continue to operate in accordance with ACGIH Guidelines.[e] Inspection includes volumetric flow rate measurements or verification of a permanent total enclosure using EPA Method 204.[d]
All affected sources and emission units subject to production-based (lb/ton or gr/ton of feed/charge) emission limits.[a]	Feed/charge weight	Record weight of each feed/charge, weight measurement device or other procedure accuracy of ±1%;[b] calibrate according to manufacturer's specifications, or at least once every 6 months.
Group 1 furnace, group 2 furnace, in-line fluxer, and scrap dryer/delacquering kiln/decoating kiln	Labeling	Check monthly to confirm that labels are intact and legible.
Aluminum scrap shredder with fabric filter	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM or	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	VE	Conduct and record results of 30-minute daily test in accordance with Method 9 or ASTM D7520-13.[e]
Thermal chip dryer with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in §63.1510(g)(1); record average temperature for each 15-minute block; determine and record 3-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
	Feed/charge material	Record identity of each feed/charge; certify feed/charge materials every 6 months.
Scrap dryer/delacquering kiln/decoating kiln with afterburner and lime-injected fabric filter	Afterburner operating temperature	Continuous measurement device to meet specifications in §63.1510(g)(1); record temperature for each 15-minute block; determine and record 3-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM	Design and Install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
	Lime injection rate	For continuous injection systems, inspect each feed hopper or silo every 8 hours to verify that lime is free flowing; record results of each inspection. If blockage occurs, inspect every 4 hours for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period, record feeder setting daily. Verify monthly that lime injection rate is no less than 90 percent of the rate used during the compliance demonstration test.
	Fabric filter inlet temperature	Continuous measurement device to meet specifications in §63.1510(h)(2); record temperatures in 15-minute block averages; determine and record 3-hr block averages.
Sweat furnace with afterburner	Afterburner operating temperature	Continuous measurement device to meet specifications in §63.1510(g)(1); record temperatures in 15-minute block averages; determine and record 3-hr block averages.
	Afterburner operation	Annual inspection of afterburner internal parts; complete repairs in accordance with the OM&M plan.
Dross-only furnace with fabric filter	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Feed/charge material	Record identity of each feed/charge; certify charge materials every 6 months.
Rotary dross cooler with fabric filter	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
In-line fluxer with lime-injected fabric filter	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 CFR part 63; determine and record 6-minute block averages.
	Reactive flux injection rate	Weight measurement device accuracy of ±1%;[b] calibrate according to manufacturer's specifications or at least once every 6 months; record time, weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive chlorine flux injection rate and the total reactive fluorine flux injection rate for each operating cycle or time period used in performance test; or Alternative flux injection rate determination procedure per §63.1510(j)(5). For solid flux added intermittently, record the amount added for each operating cycle or time period used in the performance test.
In-line fluxer using no reactive flux	Flux materials	Record flux materials; certify every 6 months for no reactive flux.

Affected source/Emission unit	**Monitor type/Operation/Process**	**Monitoring requirements**
Group 1 furnace with lime-injected fabric filter	Bag leak detector or	Install and operate in accordance with manufacturer's operating instructions.
	COM	Design and install in accordance with PS-1; collect data in accordance with subpart A of 40 part CFR 63; determine and record 6-minute block averages.
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every 8 hours to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hours for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period.[c] Verify monthly that the lime injection rate is no less than 90 percent of the rate used during the compliance demonstration test.
	Reactive flux injection rate	Weight measurement device accuracy of ±1%;[b] calibrate every 3 months; record weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive chlorine flux injection rate and the total reactive fluorine flux injection rate for each operating cycle or time period used in performance test; or Alternative flux injection rate determination procedure per §63.1510(j)(5). For solid flux added intermittently, record the amount added for each operating cycle or time period used in the performance test.
Group 1 furnace without add-on controls	Fluxing in sidewell furnace hearth	Maintain flux addition operating log; certify every 6 months.
	Reactive flux injection rate	Weight measurement device accuracy of +1%;[b] calibrate according to manufacturer's specifications or at least once every six months; record weight and type of reactive flux added or injected for each 15-minute block period while reactive fluxing occurs; calculate and record total reactive flux injection rate for each operating cycle or time period used in performance test. For solid flux added intermittently, record the amount added for each operating cycle or time period used in the performance test.
	OM&M plan (approved by permitting agency)	Demonstration of site-specific monitoring procedures to provide data and show correlation of emissions across the range of charge and flux materials and furnace operating parameters.
	Feed material (melting/holding furnace)	Record type of permissible feed/charge material; certify charge materials every 6 months.
Clean (group 2) furnace	Charge and flux materials	Record charge and flux materials; certify every 6 months for clean charge and no reactive flux.

[a]Thermal chip dryers, scrap dryers/delacquering kilns/decoating kilns, dross-only furnaces, in-line fluxers and group 1 furnaces or melting/holding furnaces.

[b]Permitting agency may approve measurement devices of alternative accuracy, for example in cases where flux rates are very low and costs of meters of specified accuracy are prohibitive; or where feed/charge weighing devices of specified accuracy are not practicable due to equipment layout or charging practices.

[c]Permitting authority for major sources, or the Administrator for area sources may approve other alternatives including load cells for lime hopper weight, sensors for carrier gas pressure, or HCl monitoring devices at fabric filter outlet.

[d]The frequency of volumetric flow rate measurements may be decreased to once every 5 years if daily differential pressure measures, daily fan RPM, or daily fan motor amp measurements are made in accordance with §63.1510(d)(2)(ii)-(iii). The frequency of annual verification of a permanent total enclosure may be decreased to once every 5 years if negative pressure measurements in the enclosure are made daily in accordance with §63.1510(d)(2)(iv). In lieu of volumetric flow rate measurements or verification of permanent total enclosure, sweat furnaces may demonstrate annually negative air flow into the sweat furnace opening in accordance with §63.1510(d)(3).

[e]Incorporated by reference, see §63.14.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53985, Sept. 3, 2004; 80 FR 56758, Sept. 18, 2015; 81 FR 38092, June 13, 2016]

Appendix A to Subpart RRR of Part 63—General Provisions Applicability to Subpart RRR

Citation	Requirement	Applies to RRR	Comment
§63.1(a)(1)-(4)	General Applicability	Yes	
§63.1(a)(5)		No	[Reserved]
§63.1(a)(6)		Yes	
§63.1(a)(7)-(9)		No	[Reserved]
§63.1(a)(10)-(12)		Yes	
§63.1(b)	Initial Applicability Determination	Yes	EPA retains approval authority.
§63.1(c)(1)	Applicability After Standard Established	Yes	
§63.1(c)(2)		Yes	§63.1500(e) exempts area sources subject to this subpart from the obligation to obtain Title V operating permits.
§63.1(c)(3)-(4)		No	[Reserved]
§63.1(c)(5)		Yes	
§63.1(d)		No	[Reserved]
§63.1(e)	Applicability of Permit Program	Yes	
§63.2	Definitions	Yes	Additional definitions in §63.1503.
§63.3	Units and Abbreviations	Yes	
§63.4(a)(1)-(2)	Prohibited Activities	Yes	
§63.4(a)(3)-(5)		No	[Reserved]
§63.4(b)	Circumvention	Yes	
§63.4(c)	Fragmentation	Yes	
§63.5(a)	Applicability of Preconstruction Review and Notification	Yes	

Citation	Requirement	Applies to RRR	Comment
§63.5(b)(1)	Requirements for Existing, Newly, Constructed Sources and Reconstructed Sources	Yes	
§63.5(b)(2)		No	[Reserved]
§63.5(b)(3)-(4)		Yes	
§63.5(b)(5)		No	[Reserved]
§63.5(b)(6)		Yes	
§63.5(c)		No	[Reserved]
§63.5(d)	Application for Approval of Construction or Reconstruction	Yes	
§63.5(e)	Approval of Construction or Reconstruction	Yes	
§63.5(f)	Approval of Construction or Reconstruction Based on Prior State Preconstruction Review	Yes	
§63.6(a)	Applicability for Compliance with Standards and Maintenance Requirements	Yes	
§63.6(b)(1)-(5)	Compliance Dates for New and Reconstructed Sources	Yes	§63.1501 specifies dates.
§63.6(b)(6)		No	[Reserved]
§63.6(b)(7)		Yes	
§63.6(c)(1)	Compliance Dates for Existing Sources	Yes	§63.1501 specifies dates.
§63.6(c)(2)		Yes	
§63.6(c)(3)-(4)		No	[Reserved]
§63.6(c)(5)		Yes	
§63.6(d)		No	[Reserved]
§63.6(e)(1)(i)	Operation and Maintenance Requirements	No	See §63.1506(a)(5) for general duty requirement. Any other cross reference to §63.6(3)(1)(i) in any other general provision referenced shall be treated as a cross reference to §63.1506(a)(5).
§63.6(e)(1)(ii)		No	
§63.6(e)(2)		No	[Reserved]
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	No	
§63.6(f)(1)	Compliance with Nonopacity Emission Standards	No	
§63.6(f)(2)		Yes	

Citation	Requirement	Applies to RRR	Comment
§63.6(g)	Use of an Alternative Nonopacity Emission Standard	No	
§63.6(h)(1)	Applicability for Compliance with Opacity and Visible Emission Standards	No	
§63.6(h)(2)	Methods for Determining Compliance	Yes	
§63.6(h)(3)		No	[Reserved]
§63.6(h)(4)-(9)		Yes	
§63.6(i)(1)-(14)	Extension of Compliance	Yes	
§63.6(i)(15)		No	[Reserved]
§63.6(i)(16)		Yes	
§63.6(j)	Exemption from Compliance	Yes	
§63.7(a)	Applicability and Performance Test Dates	Yes	Except §63.1511 establishes dates for initial performance tests.
§63.7(b)	Notification of Performance Test	Yes	
§63.7(c)	Quality Assurance Program	Yes	
§63.7(d)	Performance Testing Facilities	Yes	
§63.7(e)(1)	Conduct of Performance Tests	No	
§63.7(e)(2)		Yes	
§63.7(e)(3)		Yes	
§63.7(f)	Use of an Alternative Test Method	Yes	
§63.7(g)(1)-(3)	Data Analysis, Recordkeeping, and Reporting	Yes	Except for §63.7(g)(2), which is reserved.
§63.7(h)(1)-(5)	Waiver of Performance Tests	Yes	
§63.8(a)(1)	Applicability for Monitoring Requirements	Yes	
§63.8(a)(2)		Yes	
§63.8(a)(3)		No	[Reserved]
§63.8(a)(4)		Yes	
§63.8(b)	Conduct of Monitoring	Yes	
§63.8(c)(1)(i)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	No	See §63.1506(a)(5) for general duty requirement.

Citation	Requirement	Applies to RRR	Comment
§63.8(c)(1)(ii)		Yes	
§63.8(c)(1)(iii)		No	
§63.8(c)(2)-(8)		Yes	
§63.8(d)(1)-(2)	Quality Control Program	Yes	
§63.8(d)(3)		Yes, except for last sentence, which refers to an SSM plan. SSM plans are not required	
§63.8(e)	Performance Evaluation of CMS	Yes	
§63.8(f)(1)-(5)	Use of an Alternative Monitoring Method	No	§63.1501(w) includes provisions for monitoring alternatives.
§63.8(f)(6)	Alternative to the Relative Accuracy Test	Yes	
§63.8(g)(1)	Reduction of Monitoring Data	Yes	
§63.8(g)(2)		No	§63.1512 requires five 6-minute averages for an aluminum scrap shredder.
§63.8(g)(3)-(5)		Yes	
§63.9(a)	Applicability and General Information for Notification Requirements	Yes	
§63.9(b)(1)-(5)	Initial Notifications	Yes	Except §63.9(b)(3) is reserved.
§63.9(c)	Request for Compliance Extension	Yes	
§63.9(d)	Notification that Source is Subject to Special Compliance Requirements	Yes	
§63.9(e)	Notification of Performance Test	Yes	
§63.9(f)	Notification of Opacity and Visible Emission Observations	Yes	
§63.9(g)	Additional Notification Requirement for Sources with CMS	Yes	
§63.9(h)(1)-(3)	Notification of Compliance Status	Yes	Except §63.1515 establishes dates notification of compliance status reports.
§63.9(h)(4)		No	[Reserved]
§63.9(h)(5)-(6)		Yes	
§63.9(i)	Adjustment of Deadlines for Required Communications	Yes	

Citation	Requirement	Applies to RRR	Comment
§63.9(j)	Change in Information Already Provided	Yes	
§63.10(a)	Applicability and General Information for Recordkeeping and Reporting Requirements	Yes	
§63.10(b)(1)	General Recordkeeping Requirements	Yes	
§63.10(b)(2)(i), (ii), (iv), (v)		No	
§63.10(b)(2)(iii), (vi)-(xiv)		Yes	§63.1517 includes additional requirements.
§63.10(b)(3)	Recordkeeping Requirement for Applicability Determinations	Yes	
§63.10(c)(1)	Additional Recordkeeping Requirements for Sources with CMS	Yes	
§63.10(c)(2)-(4)		No	[Reserved]
§63.10(c)(5)		Yes	
§63.10(c)(6)		Yes	
§63.10(c)(7)-(8)		Yes	
§63.10(c)(9)		No	[Reserved]
§63.10(c)(10)-(13)		Yes	
§63.10(c)(14)		Yes	
§63.10(c)(15)		No	
§63.10(d)(1)	General Reporting Requirements	Yes	
§63.10(d)(2)	Reporting Results of Performance Tests	Yes	
§63.10(d)(3)	Reporting Results of Opacity or Visible Emission Observations	Yes	
§63.10(d)(4)	Progress Reports	No	See §63.1516(d).
§63.10(d)(5)	Periodic Startup, Shutdown, and Malfunction Reports	No	See §63.1516(d).
§63.10(e)(1)-(2)	Additional Reporting Requirements for Sources with CMS	Yes	
§63.10(e)(3)	Excess Emissions and CMS Performance Report and Summary Report	Yes	Reporting deadline given in §63.1516.

Citation	Requirement	Applies to RRR	Comment
§63.10(e)(4)	Continuous Opacity Monitoring System (COMS) Data Produced During a Performance Test	Yes	
§63.10(f)	Waiver of Recordkeeping or Reporting Requirements	Yes	
§63.11(a)-(e)	Control Device and Work Practice Requirements	No	Flares not applicable.
§63.12(a)-(c)	State Authority and Delegations	Yes	EPA retains authority for applicability determinations.
§63.13	Addresses	Yes	
§63.14	Incorporations by Reference	Yes	ACGIH Guidelines, ASTM D7520-13, and Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzo-p-Dioxins and -Dibenzofurans (CDDs and CDFs) and 1989 Update.
§63.15	Availability of Information and Confidentiality	Yes	
§63.16	Performance Track Provisions	No	

[81 FR 38093, June 13, 2016]

Attachment B

Part 70 Operating Permit No: T157-38267-00001

[Downloaded from the eCFR on October 31, 2016]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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

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

What This Subpart Covers

§60.4230 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary spark ignition (SI) internal combustion engines (ICE) as specified in paragraphs (a)(1) through (6) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary SI ICE with a maximum engine power less than or equal to 19 kilowatt (KW) (25 horsepower (HP)) that are manufactured on or after July 1, 2008.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(e) Stationary SI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR parts 90 and 1048, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

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

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37972, June 28, 2011]

Emission Standards for Manufacturers

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

(a) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) manufactured on or after July 1, 2008 to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as follows:

If engine displacement is * * *	and manufacturing dates are * * *	the engine must meet emission standards and related requirements for nonhandheld engines under * * *
(1) below 225 cc	July 1, 2008 to December 31, 2011	40 CFR part 90.
(2) below 225 cc	January 1, 2012 or later	40 CFR part 1054.
(3) at or above 225 cc	July 1, 2008 to December 31, 2010	40 CFR part 90.
(4) at or above 225 cc	January 1, 2011 or later	40 CFR part 1054.

(b) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE with a maximum engine power greater than 25 HP and less than 130 HP that use gasoline and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cubic centimeters (cc) that use gasoline to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(c) Stationary SI internal combustion engine manufacturers must certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) (except emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(2), or manufactured on or after the applicable date in §60.4230(a)(4) for emergency stationary ICE with a maximum engine power greater than or equal to 130 HP, to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers must certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP that are rich burn engines that use LPG and that are manufactured on or after the applicable date in §60.4230(a)(4) to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, and other requirements for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc that are rich burn engines that use LPG to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate.

(d) Stationary SI internal combustion engine manufacturers who choose to certify their stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) under the voluntary manufacturer certification program described in this subpart must certify those engines to the certification emission standards for new nonroad SI engines in 40 CFR part 1048. Stationary SI internal combustion engine manufacturers who choose to certify their emergency stationary SI ICE greater than 25 HP and less than 130 HP (except gasoline and rich burn engines that use LPG), must certify those engines to the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, for new nonroad SI engines in 40 CFR part 90. Stationary SI internal combustion engine manufacturers may certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc (except gasoline and rich burn engines that use LPG) to the certification emission standards for new nonroad SI engines in 40 CFR part 90 or 1054, as appropriate. For stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) and less than 75 KW (100 HP) (except gasoline and rich burn engines that use LPG and emergency stationary ICE with a maximum engine power greater than 25 HP and less than 130 HP) manufactured prior to January 1, 2011, manufacturers may choose to certify these engines to the standards in Table 1 to this subpart applicable to engines with a maximum engine power greater than or equal to 100 HP and less than 500 HP.

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

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

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

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

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

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

Emission Standards for Owners and Operators

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

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

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

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

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

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

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

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

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

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

(4) Owners and operators of stationary SI natural gas and lean burn LPG engines with a maximum engine power greater than 19 KW (25 HP), that are modified or reconstructed after June 12, 2006, must comply with the same emission standards as those specified in paragraph (d) or (e) of this section, except that such owners and operators of non-emergency engines and emergency engines greater than or equal to 130 HP must meet a nitrogen oxides (NO_X) emission standard of 3.0 grams per HP-hour (g/HP-hr), a CO emission standard of 4.0 g/HP-hr (5.0 g/HP-hr for non-emergency engines less than 100 HP), and a volatile organic compounds (VOC) emission standard of 1.0 g/HP-hr, or a NO_X emission standard of 250 ppmvd at 15 percent oxygen (O_2), a CO emission standard 540 ppmvd at 15 percent O_2 (675 ppmvd at 15 percent O_2 for non-emergency engines less than 100 HP), and a VOC emission standard of 86 ppmvd at 15 percent O_2, where the date of manufacture of the engine is:

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

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

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

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

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

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

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

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

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

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

Other Requirements for Owners and Operators

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

Owners and operators of stationary SI ICE subject to this subpart that use gasoline must use gasoline that meets the per gallon sulfur limit in 40 CFR 80.195.

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

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

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

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

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

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

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

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

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

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

Compliance Requirements for Manufacturers

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

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(a) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

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

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(b) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

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

Stationary SI internal combustion engine manufacturers who are subject to the emission standards specified in §60.4231(c) must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must test their engines as specified in that part. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of stationary SI emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 emission standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

[73 FR 59176, Oct. 8, 2008]

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

(a) Manufacturers of stationary SI internal combustion engines with a maximum engine power greater than 19 KW (25 HP) that do not use gasoline and are not rich burn engines that use LPG can choose to certify their engines to the emission standards in §60.4231(d) or (e), as applicable, under the voluntary certification program described in this subpart. Manufacturers who certify their engines under the voluntary certification program must meet the requirements as specified in paragraphs (b) through (g) of this section. In addition, manufacturers of stationary SI internal combustion engines who choose to certify their engines under the voluntary certification program, must also meet the requirements as specified in §60.4247.

(b) Manufacturers of engines other than those certified to standards in 40 CFR part 90 or 40 CFR part 1054 must certify their stationary SI ICE using the certification procedures required in 40 CFR part 1048, subpart C, and must follow the same test procedures that apply to large SI nonroad engines under 40 CFR part 1048, but must use the D-1 cycle of International Organization of Standardization 8178-4: 1996(E) (incorporated by reference, see 40 CFR 60.17) or the test cycle requirements specified in Table 3 to 40 CFR 1048.505, except that Table 3 of 40 CFR 1048.505 applies to high load engines only. Stationary SI internal combustion engine manufacturers who certify their stationary SI ICE with a maximum engine power less than or equal to 30 KW (40 HP) with a total displacement less than or equal to 1,000 cc to the certification emission standards and other requirements for new nonroad SI engines in 40 CFR part 90 or 40 CFR part 1054, and manufacturers of emergency engines that are greater than 25 HP and less than 130 HP who meet the Phase 1 standards in 40 CFR 90.103, applicable to class II engines, must certify their stationary SI ICE using the certification procedures required in 40 CFR part 90, subpart B, or 40 CFR part 1054, subpart C, as applicable, and must test their engines as specified in those parts. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, subpart C, to the extent they apply to equipment manufacturers.

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

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

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

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

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

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

(i) For engines being certified to the voluntary certification standards in Table 1 of this subpart, the VOC measurement shall be made by following the procedures in 40 CFR 1065.260 and 1065.265 in order to determine the total NMHC emissions by using a flame-ionization detector and non-methane cutter. As an alternative to the nonmethane cutter, manufacturers may use a gas chromatograph as allowed under 40 CFR 1065.267 and may measure ethane, as well as methane, for excluding such levels from the total VOC measurement.

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

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

(a) Stationary SI internal combustion engine manufacturers must meet the provisions of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as applicable, as well as 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1048 or 1054, except that engines certified pursuant to the voluntary certification procedures in §60.4241 are subject only to the provisions indicated in §60.4247 and are permitted to provide instructions to owners and operators allowing for deviations from certified configurations, if such deviations are consistent with the provisions of paragraphs §60.4241(c) through (f). Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060, as applicable. Labels on engines certified to 40 CFR part 1048 must refer to stationary engines, rather than or in addition to nonroad engines, as appropriate.

(b) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054 for that model year may certify any such family that contains both nonroad and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts. This provision also applies to equipment or component manufacturers certifying to standards under 40 CFR part 1060.

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

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

(e) All stationary SI engines subject to mandatory certification that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230. Stationary SI engines subject to standards in 40 CFR part 90 may use the provisions in 40 CFR 90.909. Manufacturers of stationary engines with a maximum engine power greater than 25 HP that are not certified to standards and other requirements under 40 CFR part 1048 are subject to the labeling provisions of 40 CFR 1048.20 pertaining to excluded stationary engines.

(f) For manufacturers of gaseous-fueled stationary engines required to meet the warranty provisions in 40 CFR 90.1103 or 1054.120, we may establish an hour-based warranty period equal to at least the certified emissions life of the engines (in engine operating hours) if we determine that these engines are likely to operate for a number of hours greater than the applicable useful life within 24 months. We will not approve an alternate warranty under this paragraph (f) for nonroad engines. An alternate warranty period approved under this paragraph (f) will be the specified number of engine operating hours or two years, whichever comes first. The engine manufacturer shall request this alternate warranty period in its application for certification or in an earlier submission. We may approve an alternate warranty period for an engine family subject to the following conditions:

(1) The engines must be equipped with non-resettable hour meters.

(2) The engines must be designed to operate for a number of hours substantially greater than the applicable certified emissions life.

(3) The emission-related warranty for the engines may not be shorter than any published warranty offered by the manufacturer without charge for the engines. Similarly, the emission-related warranty for any component shall not be shorter than any published warranty offered by the manufacturer without charge for that component.

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008]

Compliance Requirements for Owners and Operators

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

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

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

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

(i) If you are an owner or operator of a stationary SI internal combustion engine less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions, but no performance testing is required if you are an owner or operator.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup to demonstrate compliance.

(iii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test within 1 year of engine startup and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

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

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

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

(i) If you are an owner or operator of a stationary SI internal combustion engine greater than 25 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance.

(ii) If you are an owner or operator of a stationary SI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test and conduct subsequent performance testing every 8,760 hours or 3 years, whichever comes first, thereafter to demonstrate compliance.

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

(d) If you own or operate an emergency stationary ICE, you must operate the emergency stationary ICE according to the requirements in paragraphs (d)(1) through (3) of this section. In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (d)(1) through (3) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (d)(1) through (3) of this section, the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines.

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

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

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

(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.

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

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

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

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

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

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

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

(E) The owner or operator identifies and records the entity that dispatches the engine and the specific NERC, regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the engine owner or operator.

(ii) [Reserved]

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

(f) If you are an owner or operator of a stationary SI internal combustion engine that is less than or equal to 500 HP and you purchase a non-certified engine or you do not operate and maintain your certified stationary SI internal combustion engine and control device according to the manufacturer's written emission-related instructions, you are required to perform initial performance testing as indicated in this section, but you are not required to conduct subsequent performance testing unless the stationary engine is rebuilt or undergoes major repair or maintenance. A rebuilt stationary SI ICE means an engine that has been rebuilt as that term is defined in 40 CFR 94.11(a).

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

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

(1) Purchasing an engine certified according to 40 CFR part 1048. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

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

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 76 FR 37974, June 28, 2011; 78 FR 6697, Jan. 30, 2013]

Testing Requirements for Owners and Operators

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

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

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

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

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must be conducted within 10 percent of 100 percent peak (or the highest achievable) load and last at least 1 hour.

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

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

Where:

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

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

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = Measured CO concentration in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

C_d = VOC concentration measured as propane in ppmv.

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

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

T = Time of test run, in hours.

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

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

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

Where:

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

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

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

$$C_{icorr} = RF_i \times C_{imeas} \qquad \text{(Eq. 5)}$$

Where:

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

C_{imeas} = Concentration of compound i measured by EPA Method 320, ppmv as carbon.

$$C_{Peq} = 0.6098 \times C_{icorr} \qquad \text{(Eq. 6)}$$

Where:

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

Notification, Reports, and Records for Owners and Operators

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

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

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

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

(2) Maintenance conducted on the engine.

(3) If the stationary SI internal combustion engine is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards and information as required in 40 CFR parts 90, 1048, 1054, and 1060, as applicable.

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

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

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

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

(2) The address of the affected source;

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

(4) Emission control equipment; and

(5) Fuel used.

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

(e) If you own or operate an emergency stationary SI ICE with a maximum engine power more than 100 HP that operates or is contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §60.4243(d)(2)(ii) and (iii) or that operates for the purposes specified in §60.4243(d)(3)(i), you must submit an annual report according to the requirements in paragraphs (e)(1) through (3) of this section.

(1) The report must contain the following information:

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

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

(iii) Engine site rating and model year.

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

(v) Hours operated for the purposes specified in §60.4243(d)(2)(ii) and (iii), including the date, start time, and end time for engine operation for the purposes specified in §60.4243(d)(2)(ii) and (iii).

(vi) Number of hours the engine is contractually obligated to be available for the purposes specified in §60.4243(d)(2)(ii) and (iii).

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

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 78 FR 6697, Jan. 30, 2013; 81 FR 59809, Aug. 30, 2016]

General Provisions

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

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

MOBILE SOURCE PROVISIONS

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

(a) Manufacturers certifying to emission standards in 40 CFR part 90, including manufacturers certifying emergency engines below 130 HP, must meet the provisions of 40 CFR part 90. Manufacturers certifying to emission standards in 40 CFR part 1054 must meet the provisions of 40 CFR part 1054. Manufacturers of equipment containing stationary SI internal combustion engines meeting the provisions of 40 CFR part 1054 must meet the provisions of 40 CFR part 1060 to the extent they apply to equipment manufacturers.

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008]

Definitions

§60.4248 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary SI ICE with a maximum engine power less than or equal to 19 KW (25 HP) are given in 40 CFR 90.105, 40 CFR 1054.107, and 40 CFR 1060.101, as appropriate. The values for certified emissions life for stationary SI ICE with a maximum engine power greater than 19 KW (25 HP) certified to 40 CFR part 1048 are given in 40 CFR 1048.101(g). The certified emissions life for stationary SI ICE with a maximum engine power greater than 75 KW (100 HP) certified under the voluntary manufacturer certification program of this subpart is 5,000 hours or 7 years, whichever comes first. You may request in your application for certification that we approve a shorter certified emissions life for an engine family. We may approve a shorter certified emissions life, in hours of engine operation but not in years, if we determine that these engines will rarely operate longer than the shorter certified emissions life. If engines identical to those in the engine family have already been produced and are in use, your demonstration must include documentation from such in-use engines. In other cases, your demonstration must include an engineering analysis of information equivalent to such in-use data, such as data from research engines or similar engine models that are already in production. Your demonstration must also include any overhaul interval that you recommend, any mechanical warranty that you offer for the engine or its components, and any relevant customer design specifications. Your demonstration may include any other relevant information. The certified emissions life value may not be shorter than any of the following:

(i) 1,000 hours of operation.

(ii) Your recommended overhaul interval.

(iii) Your mechanical warranty for the engine.

Certified stationary internal combustion engine means an engine that belongs to an engine family that has a certificate of conformity that complies with the emission standards and requirements in this part, or of 40 CFR part 90, 40 CFR part 1048, or 40 CFR part 1054, as appropriate.

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

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

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

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

Emergency stationary internal combustion engine means any stationary reciprocating internal combustion engine that meets all of the criteria in paragraphs (1) through (3) of this definition. All emergency stationary ICE must comply with the requirements specified in §60.4243(d) in order to be considered emergency stationary ICE. If the engine does not comply with the requirements specified in §60.4243(d), then it is not considered to be an emergency stationary ICE under this subpart.

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

(2) The stationary ICE is operated under limited circumstances for situations not included in paragraph (1) of this definition, as specified in §60.4243(d).

(3) The stationary ICE operates as part of a financial arrangement with another entity in situations not included in paragraph (1) of this definition only as allowed in §60.4243(d)(2)(ii) or (iii) and §60.4243(d)(3)(i).

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

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

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

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

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

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

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

Manufacturer has the meaning given in section 216(1) of the Clean Air Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for resale.

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

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

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

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

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

Rich burn engine means any four-stroke spark ignited engine where the manufacturer's recommended operating air/fuel ratio divided by the stoichiometric air/fuel ratio at full load conditions is less than or equal to 1.1. Engines originally manufactured as rich burn engines, but modified prior to June 12, 2006, with passive emission control technology for NO_X (such as pre-combustion chambers) will be considered lean burn engines. Also, existing engines where there are no manufacturer's recommendations regarding air/fuel ratio will be considered a rich burn engine if the excess oxygen content of the exhaust at full load conditions is less than or equal to 2 percent.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

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

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

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

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

Subpart means 40 CFR part 60, subpart JJJJ.

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

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

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

[73 FR 3591, Jan. 18, 2008, as amended at 73 FR 59177, Oct. 8, 2008; 76 FR 37974, June 28, 2011; 78 FR 6698, Jan. 30, 2013]

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

Engine type and fuel	Maximum engine power	Manufacture date	Emission standards[a]					
			g/HP-hr			ppmvd at 15% O_2		
			NO_X	CO	VOC[d]	NO_X	CO	VOC[d]
Non-Emergency SI Natural Gas[b] and Non-Emergency SI Lean Burn LPG[b]	100≤HP<500	7/1/2008	2.0	4.0	1.0	160	540	86
		1/1/2011	1.0	2.0	0.7	82	270	60
Non-Emergency SI Lean Burn Natural Gas and LPG	500≤HP<1,350	1/1/2008	2.0	4.0	1.0	160	540	86
		7/1/2010	1.0	2.0	0.7	82	270	60
Non-Emergency SI Natural Gas and Non-Emergency SI Lean Burn LPG (except lean burn 500≤HP<1,350)	HP≥500	7/1/2007	2.0	4.0	1.0	160	540	86
	HP≥500	7/1/2010	1.0	2.0	0.7	82	270	60
Landfill/Digester Gas (except lean burn 500≤HP<1,350)	HP<500	7/1/2008	3.0	5.0	1.0	220	610	80
		1/1/2011	2.0	5.0	1.0	150	610	80
	HP≥500	7/1/2007	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Landfill/Digester Gas Lean Burn	500≤HP<1,350	1/1/2008	3.0	5.0	1.0	220	610	80
		7/1/2010	2.0	5.0	1.0	150	610	80
Emergency	25<HP<130	1/1/2009	[c]10	387	N/A	N/A	N/A	N/A
	HP≥130		2.0	4.0	1.0	160	540	86

[a]Owners and operators of stationary non-certified SI engines may choose to comply with the emission standards in units of either g/HP-hr or ppmvd at 15 percent O_2.

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

[c]The emission standards applicable to emergency engines between 25 HP and 130 HP are in terms of NO_X + HC.

[d]For purposes of this subpart, when calculating emissions of volatile organic compounds, emissions of formaldehyde should not be included.

[76 FR 37975, June 28, 2011]

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

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

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary SI internal combustion engine demonstrating compliance according to §60.4244	a. limit the concentration of NO_X in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for NO_X, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *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. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ad]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for NO_X concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR part 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(c) Measurements to determine moisture must be made at the same time as the measurement for NO_X concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure NO_X at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device	(5) Method 7E of 40 CFR part 60, appendix A-4, ASTM Method D6522-00 (Reapproved 2005)[ad], Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	b. limit the concentration of CO in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for CO, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *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. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ad]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for CO concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(c) Measurements to determine moisture must be made at the same time as the measurement for CO concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure CO at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device	(5) Method 10 of 40 CFR part 60, appendix A4, ASTM Method D6522-00 (Reapproved 2005)[ade], Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(d) Results of this test consist of the average of the three 1-hour or longer runs.
	c. limit the concentration of VOC in the stationary SI internal combustion engine exhaust	i. Select the sampling port location and the number/location of traverse points at the exhaust of the stationary internal combustion engine;	(1) Method 1 or 1A of 40 CFR part 60, appendix A-1, if measuring flow rate	(a) Alternatively, for VOC, O_2, and moisture measurement, ducts ≤6 inches in diameter may be sampled at a single point located at the duct centroid and ducts >6 and ≤12 inches in diameter may be sampled at 3 traverse points located at 16.7, 50.0, and 83.3% of the measurement line (`3-point long line'). If the duct is >12 inches in diameter *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. Determine the O_2 concentration of the stationary internal combustion engine exhaust at the sampling port location;	(2) Method 3, 3A, or 3B[b] of 40 CFR part 60, appendix A-2 or ASTM Method D6522-00 (Reapproved 2005)[ad]	(b) Measurements to determine O_2 concentration must be made at the same time as the measurements for VOC concentration.
		iii. If necessary, determine the exhaust flowrate of the stationary internal combustion engine exhaust;	(3) Method 2 or 2C of 40 CFR 60, appendix A-1 or Method 19 of 40 CFR part 60, appendix A-7	
		iv. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(4) Method 4 of 40 CFR part 60, appendix A-3, Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(c) Measurements to determine moisture must be made at the same time as the measurement for VOC concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		v. Measure VOC at the exhaust of the stationary internal combustion engine; if using a control device, the sampling site must be located at the outlet of the control device	(5) Methods 25A and 18 of 40 CFR part 60, appendices A-6 and A-7, Method 25A with the use of a hydrocarbon cutter as described in 40 CFR 1065.265, Method 18 of 40 CFR part 60, appendix A-6[ce], Method 320 of 40 CFR part 63, appendix A[e], or ASTM Method D6348-03[de]	(d) Results of this test consist of the average of the three 1-hour or longer runs.

[a]Also, you may petition the Administrator for approval to use alternative methods for portable analyzer.

[b]You may use ASME PTC 19.10-1981, Flue and Exhaust Gas Analyses, for measuring the O_2 content of the exhaust gas as an alternative to EPA Method 3B. AMSE PTC 19.10-1981 incorporated by reference, see 40 CFR 60.17

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

[d]Incorporated by reference; see 40 CFR 60.17.

[e]You must meet the requirements in §60.4245(d).

[81 FR 59809, Aug. 30, 2016]

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

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

General provisions citation	Subject of citation	Applies to subpart	Explanation
§60.1	General applicability of the General Provisions	Yes	
§60.2	Definitions	Yes	Additional terms defined in §60.4248.
§60.3	Units and abbreviations	Yes	
§60.4	Address	Yes	
§60.5	Determination of construction or modification	Yes	
§60.6	Review of plans	Yes	
§60.7	Notification and Recordkeeping	Yes	Except that §60.7 only applies as specified in §60.4245.
§60.8	Performance tests	Yes	Except that §60.8 only applies to owners and operators who are subject to performance testing in subpart JJJJ.

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

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

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

Mobile source provisions citation	Subject of citation	Applies to subpart	Explanation
1048 subpart A	Overview and Applicability	Yes	
1048 subpart B	Emission Standards and Related Requirements	Yes	Except for the specific sections below.
1048.101	Exhaust Emission Standards	No	
1048.105	Evaporative Emission Standards	No	
1048.110	Diagnosing Malfunctions	No	
1048.140	Certifying Blue Sky Series Engines	No	
1048.145	Interim Provisions	No	
1048 subpart C	Certifying Engine Families	Yes	Except for the specific sections below.
1048.205(b)	AECD reporting	Yes	
1048.205(c)	OBD Requirements	No	
1048.205(n)	Deterioration Factors	Yes	Except as indicated in 60.4247(c).
1048.205(p)(1)	Deterioration Factor Discussion	Yes	

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

Attachment C

Part 70 Operating Permit No: T157-38267-00001

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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes	Except that the most recent 2 years of data do not have to be retained on site.
§63.10(b)(2)(i)-(v)	Records related to SSM	No.	
§63.10(b)(2)(vi)-(xi)	Records	Yes.	
§63.10(b)(2)(xii)	Record when under waiver	Yes.	
§63.10(b)(2)(xiii)	Records when using alternative to RATA	Yes	For CO standard if using RATA alternative.
§63.10(b)(2)(xiv)	Records of supporting documentation	Yes.	
§63.10(b)(3)	Records of applicability determination	Yes.	
§63.10(c)	Additional records for sources using CEMS	Yes	Except that §63.10(c)(2)-(4) and (9) are reserved.
§63.10(d)(1)	General reporting requirements	Yes.	
§63.10(d)(2)	Report of performance test results	Yes.	
§63.10(d)(3)	Reporting opacity or VE observations	No	Subpart ZZZZ does not contain opacity or VE standards.
§63.10(d)(4)	Progress reports	Yes.	
§63.10(d)(5)	Startup, shutdown, and malfunction reports	No.	
§63.10(e)(1) and (2)(i)	Additional CMS Reports	Yes.	
§63.10(e)(2)(ii)	COMS-related report	No	Subpart ZZZZ does not require COMS.
§63.10(e)(3)	Excess emission and parameter exceedances reports	Yes.	Except that §63.10(e)(3)(i) (C) is reserved.
§63.10(e)(4)	Reporting COMS data	No	Subpart ZZZZ does not require COMS.
§63.10(f)	Waiver for recordkeeping/reporting	Yes.	
§63.11	Flares	No.	
§63.12	State authority and delegations	Yes.	
§63.13	Addresses	Yes.	
§63.14	Incorporation by reference	Yes.	
§63.15	Availability of information	Yes.	

[75 FR 9688, Mar. 3, 2010, as amended at 78 FR 6720, Jan. 30, 2013]

Appendix A—Protocol for Using an Electrochemical Analyzer to Determine Oxygen and Carbon Monoxide Concentrations From Certain Engines

1.0 Scope and Application. What is this Protocol?

This protocol is a procedure for using portable electrochemical (EC) cells for measuring carbon monoxide (CO) and oxygen (O_2) concentrations in controlled and uncontrolled emissions from existing stationary 4-stroke lean burn and 4-stroke rich burn reciprocating internal combustion engines as specified in the applicable rule.

1.1 Analytes. What does this protocol determine?

This protocol measures the engine exhaust gas concentrations of carbon monoxide (CO) and oxygen (O_2).

Analyte	CAS No.	Sensitivity
Carbon monoxide (CO)	630-08-0	Minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.
Oxygen (O_2)	*7782-44-7*	

1.2 Applicability. When is this protocol acceptable?

This protocol is applicable to 40 CFR part 63, subpart ZZZZ. Because of inherent cross sensitivities of EC cells, you must not apply this protocol to other emissions sources without specific instruction to that effect.

1.3 Data Quality Objectives. How good must my collected data be?

Refer to Section 13 to verify and document acceptable analyzer performance.

1.4 Range. What is the targeted analytical range for this protocol?

The measurement system and EC cell design(s) conforming to this protocol will determine the analytical range for each gas component. The nominal ranges are defined by choosing up-scale calibration gas concentrations near the maximum anticipated flue gas concentrations for CO and O_2, or no more than twice the permitted CO level.

1.5 Sensitivity. What minimum detectable limit will this protocol yield for a particular gas component?

The minimum detectable limit depends on the nominal range and resolution of the specific EC cell used, and the signal to noise ratio of the measurement system. The minimum detectable limit should be 2 percent of the nominal range or 1 ppm, whichever is less restrictive.

2.0 Summary of Protocol

In this protocol, a gas sample is extracted from an engine exhaust system and then conveyed to a portable EC analyzer for measurement of CO and O_2 gas concentrations. This method provides measurement system performance specifications and sampling protocols to ensure reliable data. You may use additions to, or modifications of vendor supplied measurement systems (e.g., heated or unheated sample lines, thermocouples, flow meters, selective gas scrubbers, etc.) to meet the design specifications of this protocol. Do not make changes to the measurement system from the as-verified configuration (Section 3.12).

3.0 Definitions

3.1 Measurement System. The total equipment required for the measurement of CO and O_2 concentrations. The measurement system consists of the following major subsystems:

3.1.1 Data Recorder. A strip chart recorder, computer or digital recorder for logging measurement data from the analyzer output. You may record measurement data from the digital data display manually or electronically.

3.1.2 Electrochemical (EC) Cell. A device, similar to a fuel cell, used to sense the presence of a specific analyte and generate an electrical current output proportional to the analyte concentration.

3.1.3 Interference Gas Scrubber. A device used to remove or neutralize chemical compounds that may interfere with the selective operation of an EC cell.

3.1.4 Moisture Removal System. Any device used to reduce the concentration of moisture in the sample stream so as to protect the EC cells from the damaging effects of condensation and to minimize errors in measurements caused by the scrubbing of soluble gases.

3.1.5 Sample Interface. The portion of the system used for one or more of the following: sample acquisition; sample transport; sample conditioning or protection of the EC cell from any degrading effects of the engine exhaust effluent; removal of particulate matter and condensed moisture.

3.2 Nominal Range. The range of analyte concentrations over which each EC cell is operated (normally 25 percent to 150 percent of up-scale calibration gas value). Several nominal ranges can be used for any given cell so long as the calibration and repeatability checks for that range remain within specifications.

3.3 Calibration Gas. A vendor certified concentration of a specific analyte in an appropriate balance gas.

3.4 Zero Calibration Error. The analyte concentration output exhibited by the EC cell in response to zero-level calibration gas.

3.5 Up-Scale Calibration Error. The mean of the difference between the analyte concentration exhibited by the EC cell and the certified concentration of the up-scale calibration gas.

3.6 Interference Check. A procedure for quantifying analytical interference from components in the engine exhaust gas other than the targeted analytes.

3.7 Repeatability Check. A protocol for demonstrating that an EC cell operated over a given nominal analyte concentration range provides a stable and consistent response and is not significantly affected by repeated exposure to that gas.

3.8 Sample Flow Rate. The flow rate of the gas sample as it passes through the EC cell. In some situations, EC cells can experience drift with changes in flow rate. The flow rate must be monitored and documented during all phases of a sampling run.

3.9 Sampling Run. A timed three-phase event whereby an EC cell's response rises and plateaus in a sample conditioning phase, remains relatively constant during a measurement data phase, then declines during a refresh phase. The sample conditioning phase exposes the EC cell to the gas sample for a length of time sufficient to reach a constant response. The measurement data phase is the time interval during which gas sample measurements can be made that meet the acceptance criteria of this protocol. The refresh phase then purges the EC cells with CO-free air. The refresh phase replenishes requisite O_2 and moisture in the electrolyte reserve and provides a mechanism to de-gas or desorb any interference gas scrubbers or filters so as to enable a stable CO EC cell response. There are four primary types of sampling runs: pre- sampling calibrations; stack gas sampling; post-sampling calibration checks; and measurement system repeatability checks. Stack gas sampling runs can be chained together for extended evaluations, providing all other procedural specifications are met.

3.10 Sampling Day. A time not to exceed twelve hours from the time of the pre-sampling calibration to the post-sampling calibration check. During this time, stack gas sampling runs can be repeated without repeated recalibrations, providing all other sampling specifications have been met.

3.11 Pre-Sampling Calibration/Post-Sampling Calibration Check. The protocols executed at the beginning and end of each sampling day to bracket measurement readings with controlled performance checks.

3.12 Performance-Established Configuration. The EC cell and sampling system configuration that existed at the time that it initially met the performance requirements of this protocol.

4.0 Interferences.

When present in sufficient concentrations, NO and NO_2 are two gas species that have been reported to interfere with CO concentration measurements. In the likelihood of this occurrence, it is the protocol user's responsibility to employ and properly maintain an appropriate CO EC cell filter or scrubber for removal of these gases, as described in Section 6.2.12.

5.0 Safety. [Reserved]

6.0 Equipment and Supplies.

6.1 What equipment do I need for the measurement system?

The system must maintain the gas sample at conditions that will prevent moisture condensation in the sample transport lines, both before and as the sample gas contacts the EC cells. The essential components of the measurement system are described below.

6.2 Measurement System Components.

6.2.1 Sample Probe. A single extraction-point probe constructed of glass, stainless steel or other non-reactive material, and of length sufficient to reach any designated sampling point. The sample probe must be designed to prevent plugging due to condensation or particulate matter.

6.2.2 Sample Line. Non-reactive tubing to transport the effluent from the sample probe to the EC cell.

6.2.3 Calibration Assembly (optional). A three-way valve assembly or equivalent to introduce calibration gases at ambient pressure at the exit end of the sample probe during calibration checks. The assembly must be designed such that only stack gas or calibration gas flows in the sample line and all gases flow through any gas path filters.

6.2.4 Particulate Filter (optional). Filters before the inlet of the EC cell to prevent accumulation of particulate material in the measurement system and extend the useful life of the components. All filters must be fabricated of materials that are non-reactive to the gas mixtures being sampled.

6.2.5 Sample Pump. A leak-free pump to provide undiluted sample gas to the system at a flow rate sufficient to minimize the response time of the measurement system. If located upstream of the EC cells, the pump must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.8 Sample Flow Rate Monitoring. An adjustable rotameter or equivalent device used to adjust and maintain the sample flow rate through the analyzer as prescribed.

6.2.9 Sample Gas Manifold (optional). A manifold to divert a portion of the sample gas stream to the analyzer and the remainder to a by-pass discharge vent. The sample gas manifold may also include provisions for introducing calibration gases directly to the analyzer. The manifold must be constructed of a material that is non-reactive to the gas mixtures being sampled.

6.2.10 EC cell. A device containing one or more EC cells to determine the CO and O_2 concentrations in the sample gas stream. The EC cell(s) must meet the applicable performance specifications of Section 13 of this protocol.

6.2.11 Data Recorder. A strip chart recorder, computer or digital recorder to make a record of analyzer output data. The data recorder resolution (i.e., readability) must be no greater than 1 ppm for CO; 0.1 percent for O_2; and one degree (either °C or °F) for temperature. Alternatively, you may use a digital or analog meter having the same resolution to observe and manually record the analyzer responses.

6.2.12 Interference Gas Filter or Scrubber. A device to remove interfering compounds upstream of the CO EC cell. Specific interference gas filters or scrubbers used in the performance-established configuration of the analyzer must continue to be used. Such a filter or scrubber must have a means to determine when the removal agent is exhausted. Periodically replace or replenish it in accordance with the manufacturer's recommendations.

7.0 Reagents and Standards. What calibration gases are needed?

7.1 Calibration Gases. CO calibration gases for the EC cell must be CO in nitrogen or CO in a mixture of nitrogen and O_2. Use CO calibration gases with labeled concentration values certified by the manufacturer to be within ±5 percent of the label value. Dry ambient air (20.9 percent O_2) is acceptable for calibration of the O_2 cell. If needed, any lower percentage O_2 calibration gas must be a mixture of O_2 in nitrogen.

7.1.1 Up-Scale CO Calibration Gas Concentration. Choose one or more up-scale gas concentrations such that the average of the stack gas measurements for each stack gas sampling run are between 25 and 150 percent of those concentrations. Alternatively, choose an up-scale gas that does not exceed twice the concentration of the applicable outlet standard. If a measured gas value exceeds 150 percent of the up-scale CO calibration gas value at any time during the stack gas sampling run, the run must be discarded and repeated.

7.1.2 Up-Scale O_2 Calibration Gas Concentration.

Select an O_2 gas concentration such that the difference between the gas concentration and the average stack gas measurement or reading for each sample run is less than 15 percent O_2. When the average exhaust gas O_2 readings are above 6 percent, you may use dry ambient air (20.9 percent O_2) for the up-scale O_2 calibration gas.

7.1.3 Zero Gas. Use an inert gas that contains less than 0.25 percent of the up-scale CO calibration gas concentration. You may use dry air that is free from ambient CO and other combustion gas products (e.g., CO_2).

8.0 Sample Collection and Analysis

8.1 Selection of Sampling Sites.

8.1.1 Control Device Inlet. Select a sampling site sufficiently downstream of the engine so that the combustion gases should be well mixed. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.1.2 Exhaust Gas Outlet. Select a sampling site located at least two stack diameters downstream of any disturbance (e.g., turbocharger exhaust, crossover junction or recirculation take-off) and at least one-half stack diameter upstream of the gas discharge to the atmosphere. Use a single sampling extraction point near the center of the duct (e.g., within the 10 percent centroidal area), unless instructed otherwise.

8.2 Stack Gas Collection and Analysis. Prior to the first stack gas sampling run, conduct that the pre-sampling calibration in accordance with Section 10.1. Use Figure 1 to record all data. Zero the analyzer with zero gas. Confirm and record that the scrubber media color is correct and not exhausted. Then position the probe at the sampling point and begin the sampling run at the same flow rate used during the up-scale calibration. Record the start time. Record all EC cell output responses and the flow rate during the “sample conditioning phase” once per minute until constant readings are obtained. Then begin the “measurement data phase” and record readings every 15 seconds for at least two minutes (or eight readings), or as otherwise required to achieve two continuous minutes of data that meet the specification given in Section 13.1. Finally, perform the “refresh phase” by introducing dry air, free from CO and other combustion gases, until several minute-to-minute readings of consistent value have been obtained. For each run use the “measurement data phase” readings to calculate the average stack gas CO and O_2 concentrations.

8.3 EC Cell Rate. Maintain the EC cell sample flow rate so that it does not vary by more than ±10 percent throughout the pre-sampling calibration, stack gas sampling and post-sampling calibration check. Alternatively, the EC cell sample flow rate can be maintained within a tolerance range that does not affect the gas concentration readings by more than ±3 percent, as instructed by the EC cell manufacturer.

9.0 Quality Control (Reserved)

10.0 Calibration and Standardization

10.1 Pre-Sampling Calibration. Conduct the following protocol once for each nominal range to be used on each EC cell before performing a stack gas sampling run on each field sampling day. Repeat the calibration if you replace an EC cell before completing all of the sampling runs. There is no prescribed order for calibration of the EC cells; however, each cell must complete the measurement data phase during calibration. Assemble the measurement system by following the manufacturer's recommended protocols including for preparing and preconditioning the EC cell. Assure the measurement system has no leaks and verify the gas scrubbing agent is not depleted. Use Figure 1 to record all data.

10.1.1 Zero Calibration. For both the O_2 and CO cells, introduce zero gas to the measurement system (e.g., at the calibration assembly) and record the concentration reading every minute until readings are constant for at least two consecutive minutes. Include the time and sample flow rate. Repeat the steps in this section at least once to verify the zero calibration for each component gas.

10.1.2 Zero Calibration Tolerance. For each zero gas introduction, the zero level output must be less than or equal to ±3 percent of the up-scale gas value or ±1 ppm, whichever is less restrictive, for the CO channel and less than or equal to ±0.3 percent O_2 for the O_2 channel.

10.1.3 Up-Scale Calibration. Individually introduce each calibration gas to the measurement system (e.g., at the calibration assembly) and record the start time. Record all EC cell output responses and the flow rate during this "sample conditioning phase" once per minute until readings are constant for at least two minutes. Then begin the "measurement data phase" and record readings every 15 seconds for a total of two minutes, or as otherwise required. Finally, perform the "refresh phase" by introducing dry air, free from CO and other combustion gases, until readings are constant for at least two consecutive minutes. Then repeat the steps in this section at least once to verify the calibration for each component gas. Introduce all gases to flow through the entire sample handling system (i.e., at the exit end of the sampling probe or the calibration assembly).

10.1.4 Up-Scale Calibration Error. The mean of the difference of the "measurement data phase" readings from the reported standard gas value must be less than or equal to ±5 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively. The maximum allowable deviation from the mean measured value of any single "measurement data phase" reading must be less than or equal to ±2 percent or ±1 ppm for CO or ±0.5 percent O_2, whichever is less restrictive, respectively.

10.2 Post-Sampling Calibration Check. Conduct a stack gas post-sampling calibration check after the stack gas sampling run or set of runs and within 12 hours of the initial calibration. Conduct up-scale and zero calibration checks using the protocol in Section 10.1. Make no changes to the sampling system or EC cell calibration until all post-sampling calibration checks have been recorded. If either the zero or up-scale calibration error exceeds the respective specification in Sections 10.1.2 and 10.1.4 then all measurement data collected since the previous successful calibrations are invalid and re-calibration and re-sampling are required. If the sampling system is disassembled or the EC cell calibration is adjusted, repeat the calibration check before conducting the next analyzer sampling run.

11.0 Analytical Procedure

The analytical procedure is fully discussed in Section 8.

12.0 Calculations and Data Analysis

Determine the CO and O_2 concentrations for each stack gas sampling run by calculating the mean gas concentrations of the data recorded during the "measurement data phase".

13.0 Protocol Performance

Use the following protocols to verify consistent analyzer performance during each field sampling day.

13.1 Measurement Data Phase Performance Check. Calculate the mean of the readings from the "measurement data phase". The maximum allowable deviation from the mean for each of the individual readings is ±2 percent, or ±1 ppm, whichever is less restrictive. Record the mean value and maximum deviation for each gas monitored. Data must conform to Section 10.1.4. The EC cell flow rate must conform to the specification in Section 8.3.

Example: A measurement data phase is invalid if the maximum deviation of any single reading comprising that mean is greater than ±2 percent *or* ±1 ppm (the default criteria). For example, if the mean = 30 ppm, single readings of below 29 ppm and above 31 ppm are disallowed).

13.2 Interference Check. Before the initial use of the EC cell and interference gas scrubber in the field, and semi-annually thereafter, challenge the interference gas scrubber with NO and NO_2 gas standards that are generally recognized as representative of diesel-fueled engine NO and NO_2 emission values. Record the responses displayed by the CO EC cell and other pertinent data on Figure 1 or a similar form.

13.2.1 Interference Response. The combined NO and NO_2 interference response should be less than or equal to ±5 percent of the up-scale CO calibration gas concentration.

13.3 Repeatability Check. Conduct the following check once for each nominal range that is to be used on the CO EC cell within 5 days prior to each field sampling program. If a field sampling program lasts longer than 5 days, repeat this check every 5 days. Immediately repeat the check if the EC cell is replaced or if the EC cell is exposed to gas concentrations greater than 150 percent of the highest up-scale gas concentration.

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

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

14.0 Pollution Prevention (Reserved)

15.0 Waste Management (Reserved)

16.0 Alternative Procedures (Reserved)

17.0 References

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

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

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

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

Table 1: Appendix A—Sampling Run Data.

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

Attachment D

Part 70 Operating Permit No: T157-38267-00001

Electronic Code of Federal Regulations

Title 40: Protection of Environment

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

Subpart CCCCCC—National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Source: 73 FR 1945, Jan. 10, 2008, unless otherwise noted.

What This Subpart Covers

§ 63.11110 What is the purpose of this subpart?

This subpart establishes national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). This subpart also establishes requirements to demonstrate compliance with the emission limitations and management practices.

§ 63.11111 Am I subject to the requirements in this subpart?

(a) The affected source to which this subpart applies is each GDF that is located at an area source. The affected source includes each gasoline cargo tank during the delivery of product to a GDF and also includes each storage tank.

(b) If your GDF has a monthly throughput of less than 10,000 gallons of gasoline, you must comply with the requirements in § 63.11116.

(c) If your GDF has a monthly throughput of 10,000 gallons of gasoline or more, you must comply with the requirements in § 63.11117.

(d) If your GDF has a monthly throughput of 100,000 gallons of gasoline or more, you must comply with the requirements in § 63.11118.

(e) An affected source shall, upon request by the Administrator, demonstrate that their monthly throughput is less than the 10,000-gallon or the 100,000-gallon threshold level, as applicable. For new or reconstructed affected sources, as specified in § 63.11112(b) and (c), recordkeeping to document monthly throughput must begin upon startup of the affected source. For existing sources, as specified in § 63.11112(d), recordkeeping to document monthly throughput must begin on January 10, 2008. For existing sources that are subject to this subpart only because they load gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, recordkeeping to document monthly throughput must begin on January 24, 2011. Records required under this paragraph shall be kept for a period of 5 years.

(f) If you are an owner or operator of affected sources, as defined in paragraph (a) of this section, you are not required to obtain a permit under 40 CFR part 70 or 40 CFR part 71 as a result of being subject to this subpart. However, you must still apply for and obtain a permit under 40 CFR part 70 or 40 CFR part 71 if you meet one or more of the applicability criteria found in 40 CFR 70.3(a) and (b) or 40 CFR 71.3(a) and (b).

(g) The loading of aviation gasoline into storage tanks at airports, and the subsequent transfer of aviation gasoline within the airport, is not subject to this subpart.

(h) Monthly throughput is the total volume of gasoline loaded into, or dispensed from, all the gasoline storage tanks located at a single affected GDF. If an area source has two or more GDF at separate locations within the area source, each GDF is treated as a separate affected source.

(i) If your affected source's throughput ever exceeds an applicable throughput threshold, the affected source will remain subject to the requirements for sources above the threshold, even if the affected source throughput later falls below the applicable throughput threshold.

(j) The dispensing of gasoline from a fixed gasoline storage tank at a GDF into a portable gasoline tank for the on-site delivery and subsequent dispensing of the gasoline into the fuel tank of a motor vehicle or other gasoline-fueled engine or equipment used within the area source is only subject to § 63.11116 of this subpart.

(k) For any affected source subject to the provisions of this subpart and another Federal rule, you may elect to comply only with the more stringent provisions of the applicable subparts. You must consider all provisions of the rules, including monitoring, recordkeeping, and reporting. You must identify the affected source and provisions with which you will comply in your Notification of Compliance Status required under § 63.11124. You also must demonstrate in your Notification of Compliance Status that each provision with which you will comply is at least as stringent as the otherwise applicable requirements in this subpart. You are responsible for making accurate determinations concerning the more stringent provisions, and noncompliance with this rule is not excused if it is later determined that your determination was in error, and, as a result, you are violating this subpart. Compliance with this rule is your responsibility and the Notification of Compliance Status does not alter or affect that responsibility.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4181, Jan. 24, 2011]

§ 63.11112 What parts of my affected source does this subpart cover?

(a) The emission sources to which this subpart applies are gasoline storage tanks and associated equipment components in vapor or liquid gasoline service at new, reconstructed, or existing GDF that meet the criteria specified in § 63.11111. Pressure/Vacuum vents on gasoline storage tanks and the equipment necessary to unload product from cargo tanks into the storage tanks at GDF are covered emission sources. The equipment used for the refueling of motor vehicles is not covered by this subpart.

(b) An affected source is a new affected source if you commenced construction on the affected source after November 9, 2006, and you meet the applicability criteria in § 63.11111 at the time you commenced operation.

(c) An affected source is reconstructed if you meet the criteria for reconstruction as defined in § 63.2.

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

§ 63.11113 When do I have to comply with this subpart?

(a) If you have a new or reconstructed affected source, you must comply with this subpart according to paragraphs (a)(1) and (2) of this section, except as specified in paragraph (d) of this section.

(1) If you start up your affected source before January 10, 2008, you must comply with the standards in this subpart no later than January 10, 2008.

(2) If you start up your affected source after January 10, 2008, you must comply with the standards in this subpart upon startup of your affected source.

(b) If you have an existing affected source, you must comply with the standards in this subpart no later than January 10, 2011.

(c) If you have an existing affected source that becomes subject to the control requirements in this subpart because of an increase in the monthly throughput, as specified in § 63.11111(c) or § 63.11111(d), you must comply with the standards in this subpart no later than 3 years after the affected source becomes subject to the control requirements in this subpart.

(d) If you have a new or reconstructed affected source and you are complying with Table 1 to this subpart, you must comply according to paragraphs (d)(1) and (2) of this section.

(1) If you start up your affected source from November 9, 2006 to September 23, 2008, you must comply no later than September 23, 2008.

(2) If you start up your affected source after September 23, 2008, you must comply upon startup of your affected source.

(e) The initial compliance demonstration test required under § 63.11120(a)(1) and (2) must be conducted as specified in paragraphs (e)(1) and (2) of this section.

(1) If you have a new or reconstructed affected source, you must conduct the initial compliance test upon installation of the complete vapor balance system.

(2) If you have an existing affected source, you must conduct the initial compliance test as specified in paragraphs (e)(2)(i) or (e)(2)(ii) of this section.

(i) For vapor balance systems installed on or before December 15, 2009, you must test no later than 180 days after the applicable compliance date specified in paragraphs (b) or (c) of this section.

(ii) For vapor balance systems installed after December 15, 2009, you must test upon installation of the complete vapor balance system.

(f) If your GDF is subject to the control requirements in this subpart only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must comply with the standards in this subpart as specified in paragraphs (f)(1) or (f)(2) of this section.

(1) If your GDF is an existing facility, you must comply by January 24, 2014.

(2) If your GDF is a new or reconstructed facility, you must comply by the dates specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) If you start up your GDF after December 15, 2009, but before January 24, 2011, you must comply no later than January 24, 2011.

(ii) If you start up your GDF after January 24, 2011, you must comply upon startup of your GDF.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4181, Jan. 24, 2011]

Emission Limitations and Management Practices

§ 63.11115 What are my general duties to minimize emissions?

Each owner or operator of an affected source under this subpart must comply with the requirements of paragraphs (a) and (b) of this section.

(a) You must, at all times, operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) You must keep applicable records and submit reports as specified in § 63.11125(d) and § 63.11126(b).

[76 FR 4182, Jan. 24, 2011]

§ 63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

(a) You must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following:

(1) Minimize gasoline spills;

(2) Clean up spills as expeditiously as practicable;

(3) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use;

(4) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators.

(b) You are not required to submit notifications or reports as specified in § 63.11125, § 63.11126, or subpart A of this part, but you must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(c) You must comply with the requirements of this subpart by the applicable dates specified in § 63.11113.

(d) Portable gasoline containers that meet the requirements of 40 CFR part 59, subpart F, are considered acceptable for compliance with paragraph (a)(3) of this section.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

§ 63.11117 Requirements for facilities with monthly throughput of 10,000 gallons of gasoline or more.

(a) You must comply with the requirements in section § 63.11116(a).

(b) Except as specified in paragraph (c) of this section, you must only load gasoline into storage tanks at your facility by utilizing submerged filling, as defined in § 63.11132, and as specified in paragraphs (b)(1), (b)(2), or (b)(3) of this section. The applicable distances in paragraphs (b)(1) and (2) shall be measured from the point in the opening of the submerged fill pipe that is the greatest distance from the bottom of the storage tank.

(1) Submerged fill pipes installed on or before November 9, 2006, must be no more than 12 inches from the bottom of the tank.

(2) Submerged fill pipes installed after November 9, 2006, must be no more than 6 inches from the bottom of the tank.

(3) Submerged fill pipes not meeting the specifications of paragraphs (b)(1) or (b)(2) of this section are allowed if the owner or operator can demonstrate that the liquid level in the tank is always above the entire opening of the fill pipe. Documentation providing such demonstration must be made available for inspection by the Administrator's delegated representative during the course of a site visit.

(c) Gasoline storage tanks with a capacity of less than 250 gallons are not required to comply with the submerged fill requirements in paragraph (b) of this section, but must comply only with all of the requirements in § 63.11116.

(d) You must have records available within 24 hours of a request by the Administrator to document your gasoline throughput.

(e) You must submit the applicable notifications as required under § 63.11124(a).

(f) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11118 Requirements for facilities with monthly throughput of 100,000 gallons of gasoline or more.

(a) You must comply with the requirements in §§ 63.11116(a) and 63.11117(b).

(b) Except as provided in paragraph (c) of this section, you must meet the requirements in either paragraph (b)(1) or paragraph (b)(2) of this section.

(1) Each management practice in Table 1 to this subpart that applies to your GDF.

(2) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(2)(i) and (ii) of this section, you will be deemed in compliance with this subsection.

(i) You operate a vapor balance system at your GDF that meets the requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraph (b)(2)(i)(A) or paragraph (b)(2)(i)(B) of this section.

(c) The emission sources listed in paragraphs (c)(1) through (3) of this section are not required to comply with the control requirements in paragraph (b) of this section, but must comply with the requirements in § 63.11117.

(1) Gasoline storage tanks with a capacity of less than 250 gallons that are constructed after January 10, 2008.

(2) Gasoline storage tanks with a capacity of less than 2,000 gallons that were constructed before January 10, 2008.

(3) Gasoline storage tanks equipped with floating roofs, or the equivalent.

(d) Cargo tanks unloading at GDF must comply with the management practices in Table 2 to this subpart.

(e) You must comply with the applicable testing requirements contained in § 63.11120.

(f) You must submit the applicable notifications as required under § 63.11124.

(g) You must keep records and submit reports as specified in §§ 63.11125 and 63.11126.

(h) You must comply with the requirements of this subpart by the applicable dates contained in § 63.11113.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008]

Testing and Monitoring Requirements

§ 63.11120 What testing and monitoring requirements must I meet?

(a) Each owner or operator, at the time of installation, as specified in § 63.11113(e), of a vapor balance system required under § 63.11118(b)(1), and every 3 years thereafter, must comply with the requirements in paragraphs (a)(1) and (2) of this section.

(1) You must demonstrate compliance with the leak rate and cracking pressure requirements, specified in item 1(g) of Table 1 to this subpart, for pressure-vacuum vent valves installed on your gasoline storage tanks using the test methods identified in paragraph (a)(1)(i) or paragraph (a)(1)(ii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.1E,—Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, adopted October 8, 2003 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(2) You must demonstrate compliance with the static pressure performance requirement specified in item 1(h) of Table 1 to this subpart for your vapor balance system by conducting a static pressure test on your gasoline storage tanks using the test methods identified in paragraphs (a)(2)(i), (a)(2)(ii), or (a)(2)(iii) of this section.

(i) California Air Resources Board Vapor Recovery Test Procedure TP-201.3,—Determination of 2-Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities, adopted April 12, 1996, and amended March 17, 1999 (incorporated by reference, see § 63.14).

(ii) Use alternative test methods and procedures in accordance with the alternative test method requirements in § 63.7(f).

(iii) Bay Area Air Quality Management District Source Test Procedure ST-30—Static Pressure Integrity Test—Underground Storage Tanks, adopted November 30, 1983, and amended December 21, 1994 (incorporated by reference, *see* § 63.14).

(b) Each owner or operator choosing, under the provisions of § 63.6(g), to use a vapor balance system other than that described in Table 1 to this subpart must demonstrate to the Administrator or delegated authority under paragraph § 63.11131(a) of this subpart, the equivalency of their vapor balance system to that described in Table 1 to this subpart using the procedures specified in paragraphs (b)(1) through (3) of this section.

(1) You must demonstrate initial compliance by conducting an initial performance test on the vapor balance system to demonstrate that the vapor balance system achieves 95 percent reduction using the California Air Resources Board Vapor Recovery Test Procedure TP-201.1,—Volumetric Efficiency for Phase I Vapor Recovery Systems, adopted April 12, 1996, and amended February 1, 2001, and October 8, 2003, (incorporated by reference, see § 63.14).

(2) You must, during the initial performance test required under paragraph (b)(1) of this section, determine and document alternative acceptable values for the leak rate and cracking pressure requirements specified in item 1(g) of Table 1 to this subpart and for the static pressure performance requirement in item 1(h) of Table 1 to this subpart.

(3) You must comply with the testing requirements specified in paragraph (a) of this section.

(c) Conduct of performance tests. Performance tests conducted for this subpart shall be conducted under such conditions as the Administrator specifies to the owner or operator based on representative performance (*i.e.,* performance based on normal operating conditions) of the affected source. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(d) Owners and operators of gasoline cargo tanks subject to the provisions of Table 2 to this subpart must conduct annual certification testing according to the vapor tightness testing requirements found in § 63.11092(f).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4182, Jan. 24, 2011]

Notifications, Records, and Reports

§ 63.11124 What notifications must I submit and when?

(a) Each owner or operator subject to the control requirements in § 63.11117 must comply with paragraphs (a)(1) through (3) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11117, unless you meet the requirements in paragraph (a)(3) of this section. If your affected source is subject to the control requirements in § 63.11117 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (a)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11117 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, within 60 days of the applicable compliance date specified in § 63.11113, unless you meet the requirements in paragraph (a)(3) of this section. The Notification of Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facilities' monthly throughput is calculated based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (a)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (a)(1) of this section.

(3) If, prior to January 10, 2008, you are operating in compliance with an enforceable State, local, or tribal rule or permit that requires submerged fill as specified in § 63.11117(b), you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (a)(1) or paragraph (a)(2) of this section.

(b) Each owner or operator subject to the control requirements in § 63.11118 must comply with paragraphs (b)(1) through (5) of this section.

(1) You must submit an Initial Notification that you are subject to this subpart by May 9, 2008, or at the time you become subject to the control requirements in § 63.11118. If your affected source is subject to the control requirements in § 63.11118 only because it loads gasoline into fuel tanks other than those in motor vehicles, as defined in § 63.11132, you must submit the Initial Notification by May 24, 2011. The Initial Notification must contain the information specified in paragraphs (b)(1)(i) through (iii) of this section. The notification must be submitted to the applicable EPA Regional Office and delegated State authority as specified in § 63.13.

(i) The name and address of the owner and the operator.

(ii) The address (i.e., physical location) of the GDF.

(iii) A statement that the notification is being submitted in response to this subpart and identifying the requirements in paragraphs (a) through (c) of § 63.11118 that apply to you.

(2) You must submit a Notification of Compliance Status to the applicable EPA Regional Office and the delegated State authority, as specified in § 63.13, in accordance with the schedule specified in § 63.9(h). The Notification of

Compliance Status must be signed by a responsible official who must certify its accuracy, must indicate whether the source has complied with the requirements of this subpart, and must indicate whether the facility's throughput is determined based on the volume of gasoline loaded into all storage tanks or on the volume of gasoline dispensed from all storage tanks. If your facility is in compliance with the requirements of this subpart at the time the Initial Notification required under paragraph (b)(1) of this section is due, the Notification of Compliance Status may be submitted in lieu of the Initial Notification provided it contains the information required under paragraph (b)(1) of this section.

(3) If, prior to January 10, 2008, you satisfy the requirements in both paragraphs (b)(3)(i) and (ii) of this section, you are not required to submit an Initial Notification or a Notification of Compliance Status under paragraph (b)(1) or paragraph (b)(2) of this subsection.

(i) You operate a vapor balance system at your gasoline dispensing facility that meets the requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(A) Achieves emissions reduction of at least 90 percent.

(B) Operates using management practices at least as stringent as those in Table 1 to this subpart.

(ii) Your gasoline dispensing facility is in compliance with an enforceable State, local, or tribal rule or permit that contains requirements of either paragraphs (b)(3)(i)(A) or (b)(3)(i)(B) of this section.

(4) You must submit a Notification of Performance Test, as specified in § 63.9(e), prior to initiating testing required by § 63.11120(a) and (b).

(5) You must submit additional notifications specified in § 63.9, as applicable.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 12276, Mar. 7, 2008; 76 FR 4182, Jan. 24, 2011]

§ 63.11125 What are my recordkeeping requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 must keep records of all tests performed under § 63.11120(a) and (b).

(b) Records required under paragraph (a) of this section shall be kept for a period of 5 years and shall be made available for inspection by the Administrator's delegated representatives during the course of a site visit.

(c) Each owner or operator of a gasoline cargo tank subject to the management practices in Table 2 to this subpart must keep records documenting vapor tightness testing for a period of 5 years. Documentation must include each of the items specified in § 63.11094(b)(2)(i) through (viii). Records of vapor tightness testing must be retained as specified in either paragraph (c)(1) or paragraph (c)(2) of this section.

(1) The owner or operator must keep all vapor tightness testing records with the cargo tank.

(2) As an alternative to keeping all records with the cargo tank, the owner or operator may comply with the requirements of paragraphs (c)(2)(i) and (ii) of this section.

(i) The owner or operator may keep records of only the most recent vapor tightness test with the cargo tank, and keep records for the previous 4 years at their office or another central location.

(ii) Vapor tightness testing records that are kept at a location other than with the cargo tank must be instantly available (*e.g.,* via e-mail or facsimile) to the Administrator's delegated representative during the course of a site visit or within a mutually agreeable time frame. Such records must be an exact duplicate image of the original paper copy record with certifying signatures.

(d) Each owner or operator of an affected source under this subpart shall keep records as specified in paragraphs (d)(1) and (2) of this section.

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

(2) Records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.11115(a), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

§ 63.11126 What are my reporting requirements?

(a) Each owner or operator subject to the management practices in § 63.11118 shall report to the Administrator the results of all volumetric efficiency tests required under § 63.11120(b). Reports submitted under this paragraph must be submitted within 180 days of the completion of the performance testing.

(b) Each owner or operator of an affected source under this subpart shall report, by March 15 of each year, the number, duration, and a brief description of each type of malfunction which occurred during the previous calendar year and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.11115(a), including actions taken to correct a malfunction. No report is necessary for a calendar year in which no malfunctions occurred.

[76 FR 4183, Jan. 24, 2011]

Other Requirements and Information

§ 63.11130 What parts of the General Provisions apply to me?

Table 3 to this subpart shows which parts of the General Provisions apply to you.

§ 63.11131 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the U.S. EPA or a delegated authority such as the applicable State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a State, local, or tribal agency.

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

(c) The authorities that cannot be delegated to State, local, or tribal agencies are as specified in paragraphs (c)(1) through (3) of this section.

(1) Approval of alternatives to the requirements in §§ 63.11116 through 63.11118 and 63.11120.

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

(3) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

§ 63.11132 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein shall have the meaning given them in the Clean Air Act (CAA), or in subparts A and BBBBBB of this part. For purposes of this subpart, definitions in this section supersede definitions in other parts or subparts.

Dual-point vapor balance system means a type of vapor balance system in which the storage tank is equipped with an entry port for a gasoline fill pipe and a separate exit port for a vapor connection.

Gasoline means any petroleum distillate or petroleum distillate/alcohol blend having a Reid vapor pressure of 27.6 kilopascals or greater, which is used as a fuel for internal combustion engines.

Gasoline cargo tank means a delivery tank truck or railcar which is loading or unloading gasoline, or which has loaded or unloaded gasoline on the immediately previous load.

Gasoline dispensing facility (GDF) means any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

Monthly throughput means the total volume of gasoline that is loaded into, or dispensed from, all gasoline storage tanks at each GDF during a month. Monthly throughput is calculated by summing the volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the current day, plus the total volume of gasoline loaded into, or dispensed from, all gasoline storage tanks at each GDF during the previous 364 days, and then dividing that sum by 12.

Motor vehicle means any self-propelled vehicle designed for transporting persons or property on a street or highway.

Nonroad engine means an internal combustion engine (including the fuel system) that is not used in a motor vehicle or a vehicle used solely for competition, or that is not subject to standards promulgated under section 7411 of this title or section 7521 of this title.

Nonroad vehicle means a vehicle that is powered by a nonroad engine, and that is not a motor vehicle or a vehicle used solely for competition.

Submerged filling means, for the purposes of this subpart, the filling of a gasoline storage tank through a submerged fill pipe whose discharge is no more than the applicable distance specified in § 63.11117(b) from the bottom of the tank. Bottom filling of gasoline storage tanks is included in this definition.

Vapor balance system means a combination of pipes and hoses that create a closed system between the vapor spaces of an unloading gasoline cargo tank and a receiving storage tank such that vapors displaced from the storage tank are transferred to the gasoline cargo tank being unloaded.

Vapor-tight means equipment that allows no loss of vapors. Compliance with vapor-tight requirements can be determined by checking to ensure that the concentration at a potential leak source is not equal to or greater than 100 percent of the Lower Explosive Limit when measured with a combustible gas detector, calibrated with propane, at a distance of 1 inch from the source.

Vapor-tight gasoline cargo tank means a gasoline cargo tank which has demonstrated within the 12 preceding months that it meets the annual certification test requirements in § 63.11092(f) of this part.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4183, Jan. 24, 2011]

Table 1 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More1

If you own or operate	Then you must
1. A new, reconstructed, or existing GDF subject to § 63.11118	Install and operate a vapor balance system on your gasoline storage tanks that meets the design criteria in paragraphs (a) through (h).
	(a) All vapor connections and lines on the storage tank shall be equipped with closures that seal upon disconnect.
	(b) The vapor line from the gasoline storage tank to the gasoline cargo tank shall be vapor-tight, as defined in § 63.11132.
	(c) The vapor balance system shall be designed such that the pressure in the tank truck does not exceed 18 inches water pressure or 5.9 inches water vacuum during product transfer.
	(d) The vapor recovery and product adaptors, and the method of connection with the delivery elbow, shall be designed so as to prevent the over-tightening or loosening of fittings during normal delivery operations.
	(e) If a gauge well separate from the fill tube is used, it shall be provided with a submerged drop tube that extends the same distance from the bottom of the storage tank as specified in § 63.11117(b).
	(f) Liquid fill connections for all systems shall be equipped with vapor-tight caps.
	(g) Pressure/vacuum (PV) vent valves shall be installed on the storage tank vent pipes. The pressure specifications for PV vent valves shall be: a positive pressure setting of 2.5 to 6.0 inches of water and a negative pressure setting of 6.0 to 10.0 inches of water. The total leak rate of all PV vent valves at an affected facility, including connections, shall not exceed 0.17 cubic foot per hour at a pressure of 2.0 inches of water and 0.63 cubic foot per hour at a vacuum of 4 inches of water.
	(h) The vapor balance system shall be capable of meeting the static pressure performance requirement of the following equation:
	$Pf = 2e^{-500.887/v}$
	Where:
	Pf = Minimum allowable final pressure, inches of water.
	v = Total ullage affected by the test, gallons.
	e = Dimensionless constant equal to approximately 2.718.
	2 = The initial pressure, inches water.
2. A new or reconstructed GDF, or any storage tank(s) constructed after November 9, 2006, at an existing affected facility subject to § 63.11118	Equip your gasoline storage tanks with a dual-point vapor balance system, as defined in § 63.11132, and comply with the requirements of item 1 in this Table.

[1] The management practices specified in this Table are not applicable if you are complying with the requirements in § 63.11118(b)(2), except that if you are complying with the requirements in § 63.11118(b)(2)(i)(B), you must operate using management practices at least as stringent as those listed in this Table.

[73 FR 1945, Jan. 10, 2008, as amended at 73 FR 35944, June 25, 2008; 76 FR 4184, Jan. 24, 2011]

Table 2 to Subpart CCCCCC of Part 63—Applicability Criteria and Management Practices for Gasoline Cargo Tanks Unloading at Gasoline Dispensing Facilities With Monthly Throughput of 100,000 Gallons of Gasoline or More

If you own or operate	Then you must
A gasoline cargo tank	Not unload gasoline into a storage tank at a GDF subject to the control requirements in this subpart unless the following conditions are met:
	(i) All hoses in the vapor balance system are properly connected,
	(ii) The adapters or couplers that attach to the vapor line on the storage tank have closures that seal upon disconnect,
	(iii) All vapor return hoses, couplers, and adapters used in the gasoline delivery are vapor-tight,
	(iv) All tank truck vapor return equipment is compatible in size and forms a vapor-tight connection with the vapor balance equipment on the GDF storage tank, and
	(v) All hatches on the tank truck are closed and securely fastened.
	(vi) The filling of storage tanks at GDF shall be limited to unloading from vapor-tight gasoline cargo tanks. Documentation that the cargo tank has met the specifications of EPA Method 27 shall be carried with the cargo tank, as specified in § 63.11125(c).

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Table 3 to Subpart CCCCCC of Part 63—Applicability of General Provisions

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.1	Applicability	Initial applicability determination; applicability after standard established; permit requirements; extensions, notifications	Yes, specific requirements given in § 63.11111.
§ 63.1(c)(2)	Title V Permit	Requirements for obtaining a title V permit from the applicable permitting authority	Yes, § 63.11111(f) of subpart CCCCCC exempts identified area sources from the obligation to obtain title V operating permits.
§ 63.2	Definitions	Definitions for part 63 standards	Yes, additional definitions in § 63.11132.
§ 63.3	Units and Abbreviations	Units and abbreviations for part 63 standards	Yes.
§ 63.4	Prohibited Activities and Circumvention	Prohibited activities; Circumvention, severability	Yes.
§ 63.5	Construction/Reconstruction	Applicability; applications; approvals	Yes, except that these notifications are not required for facilities subject to § 63.11116
§ 63.6(a)	Compliance with Standards/Operation & Maintenance—Applicability	General Provisions apply unless compliance extension; General Provisions apply to area sources that become major	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed Sources	Standards apply at effective date; 3 years after effective date; upon startup; 10 years after construction or reconstruction commences for CAA section 112(f)	Yes.
§ 63.6(b)(5)	Notification	Must notify if commenced construction or reconstruction after proposal	Yes.
§ 63.6(b)(6)	[Reserved]		
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Area sources that become major must comply with major source standards immediately upon becoming major, regardless of whether required to comply when they were an area source	No.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Comply according to date in this subpart, which must be no later than 3 years after effective date; for CAA section 112(f) standards, comply within 90 days of effective date unless compliance extension	No, § 63.11113 specifies the compliance dates.
§ 63.6(c)(3)-(4)	[Reserved]		
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Area sources That become major must comply with major source standards by date indicated in this subpart or by equivalent time period (e.g., 3 years)	No.
§ 63.6(d)	[Reserved]		
63.6(e)(1)(i)	General duty to minimize emissions	Operate to minimize emissions at all times; information Administrator will use to determine if operation and maintenance requirements were met.	No.*See*§ 63.11115 for general duty requirement.
63.6(e)(1)(ii)	Requirement to correct malfunctions ASAP	Owner or operator must correct malfunctions as soon as possible.	No.
§ 63.6(e)(2)	[Reserved]		
§ 63.6(e)(3)	Startup, Shutdown, and Malfunction (SSM) Plan	Requirement for SSM plan; content of SSM plan; actions during SSM	No.
§ 63.6(f)(1)	Compliance Except During SSM	You must comply with emission standards at all times except during SSM	No.
§ 63.6(f)(2)-(3)	Methods for Determining Compliance	Compliance based on performance test, operation and maintenance plans, records, inspection	Yes.
§ 63.6(g)(1)-(3)	Alternative Standard	Procedures for getting an alternative standard	Yes.
§ 63.6(h)(1)	Compliance with Opacity/Visible Emission (VE) Standards	You must comply with opacity/VE standards at all times except during SSM	No.
§ 63.6(h)(2)(i)	Determining Compliance with Opacity/VE Standards	If standard does not State test method, use EPA Method 9 for opacity in appendix A of part 60 of this chapter and EPA Method 22 for VE in appendix A of part 60 of this chapter	No.
§ 63.6(h)(2)(ii)	[Reserved]		

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.6(h)(2)(iii)	Using Previous Tests To Demonstrate Compliance With Opacity/VE Standards	Criteria for when previous opacity/VE testing can be used to show compliance with this subpart	No.
§ 63.6(h)(3)	[Reserved]		
§ 63.6(h)(4)	Notification of Opacity/VE Observation Date	Must notify Administrator of anticipated date of observation	No.
§ 63.6(h)(5)(i), (iii)-(v)	Conducting Opacity/VE Observations	Dates and schedule for conducting opacity/VE observations	No.
§ 63.6(h)(5)(ii)	Opacity Test Duration and Averaging Times	Must have at least 3 hours of observation with 30 6-minute averages	No.
§ 63.6(h)(6)	Records of Conditions During Opacity/VE Observations	Must keep records available and allow Administrator to inspect	No.
§ 63.6(h)(7)(i)	Report Continuous Opacity Monitoring System (COMS) Monitoring Data From Performance Test	Must submit COMS data with other performance test data	No.
§ 63.6(h)(7)(ii)	Using COMS Instead of EPA Method 9	Can submit COMS data instead of EPA Method 9 results even if rule requires EPA Method 9 in appendix A of part 60 of this chapter, but must notify Administrator before performance test	No.
§ 63.6(h)(7)(iii)	Averaging Time for COMS During Performance Test	To determine compliance, must reduce COMS data to 6-minute averages	No.
§ 63.6(h)(7)(iv)	COMS Requirements	Owner/operator must demonstrate that COMS performance evaluations are conducted according to § 63.8(e); COMS are properly maintained and operated according to § 63.8(c) and data quality as § 63.8(d)	No.
§ 63.6(h)(7)(v)	Determining Compliance with Opacity/VE Standards	COMS is probable but not conclusive evidence of compliance with opacity standard, even if EPA Method 9 observation shows otherwise. Requirements for COMS to be probable evidence-proper maintenance, meeting Performance Specification 1 in appendix B of part 60 of this chapter, and data have not been altered	No.
§ 63.6(h)(8)	Determining Compliance with Opacity/VE Standards	Administrator will use all COMS, EPA Method 9 (in appendix A of part 60 of this chapter), and EPA Method 22 (in appendix A of part 60 of this chapter) results, as well as information about operation and maintenance to determine compliance	No.
§ 63.6(h)(9)	Adjusted Opacity Standard	Procedures for Administrator to adjust an opacity standard	No.
§ 63.6(i)(1)-(14)	Compliance Extension	Procedures and criteria for Administrator to grant compliance extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	President may exempt any source from requirement to comply with this subpart	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.7(a)(2)	Performance Test Dates	Dates for conducting initial performance testing; must conduct 180 days after compliance date	Yes.
§ 63.7(a)(3)	CAA Section 114 Authority	Administrator may require a performance test under CAA section 114 at any time	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Must notify Administrator 60 days before the test	Yes.
§ 63.7(b)(2)	Notification of Re-scheduling	If have to reschedule performance test, must notify Administrator of rescheduled date as soon as practicable and without delay	Yes.
§ 63.7(c)	Quality Assurance (QA)/Test Plan	Requirement to submit site-specific test plan 60 days before the test or on date Administrator agrees with; test plan approval procedures; performance audit requirements; internal and external QA procedures for testing	Yes.
§ 63.7(d)	Testing Facilities	Requirements for testing facilities	Yes.
63.7(e)(1)	Conditions for Conducting Performance Tests	Performance test must be conducted under representative conditions	No, § 63.11120(c) specifies conditions for conducting performance tests.
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Must conduct according to this subpart and EPA test methods unless Administrator approves alternative	Yes.
§ 63.7(e)(3)	Test Run Duration	Must have three test runs of at least 1 hour each; compliance is based on arithmetic mean of three runs; conditions when data from an additional test run can be used	Yes.
§ 63.7(f)	Alternative Test Method	Procedures by which Administrator can grant approval to use an intermediate or major change, or alternative to a test method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Must include raw data in performance test report; must submit performance test data 60 days after end of test with the Notification of Compliance Status; keep data for 5 years	Yes.
§ 63.7(h)	Waiver of Tests	Procedures for Administrator to waive performance test	Yes.
§ 63.8(a)(1)	Applicability of Monitoring Requirements	Subject to all monitoring requirements in standard	Yes.
§ 63.8(a)(2)	Performance Specifications	Performance Specifications in appendix B of 40 CFR part 60 apply	Yes.
§ 63.8(a)(3)	[Reserved]		
§ 63.8(a)(4)	Monitoring of Flares	Monitoring requirements for flares in § 63.11 apply	Yes.
§ 63.8(b)(1)	Monitoring	Must conduct monitoring according to standard unless Administrator approves alternative	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Specific requirements for installing monitoring systems; must install on each affected source or after combined with another affected source before it is released to the atmosphere provided the monitoring is sufficient to demonstrate compliance with the standard; if more than one monitoring system on an emission point, must report all monitoring system results, unless one monitoring system is a backup	No.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Maintain monitoring system in a manner consistent with good air pollution control practices	No.
§ 63.8(c)(1)(i)-(iii)	Operation and Maintenance of Continuous Monitoring Systems (CMS)	Must maintain and operate each CMS as specified in § 63.6(e)(1); must keep parts for routine repairs readily available; must develop a written SSM plan for CMS, as specified in § 63.6(e)(3)	No.
§ 63.8(c)(2)-(8)	CMS Requirements	Must install to get representative emission or parameter measurements; must verify operational status before or at performance test	No.
§ 63.8(d)	CMS Quality Control	Requirements for CMS quality control, including calibration, etc.; must keep quality control plan on record for 5 years; keep old versions for 5 years after revisions	No.
§ 63.8(e)	CMS Performance Evaluation	Notification, performance evaluation test plan, reports	No.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Procedures for Administrator to approve alternative monitoring	No.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Procedures for Administrator to approve alternative relative accuracy tests for continuous emissions monitoring system (CEMS)	No.
§ 63.8(g)	Data Reduction	COMS 6-minute averages calculated over at least 36 evenly spaced data points; CEMS 1 hour averages computed over at least 4 equally spaced data points; data that cannot be used in average	No.
§ 63.9(a)	Notification Requirements	Applicability and State delegation	Yes.
§ 63.9(b)(1)-(2), (4)-(5)	Initial Notifications	Submit notification within 120 days after effective date; notification of intent to construct/reconstruct, notification of commencement of construction/reconstruction, notification of startup; contents of each	Yes.
§ 63.9(c)	Request for Compliance Extension	Can request if cannot comply by date or if installed best available control technology or lowest achievable emission rate	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.9(d)	Notification of Special Compliance Requirements for New Sources	For sources that commence construction between proposal and promulgation and want to comply 3 years after effective date	Yes.
§ 63.9(e)	Notification of Performance Test	Notify Administrator 60 days prior	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	Notify Administrator 30 days prior	No.
§ 63.9(g)	Additional Notifications when Using CMS	Notification of performance evaluation; notification about use of COMS data; notification that exceeded criterion for relative accuracy alternative	Yes, however, there are no opacity standards.
§ 63.9(h)(1)-(6)	Notification of Compliance Status	Contents due 60 days after end of performance test or other compliance demonstration, except for opacity/VE, which are due 30 days after; when to submit to Federal vs. State authority	Yes, however, there are no opacity standards.
§ 63.9(i)	Adjustment of Submittal Deadlines	Procedures for Administrator to approve change when notifications must be submitted	Yes.
§ 63.9(j)	Change in Previous Information	Must submit within 15 days after the change	Yes.
§ 63.10(a)	Recordkeeping/Reporting	Applies to all, unless compliance extension; when to submit to Federal vs. State authority; procedures for owners of more than one source	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	General requirements; keep all records readily available; keep for 5 years	Yes.
§ 63.10(b)(2)(i)	Records related to SSM	Recordkeeping of occurrence and duration of startups and shutdowns	No.
§ 63.10(b)(2)(ii)	Records related to SSM	Recordkeeping of malfunctions	No.*See*§ 63.11125(d) for recordkeeping of (1) occurrence and duration and (2) actions taken during malfunction.
§ 63.10(b)(2)(iii)	Maintenance records	Recordkeeping of maintenance on air pollution control and monitoring equipment	Yes.
§ 63.10(b)(2)(iv)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(v)	Records Related to SSM	Actions taken to minimize emissions during SSM	No.
§ 63.10(b)(2)(vi)-(xi)	CMS Records	Malfunctions, inoperative, out-of-control periods	No.
§ 63.10(b)(2)(xii)	Records	Records when under waiver	Yes.
§ 63.10(b)(2)(xiii)	Records	Records when using alternative to relative accuracy test	Yes.
§ 63.10(b)(2)(xiv)	Records	All documentation supporting Initial Notification and Notification of Compliance Status	Yes.
§ 63.10(b)(3)	Records	Applicability determinations	Yes.
§ 63.10(c)	Records	Additional records for CMS	No.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.10(d)(1)	General Reporting Requirements	Requirement to report	Yes.
§ 63.10(d)(2)	Report of Performance Test Results	When to submit to Federal or State authority	Yes.
§ 63.10(d)(3)	Reporting Opacity or VE Observations	What to report and when	No.
§ 63.10(d)(4)	Progress Reports	Must submit progress reports on schedule if under compliance extension	Yes.
§ 63.10(d)(5)	SSM Reports	Contents and submission	No.*See*§ 63.11126(b) for malfunction reporting requirements.
§ 63.10(e)(1)-(2)	Additional CMS Reports	Must report results for each CEMS on a unit; written copy of CMS performance evaluation; two-three copies of COMS performance evaluation	No.
§ 63.10(e)(3)(i)-(iii)	Reports	Schedule for reporting excess emissions	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	No.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	Requirement to revert to quarterly submission if there is an excess emissions and parameter monitor exceedances (now defined as deviations); provision to request semiannual reporting after compliance for 1 year; submit report by 30th day following end of quarter or calendar half; if there has not been an exceedance or excess emissions (now defined as deviations), report contents in a statement that there have been no deviations; must submit report containing all of the information in §§ 63.8(c)(7)-(8) and 63.10(c)(5)-(13)	No, § 63.11130(K) specifies excess emission events for this subpart.
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	Requirements for reporting excess emissions for CMS; requires all of the information in §§ 63.10(c)(5)-(13) and 63.8(c)(7)-(8)	No.
§ 63.10(e)(4)	Reporting COMS Data	Must submit COMS data with performance test data	No.
§ 63.10(f)	Waiver for Recordkeeping/Reporting	Procedures for Administrator to waive	Yes.

Citation	Subject	Brief description	Applies to subpart CCCCCC
§ 63.11(b)	Flares	Requirements for flares	No.
§ 63.12	Delegation	State authority to enforce standards	Yes.
§ 63.13	Addresses	Addresses where reports, notifications, and requests are sent	Yes.
§ 63.14	Incorporations by Reference	Test methods incorporated by reference	Yes.
§ 63.15	Availability of Information	Public and confidential information	Yes.

[73 FR 1945, Jan. 10, 2008, as amended at 76 FR 4184, Jan. 24, 2011]

Indiana Department of Environmental Management
Office of Air Quality

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

Source Background and Description

Source Name:	**Arconic, Inc.**
Source Location:	**3131 East Main Street, Lafayette, IN 47905**
County:	**Tippecanoe**
SIC Code:	**3341 (Secondary Smelting and Refining of Nonferrous Metals)** **3354 (Aluminum Extruded Products)**
Master Agency Interest ID No.:	**11814**
Operation Permit Renewal No.:	**T157-38267-00001**
Permit Reviewer:	**Tamara Havics**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application for Arconic Inc. relating to the operation of a stationary secondary aluminum production facility. On March 1, 2017, Arconic Inc. submitted an application to the OAQ requesting to renew its operating permit. Arconic Inc. was issued its second Part 70 Operating Permit Renewal (T157-30520-00001) on November 28, 2012.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

Ingot Department

(a) One (1) #2-2 tilting-melting-holding furnace, identified as emission unit 2, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 89-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(b) One (1) #2-3 tilting-melting-holding furnace, identified as emission unit 3, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 90-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(c) One (1) #2-4 tilting-melting-holding furnace, identified as emission unit 4, constructed in 1991, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 88-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(d) One (1) #2-5 tilting-melting-holding furnace, identified as emission unit 5, constructed in 1988, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 87-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(e) One (1) #2-6 tilting-melting-holding furnace, identified as emission unit 6, constructed in 1995, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 94-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(f) One (1) #4 melting furnace, identified as emission unit 7, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 5-8;

[Under 40 CFR 63, Subpart RRR, this is an affected facility]

(g) One (1) #3 ingot preheater, identified as emission unit 20, constructed in 1985, with a maximum heat input capacity of 17.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 29-7;

(h) One (1) #4 ingot preheater, identified as emission unit 21, constructed in 1980, with a maximum heat input capacity of 12.3 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 30-7;

(i) One (1) #7 ingot preheater, identified as emission unit 23, constructed in 1997, with a maximum heat input capacity of 20.0 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 24-7;

(j) One (1) #10 ingot preheater, identified as emission unit 24, constructed in 1966, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 24-7;

(k) One (1) #11 ingot preheater, identified as emission unit 25, constructed in 1966, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 23-7;

(l) One (1) #12 ingot preheater, identified as emission unit 26, constructed in 1967, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 22-7;

(m) One (1) #13 ingot preheater, identified as emission unit 27, constructed in 1967, with a maximum heat input capacity of 13.5 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 21-7;

Extrusion - 1

(a) One (1) #5 press reheat furnace, identified as emission unit 35, constructed in 1975, with a maximum heat input capacity of 18.0 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 56-12;

(b) One (1) #2 press reheat furnace, identified as emission unit 37, constructed in 1987, with a maximum heat input capacity of 16.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(c) One (1) #12 press reheat furnace, identified as emission unit 38, constructed in 1989, with a maximum heat input capacity of 16.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(d) One (1) #6 age oven, identified as emission unit 50, constructed in 1996, with a maximum heat input capacity of 14.0 million Btu per hour, natural gas-fired, with emissions uncontrolled;

(e) One (1) #3 billet reheat furnace, identified as 3BRF, permitted in 2016, with a maximum heat input capacity of 11.35 MMBtu/hr, natural gas-fired, with emissions uncontrolled and exhausting to stack S-3BRF;

Extrusion - 2

(a) One (1) #1 horizontal heat treat furnace, identified as emission unit 71, constructed in 1957, with a maximum heat input capacity of 13.2 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting to stack 68-112;

Tube Mill

(a) One (1) tube mill solvent dip tank, identified as emission unit 94, constructed in 1942, with a maximum capacity of 5,000 gallons, with emissions uncontrolled;

(b) One (1) tube mill solvent dip tank, identified as emission unit 95, constructed in 1942, with a maximum capacity of 10,000 gallons, with emission uncontrolled;

(c) One (1) tube mill solvent tank farm, identified as emission unit 98, constructed in 1942, consisting of four (4) active tanks and three (3) closed tanks, with emission uncontrolled;

(d) Bronx 10 Roll Tube Straightener, identified as unit 142, approved in 2018 for construction, with a maximum capacity of less than 10 tons per year of VOC solvent used for cleaning and lubricating metal, using no control, and exhausting to atmosphere;

(e) #6 Pre-Roll Machine, identified as unit 145, installed in 1973, using no control, and exhausting internally;

(f) #4 Roll Machine, identified as unit 146, installed in 1984, using no control, and exhausting internally;

(g) Wyko Tube Straightener, identified as unit 144, installed in 1995, using no control and exhausting internally.

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, constructed in 2014, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs per nine (9) hour cycle), with a natural gas-fired furnace rated at 12.8 MMBtu/hr, exhausting to stack ALLI-S1;

(b) Two (2) natural gas-fired homogenizing ovens, identified as ALLI-27 and ALLI-28, constructed in 2014, each with a maximum time-weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 21.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Plant Miscellaneous

(a) One (1) diesel air compressor, identified as emission unit EUDAC#1, constructed in 2005, with a maximum capacity of 450 brake horsepower, exhausting through stack DAC#1.

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

Insignificant Activities

The source also consists of the following insignificant activities:

Ingot Department

(a) “622" filter boxes for transferring metal from #41 holding furnace to #11 casting pit, identified as emission unit 9, constructed prior to 1970, with a maximum time-weighted throughput of 6.2 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux with a maximum heat input capacity of 0.8 million Btu per hour;

(b) “622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #12 casting pit, identified as emission unit 10, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(c) “622" filter boxes for transferring metal from 2-2 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 11, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(d) “622" filter boxes for transferring metal from 2-3 tilting-melting-holding furnace to #13 casting pit, identified as emission unit 12, constructed prior to 1970, with a maximum time-weighted throughput of 6.0 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(e) “622" filter boxes for transferring metal from 2-4 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 13, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(f) “622" filter boxes for transferring metal from 2-5 tilting-melting-holding furnace to #14 casting pit, identified as emission unit 14, constructed prior to 1970, with a maximum time-weighted throughput of 9.6tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(g) “622" filter boxes for transferring metal from 2-6 tilting-melting-holding furnace to #15 casting pit, identified as emission unit 15, constructed prior to 1970, with a maximum time-weighted throughput of 9.6 tons of molten aluminum per hour, using natural gas-fired burners, used for adding argon and chlorine flux, with a maximum heat input capacity of 0.8 million Btu per hour;

(h) One (1) north skim cooling operation, identified as emission unit 16, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 3-8F;

(i) One (1) south skim cooling operation, identified as emission unit 17, constructed prior to 1970, with a maximum capacity of 2.0 tons per hour, with emissions exhausting to stack 4-8F;

(j) One (1) Niles lathe operation, identified as emission unit 31, constructed in 2004, with a maximum capacity of 47.0 tons per hour, with emissions controlled by the Ingot Rotoclone (130) with a maximum capacity of 4,000 CFM, exhausting to stack S31;

(k) One (1) diesel-fired emergency generator for Ingot Department water recirculation, identified as emission unit 136, constructed in 1990, with a maximum capacity of 469 HP (350 kW), exhausting to stack S136;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(l) One (1) #41 holding furnace, identified as emission unit 8, constructed prior to 1970, with a maximum time-weighted capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, with emissions exhausting to stack 6-8;

(m) One (1) #5 ingot preheater, identified as emission unit 22, constructed prior to 1970, with a maximum heat input capacity of 7.4 million Btu per hour, natural gas-fired, with emissions uncontrolled and exhausting internally;

(n) One (1) ingot pig drying oven, identified as emission unit 28, constructed prior to 1970, with a maximum capacity of 4.7 MMBtu/hr, natural gas fired, exhausting internally;

(o) One (1) ingot cooling recovery operation, identified as emission unit 29, constructed prior to 1970, with a maximum capacity of 0.4 MMBtu/hr, natural gas fired, exhausting internally;

(p) One (1) refractory basin dry out oven, identified as emission unit 30, constructed prior to 1970, with a maximum capacity of 2.00 MMBtu/hr, natural gas fired, exhausting internally;

(q) One (1) #2 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(r) One (1) #5 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(s) One (1) #6 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(t) One (1) #7 saw operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(u) One (1) #1 boring machine, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(v) One (1) #9 boring machine, constructed 2010 with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(w) One (1) Ingersoll boring machine, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(x) One (1) Medart peeler, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(y) One (1) Springfield lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(z) One (1) Monarch lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(aa) One (1) Gisholt lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

(bb) One (1) LaBlond lathe, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled;

Extrusion - 1

(a) One (1) clear coating applicator, constructed in 1999, identified as emission unit 141, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started;

(b) One (1) #1 press, runout table saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(c) One (1) #1 press, #17 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(d) One (1) #2 press, puller saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(e) One (1) #2 press, #2 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(f) One (1) #15 press, west rough cut saw 1, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(g) One (1) #15 press, west rough cut saw 2, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(h) One (1) #18 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(i) One (1) #1 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone exhausting internally;

(j) One (1) #2 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone exhausting internally;

(k) One (1) #11 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, exhausting internally;

(l) One (1) #12 Oliver saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(m) One (1) #13 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, exhausting internally;

(n) One (1) #20 stretcher saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(o) One (1) #20 finish saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(p) One (1) #3 extrusion press saw operation, identified as emission unit 135, permitted in 2018, with a maximum throughput capacity of 5,000 tons per year, with emissions controlled by dust collector 135DC with a maximum capacity of 7,500 CFM, exhausting to stack S135;

(q) One (1) diesel emergency generator for the wastewater treatment plant, identified as emission unit 137, constructed in 1990, with a maximum capacity of 241.2 HP (180 kW), exhausting externally through a stack;

[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(r) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3A, constructed prior to 1970, exhausting internally;

(s) One (1) #1 vertical Swindell Heat Treat furnace, identified as emission unit 32, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(t) One (1) #2 vertical Swindell Heat Treat furnace, identified as emission unit 33, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(u) One (1) #3 vertical Swindell Heat Treat furnace, identified as emission unit 34, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(v) One (1) #1-1A reheat furnace, identified as emission unit 39, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(w) One (1) #10-10A reheat furnace, identified as emission unit 41, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(x) One (1) #13 press billet reheat furnace, identified as emission unit 43, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(y) One (1) #1 age anneal extrusion oven, identified as emission unit 44, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(z) One (1) #3 age anneal extrusion oven, identified as emission unit 45, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(aa) One (1) #4 age anneal extrusion oven, identified as emission unit 46, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(bb) One (1) #1 age oven, identified as emission unit 47, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(cc) One (1) #2 age oven, identified as emission unit 48, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(dd) One (1) #5 age oven, identified as emission unit 49, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(ee) One (1) #13 press hot box die heating oven furnace, identified as emission unit 51, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(ff) One (1) #14 press reheat furnace, identified as emission unit 51-1, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(gg) One (1) #15 press reheat furnace, identified as emission unit 51-2, constructed prior to 1970, with a maximum heat input capacity of 0.9 million Btu per hour, exhausting internally;

(hh) One (1) caustic die cleaning system, identified as emission unit 52, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting externally;

(ii) One (1) #4 heat treat furnace, identified as emission unit 134, constructed prior to 1970, and each with a maximum heat input capacity of 3.0 million Btu per hour, exhausting to stack S134;

(jj) One (1) extrusion etch sampling operation, identified as emission unit 53, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr, with a maximum capacity of 1,500 CFM, and exhausting to stack S53;

(kk) One (1) #1 press, runout table saws, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(ll) One (1) #1 press, #17 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(mm) One (1) #2 press, puller saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled discharging internally;

(nn) One (1) #2 press, #2 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(oo) One (1) #15 press, west rough cut saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(pp) One (1) #15 press, east rough cut saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(qq) One (1) #18 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(rr) One (1) #1 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone discharging internally;

(ss) One (1) #2 sander, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a rotoclone discharging internally;

(tt) One (1) #20 stretcher finish saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled discharging internally;

(uu) One (1) #12 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector discharging internally;

(vv) One (1) #11 saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, discharging internally;

(ww) One (1) #13 press saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled, discharging internally;

Die Shop

(a) One (1) caustic die cleaning system, identified as emission unit 124, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and with a maximum capacity of 6,000 CFM, exhausting externally;

(b) One (1) die etch system, identified as emission unit 125, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and with a maximum capacity of 1,500 CFM, exhausting externally;

(h) One (1) #20 weld furnace, identified as emission unit 59, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(i) One (1) #21 high heat furnace, identified as emission unit 60, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(j) One (1) #22 high heat furnace, identified as emission unit 61, constructed prior to 1970, with a maximum heat input capacity of 1.5 million Btu per hour, exhausting internally;

(k) One (1) #23 draw furnace, identified as emission unit 62, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(m) One (1) #43 salt pot furnace, identified as emission unit 64, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(n) One (1) #42 vertical heat treat endo gas furnace, identified as emission unit 65, constructed prior to 1970, with a maximum heat input capacity of 1.8 million Btu per hour, exhausting internally;

(o) One (1) #10 lead pot furnace, identified as emission unit 66, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

Extrusion - 2

(a) One (1) #21 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(b) One (1) #22 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(c) One (1) #23 press DoAll band saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled and exhausting internally;

(d) One (1) #23 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(e) One (1) #24 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(f) One (1) #28 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(g) One (1) #34 sawing operation, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(h) One (1) #27 sawing operation, identified as emission unit 131, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector, exhausting internally;

(i) One (1) #37 band saw, identified as emission unit 132, constructed prior to 1970, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector, exhausting internally;

(j) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3B, constructed prior to 1970, exhausting internally;

(k) One (1) parts washer supporting Extrusion 2, constructed after January 1, 1980, with a maximum solvent usage of 145 gallons per twelve (12) months, and emissions uncontrolled and equipped with a cover;

(l) One (1) #21 vertical Swindell heat treat furnace, identified as emission unit 68, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(m) One (1) #22 vertical Swindell heat treat furnace, identified as emission unit 69, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(n) One (1) #23 vertical Swindell heat treat furnace, identified as emission unit 70, constructed prior to 1970, with a maximum heat input capacity of 8.0 million Btu per hour, exhausting internally;

(o) One (1) #2 horizontal heat treat furnace, identified as emission unit 72, constructed prior to 1970, with a maximum heat input capacity of 10.0 million Btu per hour, natural gas-fired, exhausting internally;

(p) One (1) #21 age oven, identified as emission unit 73, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(q) One (1) #22 age oven, identified as emission unit 74, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, exhausting internally;

(r) One (1) #24 age oven, identified as emission unit 75, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(s) One (1) #25 age oven, identified as emission unit 76, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(t) One (1) #23 anneal furnace, identified as emission unit 77, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(u) One (1) #29-29A reheat furnace, identified as emission unit 77-2, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(v) Two (2) Dreaver die heating ovens, identified as emission unit 77-3, constructed prior to 1970, with a maximum heat input capacity of 2.0 million Btu per hour, each, exhausting internally;

(w) One (1) 22 press Swindell die heating oven #1, identified as emission unit 77-4, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(x) One (1) 22 press Swindell die heating oven #2, identified as emission unit 77-5, constructed prior to 1970, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting internally;

(y) One (1) 23 press Rockwell die heating oven, identified as emission unit 78, constructed prior to 1970, with a maximum heat input capacity of 6.0 million Btu per hour, exhausting internally;

(z) One (1) 21 press Granco die oven, identified as emission unit 77-1, constructed prior to 1970, with a maximum heat input capacity of 2.5 million Btu per hour, exhausting internally;

(aa) One (1) 21 press mandrel heater oven, with a maximum heat input capacity of 2.5 million Btu per hour, exhausting internally;

Tube Mill

(a) One (1) Lochnivar mineral spirits reclamation boiler, identified as emission unit 90, constructed in 1995, with a maximum heat input capacity of 0.4 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(b) One (1) Cleaver Brooks boiler, identified as emission unit 93, constructed in 2008, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired, exhausting externally through a stack;

(c) One (1) polishing wheel operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 126, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(d) One (1) wheel repair operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 127, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(e) One (1) flap wheel grinders operation, with particulate emission controlled by a Rotoclone, identified as emission unit 128, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(f) One (1) belt grinders operation, with particulate emissions controlled by a Rotoclone, identified as emission unit 129, constructed prior to 1970, with a maximum capacity of 47.0 tons/hr and a maximum capacity of 1,500 CFM;

(g) One (1) Grind Cell area saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(h) One (1) inking operation including video jet, pannier ink, and clean up solvent usage, identified as emission unit 51-3C, constructed prior to 1970, exhausting internally;

(i) Eighteen (18) parts washers supporting Tube Mill operations, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

(j) One (1) #30 age anneal furnace, identified as emission unit 79, constructed prior to 1970, with a maximum heat input capacity of 6.0 million Btu per hour, exhausting internally;

(k) One (1) #31 Swindell vertical heat treat furnace, identified as emission unit 80, constructed prior to 1970, with a maximum heat input capacity of 3.0 million Btu per hour, exhausting internally;

(l) One (1) #32 Swindell vertical heat treat furnace, identified as emission unit 81, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(m) One (1) #31 age anneal furnace, identified as emission unit 82, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(n) One (1) #32 age anneal furnace, identified as emission unit 83, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(o) One (1) #33 age anneal furnace, identified as emission unit 84, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(p) One (1) #34 age anneal furnace, identified as emission unit 85, constructed prior to 1970, with a maximum heat input capacity of 4.5 million Btu per hour, exhausting internally;

(q) One (1) #34 age anneal furnace afterburner, identified as emission unit 86, constructed prior to 1970, with a maximum heat input capacity of 5.0 million Btu per hour, exhausting internally;

(r) One (1) #35 age anneal furnace, identified as emission unit 87, constructed prior to 1970, with a maximum heat input capacity of 7.0 million Btu per hour, exhausting internally;

(s) One (1) #37 age anneal furnace, identified as emission unit 88, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(t) One (1) #39 age oven, identified as emission unit 89, constructed prior to 1970, with a maximum heat input capacity of 4.0 million Btu per hour, exhausting internally;

(u) One (1) #43 age anneal furnace, identified as emission unit 91, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(v) One (1) #44 age anneal furnace, identified as emission unit 96, constructed prior to 1970, with a maximum heat input capacity of 2.2 million Btu per hour, exhausting internally;

(w) One (1) natural gas-fired water heater for the wash unit at the 6 Cell Drive shaft production facility, permitted in 2016 with a maximum rated capacity of 0.42 MMBtu/hr;

(x) Sutton 2KT Roll Tube Straightener, identified as unit 143, installed in 1948, using no control, and exhausting internally;

(y) One (1) #3 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(z) One (1) #3 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(aa) One (1) #4 DSC chipless cutter sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(bb) One (1) #4 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(cc) One (1) #5 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(dd) One (1) #5 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(ee) One (1) #6 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ff) One (1) #6 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(gg) One (1) Small Cell, #10 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(hh) One (1) #7 Short Cut Cell saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ii) One (1) #3 saw, with a maximum capacity of 47.0 tons per hour, with emissions uncontrolled exhausting internally;

(jj) One (1) Large Cell, #12 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(kk) One (1) “T” Cell saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ll) One (1) #4 saw east, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(mm) One (1) #4A saw west, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(nn) One (1) #11 saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a Rotoclone exhausting internally;

(oo) One (1) #10 Oliver saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(pp) One (1) #10 Draw Bench saw, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

(qq) One (1) natural gas-fired wash unit water heater, identified as emission unit 97, constructed prior to 1970, with a maximum heat input capacity of 0.4 million Btu per hour, exhausting internally.

(rr) One (1) #7 DSC sawing operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone/bag chip collector exhausting internally;

(ss) One (1) #7 DSC chamfer operation, with a maximum capacity of 47.0 tons per hour, with emissions controlled by a cyclone chip collector exhausting internally;

Aluminum-Lithium Alloy Cast House

(a) Two (2) scrap drying ovens, identified as ALLI-22 and ALLI-23, constructed in 2014, each rated at 4.4 MMBtu/hr, natural gas fired, exhausting to stacks ALLI-S22 and ALLI-S23;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, constructed in 2014, each with a maximum time-weighted average throughput of 5.18 lb of molten lithium per hour (44.0 lb of molten lithium per cycle);

(c) Three (3) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-19, constructed in 2014, each with a maximum time-weighted average throughput capacity of 37.5 lb of molten lithium per hour (900.0 lb of molten lithium per cycle);

(d) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, constructed in 2014 and approved in 2018 for modification, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle), using a maximum of 1.0 lb of Amlox 90F flux (or equivalent) per ton of metal melted, using no control and exhausting internally;

[Under 40 CFR 63, Subpart RRR, these are affected facilities]

(e) One (1) skim cooling operation, identified as ALLI-32, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(f) One (1) skim loadout operation, identified as ALLI-33, constructed in 2014, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average);

(g) One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34;

[Under 40 CFR 60, Subpart JJJJ, this is an affected facility]
[Under 40 CFR 63, Subpart ZZZZ, this is an affected facility]

(h) Natural gas-fired space heaters, permitted in 2012, each rated at a maximum of 10.0 MMBtu/hr, with a total heat input capacity of 100.0 MMBtu/hr, exhausting internally;

(i) One (1) natural gas-fired hot water heater, identified as ALLI-37, constructed in 2014, with maximum heat input capacity of 4.0 MMBtu/hr and tank capacity of 100 gallons, and exhausting internally;

(j) One (1) 2-stage A622 filter, identified as ALLI-26, permitted in 2012 and approved in 2018 for modification, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle), using a maximum of 0.258 lbs of Amlox 90F (or equivalent) flux per ton of metal melted, using no control and exhausting internally;

(k) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput of 7,233 pounds per hour, exhausting internally;

(l) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour, with emissions controlled by dust collector ALLI-30DC with a maximum capacity of 1,500 CFM, exhausting internally;

(m) One (1) dog bone band saw, identified as ALLI-31, permitted in 2018, with a maximum throughput of 7,233 pounds per hour, exhausting internally;

(n) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput capacity of 1,200 gallons per minute;

Shipping

(a) One (1) clear coating applicator, identified as emission unit 112, constructed in 1997, consisting of a roller conveyor that runs the aluminum pieces through an enclosed spray chamber. In the spray chamber there are nozzles that apply the protective coating to the aluminum pieces. The overspray falls to a collection reservoir and is reused. There is a pump in the collection reservoir which will be activated whenever the coating is started;

(b) Four (4) clear coating applicators, identified as emission unit 112, constructed in 1997, consisting of a hand held spray applicator wand and pressurized reservoir. The protective coating is applied to the aluminum pieces by hand to minimize overspray.

Plant Miscellaneous

(a) One (1) rented boiler, identified as TB, constructed in 2011, with a maximum heat input capacity of 2.5 million Btu per hour, natural gas-fired;

(b) One (1) Pacific boiler, identified as emission unit 103, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(c) One (1) Pacific boiler, identified as emission unit 104, located in the main office building, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour, natural gas-fired;

(d) One (1) steam pad heater, identified as emission unit 135, constructed prior to 1970, with a maximum capacity of 0.3 MMBtu/hr, natural gas-fired.

(e) One hundred four (104) space heaters, identified as emission unit 133, constructed between 2001 and 2011, with a total maximum design capacity of 137.1 million British thermal units per hour (MMBtu/hr), natural gas-fired;

(f) A gasoline fuel transfer and dispensing operation handling less than or equal to 1,300 gallons per day, such as filling of tanks, locomotives, automobiles, having a storage capacity less than or equal to 10,500 gallons, consisting of the following:

(1) One (1) gasoline fuel tank, identified as emission unit 119, constructed prior to 1970, with a maximum capacity of 6,000 gallons and a throughput of 1,400 gallons per month;

[Under 40 CFR 63, Subpart CCCCCC, this is an affected facility]

(g) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 101, constructed in 1960, with emissions controlled by an integral cyclone, identified as the #1 sawdust collector, and exhausting to stack 73-57;

(h) One (1) wood sawing operation located in the carpenter shop, identified as emission unit 102, constructed in 1960, with emissions controlled by an integral baghouse, identified as the #2 sawdust collector and exhausting to stack 72-57;

(i) Sawing activities located in the Quality Lab, constructed prior to 1970, with particulate emissions controlled by cyclones, and exhausting internally;

(j) Paved and unpaved roads;

(k) Eleven (11) parts washers supporting Maintenance, all constructed after January 1, 1980, each with a maximum solvent usage of 145 gallons per twelve (12) months and emissions uncontrolled and equipped with a cover;

(l) One (1) diesel fuel tank, identified as emission unit 116, constructed prior to 1970, with a maximum capacity of 500 gallons;

(m) One (1) #2 diesel fuel tank, identified as emission unit 117, constructed prior to 1970, with a maximum capacity of 3,000 gallons;

(n) One (1) distillate fuel oil tank, identified as emission unit 118, constructed prior to 1970, with a maximum capacity of 300,000 gallons;

(o) One (1) propane emergency generator, identified as emission unit 138, constructed in 1990, with a maximum capacity of 80 kW;

(p) One (1) physical laboratory, identified as emission unit 140, constructed prior to 1970;

Miscellaneous Water Cooling Towers:

(a) One (1) Evaporative Contact Cooling Tower, identified as Ingot Tower, installed in 1970, with a maximum throughput of 5,400 gallons per minute;

(b) One (1) Evaporative Non- Contact Cooling Tower, identified as North Tower, installed in 1989, with a maximum throughput of 360 gallons per minute;

(c) One (1) Evaporative Non- Contact Cooling Tower, identified as South East Tower, installed in 1989, with a maximum throughput of 390 gallons per minute;

(d) One (1) Evaporative Non- Contact Cooling Tower, identified as #1 Press Tower, installed in 1995, with a maximum throughput of 506 gallons per minute;

(e) One (1) Evaporative Non- Contact Cooling Tower, identified as South West Tower, installed in 1999, with a maximum throughput of 360 gallons per minute;

(f) One (1) Evaporative Non- Contact Cooling Tower, identified as Swindell Tower, installed in 1999, with a maximum throughput of 280 gallons per minute;

(g) One (1) Evaporative Non- Contact Cooling Tower, identified as Tube Mill Tower, installed in 2000, with a maximum throughput of 450 gallons per minute;

(h) One (1) Evaporative Non- Contact Cooling Tower, identified as Abar Tower, installed in 2001, with a maximum throughput of 200 gallons per minute;

(i) One (1) Evaporative Non- Contact Cooling Tower, identified as Induction Tower, installed in 2001, with a maximum throughput of 1,260 gallons per minute;

(j) One (1) Evaporative Non- Contact Cooling Tower, identified as HHT Tower, installed in 2001, with a maximum throughput of 900 gallons per minute;

(k) One (1) Evaporative Non- Contact Cooling Tower, identified as #23 Tower, installed in 2001, with a maximum throughput of 265 gallons per minute;

(l) One (1) Portable Cooling Tower, installed in 2016, with a maximum throughput of 280 gallons per minute;

(m) One (1) #3 cooling tower, identified as 3CT, permitted in 2016, with a maximum capacity of 285 gallons/minute.

Existing Approvals

Since the issuance of the Part 70 Operating Permit Renewal (T157-30520-00001) on November 28, 2012, the source has constructed or has been operating under the following additional approvals:

(a) Administrative Amendment No.: 157-33561-00001, issued on December 2, 2013;
(b) Significant Permit Modification No.: 157-34081-00001, issued on July 23, 2014;
(c) Significant Permit Modification No.: 157-36780-00001, issued on August 26, 2016; and
(d) Administrative Amendment No.: 157-37799-00001, issued on December 22, 2016.
(e) Minor Source Modification No.: 157-39617-00001, issued on July 6, 2018;

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

"Integral Part of the Process" Determination

In October 1993 a Final Order Granting Summary Judgment was signed by Administrative Law Judge ("ALJ") Garrettson resolving an appeal filed by Kimball Hospitality Furniture Inc. (Cause Nos. 92-A-J-730 and 92-A-J-833) related to the method by which IDEM calculated potential emissions from woodworking operations. In his findings, the ALJ determined that particulate controls are necessary for the facility to produce its normal product and are integral to the normal operation of the facility, and therefore, potential emissions should be calculated after controls. Based on this ruling, the potential to emit particulate matter from the woodworking operations were calculated after consideration of the controls for determining operating permit level and for determining the applicability of 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes) and Prevention of Significant Deterioration (PSD).

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 in 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 the other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a secondary aluminum metal production plant it is considered one (1) of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1), 326 IAC 2-3-2(g), or 326 IAC 2-7-1(22)(B). Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

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

Pursuant to 326 IAC 2-7-1(30), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA."

The following table is used to determine the appropriate permit level under 326 IAC 2-7. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	200
PM_{10}	205
$PM_{2.5}$	202

Unrestricted Potential Emissions	
Pollutant	Tons/year
SO_2	6.67
NO_x	420
VOC	72.64
CO	337
Single HAP	> 10
Total HAP	> 25

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 PM, PM10, PM2.5, NOx and CO is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(30)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(30)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2016 OAQ emission data.

Pollutant	Actual Emissions (tons/year)
PM	3.79
PM_{10}	3.79
SO_2	0.15
NO_x	18.00
VOC	40.25
CO	15.60
HAP (lead)	0.0001

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Proposed Modification

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed applications, submitted by Arconic, Inc. on April 10, 2018, February 12, 2018, and July 10, 2017, relating to the following changes:

1. Adding the Bronx 10 Roll Tube Straightener in the Tube Mill Department.

2. Changing VOC solvent usage calculations and accountability for the Tube Mill Department to include emissions from two (2) existing straighteners and two (2) existing roll machines.

3. Dust collector ALLI-30DC has been added to the existing one (1) billet peeler lathe, identified as ALLI-30, permitted in 2012.

4. The permittee has started using a solvent which has a lower VOC content in clear coating applicators, identified as emission units 141 and 112. The permittee has requested to remove the product name from the emission unit descriptions, but will still continue to use a product that meets the requirements in 326 IAC 8-2-9 (Miscellaneous metal and plastic parts coating operations).

5. The one-time testing requirements in former Condition 11.6(a) and (b) were removed. The required testing was completed November 14, 2014 to verify the fluoride emission factor for the homogenizing ovens (ALLI-27 and ALLI-28). The required testing was completed November 12, 2014 for PM, PM10, and PM2.5 on the primary aluminum melter furnace (ALLI -1, stack ALLI-S1) as a representative emissions unit for furnaces ALLI-1, ALLI-24, and ALLI-25.

6. Testing requirements in former Condition 11.6(c) were removed. Furnaces ALLI-24 and ALLI-25 do not have stacks and are effectively sealed to keep the units purged with argon gas. The only emissions are fugitive. The MACT limits for have been used as PM, PM10, PM2.5, and HCl emission factors at 8760 hrs/yr as a conservative estimate of emissions.

The following is the list of proposed emission units:

(a) Bronx 10 Roll Tube Straightener, identified as unit 142, approved in 2018 for construction, with a maximum capacity of less than 10 tons per year of VOC solvent used for cleaning and lubricating metal, using no control, and exhausting to atmosphere;

(b) One (1) #3 extrusion press saw operation, identified as emission unit 135, permitted in 2018, with a maximum throughput capacity of 5,000 tons per year, with emissions controlled by dust collector 135DC with a maximum capacity of 7,500 CFM, exhausting to stack S135.

The following emission units are existing, but were not included in the permit. The emissions from the VOC solvent for these units were previously accounted for in the one (1) tube mill solvent dip tank system.

(a) Sutton 2KT Roll Tube Straightener, identified as unit 143, installed in 1948, using no control, and exhausting to atmosphere;

(b) Wyko Tube Straightener, identified as unit 144, installed in 1995, using no control and exhausting to atmosphere.

(c) #6 Pre-Roll Machine, identified as unit 145, installed in 1973, using no control, and exhausting to atmosphere;

(d) #4 Roll Machine, identified as unit 146, installed in 1984, using no control, and exhausting to atmosphere;

Source Status Prior to the Modification

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

	Source-Wide Emissions Before Modification (ton/year)									
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Lead**	**Single HAP***	**Combined HAPs**
Total for Source	**>100**	**>100**	**>100**	**9.12**	**>100**	**81.53**	**>100**	**0.02**	**9.69**	**21.45****
PSD Major Source Thresholds	100	100	100	100	100	100	100	5	-	-
*Single highest source-wide HAP = Hydrogen Fluoride **Total HAPs were corrected from permit 37799.										

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because PSD regulated pollutants PM, PM10, PM2.5, NOx, and CO are emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is 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).

(c) These emissions are based on Appendix A to the Technical Support Document for Administrative Amendment Permit No.: 157-37799-00001, issued December 22, 2016, with corrections as noted above.

Aggregation Analysis

For aggregation purposes, the Bronx 10 installation and the #3 Extrusion Press installation projects were reviewed to determine if these projects must be aggregated with the Amlox 90F project (MSM 157-39617-00001, issued July 6, 2018.)

The following aggregation analysis was performed, since multiple applications were received in a short period of time.

(a) The projects are located in completely separate and distinct operational departments within the Arconic facility.
1. Amlox 90 F flux addition is located in the Aluminum Lithium Casthouse designed for aerospace metallurgical applications.
2. Bronx 10 Tube Straightener is located in the Tube Mill to support drive shaft production for automotive transportation industry applications.
3. #3 Extrusion Press saw will be located in Extrusion Unit I to provide additional extrusion capacity.

(b) The emission units are operated by different program managers and in support of different customers and operations.
1. Amlox 90 F flux addition is operated by the Al-Li casting department to support lightweight aerospace metallurgical applications.
2. Bronx 10 Tube Straightener is operated by the Tube Mill department personnel.
3. #3 Extrusion Press saw will be operated by the Extrusion Unit I department personnel.

(c) The emission units are used for different purposes.
1. Amlox 90 F flux addition is used for metallurgical purification of aluminum-lithium alloys.

2. Bronx 10 Tube Straightener is used to straighten aluminum tube for driveshaft applications.
3. #3 Extrusion Press saw will be used to saw extruded aluminum pieces to length.

(d) The projects have distinct and different application and project timing.
1. Amlox 90 F flux addition permit application was filed on February 12, 2018 and operation will commence upon approval and issuance of the Title V permit renewal.
2. Bronx 10 Tube Straightener permit application was filed on February 12, 2018, and is currently operating.
3. The #3 Extrusion Press Saw, an exempt unit as defined in 326 IAC 2-7-1(21)(E)(iv), has a permit application filed on July 10, 2017, and will commence operation upon commissioning of the press later in 2018.

(e) Conclusion
IDEM has reviewed the aggregation analysis and has determined that the permitting of Bronx 10 Straightener and the #3 Press Saw installations are independent of the Amlox 90F project. Construction approval for the Amlox 90F project was granted with Minor Source Modification 157-39617-00001, issued July 6, 2018.

Permit Level Determination – Part 70 Modification to an Existing Source:

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5 and 326 IAC 2-7-11. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

Bronx 10 Straightener and #3 Extrusion Press:

	PTE Before Controls of the Amendment (ton/year)								
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**	**Single HAP**	**Combined HAPs**
Addition of Bronx 10 Straightener, unit 142	-	-	-	-	-	5.70	-	-	-
Addition of #3 extrusion press saw operation, unit 135	0.78	0.78	0.78	-	-	-	-	negl.	negl.
Total:	**0.78**	**0.78**	**0.78**	**-**	**-**	**5.70**	**-**	**1.42**	**1.42**

Pursuant to 326 IAC 2-7-11(a)(8)(B), the addition of the Bronx 10 and the #3 extrusion press qualify for an administrative amendment, because the permit is amended to incorporate exempt modification as described in 326 IAC 2-1.1-3 that does not otherwise constitute a modification for purposes of 326 IAC 2-7-10.5 (Source Modifications) or 326 IAC 2-7-12 (Permit Modifications).

Permit Level Determination – PSD

Bronx 10 Straightener and #3 Extrusion Press:

The table below summarizes the potential to emit of the modification, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of the Part 70 renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Project Emissions (ton/year)						
Process / Emission Unit	**PM**	**PM_{10}**	**$PM_{2.5}$**[1]	**SO_2**	**NO_X**	**VOC**	**CO**
Addition of Bronx 10 Straightener, unit 142	-	-	-	-	-	5.70	-
Addition of #3 extrusion press saw operation, unit 135	0.78	0.78	0.78	-	-	-	-
Total for Amendment	**0.78**	**0.78**	**0.78**	**-**	**-**	**5.70**	**-**
Significant Levels	25	15	10	40	40	40	100

This modification to an existing major PSD stationary source is not major because the emissions increase of each PSD regulated pollutant is less than the PSD significant level. There are no increase in emissions upstream or downstream from this modification, therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

Proposed Changes

IDEM, OAQ made additional changes to the permit as described below in order to update the language to match the most current version of the applicable rule, to eliminate redundancy within the permit, and to provide clarification regarding the requirements of these conditions.

(1) A new Section D.0 was added to include source-wide HAP limits. Correlated AFB flux and A-130 flux limits were added along with HF, HCl, and Cl2 emission factors. A source-wide natural gas usage limit and a hexane emission factor were added. These were added to assure the source remains an area source for HAPs.

(2) A NOx emission rate was included in Condition D.2.1 for the emergency generator ALLI-34.

(3) Throughput limits were added in Condition D.2.2 for total charge of molten aluminum-lithium to the electric induction melting/holding furnaces (ALLI-24 and ALLI-25), total metal charged to the primary aluminum melter (ALLI-1), and total skim generated (ALLI-32 and ALLI-33). Record keeping requirements were added to Condition D.2.6. These limits are the maximum throughput capacities of the respective emission units, therefore reporting is not necessary.

(4) The NOx emission rate was changed to lb/hr for the diesel air compressor EUDAC#1 in Condition D.3.1.

(5) The reporting frequency was changed from semi-annual to quarterly for AFB and A-130 flux in Condition D.0.3, compressor operating hours in Condition 3.4, and natural gas usage in Condition D.4.4.

(6) Compliance Determination was added to Section D.5 for the integral wood working controls to require the control devices be in operation and control emissions from the wood sawing operation.

(7) Work practice requirements from 326 IAC 8-2-9(f) were added in Condition D.7.1 for the clear coating applicators. The 15 lb/day limit was removed, because there are no other 326 IAC 8 rules applicable to the clear coating applicators.

Source-Wide Emissions after Issuance (ton/year)

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any new control equipment is considered federally enforceable only after issuance of this Part 70 permit renewal, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Potential To Emit of the Entire Source After Issuance of Renewal (tons/year)								
Process / Emission Unit	**PM***	**PM_{10}**	**$PM_{2.5}$****	**SO_2**	**NO_X**	**VOC**	**CO**	**Total HAP**	**Single Highest HAP*****
Source-wide Flux Usage	-	-	-	-	-	-	-	16.83	9.91
Source-wide Natural Gas Usage	6.63	26.52	26.52	2.30	348.97	21.13	322.67	5.73	-
Metal HAPs from PM	-	-	-	-	-	-	-	0.18	-
INGOT	15.24	15.24	15.24	-	-	-	-	-	-
TUBE MILL	-	-	-	-	-	40.19	-	-	-
ALLI	1.48	1.48	1.48	-	-	-	-	-	-
Air compressor EUDAC#1	4.28	4.28	4.28	4.00	24.83	4.97	13.11	5.34E-02	-
INGOT IA	51.95	51.95	51.95	0.24	3.63	0.29	0.78	3.18E-03	-
EXTRUSION-1 IA	11.82	11.82	11.82	0.12	1.87	0.15	0.40	1.64E-03	-
DIE SHOP IA	negl.	negl.	negl.	-	-	-	-	-	-
EXTRUSION-2 IA	23.60	23.60	23.60	-	-	0.09	-	-	-
TUBE MILL IA	13.30	13.30	13.30	-	-	1.69	-	-	-
ALLI IA	28.96	28.79	28.79	negl	1.46	0.14	0.38	8.55E-02	-
PLANT MISC IA	39.32	24.84	22.21	-	-	3.99	-	1.87	-
Total for Source	**197**	**202**	**199**	**6.67**	**381**	**72.64**	**337**	**24.77**	**9.91**
PSD Major Source Thresholds	100	100	100	100	100	100	100	25	10

negl. = negligible IA = Insignificant Activity
* 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 $PM_{2.5}$.
***Single Highest HAP = Hydrogen Fluoride
Note:
Calculations were updated from last issued permit (37799). Of note, the metal sawing emissions have been based on volume of cut calculations instead of engineering estimates, and the internal combustion engine calculations have been revised to current templates. Also, stack test data for Ingot Furnaces and AL-LI-1 (Primary Melter) were used for particulate emissions, and particulate emissions from the die etch cleaning system were reviewed and found to be negligible.

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a PSD regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) This existing source is not a major source of HAPs, as defined in 40 CFR 63.2, because HAPs emissions are limited to 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).

In order that the source is an area source of HAPs under Section 112 of the Clean Air Act (CAA), the Permittee shall comply with the following:

(a) The source-wide combined usage of ammonium fluoroborate (AFB or NH_4BF_4) and A-130 flux (or equivalent) shall not exceed one of the following correlated limits per twelve (12) consecutive month period with compliance determined at the end of each month:

AFB Flux Limited Usage (ton per twelve (12) consecutive month period)		A-130 (or equivalent) Flux Limited Usage (ton per twelve (12) consecutive month period)
13.00	and	20.0
12.75	and	25.5
12.00	and	30.0
11.00	and	64.0
10.50	and	75.0
10.00	and	85.0
9.50	and	97.0
9.00	and	108.0

(1) Hydrogen fluoride (HF) emissions shall not exceed 0.76 pounds per pound of AFB flux.

(2) Hydrogen chloride (HCl) emissions shall not exceed 32.18 pounds per 1000 pounds of A-130 (or equivalent) flux.

(3) Chlorine (Cl2) emissions shall not exceed 1.03 pounds per 1000 pounds of A-130 (or equivalent) flux.

(4) Hydrogen fluoride (HF) emissions shall not exceed 1.43 pounds per 1000 pounds of A-130 (or equivalent) flux.

(b) The total source-wide natural gas usage shall not exceed 6,000 million cubic feet (MMCF) per twelve (12) consecutive month period with compliance determined at the end of each month.

(1) Hexane emissions shall not exceed 1.8 pounds per million cubic feet of natural gas.

(c) The combined total metal charged to the two electric induction melter furnaces, identified as ALLI-24 and ALLI-25, and the total metal charged to the 2-stage A622 filter, identified as ALLI-26, shall not exceed 35,585 tons, each, per twelve (12) consecutive month period with compliance determined at the end of each month.

(d) HCl (HAP) emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) and A622 filter (ALLI-24) shall not exceed 0.04 pounds of HCl per ton of charge of molten aluminum-lithium.

Federal Rule Applicability

New Source Performance Standards (NSPS):

(a) Emergency generator ALLI-34 is subject to the New Source Performance Standards for Stationary Spark Ignition Internal Combustion Engines 40 CFR 60, Subpart JJJJ and 326 IAC 12, because it meets the definition of a stationary spark ignition internal combustion engine as defined in 40 CFR Part 60.4248, was constructed after June 12, 2006, and the engine was manufactured on or after January 1, 2009 and has a maximum engine power greater than 19 Kilowatts (25 Horsepower)

The unit subject to this rule includes the following:

(1) One (1) natural gas-fired emergency generator, identified as ALLI-34, permitted in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34.

Emergency generator ALLI-34 is subject to the following portions of Subpart JJJJ.

(1) 40 CFR 60.4230(a)(4)(iv)
(2) 40 CFR 60.4233(e)
(3) 40 CFR 60.4234
(4) 40 CFR 60.4236
(5) 40 CFR 60.4243(a), (a)(1), (a)(2)(iii), (b)(1), (d), (e)
(6) 40 CFR 60.4245
(7) 40 CFR 60.4246
(8) 40 CFR 60.4248
(9) Table 1
(10) Table 2
(11) Table 3

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

Based on the existing permit, this source is subject to 40 CFR 60, Subpart JJJJ. On May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit issued a mandate vacating paragraphs 40 CFR 60.4243(d)(2)(ii) - (iii) of NSPS Subpart JJJJ. 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 60.4243(d)(2) You may operate your emergency stationary ICE for any combination of the purposes specified in paragraph~~s~~ (d)(2)(i) ~~through (iii)~~ of this section for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by paragraph (d)(3) of this section counts as part of the 100 hours per calendar year allowed by this paragraph (d)(2).

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

~~(ii) Emergency stationary ICE may be operated for emergency demand response for periods in which the Reliability Coordinator under the North American Electric Reliability Corporation (NERC) Reliability Standard EOP-002-3, Capacity and Energy Emergencies (incorporated by reference, see §60.17), or other authorized entity as determined by the Reliability Coordinator, has declared an Energy Emergency Alert Level 2 as defined in the NERC Reliability Standard EOP-002-3.~~

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

(b) The requirements of the New Source Performance Standard for Stationary Compression Ignition Internal Combustion Engines, 40 CFR 60, Subpart IIII and 326 IAC 12, are not included in the permit for diesel engines 136, 137, and EUDAC#1, because each was constructed prior to July 11, 2005.

There are no other New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in this permit renewal.

<u>National Emission Standards for Hazardous Air Pollutants (NESHAP):</u>

(a) The source is subject to the National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production (40 CFR 63, Subpart RRR), because it operates a secondary aluminum production facility and the source is an area source of HAPs.

The emission units subject to this rule include the following:

1. One (1) #2-2 tilting-melting-holding furnace, identified as emission unit 2, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 89-8;

2. One (1) #2-3 tilting-melting-holding furnace, identified as emission unit 3, constructed in 1994, with a maximum capacity of 6.0 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 90-8;

3. One (1) #2-4 tilting-melting-holding furnace, identified as emission unit 4, constructed in 1991, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 88-8;

4. One (1) #2-5 tilting-melting-holding furnace, identified as emission unit 5, constructed in 1988, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 87-8;

5. One (1) #2-6 tilting-melting-holding furnace, identified as emission unit 6, constructed in 1995, with a maximum capacity of 9.58 tons of aluminum per hour, and a maximum heat input capacity of 36 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 94-8;

6. One (1) #4 melting furnace, identified as emission unit 7, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour, and a maximum heat input capacity of 26 million Btu per hour, natural gas-fired, using A-130 (or equivalent) flux, with emissions uncontrolled and exhausting to stack 5-8;

7. Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, constructed in 2014, each rated at 4.4 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(A) The tilting-melting-holding furnaces and the melting furnace are subject to the following portions of 40 CFR 63, Subpart RRR, which is incorporated by reference as 326 IAC 20-70:

(1) 40 CFR 63.1500 (a), (c), (c)(4), (e), (f)
(2) 40 CFR 63.1501 (a), (b)
(3) 40 CFR 63.1503
(4) 40 CFR 63.1505 (a), (i), (i)(3)
(5) 40 CFR 63.1506 (a)(1), (a)(4-5), (b), (b)(1-2), (d), (d)(1-3), (n), (n)(1-3), (p)
(6) 40 CFR 63.1510 (a), (a)(1-2), (a)(4), (a)(9), (a)(13), (b), (c), (e), (j), (o), (p), (s), (u), (w)
(7) 40 CFR 63.1511 (a), (b), (c), (f), (g)
(8) 40 CFR 63.1512 (e), (e)(1), (k), (o), (o)(2-3), (o)(4), (o)(5), (r)
(9) 40 CFR 63.1513(b), (d), (f), (f)(1-2)
(10) 40 CFR 63.1515 (a), (a)(1), (a)(6), (b), (b)(1-4), (b)(9)
(11) 40 CFR 63.1516 (b), (b)(1)(iv-vi), (b)(2)(vii), (b)(3), (c)(1-2), (d), (e)
(12) 40 CFR 63.1517 (a), (a)(1-3), (b), (b)(5), (b)(7-8), (b)(13), (b)(15-16), (b)(18-19)
(13) 40 CFR 63.1518
(14) 40 CFR 63.1519
(15) Table 1 to Subpart RRR
(16) Table 2 to Subpart RRR
(17) Table 3 to Subpart RRR
(18) Appendix A to Subpart RRR

(B) The scrap drying ovens are subject to the following portions of Subpart RRR, which is incorporated by reference as 326 IAC 20-70:

(1) 40 CFR 63.1500(a), (c), (c)(2), (e), and (f)
(2) 40 CFR 63.1501(e)
(3) 40 CFR 63.1503
(4) 40 CFR 63.1505(a), (d)(1(iii)
(5) 40 CFR 63.1506(a)(1), (a)(4-5), (b)(1-2), (d), (g), and (p)
(6) 40 CFR 63.1510(a), (a)(1-2), (a)(4), (b), (c), (e), and (w)
(7) 40 CFR 63.1511(a), (b), (c), (d)
(8) 40 CFR 63.1512(c), (k), and (r)
(9) 40 CFR 63.1513(b), (d), (f)
(10) 40 CFR 63.1515(a), (b)
(11) 40 CFR 63.1516(b), (b)(1)(iv), (b)(2)(vii), (b)(3), (c), (d), (e)
(12) 40 CFR 63.1517(a), (b), (b)(7), (b)(13), (b)(15), (b)(16)(ii), (b)(18-19)
(13) 40 CFR 63.1518
(14) 40 CFR 63.1519

(15) Table 1 to 40 CFR 63, Subpart RRR
(16) Table 2 to 40 CFR 63, Subpart RRR
(17) Table 3 to 40 CFR 63, Subpart RRR
(18) Appendix A to 40 CFR 63, Subpart RRR

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

Note:

The one (1) primary aluminum melter, identified as ALLI-1, and the two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, have no applicable Subpart RRR requirements as long as the source remains an area source for HAPs, and the units continue to process only clean charge as defined in 40 CFR 63.1503.

(b) Generators 136, 137, and ALLI-34, and air compressor EUDAC#1 are subject to the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocation Internal Combustion Engines, 40 CFR 63, Subpart ZZZZ, because each is a stationary reciprocating internal combustion engine (RICE) located at an area source of HAP emissions.

The units subject to this rule include the following:

1. One (1) diesel air compressor, identified as emission unit EUDAC#1, constructed in 2005, with a maximum capacity of 450 brake horsepower, exhausting through stack DAC#1.

2. (One (1) diesel fired emergency generator for Ingot Department water recirculation, identified as emission unit 136, constructed in 1990, with a maximum capacity of 469 HP (350 kW), exhausting to stack S136;

3. One (1) diesel emergency generator for the wastewater treatment plant, identified as emission unit 137, constructed in 1990, with a maximum capacity of 241.2 HP (180 kW), exhausting through a stack to atmosphere;

4. One (1) natural gas-fired emergency generator, identified as ALLI-34, constructed in 2014, rated at 636 horsepower (400 kW), exhausting to stack ALLI-S34.

(A) Air compressor EUDAC#1 is subject to the following portions of Subpart JJJJ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (c), and (d)
(3) 40 CFR 63.6590(a), (a)(1)(iii) and (iv)
(4) 40 CFR 63.6595 (a)(1), (b) and (c)
(5) 40 CFR 63.6603(a)
(6) 40 CFR 63.6604(a)
(7) 40 CFR 63.6605
(8) 40 CFR 63.6612
(9) 40 CFR 63.6620(a), (b), (d), (e), (f), (g), (h) and (i)
(10) 40 CFR 63.6625(g) and (h)
(11) 40 CFR 63.6630(a) and (c)
(12) 40 CFR 63.6635
(13) 40 CFR 63.6640(a), (b), and (e)
(14) 40 CFR 63.6645(a)(2), (g), (h) and (h)(2)
(15) 40 CFR 63.6650(a), (b)(1-5), (c), (d), (f)
(16) 40 CFR 63.6655(a), (a)(1-5), (e)(3)
(17) 40 CFR 63.6660

(18) 40 CFR 63.6665
(19) 40 CFR 63.6670
(20) 40 CFR 63.6675
(21) Table 2d (item 2)
(22) Table 4 (items 1 and 3)
(23) Table 5 (items 11 and 12)
(24) Table 7 (item 1)
(25) Table 8

(B) Generators 136 and 137 are subject to the following portions of Subpart JJJJ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (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),(f)(1-2), (f)(4)
(10) 40 CFR 63.6645(a)(5)
(11) 40 CFR 63.6650(a)
(12) 40 CFR 63.6655(a)(4)
(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

(C) Generator ALLI-34 is subject to the following portions of Subpart JJJJ:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585(a), (c), (d)
(3) 40 CFR 63.6590(a)(2)(iii) and (c)(1)
(4) 40 CFR 63.6595(a)(7)
(5) 40 CFR 63.6665
(6) 40 CFR 63.6670
(7) 40 CFR 63.6675

Pursuant to 40 CFR 63.6665, the natural gas-fired emergency generator (ALLI-34) does not have to meet the requirements of 40 CRF 63, Subpart A (General Provisions), since it is considered a new stationary RICE located at an area source of HAP emissions.

The requirements of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated as 326 IAC 20-1, apply to generators 136, and 137, and air compressor EUDAC#1, 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) The one (1) gasoline fuel tank, identified as emission unit 119, is subject to the National Emission Standards for Hazardous Air Pollutants for Gasoline Dispensing Facilities, 40 CFR 63, Subpart CCCCCC, because the gasoline dispensing facility is located at an area source of HAPs.

The one (1) gasoline fuel tank, identified as emission unit 119 is subject to the following portions of Subpart CCCCCC:

(1) 40 CFR 63.11110
(2) 40 CFR 63.11111 (a), (b), (e), (f), (h), (i), (j), and (k)
(3) 40 CFR 63.11112
(4) 40 CFR 63.11113(b) and (c)
(5) 40 CFR 63.11115
(6) 40 CFR 63.11116
(7) 40 CFR 63.11125(d)
(8) 40 CFR 63.11126(b)
(9) 40 CFR 63.11130
(10) 40 CFR 63.11131
(11) 40 CFR 63.11132
(12) Table 3 to 40 CFR 63 Subpart CCCCCC

(d) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63, Subpart

DDDDD and 326 IAC 20-95, 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.

(e) The requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Industrial, Commercial, and Institutional Boilers Area Sources, 40 CFR 63, Subpart JJJJJJ, are not included in the permit for boilers 90, 93, TB, 103, 104, the water heater for the wash unit at the 6 Cell Drive shaft production facility, and hot water heater ALLI-37, because they are exempt from this subpart, pursuant to 40 CFR 63.11195(e) and 40 CFR 63.11195(f), since each boiler meets the definition of a gas-fired boiler or hot water heater as defined in 40 CFR 63.11237.

(f) The requirements of the National Emission Standards for Hazardous Air Pollutants Area Source Standards (NESHAPs) for Aluminum, Copper, and Other Nonferrous Foundries, 40 CFR 63, Subpart ZZZZZZ are not included in the permit for this source, because the source does not meet the definition of *aluminum foundry,* as defined in 40 CFR 63.11556, because the source does not manufacture aluminum castings that are complex shapes.

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

Compliance Assurance Monitoring (CAM):

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

(1) has a potential to emit before controls equal to or greater than the major source threshold for the regulated pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant (or a surrogate thereof); and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

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

(c) Pursuant to 40 CFR 64.2(b)(1)(iii), Acid Rain requirements pursuant to Sections 404, 405, 406, 407(a), 407(b), or 410 of the Clean Air Act are exempt emission limitations or standards. Therefore, CAM was not evaluated for emission limitations or standards for SO_2 and NO_X under the Acid Rain Program.

(d) Pursuant to 40 CFR 64.3(d), if a continuous emission monitoring system (CEMS) is required pursuant to other federal or state authority, the owner or operator shall use the CEMS to satisfy the requirements of CAM according to the criteria contained in 40 CFR 64.3(d).

The following table is used to identify the applicability of CAM to each existing emission unit and each emission limitation or standard for a specified pollutant based on the criteria specified under 40 CFR 64.2:

Emission Unit/Pollutant	Pollutant	Control Device	Applicable Emission Limitation	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Ingot: Niles lathe operation	PM*	rotoclone	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #21 Press Do-All Band Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #22 Press Do-All Band Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
Ext-2: #23 Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #24 Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #28 Saw	PM*	Cyclone/bag Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #34 Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #27 Saw	PM*	Cyclone/bag Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Ext-2: #37 Saw	PM*	Chip Collector	326 IAC 6-3-2	<100	-	N	-
	PM10 PM2.5		none	<100	-		
Sawing activities located in the carpenter shop - unit 101	PM*	cyclone	326 IAC 6-3-2	450.51	4.51	N 1	-
	PM10 PM2.5		none	450.51	-		
Sawing activities located in the carpenter shop - unit 102	PM*	baghous	326 IAC 6-3-2	450.51	4.51	N 1	-
	PM10 PM2.5		none	450.51	-		

Uncontrolled PTE (tpy) and controlled PTE (tpy) are evaluated against the Major Source Threshold for each pollutant. Major Source Threshold for criteria pollutants (PM10, PM2.5, SO2, NOX, VOC and CO) is 100 tpy, for a single HAP ten (10) tpy, and for total HAPs twenty-five (25) tpy.
Under the Part 70 Permit program (40 CFR 70), PM is not a regulated pollutant.

PM* For limitations under 326 IAC 6-3-2, 326 IAC 6.5, and 326 IAC 6.8, IDEM OAQ uses PM as a surrogate for the regulated air pollutant PM10. Therefore, uncontrolled PTE and controlled PTE reflect the emissions of the regulated air pollutant PM10.

N [1] The control has been determined to be inherent process equipment for this unit in accordance with 40 CFR Part 64.1. Therefore, based on the evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable.

Emission units without air pollution controls are not subject to CAM. Therefore, they are not listed.

Inherent Process Equipment (Woodworking)

Pursuant to 40 CFR Part 64.1, the definition of inherent process equipment is "equipment that is necessary for the proper or safe functioning of the process, or material recovery equipment that the owner or operator documents is installed and operated primarily for purposes other than compliance with air pollution regulations. Equipment that must be operated at an efficiency higher than that achieved during normal process operations in order to comply with the applicable emission limitation or standard is not inherent process equipment. For the purposes of this part, inherent process equipment is not considered subject to CAM."

The woodworking baghouse controls are determined to be necessary for the normal and proper operation of the woodworking operations *(see the "Integral Part of the Process" Determination" section above for more detail)*. Therefore, the woodworking baghouses meet the criteria for inherent to the process for the purpose of determining CAM applicability, and are not considered control devices. Therefore, the requirements of 40 CFR Part 64.2, CAM, do not apply to the woodworking operations.

Based on this evaluation, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the units as part of this Part 70 permit renewal.

State Rule Applicability - Entire Source

326 IAC 1-6-3 (Preventive Maintenance Plan)
The source is subject to 326 IAC 1-6-3.

326 IAC 1-5-2 (Emergency Reduction Plans)
The source is subject to 326 IAC 1-5-2.

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

Section D.1

(a) The PM emission rate from the tilting-melting-holding furnaces #2-2 and #2-3 shall not exceed 2.84 pounds per hour, each.

Compliance with this emission limit will limit the potential to emit to less than twenty-five (25) tons per year of PM, and will render the requirements of 326 IAC 2-2 (PSD) not applicable to the modifications covered by CP 157-2316, issued April 9, 1992.

(b) The following conditions shall apply to the tilting-melting-holding furnace #2-6:

(1) The PM emissions from the tilting-melting-holding furnace #2-6 shall not exceed 5.69 pounds per hour.

(2) The NOx emissions from the tilting-melting-holding furnace #2-6 shall not exceed 5.0 pounds per hour.

(3) The charge shall consist of only alloys, pig, slabs, purchased scrap, or process scrap and chips that are essentially free of contaminants and has demonstrated to be acceptable based on successful performance tests.

Compliance with these emission limits will limit the potential to emit to less than twenty-five (25) tons per year of PM and less than forty (40) tons per year of NO_X, and will render the requirements of 326 IAC 2-2 (PSD) not applicable to the modifications covered by CP 157-4219, issued June 12, 1995.

Section D.2

Primary Aluminum Melter Furnace

(a) The total natural gas usage for the primary aluminum melter furnace (ALLI-1), scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), hot water heater (ALLI-37) and space heaters associated with the aluminum-lithium cast house modification shall not exceed 736.15 million cubic feet (MMCF) per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NO_X emissions from natural gas combustion shall not exceed 100 pounds per million cubic feet (lb/MMCF).

(c) PM emissions from natural gas combustion shall not exceed 1.9 pounds per million cubic feet (lb/MMCF).

(d) PM_{10} emissions from natural gas combustion shall not exceed 7.6 pounds per million cubic feet (lb/MMCF).

(e) $PM_{2.5}$ emissions from natural gas combustion shall not exceed 7.6 pounds per million cubic feet (lb/MMCF).

Emergency Generator

(f) The operating hours for the natural gas-fired emergency generator (ALLI-34) shall not exceed 150 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

(g) NOx emissions from the natural gas-fired emergency generator (ALLI-34) shall not exceed 19.5 pounds per hour.

Electric Induction Melting/holding Furnaces ALLI-24 and ALLI-25

(h) The combined total metal charged to the two electric induction melter furnaces, identified as ALLI-24 and ALLI-25, and the total metal charged to the 2-stage A622 filter, identified as ALLI-26, shall not exceed 35,585 tons, each, per twelve (12) consecutive month period with compliance determined at the end of each month.

(i) PM emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.4 pounds of PM per ton of charge of molten aluminum-lithium.

(j) PM_{10} emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.12 pounds of PM_{10} per ton of charge of molten aluminum-lithium.

(k) $PM_{2.5}$ emissions from the electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge of molten aluminum-lithium.

Primary Aluminum Melter (ALLI-1)

(l) The total metal charged to the primary aluminum melter (ALLI-1) shall not exceed 68.13 million pounds per twelve (12) consecutive month period, with compliance determined at the end of each month.

(m) PM emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.4 pounds of PM per ton of metal charged.

(n) PM_{10} emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.2 pounds of PM_{10} per ton of metal charged.

(o) $PM_{2.5}$ emissions from the primary aluminum melter (ALLI-1) shall not exceed 0.2 pounds of $PM_{2.5}$ per ton of metal charged.

Skim Cooling and Loadout (ALLI-32 and ALLI-33)

(p) The total skim generated shall not exceed 2,479 tons per twelve (12) consecutive month period, with compliance determined at the end of each month.

(q) PM emissions from the skim cooling (ALLI-32) shall not exceed 1.3 pounds of PM per ton of total skim generated.

(r) PM_{10} emissions from the skim cooling (ALLI-32) shall not exceed 0.15 pounds of PM_{10} per ton of total skim generated.

(s) $PM_{2.5}$ emissions from the skim cooling (ALLI-32) shall not exceed 0.15 pounds of $PM_{2.5}$ per ton of total skim generated.

(t) PM emissions from the skim loadout (ALLI-33) shall not exceed 1.3 pounds of PM per ton of total skim generated.

(u) PM_{10} emissions from the skim loadout (ALLI-33) shall not exceed 0.06 pounds of PM_{10} per ton of total skim generated.

(v) $PM_{2.5}$ emissions from the skim loadout (ALLI-33) shall not exceed 0.06 pounds of $PM_{2.5}$ per ton of total skim generated.

Homogenizing Ovens

(w) The ammonium fluoroborate (AFB or NH_4BF_4) usage for the homogenizing ovens (ALLI-27 and ALLI-28) shall not exceed 4,191 pounds of AFB per twelve (12) consecutive month period, with compliance determined at the end of each month.

(x) Fluoride (F) emissions from AFB usage in the homogenizing ovens (ALLI-27 and ALLI-28) shall not exceed 0.722 pounds of F per pound of AFB.

Compliance with these emission limits combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, and fluoride emissions from all other emission units associated with the aluminum-lithium cast house 2012 modification, will limit the potential to emit from the modification to less than forty (40) tons of NO_X, less than twenty-five (25) tons of PM, less than fifteen (15) tons of PM_{10}, less than ten (10) tons of $PM_{2.5}$, and less three (3) tons of fluoride per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the 2012 modification.

Section D.3

(a) Emission unit EUDAC#1 shall not operate more than 3,575 hours per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) NOx emissions shall not exceed 13.89 pounds per hour.

Compliance with these limits shall limit the modification potential to emit of NOx to less twenty-five (25) tons per twelve (12) consecutive month period, and shall render 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) and 326 IAC 2-7-10.5(g) (Significant Source Modification) not applicable to the modification covered by MSM 157-20762-00001.

Section D.4

(a) The total usage of natural gas fuel for the one hundred four (104) space heaters, identified as emission unit 133, shall not exceed 1,177.30 million cubic feet per twelve (12) consecutive month period.

(b) Natural gas heat content shall not exceed 1020 btu per cubic feet.

(c) NOx emissions shall not exceed 0.1 lb/MMBtu.

Compliance with these limits shall limit the project potential to emit of NOx to less than forty (40) tons per twelve (12) consecutive month period, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable to the modification covered by SSM 157-14486-00001, issued September 18, 2001.

326 IAC 2-6 (Emission Reporting)
Since this source is required to have an operating permit under 326 IAC 2-7, Part 70 Permit Program, this source is subject to 326 IAC 2-6 (Emission Reporting). In accordance with the compliance schedule in 326 IAC 2-6-3, an emission statement must be submitted triennially. The first report is due no later than July 1, 2005, and subsequent reports are due every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

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

326 IAC 5-1 (Opacity Limitations)
This source is subject to the opacity limitations specified in 326 IAC 5-1-2(1).

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

326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source does not have potential fugitive particulate emissions of greater than twenty-five (25) tons per year.

326 IAC 6.5 (PM Limitations Except Lake County)
This source is not subject to 326 IAC 6.5 because it is not located in one of the following counties: Clark, Dearborn, Dubois, Howard, Marion, St. Joseph, Vanderburgh, Vigo or Wayne.

326 IAC 6.8 (PM Limitations for Lake County)
This source is not subject to 326 IAC 6.8 because it is not located in Lake County.

326 IAC 7-1.1 (Sulfur Dioxide Emissions Limitations)
The uncontrolled sulfur dioxide (SO_2) emissions from each emissions unit are less than twenty-five (25) tons per year and ten (10) pounds per hour; therefore, none of the emissions units are subject to the requirements of 326 IAC 7-1.1.

326 IAC 9-1 (Carbon Monoxide Emission Requirements)
This source does not have a carbon monoxide (CO) emissions limit under 326 IAC 9-1-2; therefore, the source is not subject to the requirements of this rule.

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

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
The potential to emit of HAP emissions for each unit constructed or reconstructed after July 27, 1997 is less than ten (10) tons per year for a single HAP and less than twenty-five (25) tons per year for a combination of HAPs. Therefore, 326 IAC 2-4.1 does not apply to any of the emission units at this source.

326 IAC 6-2 (Particulate Emission Limitations for Sources of Indirect Heating)
The following units are subject to the provisions of 326 IAC 6-2-4, because each meets the definition of "combustion for indirect heating" in 326 IAC 1-2-19.

Emission Unit	Construction Date	Operating Capacity (MMBtu/hr)
Pacific 103	<1940	3.0
Pacific 104	<1940	3.0
135	<1970	0.3
97	<1970	0.4
Lochnivar 90	1995	0.4
Cleaver Brooks 93	2008	3.0
TB	2011	2.5
ALLI-37	2014	4.0
wash unit	2016	0.42
	Total	**17.02**

326 IAC 6-2-3 (Emission limitations for facilities specified in 326 IAC 6-2-1(c))

Pursuant to 326 IAC 6-2-3 (Particulate Limitations for Sources of Indirect Heating) the PM emissions from Units 97, 103, 104, and 135, which were existing and in operation on or before June 8, 1972, shall be limited to 0.8 pounds per MMBtu heat input.

This limitation is based on the following equation:

$$Pt = \frac{C \times a \times h}{76.5 \times Q^{0.75} \times N^{0.25}}$$

$$Pt = \frac{50 \times 0.67 \times 51}{76.5 \times 6.7^{0.75} \times 1^{0.25}} = 5.30 \text{ lbs/MMBtu}$$

where

C = 50 u/m3
Pt = emission rate limit (lbs/MMBtu)

Q = 5.9 total source heat input capacity (MMBtu/hr) (from indirect heating facilities existing and in operation before September 21, 1983).
N = number of stacks
a = plume rise factor (0.67)
h = stack height (ft)

Since 5.30 lb/mmBtu > 0.8 lb/MMBtu, the PM emissions from Units 97, 103, 104, and 135 are limited to 0.8 lb/MMBtu, pursuant to 326 IAC 6-2-3(d).

326 IAC 6-2-4 (Emission limitations for facilities specified in 326 IAC 6-2-1(d))

(a) Boiler 90 is subject to the provisions of 326 IAC 6-2-4, since it was constructed after the rule applicability date of September 21, 1983 and meets the definition of "combustion for indirect heating" in 326 IAC 1-2-19.

Pursuant to 326 IAC 6-2-4, the emission limitation for this unit, as provided in 326 IAC 6-2-4, is based on the following equation:

$$Pt = \frac{1.09}{Q^{0.26}}$$

Where:
Pt = Emission rate limit (lbs PM per MMBtu)
Pt = pounds of particulate matter emitted per million Btu (lb/MMBtu) heat input.
Q = Total source maximum operating capacity in MMBtu/hr heat input. Maximum operating capacity is defined as the maximum capacity at which the unit is operated or the nameplate capacity, whichever is specified in the permit application, except when a lower limitation is contained in the facility's operating permit.

The emission rate limit (Pt) is equal to 0.65 lb PM/MMBtu for a Q of 7.1 MMbtu/hr. However, according to 326 IAC 6-2-4(a), for Q less than ten (10) MMBtu per hour, Pt shall not exceed six tenths (0.6) lbs PM per MMBtu. Therefore, Boiler 90 is limited to six tenths (0.6) lbs of PM per MMBtu heat input.

Boiler 90 has PM emissions of 0.0019 lb/MMBtu, therefore it is in compliance 326 IAC 6-2, without the use of a control device.

(b) Pursuant to 326 IAC 6-2-4(a), particulate emissions from units 93, TB, ALLI-37, and the wash unit, constructed after September 21, 1983, shall not exceed 0.60, 0.56, 0.53, and 0.52 pound per million British thermal unit heat input, respectively.

This limitation is based on the following equation:

$$Pt = 1.09 / (Q^{0.26})$$

where:

Pt = emission rate limit (lbs/MMBtu)
Q = total source heat input capacity (MMBtu/hr)

Each of the natural gas fired units above have PM emissions of 0.0019 lb/MMBtu, therefore, each is in compliance with 326 IAC 6-2 without the use of a control device.

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

(a) Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the following processes shall not exceed the emission rate listed below:

PM Control Device	ID	Process	Process Weight, P		P<=60,000 lb/hr	P>60,000 lb/hr
			each unit (lb/hr)	each unit (ton/hr)	E = 4.10 $P^{0.67}$ (lb/hr)	E = 55 $P^{0.11}$ - 40 (lb/hr)
INGOT						
none	2	#2-2 NG furnace	12,000	6.0	-	13.62
none	3	#2-3 NG furnace	12,000	6.0	-	13.62
none	4	#2-4 NG furnace	19,160	9.58	-	18.63
none	5	#2-5 NG furnace	19,160	9.58	-	18.63
none	6	#2-6 NG furnace	19,160	9.58	-	18.63
none	7	#4 NG furnace	12,400	6.2	-	13.92
INGOT - IA						
none	8	#41 NG holding furnace	12,400	6.2	13.92	-
none	9	622 Filter box #41 -> #11	12,400	6.2	13.92	-
none	10	622 Filter box #2-2 -> #12	12,000	6.0	13.62	-
none	11	622 Filter box #2-2 -> #13	12,000	6.0	13.62	-
none	12	622 Filter box #2-3 -> #13	12,000	6.0	13.62	-
none	13	622 Filter box #2-4 -> #14	19,200	9.6	18.66	-
none	14	622 Filter box #2-5 -> #14	19,200	9.6	18.66	-
none	15	622 Filter box #2-6 -> #15	19,200	9.6	18.66	-
none	16	north skim cooling	4,000	2.0	6.52	-
none	17	south skim cooling	4,000	2.0	6.52	-
Rotoclone 130	31	Niles lathe operation	94,000	47.0	-	44.00
EXTRUSION 2 - IA						
Cyclone/bag Chip Collector	-	#21 Press Do-All Band Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#22 Press Do-All Band Saw	94,000	47.0	-	44.00
none	-	#23 Saw Do-All Band Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#23 Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#24 Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#28 Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#34 Saw	94,000	47.0	-	44.00
Cyclone/bag Chip Collector	-	#27 Saw	94,000	47.0	-	44.00
Chip Collector	-	#37 Saw	94,000	47.0	-	44.00
ALUMINUM - LITHIUM CASTHOUSE - IA						
none	ALLI-24 and 25	(2) Electric Induction Melting Furnaces	4,062	2.03	6.59	-
	ALLI-31	Dog Bone Band Saw ALLI-31	7,233	3.62	9.70	-

PM Control Device	ID	Process	Process Weight, P		P<=60,000 lb/hr	P>60,000 lb/hr
			each unit (lb/hr)	each unit (ton/hr)	$E = 4.10 P^{0.67}$ (lb/hr)	$E = 55 P^{0.11} - 40$ (lb/hr)
none	ALLI-32	Skim Cooling	600.12	0.30	1.83	-
none	ALLI-33	Skim Loadout	600.12	0.30	1.83	-
PLANT MISCELLANEOUS -Wood Sawing						
Cyclone #1 sawdust collector	101	One (1) wood sawing operation located in the carpenter shop	94,000	47.0	-	44.00
Baghouse #2 sawdust collector	102	Sawing activities located in the carpenter shop	94,000	47.0	-	44.00

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

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

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

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

$E = 55 P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

(b) The sawing activities located in the Quality Lab do not meet the definition of "manufacturing process" as defined in 326 IAC 6-3-1.5 (Definitions), therefore the requirements of 326 IAC 6-3-2 do not apply.

(c) IDEM determined that monitoring and recordkeeping is not required for any of the sawing activities in permit renewal T157-30520-00001, issued November 28, 2012, since the potential to emit particulate from these operations is less than ten (10) tons per year, each.

326 IAC 8-1-6 (New Facilities - General Reduction Requirement)

(a) The tube mill solvent dip tanks, identified as emission units 94 and 95, and the tube mill solvent tank farm, identified as emission unit 98, are not subject to 326 IAC 8-1-6, because each was constructed prior to January 1, 1980.

(b) The diesel fired generators identified as emission units 136, and 137, and the air compressor EUDAC#1 are not subject to the requirements of 326 IAC 8-1-6, since each has potential unlimited VOC emissions of less than twenty-five (25) tons per year.

(c) The two (2) clear coating roller conveyor applicators, identified as emission units 112 and 141, and the four (4) clear coating applicators, identified as emission unit 112, consisting of a hand held spray applicator wand and pressurized reservoir, are not subject to the requirements of 326 IAC 8-1-6, since they are subject to another VOC rule (326 IAC 8-2-9).

(d) The five (5) straighteners and roll machines, identified as units 142, 143, 144, 145, and 146, are not subject to the requirements of 326 IAC 8-1-6, because each has potential unlimited VOC emissions of less than twenty-five (25) tons per year.

326 IAC 8-2 (Surface Coating Emission Limitations)
The three (3) inking operations including video jet, pannier ink, and clean up solvent usage are not subject to 326 IAC 8-2 (Surface Coating Emission Limitations), because the processes do not apply a coating as defined in 326 IAC 8-1-0.5.

326 IAC 8-2-9 (Miscellaneous metal and plastic parts coating operations)
(a) The clear coating applicators, identified as emission units 112 and 141, are subject to 326 IAC 8-2-9, because they were constructed after July 1, 1990, the source is located in Tippecanoe County, and coat metal parts or products under the Standard Industrial Classification Code of major group #33. Pursuant to 326 IAC 8-2-9(c) the source may not cause, allow, or permit the discharge into the atmosphere of any VOC in excess of the following: (1) Fifty-two hundredths (0.52) kilogram per liter (four and three-tenths (4.3) pounds per gallon) of coating, excluding water, delivered to a coating applicator that applies clear coatings.

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.

(b) The five (5) straighteners and roll machines, identified as units 142, 143, 144, 145, and 146, are not subject to the requirements of 326 IAC 8-2-9, because protective oils and lubricants are not considered coatings. While protective oils are not discussed in 326 IAC 8-2-9, the EPA Control Techniques Guidelines (CTG) for Miscellaneous Metal and Plastic Parts Coatings, EPA-453/R-08-003, September 2008, states that protective oils for metal are not considered miscellaneous metal or plastic parts coatings.

The EPA CTG for Miscellaneous Metal and Plastic Parts Coatings can be found by searching for " Control Techniques Guidelines for Miscellaneous Metal and Plastic Parts Coatings " at the following internet address: https://www.epa.gov/nscep

326 IAC 8-3 (Organic Solvent Degreasing Operations)
(a) Pursuant to 326 IAC 8-3 (Organic Solvent Degreasing Operations), the cold cleaner degreasing operations (thirty (30) parts washers) using less than 145 gallons per year of solvent, each, and each constructed after January 1, 1980, are subject to the requirements of 326 IAC 8-3-2 (Cold cleaner degreaser control equipment) and 326 IAC 8-3-8 (Material requirements for cold cleaner degreasers), since each operation meets the definition of a cold cleaner degreaser under 326 IAC 1-2-18.5 and utilizes an organic solvent containing volatile organic compounds (VOCs) (as defined by 326 IAC 1-2-90).

(b) The tube mill solvent dip tanks, identified as emission units 94 and 95, and the tube mill solvent tank farm, identified as emission unit 98, are not subject to 326 IAC 8-3, because the each was constructed before January 1, 1980.

326 IAC 8-5 (Miscellaneous Operations)
The three (3) inking operations including video jet, pannier ink, and clean up solvent usage are not subject to 326 IAC 8-5 (Miscellaneous Operations), because although they were constructed before January 1, 1980, they are not the type of facilities or sources described in 326 IAC 8-5-2. Also, although they were constructed before November 1, 1980, they are not located in the counties listed in 326 IAC 8-5-1(1).

326 IAC 8-6 (Organic Solvent Emission Limitations)

(a) The tube mill solvent dip tanks, identified as emission units 94 and 95, and the tube mill solvent tank farm, identified as emission unit 98, are not subject to 326 IAC 8-6, because the source commenced operation prior to October 7, 1974 and is not located in Lake or Marion Counties.

(b) The two (2) clear coating applicators and the four (4) clear coating applicators, identified as emission units 112 and 141, are not subject to 326 IAC 8-6, because they were constructed after January 1, 1980, do not have potential emissions of 100 tons or greater per year of VOC, and are limited by another VOC rule (326 IAC 8-2-9).

(c) The three (3) inking operations including video jet, pannier ink, and clean up solvent usage are not subject to 326 IAC 8-6 (Organic Solvent Emission Limitations), because they are not located in Lake or Marion Counties, and they were constructed before October 7, 1974.

(d) The five (5) straighteners and roll machines, identified as units 142, 143, 144, 145, and 146, are not subject to the requirements of 326 IAC 8-6, because each does not have potential emissions of 100 tons or greater per year of VOC.

Compliance Determination and Monitoring Requirements

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

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

The compliance determination requirements applicable to this source are as follows:

Permit Section D.1

The charge to #2-6 tilting-melting-holding furnaces, identified as emission unit 6, shall consist of only alloys, pig, slabs, purchased scrap, or process scrap and chips that are essentially free of contaminants and has demonstrated to be acceptable based on successful performance tests.

The compliance testing requirements applicable to this source are as follows:

Summary of Testing Requirements					
Emission Unit	**Control Device**	**Date of Last Valid Demonstration**	**Pollutant**	**Frequency of Testing**	**Authority**
Furnace #2-2	none	10/16/2017	PM	at least once every five (5) years from the date of the most recent valid compliance demonstration	326 IAC 2-2
Furnace #2-3	none	10/16/2017	PM	at least once every five (5) years from the date of the most recent valid compliance demonstration	326 IAC 2-2
Furnace #2-6	none	09/25/2017	PM	at least once every five (5) years from the date of the most recent valid compliance demonstration	326 IAC 2-2
	none	09/25/2017	NOx	at least once every five (5) years from the date of the most recent valid compliance demonstration	326 IAC 2-2

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit 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 March 1, 2017. Additional information was received on Jun 23, 2017, October 10, 13, and 18, 2017, and February 26, 2018.

Conclusion

The operation of this stationary secondary aluminum production facility shall be subject to the conditions of the Part 70 Operating Permit Renewal No. T157-38267-00001.

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

TSD Appendix A: Emission Calculations
Unrestricted Emissions

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Emission Unit/Process	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Pb	Cl2	HCl	*F**	HF	Total HAPs
Source-wide Natural Gas Usage	6.63	26.52	26.52	2.30	348.97	21.13	322.67	1.92E-03	--	--	--	--	7.25
Source-wide A-130 Flux Usage	--	--	--	--	--	--	--	--	>10	>10	--	>10	>25
Source-wide AFB Usage	--	--	--	--	--	--	--	--	>10	--	*>10*	>10	>25
INGOT													
#2-2 NG furnace - unit 2	2.54	2.54	2.54	--	--	--	--	3.53E-05					
#2-3 NG furnace - unit 3	2.54	2.54	2.54	--	--	--	--	3.53E-05					
#2-4 NG furnace - unit 4	2.54	2.54	2.54	--	--	--	--	3.53E-05					
#2-5 NG furnace - unit 5	2.54	2.54	2.54	--	--	--	--	3.53E-05					
#2-6 NG furnace - unit 6	2.54	2.54	2.54	--	--	--	--	3.53E-05					
#4 melting furnace - unit 7	2.54	2.54	2.54	--	--	--	--	3.53E-05					
TUBE MILL													
Tube mill dip tank 94	--	--	--	--	--	13.40	--	--					
Tube mill dip tank 95	--	--	--	--	--	26.79	--	--					
Tube mill tank farm 98	--	--	--	--	--	+	--	--					
ALUMINUM - LITHIUM CASTHOUSE													
Prime Aluminum Melting Furnace #1 - unit ALLI-1 (PM only)	1.48	1.48	1.48	--	--	--	--	9.63E-06					
Homogenizing Oven #1 - ALLI-27 - AFB Usage only	--	--	--	--	--	--	--	--					
Homogenizing Oven #2 - ALLI-28 - AFB Usage only	--	--	--	--	--	--	--	--					
PLANT MISCELLANEOUS													
Air Compressor - EUDAC#1	4.28	4.28	4.28	4.00	60.84	4.97	13.11						
INGOT - IA													
622 Filter box #41 -> #11	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-2 -> #12	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-2 -> #13	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-3 -> #13	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-4 -> #14	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-5 -> #14	2.54	2.54	2.54	--	--	--	--	--					
622 Filter box #2-6 -> #15	2.54	2.54	2.54	--	--	--	--	--					
North Skim Cooling - unit 16	2.54	2.54	2.54	--	--	--	--	2.49E-05					
South Skim Cooling - unit 17	2.54	2.54	2.54	--	--	--	--	2.49E-05					
Sawing Activities	26.28	26.28	26.28	--	--	--	--	3.65E-04					
Ingot Department Diesel Emergency Generator - unit 136	0.26	0.26	0.26	0.24	3.63	0.29	0.78						
#41 Holding furnace - unit 8	2.54	2.54	2.54					3.53E-05					
EXTRUSION 1 - IA													
Coating applicator - unit 141	+	+	+	+	+	+	+	+					
Sawing Activities - units 120, 121, 135	11.69	11.69	11.69	--	--	--	--	1.62E-04					
Wastewater Treatment Plant Diesel Emergency Generator - unit 137	0.13	0.13	0.13	0.12	1.87	0.15	0.40						
DIE SHOP - IA													
Die Caustic Cleaning System - unit 124	negl.	negl.	negl.	--	--	--	--						
Die Etch System - unit 125	negl.	negl.	negl.	--	--	--	--						
EXTRUSION 2 - IA													
Extrusion Etch Sampling - unit 53	negl.	negl.	negl.	--	--	--	--						
Sawing activities - units 122, 123, 131, 132	23.60	23.60	23.60					3.28E-04					
Part washer supporting Ext-2	--	--	--	--	--	0.09	--	--					
TUBE MILL - IA													
Sawing activities - units 126, 127, 128, 129	13.30	13.30	13.30					2.44E-04					
18 part washers supporting Tube Mill	--	--	--	--	--	1.69	--	--					
ALUMINUM - LITHIUM CASTHOUSE - IA													
(2) Electric Induction Melting Furnaces - ALLI-24 and ALLI-25	14.23	14.23	14.23	--	--	--	--	9.25E-05					
Skim Cooling ALLI-32	4.96	4.96	4.96	--	--	--	--	3.22E-05					
Skim Loadout ALLI-33	4.96	4.96	4.96	--	--	--	--	3.22E-05					
Emergency Generator - ALLI-34	0.18	0.01	0.01	7.01E-04	4.87	0.14	0.38	--					
A622 Filter -ALLI-26	0.35	0.35	0.35	--	--	--	--	2.26E-06					
ALLI Saws	4.28	4.28	4.28	--	--	--	--	1.19E-01					
Cooling tower - unit ALLI-35	included in plant maintenance towers												
SHIPPING - IA													
Coating conveyor and applicators - unit 112	+	+	+	+	+	+	+	+					
PLANT MISCELLANEOUS - IA													
Ink for Video Jets 51-3A, 51-3B, and 51-3C						2.76							
Gasoline Dispensing - unit 119	--	--	--	--	--	0.20	--	--					
Sawing activities located in the carpenter shop - unit 101	4.51	4.51	4.51	--	--	--	--	--					
Sawing activities located in the carpenter shop - unit 102	4.51	4.51	4.51	--	--	--	--	--					
Sawing activities located in the Quality Lab	10.00	10.00	10.00										
11 part washers supporting Maintenance	--	--	--	--	--	1.03	--	--					
diesel fuel tank - unit 116	+	+	+	+	+	+	+	+					
#2 diesel fuel tank - unit 117	+	+	+	+	+	+	+	+					
distilate fuel oil tank - unit 118	+	+	+	+	+	+	+	+					
propane emergency generator - unit 138	+	+	+	+	+	+	+	+					
physical laboratory - unit 140	+	+	+	+	+	+	+	+					
Cooling Towers	2.82	2.32	2.32	--	--	--	--	--					
Cooling Towers (2016)	0.03	0.03	0.03	--	--	--	--	--					
Vehicular Roadway Fugitive Emissions	17.45	3.49	0.86	--	--	--	--	--					

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO	Pb	Cl2	HCl	*F**	HF	Total HAPs
Source-Wide Unlimited Potential Emissions:	**196.58**	**201.83**	**199.19**	**6.67**	**420.18**	**72.64**	**337.34**	**1.23E-01**	>10	>10	*>3*	>10	>25

Notes:
Calculations were updated from last issued permit (37799). Of note, the metal sawing emissions have been based on volume of cut calculations instead of engineering estimates, and the internal combustion engine calculations have been revised to current templates. Also, stack test data for Ingot Furnaces and AL-LI-1 (Primary Melter) were used for particulate emissions, and particulate emissions from the die etch cleaning system were reviewed and found to be negligible.

+Emissions were not calculated for processes that are a minor part of the entire facility. PTE already renders this source major under PSD and Part 70; therefore, calculations for these processes are not needed for this Renewal.

For several furnaces and heaters, there are no process emissions associated with the emission unit. All emissions are from natural gas combustion only; therefore, the emissions are included in the source-wide calculation for natural gas usage.

TSD Appendix A: Emission Calculations
Limited Emissions

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

limited

Emission Unit/Process	PM lb/hr	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X lb/hr	NO_X	VOC	CO	Pb	*F*
Source-wide Flux Usage		--	--	--	--		--	--	--	--	9.41
Source-wide Natural Gas Usage		6.63	26.52	26.52	2.30		348.97	21.13	322.67	1.92E-03	--
INGOT											
#2-2 NG furnace - unit 2	2.84	2.54	2.54	2.54	--		--	--	--	3.53E-05	
#2-3 NG furnace - unit 3	2.84	2.54	2.54	2.54	--		--	--	--	3.53E-05	
#2-4 NG furnace - unit 4	18.63	2.54	2.54	2.54	--		--	--	--	3.53E-05	
#2-5 NG furnace - unit 5	18.63	2.54	2.54	2.54	--		--	--	--	3.53E-05	
#2-6 NG furnace - unit 6	5.69	2.54	2.54	2.54	--	5.0	--	--	--	3.53E-05	
#4 melting furnace - unit 7	13.92	2.54	2.54	2.54	--		--	--	--	3.53E-05	
Subtotal		**15.24**	**15.24**	**15.24**						**2.12E-04**	
TUBE MILL											
Tube mill dip tank 94		--	--	--	--		--	13.40	--	--	--
Tube mill dip tank 95		--	--	--	--		--	26.79	--	--	--
Tube mill tank farm 98		--	--	--	--		--	+	--	--	--
Subtotal								**40.19**			
ALUMINUM - LITHIUM CASTHOUSE											
Prime Aluminum Melting Furnace #1 Unit ALLI-1 (PM only)		1.48	1.48	1.48	--		--	--	--	9.63E-06	--
Homogenizing Oven #1 - ALLI-27 - NG and AFB emissions accounted for in source-wide limits		--	--	--	--		--	--	--	--	--
Homogenizing Oven #2 - ALLI-28 - NG and AFB emissions accounted for in source-wide limits		--	--	--	--		--	--	--	--	--
Subtotal		**1.48**	**1.48**	**1.48**						**9.63E-06**	
PLANT MISCELLANEOUS											
Air Compressor - EUDAC#1		4.28	4.28	4.28	4.00	13.89	24.83	4.97	13.11		
Subtotal		**4.28**	**4.28**	**4.28**	**4.00**		**24.83**	**4.97**	**13.11**		
INGOT - IA											
622 Filter box #41 -> #11		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-2 -> #12		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-2 -> #13		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-3 -> #13		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-4 -> #14		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-5 -> #14		2.54	2.54	2.54	--		--	--	--	--	--
622 Filter box #2-6 -> #15		2.54	2.54	2.54	--		--	--	--	--	--
North Skim Cooling - unit 16		2.54	2.54	2.54	--		--	--	--	2.49E-05	--
South Skim Cooling - unit 17		2.54	2.54	2.54	--		--	--	--	2.49E-05	--
Sawing Activities		26.28	26.28	26.28	--		--	--	--	3.65E-04	--
Ingot Department Diesel Emergency Generator - unit 136		0.26	0.26	0.26	0.24		3.63	0.29	0.78	--	--
#41 Holding furnace - unit 8		2.54	2.54	2.54	--		--	--	--	3.53E-05	--
Subtotal		**51.95**	**51.95**	**51.95**	**0.24**		**3.63**	**0.29**	**0.78**	**4.50E-04**	**--**
EXTRUSION 1 - IA											
Coating applicator - unit 141		+	+	+	+		+	+	+	+	+
Sawing Activities - units 120, 121, 135		11.69	11.69	11.69						1.62E-04	
Wastewater Treatment Plant Diesel Emergency Generator - unit 137		0.13	0.13	0.13	0.12		1.87	0.15	0.40		
Subtotal		**11.82**	**11.82**	**11.82**	**0.12**		**1.87**	**0.15**	**0.40**	**1.62E-04**	
DIE SHOP - IA											
Die Caustic Cleaning System - unit 124		negl.	negl.	negl.	--		--	--	--		
Die Etch System - unit 125		negl.	negl.	negl.	--		--	--	--		
Subtotal		**0.00**	**0.00**	**0.00**							
EXTRUSION 2 - IA											
Extrusion Etch Sampling - unit 53		negl.	negl.	negl.	--		--	--	--		
Sawing activities - units 122, 123, 131, 132		23.60	23.60	23.60	--		--	--	--	3.28E-04	
Part washer supporting Ext-2		--	--	--	--		--	0.09	--		
Subtotal		**23.60**	**23.60**	**23.60**				**0.09**		**3.28E-04**	
TUBE MILL - IA											
Sawing activities - units 126, 127, 128, 129		13.30	13.30	13.30						2.44E-04	--
18 part washers supporting Tube Mill		--	--	--	--		--	1.69	--		--
Subtotal		**13.30**	**13.30**	**13.30**				**1.69**		**2.44E-04**	

TSD Appendix A: Emission Calculations
Limited Emissions

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

limited

Emission Unit/Process	PM lb/hr	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X lb/hr	NO_X	VOC	CO	Pb	*F*
ALUMINUM - LITHIUM CASTHOUSE - IA											
(2) Electric Induction Melting Furnaces - ALLI-24 and ALLI-25		14.23	14.23	14.23	--		--	--	--	9.25E-05	--
Skim Cooling ALLI-32		4.96	4.96	4.96	--		--	--	--	3.22E-05	--
Skim Loadout ALLI-33		4.96	4.96	4.96	--		--	--	--	3.22E-05	--
Emergency Generator - ALLI-34		1.8E-01	1.2E-02	1.2E-02	7.0E-04	19.46	1.46	0.14	0.38	--	--
A622 Filter -ALLI-26		0.35	0.35	0.35	--		--	--	--	2.26E-06	--
ALLI Saws		4.28	4.28	4.28	--		--	--	--	1.19E-01	--
Cooling tower - unit ALLI-35	included in plant maintenance towers										
Subtotal		**28.96**	**28.79**	**28.79**	**7.01E-04**		**1.46**	**0.14**	**0.38**	**1.19E-01**	
SHIPPING - IA											
Coating conveyor and applicators - unit 112		+	+	+	+		+	+	+	+	+
Subtotal											
PLANT MISCELLANEOUS - IA											
Ink for Video Jets 51-3A, 51-3B, and 51-3C		--	--	--	--		--	2.76	--	--	--
Gasoline Dispensing - unit 119		--	--	--	--		--	0.20	--	--	--
Sawing activities located in the carpenter shop - unit 101		4.51	4.51	4.51	--		--	--	--	--	--
Sawing activities located in the carpenter shop - unit 102		4.51	4.51	4.51	--		--	--	--	--	--
Sawing activities located in the Quality Lab		10.00	10.00	10.00							
11 part washers supporting Maintenance		--	--	--	--		--	1.03	--	--	--
diesel fuel tank - unit 116		+	+	+	+		+	+	+	+	+
#2 diesel fuel tank - unit 117		+	+	+	+		+	+	+	+	+
distilate fuel oil tank - unit 118		+	+	+	+		+	+	+	+	+
propane emergency generator - unit 138		+	+	+	+		+	+	+	+	+
physical laboratory - unit 140		+	+	+	+		+	+	+	+	+
Cooling Towers		2.82	2.32	2.32	--		--	--	--	--	--
Cooling Towers (2016)		0.03	0.03	0.03	--		--	--	--	--	--
Vehicular Roadway Fugitive Emissions		17.45	3.49	0.86	--		--	--	--	--	--
Subtotal		**39.32**	**24.84**	**22.21**				**3.99**			

	-	PM	PM_{10}	$PM_{2.5}$	SO_2	-	NO_X	VOC	CO	Pb	F
Total Plant Emissions (ton/yr):	-	197	202	199	6.67	-	381	72.64	337	1.23E-01	*0.00*

Notes:

+Emissions were not calculated for processes that are a minor part of the entire facility. PTE already renders this source major under PSD and Part 70; therefore, calculations for these processes are not needed for this Renewal.

For several furnaces and heaters, there are no process emissions associated with the emission unit. All emissions are from natural gas combustion only.

TSD Appendix A: Emission Calculations
Limited HAPs Summary

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Limited

Total Source-Wide HAP Emissions at Variable Flux Rates

AFB Flux Limited Usage (ton/yr)	A-130 Flux Limited Usage (ton/yr)	HF from all flux (ton/year)	Cl2 from all flux (ton/year)	HCl from all flux (ton/year)	Total HAPs from flux (ton/yr)	Total Misc HAPs (ton/yr)	Total Source-wide HAPs (ton/yr)	Highest Single HAP (ton/yr) (Hydrogen Fluoride)
13.00	20.0	9.91	0.25	6.67	16.83	7.93	24.76	**9.91**
12.75	25.5	9.73	0.26	6.84	16.83	7.93	24.76	
12.00	30.0	9.16	0.26	6.99	16.41	7.93	24.34	
11.00	64.0	8.45	0.30	8.08	16.83	7.93	24.76	
10.50	75.0	8.09	0.31	8.44	16.83	7.93	24.76	
10.00	85.0	7.72	0.32	8.76	16.80	7.93	24.73	
9.50	97.0	7.36	0.33	9.14	16.83	7.93	24.77	
9.00	108.0	6.99	0.34	9.50	16.83	7.93	**24.77**	

The source-wide combined usage of ammonium fluoroborate (AFB or NH4BF4) and A-130 flux (or equivalent) shall not exceed one of the correlated limits above, per twelve (12) consecutive month period with compliance determined at the end of each month.

1.) A-130 (or equivalent) Flux	Pollutant	Emission Factor	Units
INGOT #2-2 NG furnace - unit 2			
INGOT#2-3 NG furnace - unit 3	HCl	32.18	lbs HCl/1000 lb A-130
INGOT #2-4 NG furnace - unit 4	Cl2	1.03	lbs Cl2/1000 lb A-130
INGOT #2-5 NG furnace - unit 5	HF	1.43	lbs HF/1000 lb A-130
INGOT #2-6 NG furnace - unit 6	*F**	*0.95*	*lb F / lb HF generated*
INGOT #4 melting furnace - unit 7			

2.) AFB Flux	Pollutant	Emission Factor	Units
INGOT pre-heaters #3-5, 7, 10-13			
EXT-1 Heat treat furnaces	HF	0.76	lbs HF/lb AFB
EXT-1 Reheat furnaces	*F**	*0.95*	*lb F / lb HF generated*
EXT-1 Age ovens			
TUBE MILL Heat treat furnaces			
EXT-2 Heat treat furnaces			
AL-LI Homogenizing Ovens ALLI-27 and 28			

*Fluoride is a PSD pollutant, not a HAP. See AL-Li Homogenizing Oven calculations for equations.

3.) Cl2 Gas flux	Pollutant	Emission Rate	Units	lbs/yr	tons/yr
INGOT A622 Filter box #41 -> #11					
INGOT A622 Filter box #2-2 -> #12	HCl	0.175	lb/hr	9198	4.60
INGOT A622 Filter box #2-2 -> #13	Cl2	0.00875	lb/hr	459.9	0.23
INGOT A622 Filter box #2-3 -> #13				**Total for Cl2 flux**	**4.83**
INGOT A622 Filter box #2-4 -> #14					
INGOT A622 Filter box #2-5 -> #14					
INGOT A622 Filter box #2-6 -> #15					
AL-LI Casthouse A622 filterbox					

Emission rates are from testing of a representative box at the source, conducted September 1998, with a 25% safety factor.
Emission Rate (lb/hr) = highest test result (lb/hr) * 1.25 safety factor.
Filter boxes are inerted with argon, there are no stack vents and only emissions are fugitive.
PTE is calcuated at 8760 hrs/year and multiplied by six (6) emission units (the seven Ingot filter boxes receive metal from five furnaces.)
PTE (ton/yr) = emission rate (lb/hr) x 8760 hr/yr / 2000 lb/ton x 6 furnaces

4.) Amlox 90F flux or equivalent	Maximum Metal Melted (lb/yr)	Pollutant	Emission Factor***	Units	lbs/yr	tons/yr
AL-LI Electric Induction Melting Furnaces - ALLI-24 and ALLI-25	71,169,171	HCl	0.04	lb HCl/ton metal melted	1,423	0.71
AL-LI Casthouse A622 filterbox	71,169,171	HCl	0.04	lb HCl/ton metal melted	1,423	0.71
				Total for AL-LI Amlox Flux		**1.42**

***ALLI-24 and ALLI-25 do not have stacks and have only fugitive emissions. MACT limit for Group 2 furnaces is used as an emission factor in lieu of stack tests.
PTE is calcuated at maximum capacity and 8760 hrs/year. HCl emissions (lb/yr) = Maximum metal melted (lb/yr) x (1 ton/2000 lb) x 0.04 lb HCl/ton metal melted

Miscellaneous HAPs		tons/yr
Limited Source-wide Natural Gas HAPs		5.73
Metal HAPs from sawing PM		0.18
Main Generator - unit EUDAC#1		5.34E-02
INGOT Diesel Emergency Generator - unit 136		3.18E-03
EXT-1 Diesel Emergency Generator - unit 137		1.64E-03
AL-LI Emergency Generator - ALLI-34		8.55E-02
PLANT MISC Gasoline Dispensing - unit 119		0.05
PLANT MISC Inking Operations		1.82
	Total Source Misc HAP sources	**7.93**

TSD Appendix A: Emission Calculations
Metal and D/F HAP Emissions

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

			Hazardous Air Pollutant Emissions (lbs/yr)							
ID #	**Department**	**Description**	**PM (lb/yr)**	**Mn**	**Cr**	**Ni**	**Pb**	**Be**	**D/F***	**Total (lb/yr)**
		Ingot Melting								
2	Ingot	#2-2 Tilting-Melting-Holding Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	5.76E-09	8.67
3	Ingot	#2-3 Tilting-Melting-Holding Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	5.76E-09	8.67
4	Ingot	#2-4 Tilting-Melting-Holding Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	9.20E-09	8.67
5	Ingot	#2-5 Tilting-Melting-Holding Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	9.20E-09	8.67
6	Ingot	#2-6 Tilting-Melting-Holding Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	9.20E-09	8.67
7	Ingot	#4 Melting Furnace	5,080.80	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	-	8.67
8	Ingot	#41 Holding Furnace	5080.8	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	-	8.67
16	Ingot	North Skim Cooling Enclosure	5080.8	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	-	8.67
17	Ingot	South Skim Cooling Enclosure	5080.8	6.54	1.80E+00	2.13E-01	7.06E-02	4.98E-02	-	8.67
		Aluminum-Lithium Casthouse								
1	ALLI	Prime Aluminum Melting Furnace #1 (PM only; no NG)	2,963.80	8.13E-01	-	-	1.93E-02	2.96E-04	-	0.83
24 and 25	ALLI	(2) Electric Induction Melting Furnaces	28,467.67	7.81E+00	-	-	1.85E-01	2.85E-03	-	8.00
26	ALLI	A622 Filter	695.66	1.91E-01	-	-	4.52E-03	6.96E-05	-	0.20
32	ALLI	Skim Cooling ALLI-32	9,914.09	2.72E+00	-	-	6.44E-02	9.91E-04	-	2.79
33	ALLI	Skim Loadout ALLI-33	9,914.09	2.72E+00	-	-	6.44E-02	9.91E-04	-	2.79
		Insignificant Sawing Activities								
	Ingot	Sawing Activities	52,566.56	6.76E+01	1.86E+01	2.21E+00	7.31E-01	5.15E-01	-	89.68
	Al-Li	Sawing Activities	8,565.30	2.35E+00	-	-	1.19E-01	8.39E-02	-	2.55
	Extrusion U1	Sawing Activities	23,374.54	3.01E+01	8.27E+00	9.82E-01	3.25E-01	2.29E-01	-	39.88
	Extrusion U2	Sawing Activities	47,207.82	6.07E+01	1.67E+01	1.98E+00	6.56E-01	4.63E-01	-	80.54
	Tube Mill	Sawing Activities	35,148.22	4.52E+01	1.24E+01	1.48E+00	4.89E-01	3.44E-01	-	59.96

* Dioxin/Furan emission factor from stack test conducted April 2003 on Furnace 2-6

EF = 9.60E-10 lb D/F per ton of metal

		Mn	Cr	Ni	Pb	Be	D/F	Total
Emission Totals (lbs/yr)		279.10	72.16	8.57	3.29	2.09	3.91E-08	365.22
Emission Totals (Tons/Year)		**1.40E-01**	**3.61E-02**	**4.3E-03**	**1.65E-03**	**1.04E-03**	**1.96E-11**	**0.18**

	HAP Mass Fraction %				
	Alloy				
	Mn	**Cr**	**Ni**	**Pb**	**Be**
Total Ingot Sources	0.12866	0.03537	0.0042	0.00139	0.00098
Total Aluminum Lithium Sources	0.02744	-	-	0.00065	0.00001

TSD Appendix A: Emission Calculations
Al-Li Project Emission Sources

Company Name: **Arconic Inc.**
Source Address: **3131 East Main Street, Lafayette, IN 47905**
Part 70 Operating Permit Renewal No.: **T157-38267-00001**
Source Modification: **157-39844-00001**
Permit Reviewer: **Tamara Havics**

Al-Li Project - Process Constants			
Maximum PTE hours/year	8,760	hours/year	Process Constants
	365	days/yr	
Maximum PTE hrs/day	24	hrs/day	
Natural Gas Heating Value	1,020	BTU/ft3	
Mass Conversion (grains/pound)	7,000	grains/pound	
Al-Li Alloy Max Density	0.095	lb/in^3	Alloy 2099 Specification
Al-Li Alloy Max Manganese	0.5%		
Al-Li Alloy Max Beryllium	0.0001%		
Al-Li Alloy Max Lead	0.00065%		

Prime Aluminum Melting Furnace ALLI-1			
Natural Gas Burner Capacity	12.8	MMBTU/hr	Burner Capacity
Prime Furnace Melting Capacity	70,000	lbs/cycle	Metal Melting Production Data
Charge Cycle (tap to tap)	9.0	hours/cycle	
Prime Furnace Melting Production Capacity (lbs/hr)	7,778	lbs/hr	
Prime Furnace Melting Production Capacity (tons/hr)	3.89	tons/hr	
Prime Furnace Melting Production Capacity (million lbs/yr)	**68.13**	**million lbs/yr**	
Uncontrolled Melting PM/PM10/PM2.5 Emissions Factor	***0.087***	***lb/ton***	Uncontrolled PM/PM10/PM2.5 Data
ALLI-1 was tested on 11/12/2014 at 0.037 lb/ton at a throughput of 2.48 ton/hr. Result was scaled to maximum capacity of 3.89 ton/hr: 0.037*(3.89/2.48) = 0.058 lb/ton metal melted. A 1.5 safety factor was used yielding an emission factor of **0.087 lb PM/ton** of metal melted.			
	0.34	lb/hr	
	1.48	ton/yr	
PM Emissions Factor (PSD Limit) *	***0.4***	***lb/ton***	Limited PM/PM10/PM2.5 Data
Limited PM Emissions (Melting Only)	1.56	lb/hr	
	13,627	lb/yr	
	6.81	ton/yr	
PM10 Emissions Factor (PSD Limit) *	***0.2***	***lb/ton***	
PM10 Emissions Rate (Melting Only)	0.78	lb/hr	
	6,813	lb/yr	
	3.41	ton/yr	
PM2.5 Emissions Factor (PSD Limit) *	***0.2***	***lb/ton***	
PM2.5 Emissions Rate (Melting Only)	0.78	lb/hr	
	3.41	ton/yr	
Skim Melt Loss	2.5%		Skim Melt Loss Data
Skim Melt Loss (lbs/heat)	1,750	lbs/heat cycle	
Skim Melt Loss (lbs/hr)	194.44	lbs/hr	
Skim Melt Loss (lbs/yr)	1,703,333	lbs/yr	
Skim Melt Loss (lbs/yr)	852	tons/yr	
Prime Furnace Melting Production Capacity (lbs/yr)	68,133,333	lbs/yr	Finished Product Production Data
Prime Furnace Skim Melt Loss (lbs/yr)	1,703,333	lbs/yr	
Prime Furnace PM/PM10/PM2.5 Emissions (lbs/yr)	13,627	lbs/yr	
Prime Furnace Net Yield Prime Aluminum Productivity Output (lbs/yr)	66,416,373	lbs/yr	
Prime Furnace Net Yield Prime Aluminum Productivity Output (ton/yr)	33,208	ton/yr	

*Using a Ca-Mg salt flux in the primary aluminum melters. Therefore, Emission rate is ~0.2 lbs/ton for PM/PM10/PM2.5. MACT limit is 0.4 lbs/ton. Furnaces that do not flux and process clean charge could use an emission factor of 0.07 lbs/ton. For conservative purposes, IDEM is proposing 0.4 lbs/ton for PM and 0.2 lb/ton for PM10 & PM2.5.

Al-Li Casting Pit			
Argon Purge Rate	10-50	scfh	A622 Argon Use
Argon Flux Rate	0	scfh	

There will be no natural gas burners at the Casting Pit because it is designed to be an argon gas inert atmosphere.
The troughs and appaurentices will have ceramic covers and a blanket of argon purge to maintain an inert atmosphere.
There are no emissions expected to be gernerated at the Al-Li Casting Pit.
There will be no Argon fluxing at the Casting Pit

TSD Appendix A: Emission Calculations
Al-Li Project Emission Sources

Company Name: **Arconic Inc.**
Source Address: **3131 East Main Street, Lafayette, IN 47905**
Part 70 Operating Permit Renewal No.: **T157-38267-00001**
Source Modification: **157-39844-00001**
Permit Reviewer: **Tamara Havics**

Electric Induction Melter Furnace Design Information ALLI-24 and ALLI-25			
Number of Electric Melting/Holding Furnaces	2	Furnaces	Electric Induction Melting/Holding Furnaces Production Data
Furance Charge Cycles per day (one furnace)	1.4	drops/day (per furnace)	
Furnace Charge Cycles per day (both furnaces)	2.8	drops/day (both furnaces)	
Furnace Charge Cycles per year (both furnaces)	1,022.0	drops/year (both furnaces)	
Furnace cycle time (hrs/cycle)	8.6	hours per charge cycle (drop)	
Furnace Charge Weight	69,637	lbs melted per charge	
Furnace Melting Capacity (one furnace)	35.58	million lbs/yr melted - per furnace	
Total Furnace Melting Capacity (both furnaces)	**71.17**	**million lbs/yr melted - both furnaces**	
Melt Loss (skim %)	***4.5%***		Melt Loss Data
Melt loss (lbs/drop cycle)	3,134	lbs skim per drop cycle	
Melt Loss (lbs/yr - both furnaces)	3,202,613	lbs/yr skim - both furnaces	
Melt Loss (tons/yr - both furnaces)	1,601	tons/yr skim	
Uncontrolled Melting PM/PM10/PM2.5 Emissions Factor (MACT limit)	***0.4***	***lbs/ton metal melted***	
	7,117	lb/yr	PM/PM10/PM2.5 Emissions Data
Unlimited Melting PM/PM10/PM2.5 Emissions Rate (lbs/hr) - (one furnace)	0.81	lb/hr	
	3.56	ton/yr	
Limited Melting PM Emissions Factor	***0.4***	***lbs/ton metal melted***	
Limited Melting PM Emissions Rate - (one furnace)	7,117	lb/yr	
	3.56	ton/yr	
Limited Melting PM10 Emissions Factor	***0.12***	***lbs/ton metal melted***	
Limited Melting PM10 Emissions Rate - (one furnace)	2,135	lb/yr	
	1.07	ton/yr	
Limited Melting PM2.5 Emissions Factor	***0.1***	***lbs/ton metal melted***	
Limited Melting PM2.5 Emissions Rate - (one furnace)	1,779	lb/yr	
	0.89	ton/yr	
Fluxing PM Emissions			Amlox90F (or equivalent) Fluxing Emissions PM/PM10/PM2.5
PM/PM10/PM2.5 Fluxing Emission Factor (MACT limit)	0.4	lbs/ton metal melted	
Flux PM emissions (lb/yr)	14,233.83	lb/yr	
Flux PM emissions (ton/yr)	**7.12**	ton/yr	
Cast Weight (transfer from melter to casting unit) - per furnace	62,000	lbs/drop metal cast - per furnace	Electric Furnace Casting Production Data
Furnace Flush	3,000	lbs/drop	
Drain Pan	1,500	lbs/drop	
Cast Weight (transfer from melter to casting unit) - per furnace	31.68	million lbs/yr cast - per furnace	
Cast Weight (transfer from melter to casting unit) - both furnaces	63.36	million lbs/yr cast - both furnaces	
Finished billets & slabs for downstream processing	50.00	million lbs/yr - All Furnaces	Finished Product Yield Data

The flowable scrap consists of light scrap such as uncoated chips and turnings and other light scrap that must be melted and poured into solid "mini-ingots" before being subsequently dried and then charged into the primary Electric Melting Furnaces.
Emissions of PM/PM10/PM2.5 are expected to be low, considering that the furnace will be interted with argon. Fugitive PM/PM10/PM2.5 emissions are projected at 0.1 lbs/ton.

Electric Induction Melting/Holding Furnace Maximum Charge Input
Maximum Finished Cast Metal Output - 62,000 lbs/drop
Maximum Drops/year = 1.4 drops per furnace/day * 2 furnaces * 365 days/yr = 1022 drops/yr
Anticipated Skim Melt Loss = 4.5% of Charge Input
PM/PM10/PM2.5 Emissions Rate - 0.1 lbs/ton (0.00005 * input)
Furnace Charge Rate (lb melted/charge) = Finished Product + furnace flush + drain pan + Melt Loss + PM/PM10/PM2.5 emissions
Furnace Charge Rate (lb melted/charge) = ((Cast Weight (lbs/drop) + Flush Furnace (lbs/drop) + Drain Pan (lbs/drop)) / (1 - %Melt loss - %PM2.5 emissions)
Furnace Charge Rate = ((62,000+3,000+1,500) * 1022) / (1 - (4.5 / 100) - (0.1 / 2000)) = 69,637 lb melted / charge

The desired cast weight from the electric induction melting furnaces is 62,000 lbs/drop.
Additionally, with each drop cycle, there will be 3,000 lbs furnace flush and 1,500 lbs drain pan metal.
The maximum finished metal available for processing is 50.00 million pounds per year.

Fluxing emission factors are based on Subpart RRR MACT major source limits.

TSD Appendix A: Emission Calculations
Al-Li Project Emission Sources

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

A622 Filter Box			
A622 Natural Gas Burner Capacity	0	MMBTU/hr	No gas burners used
A622 Filter Box PM/PM10/PM2.5 Fugitive Emissions Factor	***0.01***	***lbs/ton metal cast***	PM/PM10/PM2.5 Emissions
Uncontrolled PM/PM10/PM2.5 Emissions (lbs/yr)	339.82	lbs PM/PM10/PM2.5/yr	
Melt Loss (skim %)	***0.66%***		Melt Loss Data
Melt Loss (lb/drop)	50.0	lbs/drop	
Melt Loss (lbs/yr)	51,100	lbs/yr	
Argon Purge Rate	300.0	scfh	A622 Argon Use
Argon Flux Rate	330.0	scfh	
Fluxing Emissions			Amlox90F (or equivalent) Fluxing Emissions PM/PM10/PM2.5
Fux Usage Rate (lb/yr)	9,198	lb/yr	
PM/PM10/PM2.5 Fluxing Emission Factor (MACT limit)	0.01	lbs/ton metal melted	
Flux PM emissions (lb/yr)	355.85	lb/yr	
Flux PM emissions (ton/yr)	**0.18**	ton/yr	

There will be no natural gas burners at the A622 filter box because it is designed to be an argon gas inert atmosphere.
Particulate Emissions from A622 filter box are expected to be very minimal from skimming at the beginning of the tap cycle and end of the tap cycle.
Based on this, a PM/PM10/PM2.5 fugitive emissions factor of 0.01 lbs/ton metal throughput was assumed for this process.
PM/PM10/PM2.5 emissions are based on using an EF of 0.01 lbs/ton using the 62,000 lbs/drop cast weight + 4500 lbs/drop of flush and drain, at 2.8 drops per day (1022 drops per year).
Melt Loss from the A622 Filter Box was estimated at 50 lbs/drop. There are a maximum of 1,022 drops/year. Using an EF of 0.01 lbs/ton gives an annual emissions rate of 339.8 lbs/yr. At 1,022 drops/yr, this equals 0.33 lbs PM/PM10/PM2.5 per drop - or 0.33 lbs per 50 lb skim. 0.33 lbs PM/PM10/PM2.5 per 50 lb skim shows that a little over 1/2 % of the skimmed material is released as emissions (0.33 lbs PM/PM10/PM2.5 /drop) / (50 lbs skim/drop) = 0.66%

Arconic Inc. currently runs a single stage A622 with a gas flow of 110SCFH during the cast and 10SCFH during idle times. These flows pass through the metal. Arconic Inc. also runs 300SCFH into the head space of the box at all times to keep the oxygen content in the head space down. Arconic Inc. will have a 2 or 3 stage A622 at Lafayette. The gas that goes through the metal will increase by stage. The head space gas will remain the same.
There may be a chlorine feed of approximately 1/2 percent of the Ar flux rate to the A622; assumed a chlorine usage rate of 0.55 scfh (1/2% of 330 scfh).

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Homogenizing Ovens ALLI-27 and 28 (AFB usage)			
Homogenizing Oven Natural Gas Burner Capacity	21.0	MMBTU/hr (each oven)	Homogenizing Oven Production Data
Homogenizing Oven Charge	400,000	lbs/charge	
Homogenizing Oven Cycle Time	60	hours/load	
Maximum cycles/year for two (2) Homo Ovens	292	charge loads/yr	
Maximum AFB Usage	18	lbs AFB/load (both ovens)	AFB Usage
	2.63	tons AFB/yr (both ovens)	

AFB usage in Ingot ALLI alloys is 3 lbs/load, but may be as high as 6, or 9 lbs/load.

HF Generation from AFB
There are 0.76 lbs HF generated from each lb AFB based on stoichiometric chemistry as follows:
$2NH_4BF_4+3H_2O \rightarrow 2NH_3+8HF+B_2O_3$
The molecular weight of $2NH_4BF_4$ is 122.88. The molecular weight of 8HF is 160.05.
Therefore 0.76 lbs of HF are generated per lb of AFB.

Fluoride Generation from HF
There is 0.95 lbs F generated from each lb of HF based on molecular weight as follows:
Molecular Weight: Fluoride = 19, Hydrogen = 1
F/HF = 19/20 = 0.95
Therefore, there is 0.95 lbs of Fluoride per lb of HF

Note:
Testing was conducted November 14, 2014 to verify Fluoride emission factor.
Measured emission rate was 0.000759 lb F / lb AFB

Calculated Fluoride Emission Factor
0.722 lb F/ lb AFB

Skim Generation, Cooling, & Load Out (ALLI-32 and 33)			
Skim Generation (lbs/yr) - electric melters, prime furnace, and A622 filter box	**4,957,046**	**lbs/yr**	Skim Generation
Skim Generation	2,479	tons/yr	
	565.87	lb/hr (time-weighted average)	
Unlimited Skim Cooling PM/PM10/PM2.5 Emission Factor*	4.0	lbs/ton	Skim Cooling
Unlimited Skim Cooling PM/PM10/PM2.5 Emissions	9,914.09	lbs/yr	
	4.96	ton/yr	
Limited Skim Cooling PM Emission Factor	**1.3**	**lbs/ton**	
Limited Skim Cooling PM Emissions	3,222.08	lbs/yr	
	1.61	ton/yr	
Limited Skim Cooling PM10 Emission Factor	**0.15**	**lbs/ton**	
Limited Skim Cooling PM10 Emissions	371.78	lbs/yr	
	0.19	ton/yr	
Limited Skim Cooling PM2.5 Emission Factor	**0.15**	**lbs/ton**	
Limited Skim Cooling PM2.5 Emissions	371.78	lbs/yr	
	0.19	ton/yr	
Unlimited Skim Loadout PM/PM10/PM2.5 Emission Factor*	4.0	lbs/ton	Skim Load Out Emissions
Unlimited Skim Loadout PM/PM10/PM2.5 Emissions	9,914.09	lbs/yr	
	4.96	ton/yr	
Limited Skim Loadout PM Emission Factor	**1.3**	**lbs/ton**	
Limited Skim Loadout PM Emissions	3,222.08	lbs/yr	
	1.61	ton/yr	
Limited Skim Loadout PM10 Emission Factor	**0.06**	**lbs/ton**	
Limited Skim Loadout PM10 Emissions	148.71	lbs/yr	
	0.07	ton/yr	
Limited Skim Loadout PM2.5 Emission Factor	**0.06**	**lbs/ton**	
Limited Skim Loadout PM2.5 Emissions	148.71	lbs/yr	
	0.07	ton/yr	

Total skim generated at the AL-Li facility is equal to the skim from the following:
Primary Aluminum Melter (2.5%)
Flowable Scrap Melting Furnace (2.5%)
Electric Induction Melter/Holder (4.5%)
A622 box (0.66%) (50 lbs/drop)

*Emission factors for dross/skim cooling provided by Dr. Trip Sinha of IDEM via email on 10-13-2011. EF is based on stack tests conducted at Aluminum Technology on 9-25-03
EF for PM = 0.101 lbs/ton
EF for PM10/PM2.5 = 0.151 lbs/ton

Emission factors for skim loadout emissions obtained from AP-42 Chapter 11.24 Metallic Minerals Processing, table 11.24-2 - material handling and transfer - all minerals except bauxite. Emissions are for PM2.5 is assumed equal to PM10

TSD Appendix A: Emission Calculations
Natural Gas Combustion

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Source-wide natural gas limit:	**6,000**	**MMCF/yr**
Hexane Limit:	**1.8**	**lb/MMCF**

Emission Unit	Unit ID	Installation Date	Heat Input Capacity	Natural Gas Usage		PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO
326 IAC 6-2-3 Emission Limits (lb/MMBtu):						0.8						
AP-42 Emission Factors (lb/MMCF):						1.9	7.6	7.6	0.6	100	5.5	84
						Uncontrolled Emissions (tons/yr)						
			MMBtu/hr	MMCF/yr								
INGOT												
#2-2 NG furnace	2	1994	26.0	223.3		0.21	0.85	0.85	0.07	11.16	0.61	9.38
#2-3 NG furnace	3	1994	26.0	223.3		0.21	0.85	0.85	0.07	11.16	0.61	9.38
#2-4 NG furnace	4	1991	36.0	309.2		0.29	1.17	1.17	0.09	15.46	0.85	12.99
#2-5 NG furnace	5	1988	36.0	309.2		0.29	1.17	1.17	0.09	15.46	0.85	12.99
#2-6 NG furnace	6	1995	36.0	309.2		0.29	1.17	1.17	0.09	15.46	0.85	12.99
#4 NG furnace	7	<1970	26.0	223.3		0.21	0.85	0.85	0.07	11.16	0.61	9.38
#3 NG preheater	20	1985	17.5	150.3		0.14	0.57	0.57	0.05	7.51	0.41	6.31
#4 NG preheater	21	1980	12.3	105.6		0.10	0.40	0.40	0.03	5.28	0.29	4.44
#7 NG preheater	23	1997	20.0	171.8		0.16	0.65	0.65	0.05	8.59	0.47	7.21
#10 NG preheater	24	1966	13.5	115.9		0.11	0.44	0.44	0.03	5.80	0.32	4.87
#11 NG preheater	25	1966	13.5	115.9		0.11	0.44	0.44	0.03	5.80	0.32	4.87
#12 NG preheater	26	1967	13.5	115.9		0.11	0.44	0.44	0.03	5.80	0.32	4.87
#13 NG preheater	27	1967	13.5	115.9		0.11	0.44	0.44	0.03	5.80	0.32	4.87
EXTRUSION 1												
#5 NG furnace	35	1975	18.0	154.6		0.15	0.59	0.59	0.05	7.73	0.43	6.49
#2 NG furnace	37	1987	16.0	137.4		0.13	0.52	0.52	0.04	6.87	0.38	5.77
#12 NG furnace	38	1989	16.0	137.4		0.13	0.52	0.52	0.04	6.87	0.38	5.77
#6 NG oven	50	1996	14.0	120.2		0.11	0.46	0.46	0.04	6.01	0.33	5.05
#3 billet reheat furnace	3BRF	2016	11.35	97.5		0.09	0.37	0.37	0.03	4.87	0.27	4.09
EXTRUSION 2												
#1 furnace	71	1957	13.2	113.4		0.11	0.43	0.43	0.03	5.67	0.31	4.76
INGOT - IA												
#41 Holding Furnace	8	<1970	10.0	85.9		0.08	0.33	0.33	0.03	4.29	0.24	3.61
622 Filter box #41 -> #11	9	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-2 -> #12	10	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-2 -> #13	11	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-3 -> #13	12	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-4 -> #14	13	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-5 -> #14	14	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
622 Filter box #2-6 -> #15	15	<1970	0.8	6.9		0.01	0.03	0.03	0.002	0.34	0.02	0.29
#5 NG preheater	22	<1970	7.4	63.6		0.06	0.24	0.24	0.019	3.18	0.17	2.67
Pig drying oven	28	<1970	4.7	40.4		0.04	0.15	0.15	0.01	2.02	0.11	1.70
Ingot cooling recovery	29	<1970	0.4	3.4		0.00	0.01	0.01	0.00	0.17	0.01	0.14
Refractory oven	30	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
Basin dry out oven	-	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
EXTRUSION 1 - IA												
#1 vertical furnace	32	<1970	1.5	12.9		0.01	0.05	0.05	0.004	0.64	0.04	0.54
#2 vertical furnace	33	<1970	1.5	12.9		0.01	0.05	0.05	0.004	0.64	0.04	0.54
#3 vertical furnace	34	<1970	1.5	12.9		0.01	0.05	0.05	0.004	0.64	0.04	0.54
#1-1A reheat furnace	39	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#10-10A reheat furnace	41	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#13 reheat furnace	43	<1970	4.0	34.4		0.03	0.13	0.13	0.01	1.72	0.09	1.44
#1 age anneal oven	44	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#3 age anneal oven	45	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#4 age anneal oven	46	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#1 age oven	47	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
#2 age oven	48	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
#5 age oven	49	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
#13 hot box oven	51	<1970	0.9	7.7		0.01	0.03	0.03	0.002	0.39	0.02	0.32
#14 press reheat	51-1	<1970	0.9	7.7		0.01	0.03	0.03	0.002	0.39	0.02	0.32
#15 press reheat	51-2	<1970	0.9	7.7		0.01	0.03	0.03	0.002	0.39	0.02	0.32
die cleaning	52	<1970	1.0	8.6		0.01	0.03	0.03	0.003	0.43	0.02	0.36
#4 NG furnace	134	1999	3.0	25.8		0.02	0.10	0.10	0.01	1.29	0.07	1.08
DIE SHOP - IA												
#20 weld furnace	59	<1970	1.0	8.6		0.01	0.03	0.03	0.003	0.43	0.02	0.36
#21 high heat furnace	60	<1970	1.5	12.9		0.01	0.05	0.05	0.004	0.64	0.04	0.54
#22 high heat furnace	61	<1970	1.5	12.9		0.01	0.05	0.05	0.004	0.64	0.04	0.54
#23 draw furnace	62	<1970	1.0	8.6		0.01	0.03	0.03	0.003	0.43	0.02	0.36
#43 salt pot furnace	64	<1970	1.0	8.6		0.01	0.03	0.03	0.003	0.43	0.02	0.36
#42 vertical heat treat endo gas furnace	65	<1970	1.8	15.5		0.01	0.06	0.06	0.005	0.77	0.04	0.65
#10 lead pot furnace	66	<1970	1.0	8.6		0.01	0.03	0.03	0.003	0.43	0.02	0.36
EXTRUSION 2 - IA												
#21 vertical furnace	68	<1970	4.0	34.4		0.03	0.13	0.13	0.01	1.72	0.09	1.44
#22 vertical furnace	69	<1971	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
#23 vertical furnace	70	<1972	8.0	68.7		0.07	0.26	0.26	0.02	3.44	0.19	2.89
#2 horizontal furnace	72	<1970	10.0	85.9		0.08	0.33	0.33	0.03	4.29	0.24	3.61
#21 age oven	73	<1970	4.0	34.4		0.03	0.13	0.13	0.01	1.72	0.09	1.44
#22 age oven	74	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
#24 age oven	75	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#25 age oven	76	<1970	4.0	34.4		0.03	0.13	0.13	0.01	1.72	0.09	1.44
#23 anneal treat furnace	77	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#29-29A reheat furnace	77-2	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
die heating oven - unit 77-3	77-3	<1970	2.0	17.2		0.02	0.07	0.07	0.01	0.86	0.05	0.72
die heating oven #1 - unit 77-4	77-4	<1970	1.0	8.6		0.01	0.03	0.03	0.00	0.43	0.02	0.36
die heating oven #2 - unit 77-5	77-5	<1970	1.0	8.6		0.01	0.03	0.03	0.00	0.43	0.02	0.36
die heating oven - unit 78	78	<1970	6.0	51.5		0.05	0.20	0.20	0.02	2.58	0.14	2.16
die oven - unit 77-1	77-1	<1970	2.5	21.5		0.02	0.08	0.08	0.01	1.07	0.06	0.90

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Natural Gas Combustion

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Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Source-wide natural gas limit:	**6,000**	**MMCF/yr**
Hexane Limit:	**1.8**	**lb/MMCF**

	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	VOC	CO
326 IAC 6-2-3 Emission Limits (lb/MMBtu):	0.8						
AP-42 Emission Factors (lb/MMCF):	1.9	7.6	7.6	0.6	100	5.5	84

Emission Unit	Unit ID	Installation Date	Heat Input Capacity	Natural Gas Usage		Uncontrolled Emissions (tons/yr)						
			MMBtu/hr	MMCF/yr		**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**
TUBE MILL - IA												
NG Boiler	90	1995	0.4	3.4		0.003	0.01	0.01	0.001	0.17	0.01	0.14
NG Boiler	93	2008	3.0	25.8		0.02	0.10	0.10	0.01	1.29	0.07	1.08
#30 tube furnace	79	<1970	6.0	51.5		0.05	0.20	0.20	0.02	2.58	0.14	2.16
#31 vertical heat treat furnace	80	<1970	3.0	25.8		0.02	0.10	0.10	0.01	1.29	0.07	1.08
#32 vertical heat treat furnace	81	<1970	2.2	18.9		0.02	0.07	0.07	0.01	0.94	0.05	0.79
#31 tube age anneal furnace	82	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#32 tube age anneal furnace	83	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#33 tube age anneal furnace	84	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#34 tube age anneal furnace	85	<1970	4.5	38.6		0.04	0.15	0.15	0.01	1.93	0.11	1.62
#34 tube age anneal furnace afterburner	86	<1970	5.0	42.9		0.04	0.16	0.16	0.01	2.15	0.12	1.80
#35 tube age anneal furnace	87	<1970	7.0	60.1		0.06	0.23	0.23	0.02	3.01	0.17	2.52
#37 tube age anneal furnace	88	<1970	2.2	18.9		0.02	0.07	0.07	0.01	0.94	0.05	0.79
#39 age oven	89	<1970	4.0	34.4		0.03	0.13	0.13	0.01	1.72	0.09	1.44
#43 coiled tube anneal furnace	91	<1970	2.2	18.9		0.02	0.07	0.07	0.01	0.94	0.05	0.79
0.42 MMBtu/hr Water Heater	-	2016	0.42	3.61		0.003	0.01	0.01	0.00	0.18	0.01	0.15
#44 coiled tube anneal furnace	96	<1970	2.2	18.9		0.02	0.07	0.07	0.01	0.94	0.05	0.79
PLANT MISCELLANEOUS - IA												
Rental Boiler	TB	2011	2.5	21.5		0.0204	0.08	0.08	0.01	1.07	0.06	0.90
NG Boiler	103	1940	3.0	25.8		0.02	0.10	0.10	0.01	1.29	0.07	1.08
NG Boiler	104	1940	3.0	25.8		0.02	0.10	0.10	0.01	1.29	0.07	1.08
steam pad heater	135	<1970	0.3	2.6		0.002	0.01	0.01	0.001	0.13	0.01	0.11
Natural Gas Space Heaters*	133	2001 - 2011	137.1	1,177.3	1,177.3	1.12	4.47	4.47	0.35	58.86	3.24	49.45

*Total NG usage for NG Space heaters is limited to 1,177.3 mmcf/yr to render PSD not applicable to the 2001 modification for NOx.
This fuel usage limit is equivalent to limiting NOx emissions, based on a NOx emission factor of 0.1 lb/MMBtu, to less than 40 tons per twelve (12) consecutive month period (with the emission reduction credit from removing Boilers #3 and #6) due to the 2001 modification.

ALUMINUM - LITHIUM CASTHOUSE - IA**												
Scrap Drying Oven #1	ALLI-22	2012	4.4	37.8					0.01		0.10	1.59
Scrap Drying Oven #2	ALLI-23	2012	4.4	37.8					0.01		0.10	1.59
Natural Gas Space Heaters	-	2012	100.0	859					0.26		2.36	36.07
Water Heater	ALLI-37	2014	4.0	34.4					0.01		0.09	1.44
ALUMINUM - LITHIUM CASTHOUSE**					736.2	0.70	2.80	2.80		36.81		
Prime Aluminum Melting Furnace	ALLI-1	2012	12.8	109.9					0.03		0.30	4.62
Homogenizing Furnace #1	ALLI-27	2012	21.0	180.4					0.05		0.50	7.57
Homogenizing Furnace #2	ALLI-28	2012	21.0	180.4					0.05		0.50	7.57

**Total NG usage is limited to 736.15 MMCF/yr to render PSD not applicable to the 2012 modification for PM, PM10, PM2.5, and NOx.

	Maximum Heat Input Capacity	Maximum Natural Gas Usage	Limited Natural Gas Usage***	Limited Emissions (tons/yr)						
	MMBtu/hr	MMCF/yr	MMCF/yr	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**NO_X**	**VOC**	**CO**
Total PTE (unlimited) (ton/yr):	894.55	7682.61	6000	6.63	26.52	26.52	2.30	348.97	21.13	322.67

***Natural gas limit to assure this source is an area source of HAPs under Section 112 of the Clean Air Act (CAA).
Natural Gas Usage (MMCF/yr) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu

Hazardous Air Pollutants (HAPs)

	HAPs - Organics					
	Benzene	Dichloro-benzene	Formal-dehyde	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	8.1E-03	4.6E-03	2.9E-01	6.9E+00	1.3E-02	7.23
***Source-wide Limited Emissions in ton/yr	-	-	-	5.4E+00	-	

	HAPs - Metals					
	Lead	Cadmium	Chromium	Man-ganese	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	1.9E-03	4.2E-03	5.4E-03	1.5E-03	8.1E-03	2.1E-02
Source-wide Limited Emissions in ton/yr	-	-	-	-	-	

Total Unlimited HAPs	7.25	
Highest Unlimited HAP	6.91	
Limited Total HAPs (ton/yr)	**5.73**	
Limited Highest HAP (ton/yr)	5.40	Hexane

HAP Emission (ton/yr) = EF(lb/MMCF) * Gas Usage (MMCF/yr) * 1ton/2000lb
The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

TSD Appendix A: Emission Calculations
Saw Inventory

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Area	Control Device	Saw Description	Production Saw	Classification	Control Efficiency %	Stack ID	Uncontrolled PM/PM10/PM2.5		
							lbs/hr	lbs/yr	ton/yr
Ingot	Yes	Niles lathe operation & rotoclone 130	Yes	Insignificant	99%	S31	0.99	8676.35	4.34
	None	#2 Circular Saw Operation (Column 15/48)	Yes	Insignificant	0%	Internal	0.99	8676.35	4.34
	None	#5 Circular Saw Operation (Column 15/55)	Yes	Insignificant	0%	Internal	0.99	8676.35	4.34
	None	#6 Circular Saw Operation (Column 15/59)	Yes	Insignificant	0%	Internal	0.99	8676.35	4.34
	None	#7 Circular Saw Operation (Column 15/51)	Yes	Insignificant	0%	Internal	0.99	8676.35	4.34
	None	#1 Boring Machine (Column 19/43)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	#9 Boring Machine (Column 15/45)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	Ingersoll Bore (Column 19/70)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	Medart Peeler (Lathe) (Column 19/67)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	Springfield Lathe (Column 19/45)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	Monarch Lathe (Column 19/42)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	Gisholt Lathe (Column 19/74)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
	None	LeBlond Lathe (Column 19/77)	Yes	Insignificant	0%	Internal	0.13	1148.10	0.57
AL-LI	None	Al-Li Billet Saw (ALLI-29)	Yes	Insignificant	0%	Internal	0.03	302.54	0.15
	Yes	Aluminum-Lithium Billet Peeler (ALLI-30) & dust collector ALLI-30DC	Yes	Insignificant	99%	Internal	0.13	1148.10	0.57
	None	Al-Li Dog Bone Band Saw	Yes	Insignificant	0%	Internal	0.81	7114.65	3.56
Extrusion 1	Yes	# 1 Press Run Out Table Saw & Chip collector (Column 24/21)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 1 Press - #17 saw & Chip collector (Column 22/24)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	None	# 2 Press Puller Saw (Column 23/19)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 2 Press, #2 Saw, Chip Collector and Cyclone (Column 33/17)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 15 Press Rough Cut Saw 1 (west) & cyclone/bag chip collector (Column 34	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 15 Press Rough Cut Saw 2 (west) & cyclone/bag chip collector (Column 34	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 18 Saw + cyclone/bag chip collector (Column 41/1)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 1 Sander & Rotoclone (Column 40/7)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 2 Sander & Rotoclone (Column 40/5)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	None	# 11 Press Saw (Granco Clark) (Column 25/7)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	# 12 Saw (Oliver Saw) & cyclone/bag chip collector (Column 34/29)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	None	# 13 Press Saw (Column 25/1)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	None	# 20 Stretcher Finish Saw (Column 38/35)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	None	# 20 Finish Saw (Column 38/35)	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
	Yes	#3 Extrusion Press Saw & dust collector 135DC	Yes	Insignificant	99%	Internal	0.18	1558.30	0.78
Extrusion 2	Yes	#21 Press Do-All Band Saw & Cyclone/bag Chip Collector (Column 91/13)	Yes	Insignificant	99%	Internal	0.65	5691.72	2.85
	Yes	#22 Press Do-All Band Saw & Cyclone/bag Chip Collector (Column 90/17)	Yes	Insignificant	99%	Internal	0.65	5691.72	2.85
	None	#23 Saw Do-All Band Saw	Yes	Insignificant	99%	Internal	0.57	5022.11	2.51
	Yes	#23 Saw & Cyclone/bag Chip Collector	Yes	Insignificant	99%	Internal	0.65	5691.72	2.85
	Yes	#24 Saw & Cyclone/bag Chip Collector (Column 80/25)	Yes	Insignificant	99%	Internal	0.57	5022.11	2.51
	Yes	#28 Saw & Chip Cyclone/bag Collector (Column 90/25)	Yes	Insignificant	99%	Internal	0.57	5022.11	2.51
	Yes	#34 Saw & Cyclone/bag Chip Collector (Column 80/39)	Yes	Insignificant	99%	Internal	0.57	5022.11	2.51
	Yes	#27 Saw (unit 131) & Cyclone/bag Chip Collector (Column 80/31)	Yes	Insignificant	99%	S131	0.57	5022.11	2.51
	Yes	#37 Saw (unit 132) with Chip Collector (Column 80/29)	Yes	Insignificant	99%	Internal	0.57	5022.11	2.51
Tube Mill	Yes	Polishing wheel operation unit 126 & Rotoclone	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	Wheel repair operation unit 127 & Rotoclone	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	Flap wheel grinders operation unit 128 & Rotoclon	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	Belt grinders operation unit 129 & Rotoclone	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	Grind Cell area saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#3 DSC sawing operation & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#3 DSC chamfer operation & cyclone chip collector	Yes	Insignificant	99%	Internal	0.27	2379.00	1.19
	Yes	#4 DSC chipless cutter sawing operation & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#4 DSC chamfer operation & cyclone chip collector	Yes	Insignificant	99%	Internal	0.27	2379.00	1.19
	Yes	#5 DSC sawing operation & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#5 DSC chamfer operation & cyclone chip collector	Yes	Insignificant	99%	Internal	0.27	2379.00	1.19
	Yes	#6 DSC sawing operation & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#6 DSC chamfer operation & cyclone chip collector	Yes	Insignificant	99%	Internal	0.27	2379.00	1.19
	Yes	Small Cell, #10 saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#7 Short Cut Cell saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	None	#3 saw & emissions uncontrolled	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	Large Cell, #12 saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	"T" Cell saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#4 saw east & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#4A saw west & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#11 saw & Rotoclone	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#10 Oliver saw & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#10 Draw Bench saw & cyclone chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#7 DSC sawing operation & cyclone/bag chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61
	Yes	#7 DSC chamfer operation & cyclone chip collector	Yes	Insignificant	99%	Internal	0.14	1220.58	0.61

TSD Appendix A: Emission Calculations
Peeler, Lathe, Boring Emissions

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Peeler, Lathe, Boring Emissions			Saw Data
Maximum Total Cast Weight (2 furnaces)	31,682	tons/yr	**Production Information**
Maximum Total Cast Weight (2 furnaces)	63,364,000	pounds/yr	
Maximum Total Cast Weight (2 furnaces)	7,233	pounds/hr	
Log Production (% of total production)	70%	percent of total cast production	
Log Production (lbs/yr)	44,354,800	pounds logs/yr	
Logs Cast Per Drop Cycle	6	logs/drop cycle	**Log Saw Emissions**
Uncropped Cast Log Length	260	inches	
Crop Saw Cuts per log	2	cuts/log	
Crop Saw Cuts per Cast Drop	12	cuts/drop	
Cast Drops per year	1,022	Cast Drops per Year	
Cast logs per year	6,132	cast logs/yr	
Crop Cuts per Year	12,264	crop cuts per year	
Saw Blade Thickness (in)	0.25	inches	
Average Cast Log Diameter	23.0	inches	
Cast Log Cross Sectional Area (square inches)	415.48	square inches	
Metal Volume removed per crop saw cut	104	cubic inches metal per cut	
Total metal volume removed for all crop saw cuts	1,273,848	cubic inches/yr - all crop cuts	
Log Crop Reduction (%)	8.8%	Percent	
Crop Length	23	inches	
Cropped log length	237	inches	
Average billet length	65	inches	
Billets per log	4	billets per log	
Billet Saw Cuts per Log (# billets/log - 1)	3	saw cuts/log	
Billet saw cuts per year	18,396	billet saw cuts/yr	
Total metal volume removed for all billet saw cuts	1,910,772	cubic inches/yr - all billet cuts	
Total metal volume removed from all log crop & billet cuts	3,184,621	cubic inches/yr - all log & billet saw cuts	
Total metal mass removed for all cuts (lbs/yr)	302,539	lbs/yr metal removed for all saw cuts	
% Aluminum Emissions generated from saw cuts	0.10%	percent	
Uncontrolled Aluminum Emissions generated from saw cuts (lbs/yr)	***302.5***	***lbs/yr***	
Uncontrolled Aluminum Emissions generated from saw cuts (tons/yr)	***0.151***	***tons/yr***	
Peeled Billet Diameter (inches)	20.563	inches	**Log Peeler, Boring, and Lathe Emissions**
Peeled Log Cross Sectional Area (square inches)	332.10	square inches	
Cross Sectional Area Reduction from Billet Peeling	83.38	square inches	
Total volume of metal peeled per year	120,853,071	cubic inches/yr metal peeled	
Total mass of metal peeled per year	11,481,042	lbs/yr metal removed from log peeling	
% Aluminum Emissions generated from peeled aluminum***	0.01%	percent	
Uncontrolled Aluminum Emissions generated from billet peeling (lbs/yr)	1,148.1	lbs/yr	
Uncontrolled Aluminum Emissions generated from billet peeling (lbs/hr)	**0.13**	lbs/hr	
Uncontrolled Aluminum Emissions generated from billet peeling (lbs/day)	3.1	lbs/day	
Uncontrolled Aluminum Emissions generated from billet peeling (tons/yr)	**0.574**	tons/yr	
Billet Peeler Dust Collector Capture Efficiency	95%	Percent	**ALLI Billet Peeler Dust Collector**
Billet Peeler Dust Collector Control Efficiency	99%	Percent	
Uncaptured Uncontrolled fugitive emissions (lbs/yr)	57.405	PM lbs/yr	
Uncaptured Uncontrolled fugitive emissions (tons/yr)	0.029	PM tons/yr	
Captured, Controlled Emissions (lbs/yr)	10.907	lbs/yr	
Captured, Controlled Emissions (tons/yr)	0.005	tons/yr	
Net Emissions to Environment (lb/yr)	**68.312**	**PM lbs/yr**	
Net Emissions to Environment (tons/yr)	**0.034**	**PM tons/yr**	
Net Emissions Reduction from Dust Collector Installation (lbs/yr)	1,079.8	PM lbs/yr	

***Estimate of aluminum emissions generated as a percentage of total aluminum mass cut
Peeled billet volume is determined by multipling the cross-sectional area reduction by the overall lineal length of the billets peeled per year
Estimate of aluminum emissions generated as a percentage of total aluminum mass peeled.

Saw blade thickness is assumed to be 1/4 inch thick.
The volume of each cut is equal to the cross sectional area multiplied by the saw blade thickness.

TSD Appendix A: Emission Calculations
Ingot Circular Saw Calculations

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Ingot Saws		
	PTE	**Units**
Al Density	172.8	lb/ft3
PTE Casting Throughput	713,940,000	lbs/yr
Theoretical Log Volume	4,131,597	ft3/yr
Average Log Diameter	16	in
Log Surface Area	1.40	ft2
Theoretical Log Length	2,959,039	ft/yr
Average Billet Length	3	ft
Billets produced	986,346	billets/yr
Log-Billet Saw Cuts	986,345	cuts/yr
Saw Blade Thickness	0.25	in
Metal Volume removed per cut	0.03	ft3/cut
Metal Volume removed for all cuts	28,691.62	ft3/yr
Metal mass removed for all cuts	4,957,912	lbs/yr
PM Emission Factor (lbs PM/100 lbs cut)	0.7	lbs PM/100 lbs cut
No. of Ingot circular saws	4	# of Saws
PM Emissions generated from Sawing	34,705	lbs/yr
PM Emissions generated per saw	8,676.35	lbs/yr
PM Emissions generated per saw	0.99	lbs/hr
PM Emissions generated per saw	23.77	lbs/day
PM Emissions generated per saw	**4.34**	**ton/yr**

Sawing Operations with Control

Assumptions

Outlet grain loading: 0.03 gr/acf
Baghouse flow rate: 4000 ACFM
Controlled Emission Rate: 1.03 lb/hr

Process	Baghouse Efficiency	Uncontrolled PM/PM10/PM2.5 Emissions		Controlled PM/PM10/PM2.5 Emissions	
		lb/hr	*ton/yr*	*lb/hr*	*ton/yr*
Sawing Operations with Control	99.00%	2.28	10	1.03	4.51

Methodology

Uncontrolled PM Emission Factors are based engineering judgement.
Controlled PM Emission Factors are based on the assumptions stated above.
PM_{10} and $PM_{2.5}$ Emission Factors are assumed to be equal to the PM emission Factors.
Uncontrolled PTE (ton/yr) = Controlled PTE (ton/yr) / (1 - CE (%))
Controlled PTE (lb/hr) = Grain Loading (gr/dscf) x Flow Rate (ACFM) x 60 min/hr / 7000 gr/lb
Controlled PTE (ton/yr) = Controlled PTE (lb/hr) x 8760 hr/yr / 2000 lb/ton

TSD Appendix A: Emission Calculations
Unit 1 & Tube Mill Saw Calculations

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Unit 1 Saw Operations Emissions		
	PTE	Units
Production (lbs/yr)	10,000,000	lbs/yr
Aluminum Density	172.8	lbs/ft3
Production Volume (ft3/yr)	57,870	ft3/yr
Average Extrusion Cross Sectional Area (in2)	8.25	in2
Theoretical extrusion length	1,010,101	ft/yr
Average Extrusion Shipped Length (ft)	20	ft
Maximum Extrusion Pieces	50,505	pieces/yr
Maximun cuts/yr	50,504	cuts/yr
Saw Blade Thickness (in)	0.22	inches
Saw Cut Volume (ft3/yr)	53.05	ft3/yr
Saw Cut Mass (lbs/yr)	9,166.49	lbs/yr
Percentage of PM Emissions Generated (%)	17.0%	percent
Total uncontrolled PM from Saw Cutting (lbs/yr)	1,558.30	lbs/yr
Total uncontrolled PM from Saw Cutting (lbs/hr)	0.18	lbs/hr
Total PM from Saw Cutting (tons/yr)	0.78	tons/yr
Chip Collector Capture Efficiency (%)	95%	%
Chip Collector Control Efficiency (%)	99%	%
Uncaptured PM Emissions (lbs/yr)	77.92	lbs/yr
Captured, Controlled PM Emissions (lbs/yr)	14.80	lbs/yr
Total PM from Saw Cutting (lbs/yr)	**92.72**	**lbs/yr**
Total PM from Saw Cutting (ton/yr)	**0.05**	**ton/yr**

Tube Mill Saw Operations Emissions		
	PTE	Units
Aluminum Density	172.8	lbs/ft3
Maximun cuts/hr	450	cuts/hr
Saw Blade Thickness (in)	0.22	inches
Outside Tube Diameter	6.50	inches
Tube Wall Thickness	0.20	inches
Saw Cut Volume (in3/cut)	0.44	in3/cut
Saw Cut Volume for all cuts	1,009.08	ft3/yr
Saw Cut Mass for all cuts	174,368.95	lbs/yr
Percentage of PM Emissions Generated (%)	0.7%	percent
Total uncontrolled PM from Saw Cutting (lbs/yr)	1,220.58	lbs/yr
Total uncontrolled PM from Saw Cutting (lbs/hr)	0.14	lbs/hr
Total PM from Saw Cutting (tons/yr)	0.61	tons/yr
Chip Collector Capture Efficiency (%)	95%	%
Chip Collector Control Efficiency (%)	99%	%
Uncaptured PM Emissions (lbs/yr)	61.03	lbs/yr
Captured, Controlled PM Emissions (lbs/yr)	11.60	lbs/yr
Total PM from Saw Cutting (lbs/yr)	**72.62**	**lbs/yr**
Total PM from Saw Cutting (ton/yr)	**0.04**	**ton/yr**

Tube Mill Chamfer Emissions		
	PTE	Units
Chamfer tubes	300	tubes/hr
Outside Diameter	6.5	inches
Wall thickness Max	0.200	inches
Chamfer	0.25	inches
Cross Sectional Area	0.213	in2/tube
Chamfer Volume Mass	13994.1	lbs Al Mass Cut/yr
Percentage of PM Emissions from Chamfer Cut (%)	17%	lbs PM/100 lbs cut
Total uncontrolled PM from Saw Cutting (lbs/yr)	2379	lbs PM/yr
Total uncontrolled PM from Saw Cutting (lbs/hr)	0.27	lbs PM/hr
Total uncontrolled PM from Saw Cutting (ton/yr)	**1.19**	**ton PM/yr**

TSD Appendix A: Emission Calculations
Unit 2 & Al Li Dog Bone Saw Calculations

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

	Trivial Circular Saws		Unit 2 Insignificant Circular Saws		Unit 2 Insignificant Band Saws	
Al Density	0.098	lb/in3	0.098	lb/in3	0.098	lb/in3
Blade Thickness	0.125	Inches	0.125	Inches	0.125	Inches
Working Piece Cross sectional area	7	in2	26.00	in2	26.00	in2
Saw Cuts per hour	2	cuts/hr	12	cuts/hr	12	cuts/hr
Saw Cuts per year	17,520	cuts/yr	105,120	cuts/yr	105,120	cuts/yr
Volume per Cut	0.875	in3/cut	3.25	in3/cut	3.25	in3/cut
Mass per Cut	0.08575	lbs/cut	0.3185	lbs/cut	0.3185	lbs/cut
PM Emission Factor (Uncontrolled)	15.0%	lbs PM/100 lbs cut	15.0%	lbs PM/100 lbs cut	17.0%	lbs PM/100 lbs cut
PM Emissions (Uncontrolled)	225.35	lbs/yr	5,022.11	lbs/yr	5,691.72	lbs/yr
PM Emissions (Uncontrolled)	0.62	lbs/day	13.76	lbs/day	15.59	lbs/day
PM Emissions (Uncontrolled)	0.03	lbs/hr	0.57	lbs/hr	0.65	lbs/hr

Al Li Dog Bone Band Saw	
0.098	lb/in3
0.125	Inches
26.00	in2
15	cuts/hr
131,400	cuts/yr
3.25	in3/cut
0.3185	lbs/cut
17.0%	lbs PM/100 lbs cut
7,114.65	lbs/yr
19.49	lbs/day
0.81	lbs/hr

TSD Appendix A: Emission Calculations
Furnace (stack data)

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

PM Control Device	Unit ID	Process	Melting Capacity			Emission Factor (lb/ton)			Uncontrolled Emissions (ton/year)		
			each unit	each unit	each unit						
			P (lb/hr)	P (ton/yr)	P (ton/hr)	PM	PM10	PM2.5	PM	PM10	PM2.5
INGOT											
No	2	#2-2 NG furnace	12,000	52,560	6.0	0.097	0.097	0.097	2.54	2.54	2.54
No	3	#2-3 NG furnace	12,000	52,560	6.0	0.097	0.097	0.097	2.54	2.54	2.54
No	4	#2-4 NG furnace	19,160	83,921	9.58	0.061	0.061	0.061	2.54	2.54	2.54
No	5	#2-5 NG furnace	19,160	83,921	9.58	0.061	0.061	0.061	2.54	2.54	2.54
No	6	#2-6 NG furnace	19,160	83,921	9.58	0.061	0.061	0.061	2.54	2.54	2.54
No	7	#4 NG melting furnace	12,400	54,312	6.2	0.094	0.094	0.094	2.54	2.54	2.54
INGOT - IA											
No	9	622 Filter box #41 -> #11	12,400	54,312	6.2	0.094	0.094	0.094	2.54	2.54	2.54
No	10	622 Filter box #2-2 -> #12	12,000	52,560	6.0	0.097	0.097	0.097	2.54	2.54	2.54
No	11	622 Filter box #2-2 -> #13	12,000	52,560	6.0	0.097	0.097	0.097	2.54	2.54	2.54
No	12	622 Filter box #2-3 -> #13	12,000	52,560	6.0	0.097	0.097	0.097	2.54	2.54	2.54
No	13	622 Filter box #2-4 -> #14	19,200	84,096	9.6	0.060	0.060	0.060	2.54	2.54	2.54
No	14	622 Filter box #2-5 -> #14	19,200	84,096	9.6	0.060	0.060	0.060	2.54	2.54	2.54
No	15	622 Filter box #2-6 -> #15	19,200	84,096	9.6	0.060	0.060	0.060	2.54	2.54	2.54
No	16	north skim cooling	4,000	17,520	2.0	0.290	0.290	0.290	2.54	2.54	2.54
No	17	south skim cooling	4,000	17,520	2.0	0.290	0.290	0.290	2.54	2.54	2.54

Emission Factor (lb/ton) = stack test emission rate (lb/hr) / Process Throughput (ton/hr)
Assume PM= PM10/PM2.5

Methodology
Emission Factor (lb/ton) = stack test emission rate (lb/hr) / Process Throughput (ton/hr)

(October 24-26, 2012)	NG tilting-melting-holding **furnace 2-2**	
Stack Test Emission Rate	0.580	lb/hr PM
Stack Test Operating Capacity	5.2	Tons/hr
Emission Factor	**0.112**	lb/Ton
	2.54	ton/yr PM

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Diesel Air Compressor EUDAC#1

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Permit Number: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	450.0	
Maximum Hours Operated per Year	8760	
Conversion hp to Btu/hr	7000	Btu/hp-hr
Heat Input Rating - MMBtu/hr	3.15	
Limited Operating (hrs/yr)	3,575	

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMBtu	0.31	0.31	0.31	0.29	4.41	0.36	0.95
Potential Emission in lb/hr	-	-	-	-	13.89	-	-
Potential Emission in tons/yr	4.28	4.28	4.28	4.00	60.84	4.97	13.11
Limited Emissions tons/yr	-	-	-	-	24.83	-	-

*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 are from AP 42 (Supplement B 10/96) 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/MMBtu	9.33E-04	4.09E-04	2.85E-04	3.91E-05	1.18E-03	7.67E-04	9.25E-05	1.68E-04
Potential Emission in tons/yr	1.29E-02	5.64E-03	3.93E-03	5.39E-04	1.63E-02	1.06E-02	1.28E-03	2.32E-03

***PAH = Polyaromatic Hydrocarbon (PAHs are considered HAPs, since they are considered Polycyclic Organic Matter)

Potential Emission of Total HAPs (tons/yr)	**5.34E-02**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
Output Rating (<=600 HP)
Emergency Generator INGOT

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Permit Number: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

B. Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	469.0
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	234,500

	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	0.26	0.26	0.26	0.24	3.63	0.29	0.78

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

Hazardous Air Pollutants (HAPs)

	Pollutant							
	Benzene	Toluene	Xylene	1,3-Butadiene	Formaldehyde	Acetaldehyde	Acrolein	Total PAH HAPs***
Emission Factor in lb/hp-hr****	6.53E-06	2.86E-06	2.00E-06	2.74E-07	8.26E-06	5.37E-06	6.48E-07	1.18E-06
Potential Emission in tons/yr	7.66E-04	3.36E-04	2.34E-04	3.21E-05	9.68E-04	6.30E-04	7.59E-05	1.38E-04

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

Potential Emission of Total HAPs (tons/yr)	**3.18E-03**

Methodology
Emission Factors are from AP 42 (Supplement B 10/96) Tables 3.4-1 , 3.4-2, 3.4-3, and 3.4-4.

Potential Throughput (hp-hr/yr) = [Output Horsepower Rating (hp)] * [Maximum Hours Operated per Year]
Potential Emission (tons/yr) = [Potential Throughput (hp-hr/yr)] * [Emission Factor (lb/hp-hr)] / [2,000 lb/ton]

Appendix A: Emission Calculations
Reciprocating Internal Combustion Engines - Diesel Fuel
One (1) Emergency Diesel Air Compressor, EG8 - 125 hp
Output Rating (<=600 HP)
Maximum Input Rate (<=4.2 MMBtu/hr)

Company Name: **Arconic Inc.**
Source Address: **3131 East Main Street, Lafayette, IN 47905**
Permit Number: **T157-38267-00001**
Source Modification: **157-39844-00001**
Permit Reviewer: **Tamara Havics**

Emissions calculated based on output rating (hp)

Output Horsepower Rating (hp)	241.2
Maximum Hours Operated per Year	500
Potential Throughput (hp-hr/yr)	120,600

	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	0.13	0.13	0.13	0.12	1.87	0.15	0.40

*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	3.94E-04	1.73E-04	1.20E-04	1.65E-05	4.98E-04	3.24E-04	3.90E-05	7.09E-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)	**0.0016**

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
Reciprocating Internal Combustion Engines - Natural Gas
4-Stroke Lean-Burn (4SLB) Engines
Emergency Generator ALLI-34

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Permit Number: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Maximum Output Horsepower Rating (hp)	636
Brake Specific Fuel Consumption (BSFC) (Btu/hp-hr)	7500
Maximum Hours Operated per Year (hr/yr)	500
Permit Limit (hrs/yr)	150
Heat Input Rating (MMBtu/yr)	2385
Heat Input Rating (MMBtu/hr)	4.77
High Heat Value (MMBtu/MMscf)	1020
Potential Fuel Usage (MMcf/yr)	2.34

	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 (lb/hr)	3.68E-04	4.76E-02	4.76E-02	-	1.95E+01	-	-
Potential Emissions (tons/yr)	0.1839	0.01	0.01	0.001	4.87	0.14	0.38
Limited Emissions (tons/yr)					1.46		

*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.

Compliance with this emission limit is needed to limit the potential to emit for the aluminum-lithium cast house 2012 modificationn to less than forty (40) tons of NOx.

Hazardous Air Pollutants (HAPs)

Pollutant	Emission Factor (lb/MMBtu)	Potential Emissions (tons/yr)
Acetaldehyde	8.36E-03	0.010
Acrolein	5.14E-03	0.006
Benzene	4.40E-04	0.001
Biphenyl	2.12E-04	0.000
1,3-Butadiene	2.67E-04	0.000
Formaldehyde	5.28E-02	0.063
Methanol	2.50E-03	0.003
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
	Total	**0.09**

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

TSD Appendix A: Emission Calculations
Etch & Cleaning

Company Name: **Arconic Inc.**
Source Address: **3131 East Main Street, Lafayette, IN 47905**
Part 70 Operating Permit Renewal No.: **T157-38267-00001**
Source Modification: **157-39844-00001**
Permit Reviewer: **Tamara Havics**

PM Control Device	Unit ID	Process	PM Emissions Uncontrolled ton/yr	PM Emissions Controlled ton/yr
EXTRUSION 2 - IA				
none	53	extrusion etch sampling operation	negl.	-
Die Shop				
none	124	caustic die cleaning system	negl.	negl.
none	125	die etch system	negl.	negl.

Methodology
PM_{10} and $PM_{2.5}$ Emission Factors are assumed to be equal to the PM emission Factors.

Note: Sodium Hydroxide (NaOH) is used in this process, which is not a regulated pollutant or a hazardous air pollutant on the EPA list; therefore, there are no emissions calculations evaluated for this operation.

Appendix A: Emissions Summary
Gasoline Fuel Transfer and Dispensing Operation
Volatile Organic Compounds and Hazardous Air Pollutants (HAPs)

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

To calculate evaporative emissions from the gasoline dispensing fuel transfer and dispensing operation emission factors from AP-42 Chapter 5.2 Transportation And Marketing Of Petroleum Liquids were used. The total potential emission of VOC is as follows:

Gasoline Throughput =	1400	gallons/month
Gasoline Throughput =	46.0	gallons/day
Gasoline Throughput =	16.80	kgal/yr

Volatile Organic Compounds

Emission Source	Emission Factor (lb/kgal of throughput)*	PTE of VOC (tons/yr)
Filling storage tank (splash filling)	11.50	0.0966
Tank breathing and emptying	1.00	0.0084
Vehicle refueling (displaced losses - uncontrolled)	11.00	0.0924
Spillage	0.70	0.0059
	Total	**0.20**

The potential to emit (PTE) Hazardous Air Pollutants (HAPs) were estimated using published gasoline data and assuming that the HAP % composition of the gasoline vapor is similar to the HAP % composition in liquid gasoline.

Hazardous Air Pollutants (HAPs)

Volatile Organic HAP	CAS#	HAP Content for Gasoline (% by weight)**	PTE of HAP (tons/yr)	
1,3-Butadiene	106-99-0	3.70E-5%	7.5E-06	
2,2,4-Trimethylpentane	540-84-1	2.40%	4.9E-03	
Benzene	71-43-2	1.90%	3.9E-03	
Ethylbenzene	100-41-4	1.70%	3.5E-03	
Methyl-tert-butylether	1634-04-4	0.33%	6.7E-04	
Naphthalene	91-20-3	0.25%	5.1E-04	
n-Hexane	110-54-3	2.40%	4.9E-03	
Toluene	108-88-3	8.10%	1.6E-02	
Total Xylenes	1330-20-7	9.00%	1.8E-02	
		Total PTE of HAPs (tons/yr)	**0.05**	
		PTE of Worst Single HAP (tons/yr)	**1.8E-02**	**(xylenes)**

Methodology

*Emission Factors from AP-42 Chapter 5.2 Transportation And Marketing Of Petroleum Liquids (dated 6/08), Table 5.2-7

**Source: Petroleum Liquids. Potter, T.L. and K.E. Simmons. 1998. Total Petroleum Hydrocarbon Criteria Working Group Series, Volume 2. Composition of Petroleum Mixtures. The Association for Environmental Health and Science. Available on the Internet at: http://www.aehsfoundation.org/Publications.aspx
The gasoline throughput was provided by the source.
Gasoline Throughput (kgal/yr) = [Gasoline Throughput (gallons/day)] * [365 days/yr] * [kgal/1000 gal]
PTE of VOC (tons/yr) = [Gasoline Throughput (kgal/yr)] * [Emission Factor (lb/kgal)] * [ton/2000 lb]
PTE of HAP (tons/yr) = [HAP Content of Gasoline (% by weight)] * [PTE of VOC (tons/yr)]

Abbreviations
VOC = Volatile Organic Compounds
HAP = Hazardous Air Pollutant
PTE = Potential to Emit

TSD Appendix A: Emission Calculations
Cooling Towers -12

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Recirculating Cooling Tower Emissions

Arconic Inc. Cooling Towers (Existing)														
Cooling Tower System	**Mill Water Make Up**	**ALLI-35**	**Unit#1 North Tower**	**Unit#1 SE Tower**	**Unit#1 SW Tower**	**Unit#1 Swindell Tower**	**Unit#1 #1 Press Tower**	**Unit#1 Abar Tower**	**Unit #2 Induction**	**Unit #2 HHT Tower**	**Unit #2 #23 Tower**	**Tube Mill Tower**	**Ingot Tower**	
Recirculation Flow Rate (gpm)	NA	1200	360	390	360	280	506	200	1,260	900	265	450	5,400	gallons/minute
Cooling Tower Drift	NA	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	0.005%	% of Recirc. Rate
Cooling Tower Drift (gal/day)	NA	86.4	26	28	26	20	36	14	91	65	19	32	389	gallons/day
Cooling Tower Drift (lbs/day)	NA	720.576	216	234	216	168	304	120	757	540	159	270	3,243	lbs/day
Cooling Tower Drift (million lbs/day)	NA	0.0007	0.0002	0.0002	0.0002	0.0002	0.0003	0.0001	0.0008	0.0005	0.0002	0.0003	0.0032	million lbs/day
Water Conductivity (u-S)	747	674	1,144	1,156	1,135	2,906	777	1,179	761	2,805	1,721	1,200	1,650	micro-S
Calcium Hardness (ppm)	272	438.1	440	420	424		312	400	280	440	420	440	420	
Conductivity to TDS Ratio	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	65%	
Total Dissolved Solids (mg/l)	485.55	438.1	743.6	751.4	737.75	1888.9	505.05	766.35	494.65	1823.25	1118.65	780	1072.5	mg/l
Cycles of Concentration (Conductivity)	NA	2.100	1.53	1.55	1.52	3.89	1.04	1.58	1.02	3.76	2.30	1.61	2.21	
Cycles of Concentration (Calcium H)	NA	2.100	1.62	1.54	1.56		1.15	1.47	1.03	1.62	1.54	1.62	1.54	
PM Emissions Rate (lbs/yr)	NA	242	90	99	88	451	58	53	139	1,350	150	124	2,804	lbs/yr
PM Emissions Rate (tons/yr)	NA	0.12	0.04	0.05	0.04	0.23	0.03	0.03	0.07	0.68	0.07	0.06	1.40	tons/yr
PM Emissions Rate (tons/yr)							2.82							tons/yr
Percentage of PM-10/PM-2.5 in PM emissions	NA	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	82%	Percent
PM-10/PM-2.5 Emissions Rate (lbs/yr)	NA	198.4	73.68	81.50	72.53	369.78	47.77	43.48	114.11	1,107.40	122.75	101.34	2,299.11	lbs/yr
PM-10/PM-2.5 Emissions Rate (tons/yr)	NA	**0.10**	**0.04**	**0.04**	**0.04**	**0.18**	**0.02**	**0.02**	**0.06**	**0.55**	**0.06**	**0.05**	**1.15**	tons/yr
PM-10/PM-2.5 Emissions Rate (tons/yr)							**2.32**							tons/yr

Notes:

Conductivity for raw make up water at Arconic Inc. was obtained from the Ashland Water Technologies Service water report dated 7-15-2013, except ALLI-35 (it is from report date dated 11-7-2011)

Raw make up water conductivity were reported in micro siemens. Ashland Water Technologies Service stated that TDS in ppm is 65% of the conductivity reported (in micro-siemens).

PM10 emissions calculations are obtained from the technical report entitled "Calculating Realistic PM10 Emissions from Cooling Towers" by Joel Reisman and Gordon Frisbie using Figure 1- Percentage of Drift PM that evaporates to PM10.
For TDS of 1000 ppm, the percentage of PM10/PM2.5 is approximately 82%.

Methodology:

Cooling Tower Drift (lbs/day) = Cooling Tower drift (gallons/day) * water density (8.34 lbs/gallons)
Cooling Tower Drift (millions lbs/day) = Cooling Tower Drift (lbs/day) *1 million lbs/100000 lbs
Total Disolved Solids (PPM) = Water Conductivity (u-S) * Conductivity to TDS Ratio (%)
PM Drift Emissions Rate (lbs/day) = Cooling Cooling Tower drift rate(millions lbs/day) * Total Disolved Solids (PPM) * Cycle of Concentration (conductivity)
PM Drift Emissions Rate (lbs/yr) = Cooling Cooling Tower drift rate(millions lbs/day) * Total Disolved Solids (PPM) * Cycle of Concentration (conductivity) * 365 days/yr
PM Cooling Tower drift (tons/yr) = PM emissions (lbs/yr) * 1/2000 (ton/lbs)
PTE PM10/PM2.5 (tons/yr) = 82% * PM Emissions (tons/yr)

TSD Appendix A: Emission Calculations
Cooling Towers (2016)

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

Cooling Tower Unit	Flow Rate (gal/min)	Total Dissolved Solids (TDS) (mg/l)	Drift Rate (%)	PM10 Emission Rate (lb/hr)	PM10 Emission Rate (tons/yr)	PM Emission Rate (tons/yr)	PM2.5 Emission Rate (tons/yr)
#3 Cooling Tower (3CT)	285	438.1	0.005	3.12E-03	0.01	0.02	0.01
Portable Heat Treatment Cooling Tower (PCT)	280	438.1	0.005	3.07E-03	0.01	0.02	0.01
Total					**0.03**	**0.03**	**0.03**

Methodology

Assumed PM2.5 = PM10

PM10 (lb/hr) = gal/min*TSD (mg/l)*2.2E-06 lb/mg*3.79 l/gal*drift %/100 * 60 min/hr

PM10 emissions calculations are obtained from the technical report entitled "Calculating Realistic PM10 Emissions from Cooling Towers" by Joel Reisman and Gordon Frisbie using Figure 1- Percentage of Drift that evaporates to PM10.

The percentage of PM that is PM10 is approximately 82%.

TSD Appendix A: Emission Calculations
Degreasing

Company Name: **Arconic Inc.**
Source Address: **3131 East Main Street, Lafayette, IN 47905**
Part 70 Operating Permit Renewal No.: **T157-38267-00001**
Source Modification: **157-39844-00001**
Permit Reviewer: **Tamara Havics**

Solvent Dip Tanks and Parts Washers

Material	Mineral Spirits			
Density	6.6 lbs/gal			
Weight Organic	100%			
Average Solvent Purchased	135,000 lb/yr	20,455	gal/yr	*purchase estimates provided by Arconic Inc.*
Average Solvent Disposed	49,000 lb/yr	7,424	gal/yr	*disposal estimates provided by Arconic Inc.*
Average Solvent Losses	86,000 lb/yr	13,030	gal/yr	*loss estimates provided by Arconic Inc.*

Description	**Unit ID**	**Unit Volume**	**Weighted Volume**	**Solvent Emitted**	**No. of Units**	**Potential VOC, each unit**	**Potential VOC, TOTAL**
		gallons	% of total volume	gal/12-months (each unit)		tons/yr	tons/yr
Small Tube Mill Dip Tank	94	5,000	31.15%	4,059	1	13.40	13.40
Large Tube Mill Dip Tank	95	10,000	62.31%	8,119	1	26.79	26.79
Small Parts Washers		35	0.22%	28.41	30	0.09	2.81
Total solvent volume		16,050	gallons			26.89	29.60

Description		**Location**	**Column**
Drawbench #1		Tube Mill	38/43
Drawbench #3		Tube Mill	38/45
Drawbench #4 N		Tube Mill	38/47
Drawbench #4 S		Tube Mill	38/47
Drawbench #6		Tube Mill	38/49
Drawbench #9		Tube Mill	38/53
Drawbench #10		Tube Mill	38/55
Drawbench #11		Tube Mill	30/41
Drawbench #12		Tube Mill	34/43
Drawbench #13		Tube Mill	30/45
Drawbench #13		Tube Mill	26/45
Drawbench #14		Tube Mill	30/47
Drawbench #17		Tube Mill	30/49
6 Mitchell Pointer		Tube Mill	38/53
Across from Drawbench #13		Tube Mill	26/46
2 Mitchell Pointer		Tube Mill	26/47
Oil House		Tube Mill	21/69
Tube Die Shop		Tube Mill	25/61
Carpenter Shop - Paint Room		Maintenance	N/A
Tube Mill Maintenance (/47)		Maintenance	22/47
Tube Mill Maintenance (/46)		Maintenance	22/47
0 Bay		Maintenance	
Truck Shop		Maintenance	52/64
Truck Shop		Maintenance	
Machine Shop		Maintenance	65/54
U1 Maintenance area		Maintenance	15/55
U2 Maintenance area		Maintenance	103/27
Ingot Maintenance		Maintenance	6/29
Extrusion Die Shop		Maintenance	2/18
East of 22 Press		Unit 2	99/17

Methodology

Weighted Volume %
= Unit Volume / Total Volume

Solvent Emitted
= Weighted Volume % x Average Solvent Losses

Potential VOC (each unit)
= Solvent Emitted (gal/yr) x Density (lb/gal) x % VOC /2000 lb/ton

Potential VOC (total)
= Potential VOC (each unit) x No. of Units

Appendix A: Emission Calculations
Tube Straightener VOC Emissions

Company Name:	**Arconic, Inc.**
Address City IN Zip:	**3131 East Main Street, Lafayette, IN 47905**
Source Modification No.:	**157-39844-00001**
Reviewer:	**Tamara L. Havics**

Material	Mineral Spirits	
Density	6.6	lbs/gal
Weight Organic	100%	

Location	Description	Maximum Throughput	Percent VOC	Density	Potential VOC	Potential VOC
		gallons/day	% of total	lb/gal	lbs / day	tons/yr
Tube Mill	Bronx 10 Straightener	4.7	100%	6.59	31	5.70
Tube Mill	#6 Pre-Roll Machine	9.8	100%	6.59	65	11.79
Tube Mill	#4 Roll Machine	8.6	100%	6.59	56	10.29
Tube Mill	Wyko Tube Straightener	3.3	100%	6.59	21	3.91
Tube Mill	Sutton 2kt Tube Straightener	0.4	100%	6.59	3	0.53

Methodology

Potential VOC (lb/day) = Max throughput (gal/day) x Density (lb/gal) x % VOC / 2000 lb/ton

Potential VOC (ton/yr) = Potential VOC (lb/day) x 365 day / 2000 lb/ton

Limited VOC (ton/yr) = limited VOC (lb/day) x 365 day / 2000 lb/ton

Appendix A: Emission Calculations
Inking Operations

Company Name: Arconic, Inc.
Address City IN Zip: 3131 East Main Street, Lafayette, IN 47905
Source Modification No.: 157-39844-00001
Reviewer: Tamara L. Havics

Gallons Used	Total (gallons/yr)	Lbs/Gal	% Volatile	VOC lbs/gal	VOC (lbs/yr)	Methanol %	Methanol (lbs/yr)	% Glycol Ether	Glycol Ether (lbs/yr)	MEK %	MEK (lbs/yr)	% Methyl Isobutyl Ketone	Methyl Isobutyl Ketone (lbs/yr)
Video Jet 16-5600 ink	4.5	7.42	77%	5.72	25.72	35%	9.00	0%	-	0%	-	0%	-
Video Jet 16-5605 makeup fluid	0	6.67	99%	6.61	-	45%	-	0%	-	55%	-	0%	-
Video Jet 16-8700 ink	0	7.34	77%	5.65	-	80%	-	7%	-	0%	-	0%	-
Video Jet 16-8705 makeup fluid	97.62	6.59	99%	6.52	636.74	99%	630.37	0%	-	0%	-	0%	-
Video Jet 1310 Cleaner-(V902 -Q)	37.04	6.63	99%	6.56	243.11	-	-	0%	-	0%	-	0%	-
V435-D	0.00	7.26	84%	6.09	-		-			80%	-		-
V535-D	0.00	7.30	82%	5.98	-		-			80%	-		-
V708-D	9.72	6.67	99%	6.61	64.22		-			100%	64.22		-
V902-D	0.00	6.63	98%	6.50	-		-			99%	-		-
Pannier 127 Blue	0	7.51	100%	7.51	-	4.8%	-	0.0%	-	0%	-	1.0%	-
Totals					**969.79**		**639.38**		**-**		**64.22**		**-**

Ink Station Emission Summary Breakdown - Actual Emissions				
Ink Unit Emissions Summary	**Tube (51-3C)**	**Unit 1 (51-3A)**	**Unit 2 (51-3B)**	**Total**
VOC (lbs/yr)				969.79
Methanol (lbs/yr)				639.38
Glycol Ether (lbs/yr)				-
MEK (lbs/yr)				64.22
Methyl Isobutyl Ketone (lbs/yr)				-

PTE Ratio*	**5.69**				
Ink Station Emission Summary Breakdown - Potential Emissions					
Ink Unit Emissions Summary	**Tube**	**Unit 1**	**Unit 2**	**Total**	
VOC (lbs/yr)	-	-	-	5,517.33	
Methanol (lbs/yr)	-	-	-	3,637.54	
Glycol Ether (lbs/yr)	-	-	-	-	
MEK (lbs/yr)	-	-	-	365.35	non-HAP (included in VOC PTE)
Methyl Isobutyl Ketone (lbs/yr)	-	-	-	-	

*Actual to Potential Ratio supplied by source.

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

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)
Trucks	24.0	2.0	48.0	30.0	1440.0	4118	0.780	37.4	13665.6
	0.0	0.0	0.0	30.0	0.0	4118	0.780	0.0	0.0
		Totals	**48.0**		**1440.0**			**37.4**	**13665.6**

Average Vehicle Weight Per Trip = 30.0 tons/trip
Average Miles Per Trip = 0.78 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 =	30.0	30.0	30.0	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	g/m^2 = silt loading value for paved roads at iron and steel production facilities - Table 13.2.1-3)

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, 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 =	2.793	0.559	0.1371	lb/mile
Mitigated Emission Factor, Eext =	2.554	0.511	0.1254	lb/mile

Process	Mitigated PTE of PM (Before Control) (tons/yr)	Mitigated PTE of PM10 (Before Control) (tons/yr)	Mitigated PTE of PM2.5 (Before Control) (tons/yr)			
Trucks	17.45	3.49	0.86			
Totals	**17.45**	**3.49**	**0.86**			

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 (Before Control) (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (After Control) (tons/yr) = [Mitigated PTE (Before Control) (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

TSD Appendix A: Emission Calculations
Particulate Emission Limitations for Manufacturing Processes, 326 IAC 6-3-2

Company Name: Arconic Inc.
Source Address: 3131 East Main Street, Lafayette, IN 47905
Part 70 Operating Permit Renewal No.: T157-38267-00001
Source Modification: 157-39844-00001
Permit Reviewer: Tamara Havics

PM Control Device	Process	Process Weight, P		P<=60,000 lb/hr	P>60,000 lb/hr	Uncontrolled PM Emissions (lb/hr)	Control device needed to comply?
		each unit	each unit	$E = 4.10\ P^{0.67}$	$E = 55\ P^{0.11} - 40$		
		P (lb/hr)	P (ton/hr)	E (lb/hr)	E (lb/hr)		
				Limit	Limit		
INGOT							
No	#2-2 NG furnace	12,000	6.0	13.62	-	0.58	no
No	#2-3 NG furnace	12,000	6.0	13.62	-	0.58	no
No	#2-4 NG furnace	19,160	9.58	18.63	-	0.58	no
No	#2-5 NG furnace	19,160	9.58	18.63	-	0.58	no
No	#2-6 NG furnace	19,160	9.58	18.63	-	0.58	no
No	#4 NG melting furnace	12,400	6.2	13.92	-	0.58	no
ALUMINUM - LITHIUM CASTHOUSE							
No	Primary aluminum melter furnace ALLI-1	7,780	3.89	10.187	-	0.34	exempt
INGOT - IA							
No	#41 NG holding furnace	12,400	6.2	13.92	-	0.58	no
No	622 Filter box #41 -> #11	12,400	6.2	13.922	-	0.58	no
No	622 Filter box #2-2 -> #12	12,000	6.0	13.619	-	0.58	no
No	622 Filter box #2-2 -> #13	12,000	6.0	13.619	-	0.58	no
No	622 Filter box #2-3 -> #13	12,000	6.0	13.619	-	0.58	no
No	622 Filter box #2-4 -> #14	19,200	9.6	18.660	-	0.58	no
No	622 Filter box #2-5 -> #14	19,200	9.6	18.660	-	0.58	no
No	622 Filter box #2-6 -> #15	19,200	9.6	18.660	-	0.58	no
No	north skim cooling	4,000	2.0	6.523	-	0.58	no
No	south skim cooling	4,000	2.0	6.523	-	0.58	no
Yes	Niles lathe operation & Ingot Rotoclone (130)	94,000	47.0	-	44.00	0.99	no
EXTRUSION 1 - IA							
No	# 1 Press Run Out Table Saw (Column 24/21)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 1 Press - #17 saw & Chip collector (Column 22/24)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 2 Press, Puller Saw & Chip Collector (Column 23/19)	94,000	47.0	-	44.00	0.18	exempt
Yes	#2 Press, # 2 Saw, Chip Collector and Cyclone (Column 33/17)	94,000	47.0	-	44.00	0.18	exempt
No	# 15 Press Run Out Table Saw (1) (Column 34/15)	94,000	47.0	-	44.00	0.18	exempt
No	# 15 Press Run Out Table Saw (2) (Column 34/15)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 18 Saw + Rotoclone (Column 41/1)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 1 Sander & Rotoclone (Column 40/7)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 2 Sander & Rotoclone (Column 40/5)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 11 Press Saw (Granco Clark) & Chip Collector (Column 25/7)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 12 Saw (Oliver Saw) & Chip Collector (Column 34/29)	94,000	47.0	-	44.00	0.18	exempt
Yes	# 13 Press Saw & Chip Collector (Column 25/1)	94,000	47.0	-	44.00	0.18	exempt
No	# 20 Finish Saw (Column 38/35)	94,000	47.0	-	44.00	0.18	exempt
No	# 20 Stretcher Saw (Column 38/36)	94,000	47.0	-	44.00	0.18	exempt
Yes	#3 Extrusion Press Saw Operation & Dust Collector 135DC	1,142	0.6	2.816	-	0.18	exempt
EXTRUSION 2 - IA							
Yes	#21 Press Do-All Band Saw & Cyclone/bag Chip Collector (Column 91/13	94,000	47.0	-	44.00	0.65	no
Yes	#22 Press Do-All Band Saw & Cyclone/bag Chip Collector (Column 90/17	94,000	47.0	-	44.00	0.65	no
none	#23 Saw Do-All Band Saw	94,000	47.0	-	44.00	0.57	no
Yes	#23 Saw & Cyclone/bag Chip Collector	94,000	47.0	-	44.00	0.65	no
Yes	#24 Saw & Cyclone/bag Chip Collector (Column 80/25)	94,000	47.0	-	44.00	0.57	no
Yes	#28 Saw & Chip Cyclone/bag Collector (Column 80/25)	94,000	47.0	-	44.00	0.57	no
Yes	#34 Saw & Cyclone/bag Chip Collector (Column 80/39)	94,000	47.0	-	44.00	0.57	no
Yes	#27 Saw & Cyclone/bag Chip Collector (Column 80/31)	94,000	47.0	-	44.00	0.57	no
Yes	#37 Saw with Chip Collector (Column 80/29)	94,000	47.0	-	44.00	0.57	no
TUBE MILL - IA							
Yes	Polishing wheel operation unit 126 & Rotoclone	94,000	47.0	-	44.00	0.14	exempt
Yes	Wheel repair operation unit 127 & Rotoclone	94,000	47.0	-	44.00	0.14	exempt
Yes	Flap wheel grinders operation unit 128 & Rotoclon	94,000	47.0	-	44.00	0.14	exempt
Yes	Belt grinders operation unit 129 & Rotoclone	94,000	47.0	-	44.00	0.14	exempt
Yes	Grind Cell area saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#3 DSC sawing operation & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#3 DSC chamfer operation & cyclone chip collector	94,000	47.0	-	44.00	0.27	exempt
Yes	#4 DSC chipless cutter sawing operation & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#4 DSC chamfer operation & cyclone chip collector	94,000	47.0	-	44.00	0.27	exempt
Yes	#5 DSC sawing operation & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#5 DSC chamfer operation & cyclone chip collector	94,000	47.0	-	44.00	0.27	exempt
Yes	#6 DSC sawing operation & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#6 DSC chamfer operation & cyclone chip collector	94,000	47.0	-	44.00	0.27	exempt
Yes	Small Cell, #10 saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#7 Short Cut Cell saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
No	#3 saw & emissions uncontrolled	94,000	47.0	-	44.00	0.14	exempt
Yes	Large Cell, #12 saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	"T" Cell saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#4 saw east & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#4A saw west & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#11 saw & Rotoclone	94,000	47.0	-	44.00	0.14	exempt
Yes	#10 Oliver saw & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#10 Draw Bench saw & cyclone chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#7 DSC sawing operation & cyclone/bag chip collector	94,000	47.0	-	44.00	0.14	exempt
Yes	#7 DSC chamfer operation & cyclone chip collector	94,000	47.0	-	44.00	0.14	exempt
ALUMINUM - LITHIUM CASTHOUSE - IA							
none	(2) Electric Induction Melting Furnaces (each) ALLI-24 and 25	4,062	2.03	6.59	-	1.62	no
none	A622 Filter ALLI-26	8,124	4.06	10.49	-	0.08	exempt
none	Billet Saw ALLI-29	7,233	3.62	9.70	-	0.03	exempt
AlLI-30DC	Billet Peeler ALLI-30	7,233	3.62	9.70	-	0.13	exempt
none	Dog Bone Band Saw ALLI-31	7,233	3.62	9.70	-	0.81	no
none	Skim Cooling ALLI-32	600.12	0.30	1.83	-	1.13	no
none	Skim Loadout ALLI-33	600.12	0.30	1.83	-	1.13	no
PLANT MISCELLANEOUS - Sawing*							
Cyclone	Sawing activities located in the carpenter shop - unit 101	94,000	47.0	-	44.00	1.03	no
Baghouse	Sawing activities located in the carpenter shop - unit 102	94,000	47.0	-	44.00	1.03	no
cyclones	Sawing activities in Quality Lab	94,000	47.0	-	44.00	2.28	exempt (non-manufacturing)

Methodology:

*Control devices for wood sawing operations are integral. Therefore, the controlled PM rate is used for determination of 326 IAC 6-3.

Emission unit is exempt if uncontrolled PTE is less than 0.551 lb/hr

Uncontrolled emissions (lb/hr) = Uncontrolled emissions (ton/yr) * 2000 lb/ton / 8760 hr/yr

IDEM

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

100 N. Senate Avenue • Indianapolis, IN 46204

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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

September 25, 2018

Lindley Jarrett
Arconic, Inc.
3131 E Main St
Lafayette, IN 47905-2272

Re: Public Notice
Arconic, Inc.
Permit Level: Title V Renewal
Permit Number: 157-38267-00001

Dear Ms. Jarrett:

Enclosed is a copy of your draft Title V Operating Permit 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, IN publish the abbreviated version of the public notice no later than September 27, 2018. 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, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to 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,

Theresa Weaver

Theresa Weaver
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover Letter 1/9/2017

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Governor

Bruno L. Pigott
Commissioner

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

September 25, 2018

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 Arconic, 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 September 27, 2018.

Please send the invoice, notarized form, clippings showing the date of publication to Bo Liu, at the Indiana Department of Environmental Management, Accounting, Room N1340, 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 Theresa Weaver at 800-451-6027 and ask for extension 4-5256 or dial 317-234-5256.

Sincerely,

Theresa Weaver

Theresa Weaver
Permit Branch
Office of Air Quality

Permit Level: Title V Operating Permit Renewal
Permit Number: 157-38267-00001

Enclosure

PN Newspaper Letter 8/22/2018

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

September 25, 2018

To: Tippecanoe County Public Library

From: Jenny Acker, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: Arconic, Inc.
Permit Number: 157-38267-00001

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 1/9/2017

Notice of Public Comment

September 25, 2018
Arconic, Inc.
157-38267-00001

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 Letter 1/9/2017

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Eric J. Holcomb
Governor

Bruno L. Pigott
Commissioner

AFFECTED STATE NOTIFICATION OF PUBLIC COMMENT PERIOD
DRAFT INDIANA AIR PERMIT

September 25, 2018

A 30-day public comment period has been initiated for:

Permit Number: **157-38267-00001**
Applicant Name: **Arconic, Inc.**
Location: **Lafayette, Tippecanoe County, Indiana**

The public notice, draft permit and technical support documents can be accessed via the **IDEM Air Permits Online** site at:
http://www.in.gov/ai/appfiles/idem-caats/

Questions or comments on this draft permit should be directed to the person identified in the public notice by telephone or in writing to:

Indiana Department of Environmental Management
Office of Air Quality, Permits Branch
100 North Senate Avenue
Indianapolis, IN 46204

Questions or comments regarding this email notification or access to this information from the EPA Internet site can be directed to Chris Hammack at chammack@idem.IN.gov or (317) 233-2414.

Affected States Notification 1/9/2017

Mail Code 61-53

IDEM Staff	TAWEAVER 9/24/2018 Arconic Inc 157-38267-00001 (draft)			AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
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1		Lindley Jarrett Arconic Inc 3131 E Main St Lafayette IN 47905-2272 (Source CAATS)									
2		Victor Toscano General Manager Arconic Inc 3131 E Main St Lafayette IN 47905 *(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		Lafayette City Council and Mayors Office 20 North 6th Street Lafayette IN 47901-1411 *(Local Official)*									
6		Tippecanoe County Public Library 627 South Street Lafayette IN 47901-1470 *(Library)*									
7		Mrs. Phyllis Owens 3600 Cypress Lane Lafayette IN 47905 *(Affected Party)*									
8		Mr. Jack Rolan 40 Olympia Ct Lafayette IN 47909 *(Affected Party)*									
9		Mr. Jerry White 3837 Basalt ST Lafayette IN 47909 *(Affected Party)*									
10		Ms. Rose Filley 5839 Lookout Drive West Lafayette IN 47906 *(Affected Party)*									
11		Mr. William Cramer 128 Seminole Drive West Lafayette IN 47906 *(Affected Party)*									
12		West Lafayette City Council and Mayors Office 609 W. Navajo West Lafayette IN 47906 *(Local Official)*									
13		Mr. Allen Hoffman 4740 Masons Ridge Rd. Lafayette IN 47909 (Affected Party)									
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