INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We Protect Hoosiers and Our Environment.

Mitchell E. Daniels Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
Toll Free (800) 451-6027
www.idem.IN.gov

Sharon Shoppell
Alcoa, Inc. – Lafayette Operations
3131 East Main Street
Lafayette, Indiana 47905

Re: 157-31329-00001
Significant Permit Modification to
Part 70 Renewal No.: T 157-17676-00001

Dear Ms. Shoppell:

Alcoa, Inc. – Lafayette Operations was issued a Part 70 Operating Permit Renewal on February 6, 2007, for a stationary secondary aluminum production facility. A letter requesting changes to this permit was received on December 30, 2011. Pursuant to the provisions of 326 IAC 2-7-12 a significant permit modification to this permit is hereby approved as described in the attached Technical Support Document.

Alcoa, Inc. – Lafayette Operations is proposing to construct and operate a new secondary aluminum cast house at the existing Lafayette, Indiana facility for the purpose of producing high strength, low weight aluminum-lithium alloys for the aerospace industry. The modification consists of adding natural gas fired furnaces, ovens, and space heaters, electric furnaces, molding operations, scrap preparation, filters, casting pit, sawing operations, skim cooling and loadout operations, an emergency generator, and a non-contact cooling tower.

All other conditions of the permit shall remain unchanged and in effect. For your convenience, the entire Part 70 Operating Permit as modified will be provided at issuance. A copy of this permit is available on the Internet at: www.in.gov/ai/appfiles/idem-caats/.

This decision is subject to the Indiana Administrative Orders and Procedures Act – IC 4-21.5-3-5. If you have any questions on this matter, please contact Kimberly Cottrell, OAQ, 100 North Senate Avenue, MC 61-53, Room 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Kimberly Cottrell or extension (3-0870), or dial (317) 233-0870.

Sincerely,

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

Attachments:
Updated Permit
Technical Support Document
PTE Calculations

TPS/klc

cc: File – Tippecanoe County
Tippecanoe County Health Department
U.S. EPA, Region V

Compliance and Enforcement Branch
Interested Parties

Victor Toscano
Alcoa, Inc. – Lafayette Operations
3131 East Main Street
Lafayette, Indiana 47905

Patrick Gorman
Environmental Process Technologies, Inc.
9305 Calumet Avenue, Suite F1
Munster, IN 46321

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PART 70 OPERATING PERMIT RENEWAL
OFFICE OF AIR QUALITY

Alcoa, Inc. – Lafayette Operations
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.: T157-17676-00001	
Original Issued by: Nisha Sizemore, Chief Permits Branch Office of Air Quality	Issuance Date: February 6, 2007 Expiration Date: February 6, 2012

Significant Permit Modification No.: 157-31329-00001	
Original Issued by: Tripurari P. Sinha, Ph. D., Section Chief Permits Branch Office of Air Quality	Issuance Date: Expiration Date:

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Attachment B: Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Attachment C: National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

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 and 3354
County Location:	Tippecanoe
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD Area 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 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 89-8;

(b) one (1) #2-3 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 90-8;

(c) one (1) #2-4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 88-8;

(d) one (1) #2-5 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 87-8;

(e) one (1) #2-6 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 94-8;

(f) one (1) #4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 5-8;

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

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

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

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

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

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

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

Extrusion - 1

(a) one (1) #5 natural gas-fired press reheat granco furnace, identified as emission unit 35, constructed in 1975, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 18.0 million Btu per hour, with emissions uncontrolled and exhausting to stack 56-12;

(b) one (1) #6 natural gas-fired press reheat granco furnace, identified as emission unit 36, constructed in 1973, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled and exhausting to stack 54-10;

(c) one (1) #2 natural gas-fired press reheat granco furnace, identified as emission unit 37, constructed in 1987, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

(d) one (1) #12 natural gas-fired press reheat granco furnace, identified as emission unit 38, constructed in 1989, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

(e) one (1) #8 natural gas-fired press reheat granco furnace, identified as emission unit 40, constructed in 1992, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

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

Extrusion - 2

(a) one (1) #1 natural gas-fired horizontal heat treat furnace, identified as emission unit 70, constructed in 1957, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 13.2 million Btu per hour, with emissions uncontrolled and exhausting to stack 68-112;

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, permitted in 2012, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs/cycle), with a natural gas furnace rated at 20.0 MMBtu/hr, exhausting to stack ALLI-S1.--

(b) Two (2) natural gas fired homogenizing ovens, identified as ALLI-27 and ALLI-28, permitted in 2012, each with a maximum time-weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 27.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Tube Mill

(a) one (1) tube mill solvent dip tank system, referred to as emission units 94, 95, and 96, consisting of a 5000 gallon capacity 35 ft dip tank, a 10,000 gallon capacity 50 ft dip tank, a tank farm, and several parts washers, constructed in 1942, with emission uncontrolled.

Plant Miscellaneous

(a) sand blasting operations, identified as emission unit 108, constructed in 1960, with emissions controlled by a dust collector, and exhausting to stack 75-58;

(b) sawing activities located in the carpenter shop, identified as emission unit 102, constructed in 1960, with emissions controlled by a baghouse, identified as the #2 sawdust collector and exhausting to stack 72-57;

(c) one (1) internal combustion engine diesel fuel fired emission unit acting as a diesel air compressor, with a total maximum design capacity of 450 brake horsepower [equivalent to approximately 1.15 million British thermal units per hour (MMBtu/hr)]. Designated as emission unit EUDAC#1 and exhausting through stack DAC#1.

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

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

Plant Miscellaneous

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

Extrusion - 1

(a) one (1) Protectsol 512 clear coating applicator, 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.

(c) one (1) #4 natural gas-fired heat treat furnace, constructed in 1999, with a maximum capacity of 1,000 pounds of aluminum per hour, 0.125 pounds of NH_4BF_4 per hour, and a maximum heat input capacity of 3.0 million Btu per hour, with emissions uncontrolled;

Ingot Department

(a) “622" filter boxes for transferring metal from #41 holding furnace to #11 casting pit, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, with emissions exhausting to stack 3-8F;

(i) one (1) south skim cooling operation, identified as emission unit 17, with emissions exhausting to stack 4-8F;

(j) one (1) log sawing and lathe operation, identified as emission unit 31;

(k) one (1) #41 natural gas-fired holding furnace, identified as emission unit 8, cwith a maximum capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, with emissions exhausting to stack 6-8;

(l) eleven (11) rotoclones, which are mechanical separating devices designed to capture particulate emissions from the sawing, grinding, and working of aluminum pieces. Two rotoclones, each rated at 4000 cfm. Six rotoclones, each rated at 1500 cfm. Two rotoclones, each rated at 15000 cfm. One rotoclones, rated at 6000 cfm.

Tube Mill

(a) one (1) natural gas-fired Lochinvar boiler, identified as emission unit 90, constructed in 1995, with a maximum heat input capacity of 0.4 million Btu per hour;

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

Aluminum-Lithium Alloy Cast House

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23. [40 CFR 63, Subpart RRR]

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, permitted in 2012, 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). [326 IAC 6-3-2]

(c) Four (4) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-20, permitted in 2012, 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). [326 IAC 6-3-2]

(d) One (1) electric flowable aluminum-lithium scrap melting furnace, identified as ALLI-21, permitted in 2012, with a maximum time-weighted average throughput capacity of 2.0 tons of molten aluminum-lithium per hour(69,637 lbs/cycle). [326 IAC 6-3-2]

(e) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, permitted in 2012, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle). [326 IAC 6-3-2]

(f) One (1) 3-stage A622 filter, identified as ALLI-26, permitted in 2012, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle). [326 IAC 6-3-2]

(g) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting internally. [326 IAC 6-3-2]

(h) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting to stack ALLI-S30. [326 IAC 6-3-2]

(i) One (1) slab saw, identified as ALLI-31, permitted in 2012, with a maximum throughput capacity of 2,170 pounds per hour (Process Weight = 1.085 ton/hr), exhausting internally. [326 IAC 6-3-2]

(j) One (1) skim cooling operation, identified as ALLI-32, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average). [326 IAC 6-3-2]

(k) One (1) skim loadout operation, identified as ALLI-33, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average). [326 IAC 6-3-2]

(l) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput capacity of 1,000 gallons per minute. [326 IAC 2-2]

Plant Miscellaneous

(a) one (1) natural gas-fired Pacific boiler #1, identified as emission unit 103, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour;

(b) one (1) natural gas-fired Pacific boiler #2, identified as emission unit 104, constructed in 1940, with a maximum heat input capacity of 3.0 million Btu per hour;

(c) the box shop sawdust collector, identified as emission unit 92, with emissions exhausting to stack 72-57;

(d) one (1) natural gas-fired babbit melting furnace, identified as emission unit 109, with emissions exhausting to stack 81-58;

(e) Fifty four (54) natural gas fired units, with a total maximum design capacity of 134.4 million (MM) British thermal units per hour (Btu/hr). Each individual heating unit will have a heat input rate in the range of 0.05 MMBtu/hr up to a maximum of 6.6 MMBtu/hr;

(f) Fifty (50) natural gas fired units, each with a maximum heat input rate of 6.6 MMBtu/hr; and

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

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

This stationary source also includes the following insignificant activities which are not specifically regulated, as defined in 326 IAC 2-7-1(21):

Aluminum-Lithium Alloy Cast House

(a) Natural gas fired space heaters, identified as ALLI-36, 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.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) The Part 70 Operating Permit Renewal, T157-17676-00001, 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(34), 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(34).

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

(a) The Permittee shall annually submit a compliance certification report which addresses the status of the source's compliance with the terms and conditions contained in this permit, including emission limitations, standards, or work practices. All certifications shall cover the time period from January 1 to December 31 of the previous year, and shall be submitted no later than April 15 of each year to:

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

and

United States Environmental Protection Agency, Region 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(34).

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

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

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

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

The Permittee shall implement the PMPs.

(b) If required by specific condition(s) in Section D of this permit where no PMP was previously required, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) no later than ninety (90) days after issuance of this permit or ninety (90) days after initial start-up, whichever is later, including the following information on each facility:

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

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

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

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

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

The PMP extension notification does not require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(34).

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(34).

(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(34).

(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 T157-17676-00001 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(34).

(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(40). 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(34).

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(34).

(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) or (c). 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(36)) 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(34).

(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(34).

(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(34).

(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(34).

(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(34).

(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)]

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 or of initial start-up, whichever is later, 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 or the date of initial startup, whichever is later, 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(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

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.

(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 and Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

C.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(34).

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(b)(2), starting in 2005 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

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

(2) Indicate estimated actual emissions of regulated pollutants as defined by 326 IAC 2-7-1(32) ("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(34).

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:

(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:

(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]

(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(34). A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.

(b) The address for report submittal is:

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

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

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

(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 a 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.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Ingot Department

(a) one (1) #2-2 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 89-8;

(b) one (1) #2-3 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 90-8;

(c) one (1) #2-4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 88-8;

(d) one (1) #2-5 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 87-8;

(e) one (1) #2-6 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 94-8;

(f) one (1) #4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 5-8;

Insignificant Activities

Ingot Department

(g) one (1) #41 natural gas-fired holding furnace, identified as emission unit 8, constructed prior to 1970, with a maximum capacity of 6.2 tons of aluminum per hour and a maximum heat input capacity of 10.0 million Btu per hour, modified in 2004, with emissions exhausting to stack 6-8.

Die Shop

(q) one (1) natural gas-fired babbit melting furnace, identified as emission unit 109, constructed prior to 1970, with a maximum capacity of 36.0 tons per hour, with a maximum heat input capacity of 1.0 million Btu per hour, exhausting to stack 81-58;

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

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

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

(a) Pursuant to CP 157-2316 issued April 9, 1992, the PM emission rate from each of the tilting-melting-holding furnaces #2-2 and #2-3 shall not exceed 1.14 pounds per hour. Compliance with this limit will also satisfy the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations).

(b) Pursuant to CP 157-4219, issued June 12, 1995, 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 1.89 pounds per hour. Compliance with this limit will also satisfy the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations).

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

(3) In order to comply with the requirements of 326 IAC 2-2, 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.

Therefore, the requirements of 326 IAC 2-2 (PSD) will not apply to the tilting-melting-holding furnaces #2-2, #2-3, and #2-6.

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 natural gas-fired 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 natural gas-fired 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 natural gas-fired 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 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) ALCOA may perform additional stack testing to demonstrate compliance using the granular flux method.

(c) The OAQ agrees to consider a request from ALCOA 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) ALCOA 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 Hazardous Air Pollutants (HAPs) Area Source Limit [326 IAC 2-4.1] [40 CFR Part 63]

The total amount of flux added to the furnaces at the source shall not exceed 96.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The limits on flux usage in conjunction with the ammonium fluoroborate (AFB or NH_4BF_4) usage limits in Condition D.2.1 shall limit source wide single HAP emissions to less than ten (10) tons per year and the total combination of HAPs to less than twenty five (25) tons per year. Compliance with these limits shall render 326 IAC 2-4.1 not applicable. Compliance with these limits shall render the source an area source for HAP under 40 CFR Part 63.

D.1.6 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities.

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

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) Between April 2007 and October 2007, the Permittee shall conduct PM testing for melting furnaces #2-2 and #2-3, utilizing methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.1(a). This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

(b) Between April 2007 and October 2007, the Permittee shall conduct PM and NO_X testing

for furnace #2-6, utilizing methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.1(b). This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.8 Raw Materials [326 IAC 2-7-6(1),(6)]

In order to ensure compliance with Condition D.1.1, 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 Condition D.1.7.

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

D.1.9 Visual Inspections

In order to ensure compliance with Condition D.1.8, the Permittee shall conduct visual inspections of the materials added to the furnace in accordance with the approved OM&M plan required by 40 CFR 63, Subpart RRR.

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

D.1.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.9, 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) To document the compliance status with Condition D.1.5, the Permittee shall maintain monthly records of the flux usage.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.11 Reporting Requirements

A semi-annual summary of the information to document compliance with Condition D.1.5 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.2 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Ingot Department

(g) one (1) #3 natural gas-fired ingot preheater, identified as emission unit 20, constructed in 1985, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 17.5 million Btu per hour, with emissions uncontrolled and exhausting to stack 29-7;

(h) one (1) #4 natural gas-fired ingot preheater, identified as emission unit 21, constructed in 1980, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 12.3 million Btu per hour, with emissions uncontrolled and exhausting to stack 30-7;

(i) one (1) #7 natural gas-fired ingot preheater, identified as emission unit 23, constructed in 1997, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 20.0 million Btu per hour, with emissions uncontrolled and exhausting to stack 24-7;

(j) one (1) #10 natural gas-fired ingot preheater, identified as emission unit 24, constructed in 1966, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 13.5 million Btu per hour, with emissions uncontrolled and exhausting to stack 24-7;

(k) one (1) #11 natural gas-fired ingot preheater, identified as emission unit 25, constructed in 1966, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 13.5 million Btu per hour, with emissions uncontrolled and exhausting to stack 23-7;

(l) one (1) #12 natural gas-fired ingot preheater, identified as emission unit 26, constructed in 1967, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 13.5 million Btu per hour, with emissions uncontrolled and exhausting to stack 22-7;

(m) one (1) #13 natural gas-fired ingot preheater, identified as emission unit 27, constructed in 1967, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 13.5 million Btu per hour, with emissions uncontrolled and exhausting to stack 21-7;

Extrusion - 1

(a) one (1) #5 natural gas-fired press reheat granco furnace, identified as emission unit 35, constructed in 1975, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 18.0 million Btu per hour, with emissions uncontrolled and exhausting to stack 56-12;

(b) one (1) #6 natural gas-fired press reheat granco furnace, identified as emission unit 36, constructed in 1973, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled and exhausting to stack 54-10;

(c) one (1) #2 natural gas-fired press granco reheat furnace, identified as emission unit 37, constructed in 1987, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

(d) one (1) #12 natural gas-fired press granco reheat furnace, identified as emission unit 38, constructed in 1989, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

(e) one (1) #8 natural gas-fired press reheat granco furnace, identified as emission unit 40, constructed in 1992, with a maximum capacity of 13.0 tons per hour, with a maximum heat input capacity of 16.0 million Btu per hour, with emissions uncontrolled;

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

(g) one (1) #4 natural gas-fired heat treat furnace, constructed in 1999, with a maximum capacity of 1,000 pounds of aluminum per hour, 0.125 pounds of NH_4BF_4 per hour, and a maximum heat input capacity of 3.0 million Btu per hour, with emissions uncontrolled;

Extrusion - 2

(a) one (1) #1 natural gas-fired horizontal heat treat furnace, referred to as emission unit 70, constructed in 1957, with a maximum heat input capacity of 13.2 million Btu per hour, with emissions uncontrolled and exhausting to stack 68-112;

Tube Mill

(a) one (1) tube mill solvent dip tank system, referred to as emission units 94, 95, and 96, consisting of a 5000 gallon capacity 35 ft dip tank, a 10,000 gallon capacity 50 ft dip tank, a tank farm, and several parts washers, constructed in 1942, with emission uncontrolled;

(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 Hazardous Air Pollutants (HAPs) Area Source Limit [326 IAC 2-4.1] [40 CFR Part 63]

The source-wide usage of ammonium fluoroborate (AFB or NH_4BF_4) shall not exceed 12.75 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The limit on AFB in conjunction with the flux usage limit in Condition D.1.5 shall limit source wide single HAP emissions to less than ten (10) tons per year and the total combination of HAPs to less than twenty five (25) tons per year. Compliance with these limits shall render 326 IAC 2-4.1 not applicable. Compliance with these limits shall render the source an area source for HAP under 40 CFR Part 63.

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

D.2.2 Record Keeping Requirements

(a) To document the compliance status with Condition D.2.1, the Permittee shall maintain monthly records of the AFB usage.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.3 Reporting Requirements

A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.3 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Plant Miscellaneous

(a) One (1) internal combustion engine diesel fuel fired emission unit acting as a diesel air compressor, with a total maximum design capacity of 450 brake horsepower [equivalent to approximately 1.15 million British thermal units per hour (MMBtu/hr)]. Identified as emission unit EUDAC#1 and exhausting through stack DAC#1.

(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 Nitrogen Oxides [326 IAC 2-2]

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. This limitation on hours of operation limits NOx emissions to less than twenty-five (25) tons per twelve (12) consecutive month period. Compliance with this limit shall render 326 IAC 2-2 not applicable.

D.3.2 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

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

D.3.3 Hourly Operation Gauge Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

(a) Whenever a condition in this permit requires the measurement of hours of operation, the instrument employed shall have a scale such that the expected normal reading shall be no less than one hour increments with preferred option to include a tenth of an hour increment.

(b) The Preventive Maintenance Plan for the hourly operation gauge shall include calibration using known standards. The frequency of calibration shall be adjusted such that the typical error found at calibration is less than one hour.

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

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

D.3.4 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. Records maintained for (1) through (2) shall be taken once per day when the emission unit is to operate during that day. The records shall be complete and sufficient to establish compliance with the hours of operation limit and the NO_X emission limit established in Condition D.3.1.

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

(2) Actual hours of operation since last compliance determination period.

(b) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.5 Reporting Requirements

(a) The diesel air compressor certification shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(b) A semi-annual summary of the information to document compliance with Condition D.3.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the six (6) month period being reported. The report submitted by the Permittee does require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

SECTION D.4 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description:

Insignificant Activities

(a) Fifty four (54) natural gas fired units, constructed in 2001, with a total maximum design capacity of 134.4 million (MM) British thermal units per hour (Btu/hr). Each individual heating unit will have a heat input rate in the range of 0.05 MMBtu/hr up to a maximum of 6.6 MMBtu/hr.

(b) Fifty (50) natural gas fired units, constructed in each with a maximum heat input rate of 6.6 MMBtu/hr.

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

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

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

The total usage of natural gas fuel for the one hundred four (104) natural gas fired units shall be limited to 1,177.30 million cubic feet per year (MMCF/yr). 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 year (with the emission reduction credit from removing Boilers #3 and #6) due to this modification. Therefore, the requirements of 326 IAC 2-2 do not apply.

D.4.2 Maximum Heat Capacity [326 IAC 2-7-5(15)]

Each individual natural gas fired unit shall not have a maximum heat input rate of greater than 6.6 MMBtu/hr, or else the unit will not be considered insignificant.

Record Keeping 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 calendar dates covered in the compliance determination period. Records shall be taken monthly and shall be complete and sufficient to establish compliance with the natural gas usage limit established in Condition D.4.1.

(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 semi-annual 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 six (6) month period. 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(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

SECTION D.5 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Plant Miscellaneous, Insignificant Activities

sand blasting operations, referred to as emission unit 108, constructed in 1960, with a Pangborn dust collector as control, and exhausting to stack 75-58.

(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 [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sand blasting operations shall not exceed the allowable PM emission rate calculated using 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

SECTION D.6 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

(a) sawing activities located in the carpenter shop, identified as emission unit 102, constructed in 1960, with emissions controlled by a baghouse, identified as the #2 sawdust collector and exhausting to stack 72-57;

Insignificant Activities

(b) sawing activities located in the carpenter shop, identified as emission unit 101, constructed in 1960, with emissions controlled by a cyclone, identified as the #1 sawdust collector and exhausting to stack 73-57;

(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.6.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the sawing activities located in the carpenter shop shall not exceed the allowable PM emission rate based on 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.6.2 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for this facility and its control device.

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

D.6.3 Particulate Control

In order to ensure compliance with D.6.1, the duct collectors, cyclone, and rotoclones for particulate control shall be in operation and control emissions from the sawing activities at all times that the respective facility is in operation.

D.6.4 Broken or Failed Bag Detection

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

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

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

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

D.6.5 Record Keeping Requirements

All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.7 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities

Ingot Department

(a) "622" filter boxes for transferring metal from #41 holding furnace to #11 casting pit, used for adding argon and chlorine, 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 used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, 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, used for adding argon and chlorine, with a maximum heat input capacity of 0.8 million Btu per hour;

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

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

D.7.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from the "622" filter boxes shall not exceed the allowable PM emission rate calculated using 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

SECTION D.8 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

(a) one (1) natural gas-fired Lochinvar boiler, identified as emission unit 90, constructed in 1995, with a maximum heat input capacity of 0.4 million Btu per hour.

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

(c) one (1) natural gas-fired Pacific boiler #1, identified as emission unit 103, constructed in 1940, with a maximum heat input capacity of 2.6 million Btu per hour; and

(d) one (1) natural gas-fired Pacific boiler #2, identified as emission unit 104, constructed in 1940, with a maximum heat input capacity of 2.6 million Btu per hour.

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

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

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

D.8.1 Particulate Emission Limitations for Sources of Indirect Heating [326 IAC 6-2-4]

(a) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating: Emission limitations for facilities specified in 326 IAC 6-2-1(d)), the PM emissions from the Lochinvar boiler, Unit 90, shall not exceed 0.6 pound per million Btu heat input (lb/MMBtu).

(b) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from the Cleaver-Brooks boiler, Unit 93, shall be limited to 0.6 pounds per MMBtu heat input.

(c) Pursuant to 326 IAC 6-2-4 (Particulate Emission Limitations for Sources of Indirect Heating) the PM emissions from the rented natural gas-fired boiler, Unit TB, shall be limited to 0.6 pounds per MMBtu heat input.

D.8.2 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 the Pacific boiler #1 and the Pacific boiler #2, Units 103 and 104, shall be limited to 0.8 pounds per MMBtu heat input, each.

SECTION D.9 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities

(a) one (1) north skim cooling operation, identified as emission unit 16, with emissions exhausting to stack 3-8F;

(b) one (1) south skim cooling operation, identified as emission unit 17, with emissions exhausting to stack 4-8F;

(c) one (1) log sawing and lathe operation, referred to as emission unit 31;

(d) one (1) box shop sawdust collector, referred to as emission unit 92, with emissions exhausting to stack 74-57;

(e) one (1) natural gas-fired babbit melting furnace, referred to as emission unit 109, with emissions exhausting to stack 81-58; and

(f) eleven (11) Rotoclones, which are mechanical separating devices designed to capture particulate emissions from the sawing, grinding, and working of aluminum pieces. Two rotoclones, each rated at 4000 cfm. Six rotoclones, each rated at 1500 cfm. Two rotoclones, each rated at 15,000 cfm. One rotoclones, rated at 6000 cfm.

(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.9.1 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable particulate emission rate from each facility listed above shall not exceed the allowable PM emission rate calculated using 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

SECTION D.10 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Insignificant Activities

Extrusion
one (1) Protectsol 512 clear coating applicator, 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
one (1) Protectsol 512 clear coating applicator, referred to 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.

Four (4) Protectsol 512 clear coating applicators, referred to as emission unit 112, 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.10.1 Volatile Organic Compounds (VOC) Limitations [326 IAC 8-2-9]

Pursuant to 326 IAC 8-2-9, the owner or operator 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.

D.10.2 VOC Usage Limitation [326 IAC 8]

Pursuant to 326 IAC 8-2-9(f), all solvents sprayed from the application equipment during cleanup or color changes shall be directed into containers. Said containers shall be closed as soon as the solvent spraying is complete. In addition, all waste solvent shall be disposed of in such a manner that minimizes evaporation.

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

D.10.3 Volatile Organic Compounds (VOC)[326 IAC 8-1-2] [326 IAC 8-1-4]

(a) Compliance with the VOC content contained in condition D.10.1 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.

(b) If any coatings applied in a facility during a month are noncompliant as applied pursuant to 326 IAC 8-2-9, then compliance with the VOC content limit in condition D.10.1 shall be determined pursuant to 326 IAC 8-1-2(a)(7), using a volume weighted average of coatings on a daily basis. This volume weighted average shall be determined by the following equation:

$$A = [\sum (c_i \times U) / \sum U]$$

Where: A is the volume weighted average in pounds VOC per gallon less water as applied;
C is the VOC content of the coating in pounds VOC per gallon less water as applied; and
U is the usage rate of the coating in gallons per day.

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

D.10.4 Record Keeping Requirements

(a) To document compliance with conditions D.10.1 and D.10.3(a), the Permittee shall maintain records in accordance with (1) through (4) below. Records maintained for (1) through (4) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in conditions D.10.1 and D.10.3(a).

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

(2) The amount of coating material and solvent used on monthly basis.

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

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

(3) The monthly cleanup solvent usage; and

(4) The total VOC usage for each month.

(b) To document compliance with conditions D.10.1 and D.10.3(b), the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken as stated below and shall be complete and sufficient to establish compliance with the VOC usage limit established in conditions D.10.1 and D.10.3(b).

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

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

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

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

(3) The volume weighted average VOC content of the coatings used for each day;

(4) The daily cleanup solvent usage; and

(5) The total VOC usage for each day.

(c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, permitted in 2012, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs/cycle), with a natural gas furnace rated at 20.0 MMBtu/hr, exhausting to stack ALLI-S1.

(b) Two (2) natural gas fired homogenizing ovens, identified as ALLI-27 and ALLI-28, permitted in 2012, each with a maximum time-weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 27.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Insignificant Activities

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, permitted in 2012, 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) Four (4) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-20, permitted in 2012, each with a maximum time-weighted average throughput of 37.5 lb of molten lithium per hour (900.0 lb of molten lithium per cycle).

(d) One (1) electric flowable aluminum-lithium scrap melting furnace, identified as ALLI-21, permitted in 2012, with a maximum time-weighted average throughput of 2.0 tons of molten aluminum-lithium per hour.

(e) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, permitted in 2012, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle).

(f) One (1) 3-stage A622 filter, identified as ALLI-26, permitted in 2012, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle).

(g) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting internally.

(h) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting to stack ALLI-S30.

(i) One (1) slab saw, identified as ALLI-31, permitted in 2012, with a maximum throughput of 2,170 pounds per hour (Process Weight = 1.085 ton/hr), exhausting internally.

(j) One (1) skim cooling operation, identified as ALLI-32, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average).

(k) One (1) skim loadout operation, identified as ALLI-33, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average).

(l) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput of 1,000 gallons per minute. [326 IAC 2-2]

(n) 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.

(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.11.1 PSD Minor Limits [326 IAC 2-2]

(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), and space heaters associated with the aluminum-lithium cast house modification shall not exceed 731.6 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) CO_2 emissions from natural gas combustion shall not exceed 120,000 pounds per million cubic feet (lb/MMCF).

(d) CH_4 emissions from natural gas combustion shall not exceed 2.3 pounds per million cubic feet (lb/MMCF).

(e) N_2O emissions from natural gas combustion shall not exceed 2.2 pounds per million cubic feet (lb/MMCF).

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

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

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

Compliance with these emission limits and the limits in Conditions D.11.2, D11.3 and D.11.4, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.2 PSD Minor Limit - Melting [326 IAC 2-2]

(a) The amount of metal charged in the flowable scrap melting furnace (ALLI-21) shall not exceed 5,128 tons of charge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.4 pounds of PM per ton of charge.

(c) PM_{10} emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.12 pounds of PM_{10} per ton of charge.

(d) $PM_{2.5}$ emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

(h) PM emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.4 pounds of PM per ton of charge.

(i) PM_{10} emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of PM_{10} per ton of charge.

(j) $PM_{2.5}$ emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

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

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

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

Compliance with these emission limits and the limits in Conditions D.11.1, D11.3 and D.11.4, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.3 PSD Minor Limit [326 IAC 2-2]

(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 and the limits in Conditions D.11.1,D.11.2, and D11.3, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the following processes shall not exceed the emission rate listed below:

Table 1: Summary of Process Weight Rate Limits

Unit ID	**Process**	**P** (ton/hr)	**E** (lb/hr)
ALLI-1	Prime Aluminum Melting Furnace	3.89	10.19
ALLI-2 --- ALLI-16	15 Lithium Melting Furnaces	2.6E-03 (each)	0.551 (each)
ALLI-17 --- ALLI-20	4 Lithium Melting Furnaces	1.9E-02 (each)	0.551 (each)
ALLI-21	Flowable Scrap Melting Furnace	2.00	6.52
ALLI-22 & ALLI-23	2 Scrap Drying Ovens	3.89	10.19
ALLI-24 --- ALLI-25	2 Electric Induction Melting Furnaces	2.03 (each)	6.59 (each)
ALLI-26	A622 Filter	4.06	10.49
ALLI-27 & ALLI-28	2 Homogenizing Ovens	3.89	10.19
ALLI-30	Log Peeler	3.62	9.70
ALLI-29	Log Saw	3.62	9.70
ALLI-31	Slab Saw	1.09	4.33
ALLI-32	Skim Cooling	0.30	1.82
ALLI-33	Skim Loadout	0.30	1.82

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

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

D.11.5 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Conditions D.11.3(b) and to verify the F emission factor, the Permittee shall conduct F testing for one (1) of the homogenizing ovens (ALLI-27 and ALLI-28, stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B) no later than one hundred eighty (180) days after start-up utilizing methods as approved by the Commissioner.

(b) In order to verify the PM, PM_{10}, and $PM_{2.5}$ emission factors, the Permittee shall conduct PM, PM_{10}, and $PM_{2.5}$ testing for the primary aluminum melter furnace (ALLI-1, stack ALLI-S1), one (1) of the lithium melting furnaces (ALLI-2 --- ALLI-20), and one (1) of either the flowable scrap melting furnace (ALLI-21) or one of the electric induction melting furnaces (ALLI-24 and ALLI-25), A622 filter (ALLI-26), no later than one hundred eighty (180) days after start-up utilizing methods as approved by the Commissioner. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.

(c) Testing shall be conducted in accordance with 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 Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.11.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.11.1(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.11.2(a), the Permittee shall maintain monthly records of the amount of metal charged in the flowable scrap melting furnace (ALLI-21).

(c) To document the compliance status with Condition D.11.3(a), the Permittee shall maintain monthly records of the AFB usage for the homogenizing ovens (ALLI-27 and ALLI-28).

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

D.11.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.11.1(a), D.11.2(a), and D.11.3(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 six (6) month period. 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(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the reporting required by this condition.

SECTION E.1 NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Ingot Department

(a) one (1) #2-2 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 89-8;

(b) one (1) #2-3 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 90-8;

(c) one (1) #2-4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 88-8;

(d) one (1) #2-5 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 87-8;

(e) one (1) #2-6 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 94-8; and

(f) one (1) #4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 5-8

Aluminum-Lithium Alloy Casthouse

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(The information describing the process contained in this facility 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 NESHAP RRR [40 CFR 63, Subpart A] [326 IAC 20-1-1]

Pursuant to 40 CFR 63.1518, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Appendix A of 40 CFR Part 63, Subpart RRR in accordance with the schedule in 40 CFR 63 Subpart RRR, for the #2-2, #2-3, #2-4, #2-5, and #2-6 tilting-melting-holding furnaces, the #4 melting furnace, natural gas fired scrap drying ovens (ALLI-22 & ALLI-23).

E.1.2 National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production [40 CFR Part 63, Subpart RRR] [326 IAC 20-70]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart RRR (National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production), which are included as Attachment A and 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, on and after March 24, 2003:

(1) 40 CFR 63.1500 (a), (c), (c)(1-4), (e), (f)
(2) 40 CFR 63.1501 (a), (c)
(3) 40 CFR 63.1502
(4) 40 CFR 63.1503
(5) 40 CFR 63.1505 (a), (a)(i), (a)(i)(3)
(6) 40 CFR 63.1506 (a), (b), (b)(1-2), (d), (d)(1-2), (n), (n)(1-3)
(7) 40 CFR 63.1510 (a), (b), (c), (e), (o), (p), (s)
(8) 40 CFR 63.1511 (a), (b), (c), (f)
(9) 40 CFR 63.1512 (e), (e)(1), (k), (n), (n)(1-3), (o), (o)(2), (o)(4), (o)(5)
(10) 40 CFR 63.1515 (a), (a)(6), (b), (b)(1-4), (b)(9-10)
(11) 40 CFR 63.1516 (a), (a)(1-2), (b), (b)(1)(iv-vii), (b)(3), (c), (c)(1-2)
(12) 40 CFR 63.1517 (a), (a)(1-3), (b), (b)(5), (b)(7-8), (b)(13), (b)(15-16)
(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 natural gas fired scrap drying ovens (ALLI-22 & ALLI-23) upon startup:

(1) 40 CFR 63.1500(a), (c), (e), and (f)
(2) 40 CFR 63.1501
(3) 40 CFR 63.1502
(4) 40 CFR 63.1503
(5) 40 CFR 63.1505(a) and (d)
(6) 40 CFR 63.1506(a), (b), (d), (g), and (p)
(7) 40 CFR 63.1510(a), (b), (c), (e), and (w)
(8) 40 CFR 63.1511
(9) 40 CFR 63.1512(c), (k), and (r)
(10) 40 CFR 63.1513
(11) 40 CFR 63.1515
(12) 40 CFR 63.1516
(13) 40 CFR 63.1517
(14) 40 CFR 63.1518
(15) 40 CFR 63.1519
(16) Table 1 to 40 CFR 63, Subpart RRR
(17) Table 2 to 40 CFR 63, Subpart RRR
(18) Table 3 to 40 CFR 63, Subpart RRR
(19) Appendix A to 40 CFR 63, Subpart RRR

SECTION E.2NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Casthouse

(n) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34.

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

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

E.2.1 General Provisions Relating to NSPS IIII [40 CFR 60, Subpart A] [326 IAC 12-1-1]

Pursuant to 40 CFR 60.4218, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, as specified in Table 8 to 40 CFR 60, Subpart IIII, in accordance with schedule in 40 CFR 60, Subpart IIII, for the emergency generator (ALLI-34).

E.2.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

The Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), which are included as Attachment B and incorporated by reference as 326 IAC 12, for the emergency generator (ALLI-34):

(1) 40 CFR 60.4200(a)(4), (c), and (d)
(2) 40 CFR 60.4205(b), (d), (d)(2), and (d)(3)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (d), (f), (g), (g)(2),
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 5 to 40 CFR 60, Subpart IIII
(13) Table 8 to 40 CFR 60, Subpart IIII

SECTION E.3NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Casthouse

(n) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34.

(The information describing the process contained in this facility 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 NESHAP ZZZZ [40 CFR 63, Subpart A] [326 IAC 20-1-1]

Pursuant to 40 CFR 63.6665, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Table 8 to 40 CFR 63 Subpart ZZZZ, in accordance with schedule in 40 CFR 63 Subpart ZZZZ, for the emergency generator (ALLI-34).

E.3.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

The Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are included as Attachment C and incorporated by reference as 326 IAC 20-82, for the emergency generator (ALLI-34), upon startup:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (a)(2), (c), and (c)(1)
(4) 40 CFR 63.6595(a)(7) and (c)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(h)
(7) 40 CFR 63.6635
(8) 40 CFR 63.6640
(9) 40 CFR 63.6645
(10) 40 CFR 63.6650
(11) 40 CFR 63.6655
(12) 40 CFR 63.6660
(13) 40 CFR 63.6665
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 8 to 40 CFR 63 Subpart ZZZZ

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 OPERATING PERMIT
CERTIFICATION

Source Name: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001

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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001

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), no later than four (**4**) daytime business hours (1-800-451-6027 or 317-233-0178, ask for Compliance and Enforcement Branch); and
- The Permittee must submit notice in writing or by facsimile no later than two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

If any of the following are not applicable, mark N/A

Facility/Equipment/Operation:
Control Equipment:
Permit Condition or Operation Limitation in Permit:
Description of the Emergency
Describe the cause of the Emergency

If any of the following are not applicable, mark N/A

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? ☐ Y ☐ N Describe: 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: one hundred four (104) natural gas-fired units
Parameter: natural gas usage
Limit: natural gas usage not to exceed 1,177.3 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	Natural Gas Usage for This Month (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for 12-Month Period (MMCF)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: Diesel Air Compressor (EUDAC #1)
Parameter: Hours of Operation
Limit: 3,575 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	Hours of Operation for This Month (hours)	Hours of Operation for Previous 11 Months (hours)	Hours of Operation for 12-Month Period (hours)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: Source-wide
Parameter: Flux Usage
Limit: Flux - less than 175 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	Flux Usage for This Month (tons)	Flux Usage for Previous 11 Months (tons)	Flux for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: Source-wide
Parameter: AFB Usage
Limit: AFB - less than 12.75 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	AFB Usage for This Month (tons)	AFB Usage for Previous 11 Months (tons)	AFB Usage for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: primary aluminum melter furnace (ALLI-1), scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), and space heaters associated with the aluminum-lithium cast house modification
Parameter: natural gas usage
Limit: 731.6 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	Natural Gas Usage for This Month (MMCF)	Natural Gas Usage for Previous 11 Months (MMCF)	Natural Gas Usage for 12-Month Period (MMCF)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: flowable scrap melting furnace (ALLI-21)
Parameter: Amount of Metal Charged
Limit: 5,128 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	Amount of Metal Charged for This Month (tons)	Amount of Metal Charged for Previous 11 Months (tons)	Amount of Metal Charged for 12-Month Period (tons)

☐ No deviation occurred in this quarter.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001
Facility: homogenizing ovens (ALLI-27 and ALLI-28)
Parameter: AFB usage
Limit: 4,191 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.

QUARTER: _____ **YEAR:** _____

Month	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.

☐ Deviations 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: Alcoa, Inc. - Lafayette Operations
Source Address: 3131 East Main Street, Lafayette, Indiana 47905
Part 70 Permit No.: T157-17676-00001

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 Requirements. 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 – National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production [40 CFR Part 63, Subpart RRR] [326 IAC 20-70]

Source Description and Location

Source Name:	Alcoa, Inc. – Lafayette Operations
Source Location:	3131 East Main Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3341 and 3354
Operation Permit Renewal No.:	T157-17676-00001
Issuance Date:	February 6, 2007
Significant Source Modification No.:	157-31323-00001
Significant Permit Modification No.:	157-31329-00001
Permit Reviewer:	Kimberly Cottrell

NESHAP [40 CFR Part 63, Subpart RRR]

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) The owner or operator of an existing affected source must comply with the requirements of this subpart by March 24, 2003.

(b) Except as provided in paragraph (c) of this section, the owner or operator of a new affected source that commences construction or reconstruction after February 11, 1999 must comply with the requirements of this subpart by March 24, 2000 or upon startup, whichever is later.

(c) The owner or operator of any affected source which is constructed or reconstructed 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.

[67 FR 59791, Sept. 24, 2002]

§ 63.1502 Incorporation by reference.

(a) The following material is incorporated by reference in the corresponding sections noted. The incorporation by reference (IBR) of certain publications listed in the rule will be approved by the Director of the Office of the Federal Register as of the date of publication of the final rule in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. This material is incorporated as it exists on the date of approval:

(1) Chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice,” American Conference of Governmental Industrial Hygienists, (23rd edition, 1998), IBR approved for §63.1506(c), and

(2) “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).

(b) The material incorporated by reference is available for inspection at the National Archives and Records Administration (NARA); and at the Air and Radiation Docket and Information Center, U.S. EPA, 1200 Pennsylvania Ave., NW., Washington, DC. For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.* The material is also available for purchase from the following addresses:

(1) Customer Service Department, American Conference of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240–1634, telephone number (513) 742–2020; and

(2) The National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA, NTIS no. PB 90–145756.

§ 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:

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 unit that crushes, grinds, 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.*

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.

Chips means small, uniformly-sized, unpainted pieces of aluminum scrap, typically below 11/4inches 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.

Cover flux means salt added to the surface of molten aluminum in a *group 1* or *group 2 furnace,* without agitation of the molten aluminum, for the purpose of preventing oxidation.

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.

HCl means, for the purposes of this subpart, emissions of hydrogen chloride that serve as a surrogate measure of the total emissions of the HAPs hydrogen chloride, hydrogen fluoride and chlorine.

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.

Rotary dross cooler means a water-cooled rotary barrel device that accelerates cooling of dross.

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.

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.*

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”).

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.

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.

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).

[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]

§ 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 with each applicable limit in this section. 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 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.* On and after the compliance date established by §63.1501, the owner or operator must comply with the emission limits calculated using the equations for PM and HCl 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:

$$L_{C_{PM}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{PM}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad (Eq.\ 1)$$

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 feed/charge rate for individual emission unit I; and

L_{cPM}= The PM emission limit for the secondary aluminum processing unit.

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 in excess of:

$$L_{c_{HCl}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{HCl}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad \text{(Eq. 2)}$$

Where,

L_{tiHCl}= 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; and

L_{cHCl}= The HCl emission limit for the secondary aluminum processing unit.

Note: In-line fluxers using no reactive flux materials cannot be included in this calculation since they are not subject to the HCl 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:

$$L_{c_{D/F}} = \frac{\sum_{i=1}^{n}\left(L_{ti_{D/F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad (Eq.\ 3)$$

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 D/F emission limit for the secondary aluminum processing unit.

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 responsible permitting authority, 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 MACT standard 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]

§ 63.1506 Operating requirements.

(a) *Summary.* (1) On and after the compliance date established by §63.1501, the owner or operator must operate all new and existing affected sources and control equipment according to the requirements in 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.

(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 as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of “Industrial Ventilation: A Manual of Recommended Practice” (incorporated by reference in §63.1502 of this subpart);

(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.

(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 the same 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 the same 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 the same 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.

(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 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]

§§ 63.1507-63.1509 [Reserved]

Monitoring and Compliance Requirements

§ 63.1510 Monitoring requirements.

(a) *Summary.* On and after the compliance date established by §63.1501, 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.

(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 operation, maintenance, and monitoring (OM&M) plan. The owner or operator of an existing affected source must submit the OM&M plan to the responsible permitting authority no later than the compliance date established by §63.1501(a). The owner or operator of any new affected source must submit the OM&M plan to the responsible permitting authority 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(b) 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, unless and until the plan is revised in accordance with the following procedures. If the permitting authority 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. 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 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.

(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.

(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 applicable permitting authority 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 triboelectric bag leak detection system must be installed, calibrated, operated, and maintained according to the “Fabric Filter Bag Leak Detection Guidance,” (September 1997). This document is available from the U.S. Environmental Protection Agency; Office of Air Quality Planning and Standards; Emissions, Monitoring and Analysis Division; Emission Measurement Center (MD–19), Research Triangle Park, NC 27711. This document also is available on the Technology Transfer Network (TTN) under Emission Measurement Technical Information (EMTIC), Continuous Emission Monitoring. Other bag leak detection systems must be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.

(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.

(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 coated fabric filter must obtain approval from the permitting authority for a lime addition monitoring procedure. The permitting authority 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.

(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 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).

(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 charge of a sidewell furnace that 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.

(2) Submit a certification of compliance with the operational standards in §63.1506(m)(7) 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 responsible permitting authority, a written site-specific monitoring plan. The site-specific monitoring plan must be submitted to the permitting authority 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 the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F that will be emitted from the furnace. This may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate. If the permitting authority 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 to the permitting authority.

(i) The owner or operator of an existing affected source must submit the site-specific monitoring plan to the applicable permitting authority for review at least 6 months prior to the compliance date.

(ii) The permitting authority 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 the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F that will be emitted from the furnace. Subject to permitting agency approval of the OM&M plan, this may be determined by conducting performance tests and monitoring operating parameters while charging the furnace with feed/charge materials containing the highest anticipated levels of oils and coatings and fluxing at the highest anticipated rate.

(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, shutdown, or malfunction 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 applicable permitting authority containing the information required by paragraph (s)(1) of this section and obtain approval of the applicable permitting authority 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 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.

(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:

$$E_{day} = \frac{\sum_{i=1}^{n}\left(T_i \times ER_i\right)}{\sum_{i=1}^{n} T_i} \qquad (Eq.\ 4)$$

Where,

E_{day}= The daily PM, HCl, or D/F 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.

(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.

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§ 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 requirements, and must obtain approval of the plan pursuant to the procedures, set forth in §63.7(c).

(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 existing affected source 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(a). The owner or operator of any new affected source for which an initial performance test is required must conduct this initial performance test within 90 days after the date for compliance established by §63.1501(b). 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 owner or operator must conduct each test while the affected source or emission unit is operating at the highest production level with charge materials representative of the range of materials processed by the unit and, if applicable, at the highest reactive fluxing rate.

(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.

(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.

(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. 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 an alternative test method, subject to approval 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, an owner or operator may utilize emission rates obtained by testing a particular type of group 1 furnace which is not controlled by any add-on control device, or by testing an in-line flux box which is not controlled by any add-on 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.

(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 applicable permitting authority:

(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.

(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, 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]

§ 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 observations 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.

(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, 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 and HCl at the furnace exhaust outlet. 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 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.

(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 chlorine 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 which has no ventilation ductwork manifolded to any outlet or emission control device chooses to demonstrate compliance with the emission limit for HCl by limiting use of reactive chlorine 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 utilize 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 and HCl 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 HCl (for 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 HCl (for 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.

(1) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl 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 by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using Equation 5:

$$W_t = F_1 W_1 + F_2 W_2 \qquad (Eq.\ 5)$$

Where,

W_t= Total chlorine usage, by weight;

F_1= Fraction of gaseous or liquid flux that is chlorine;

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; and

W_2= Weight of solid reactive flux;

(4) Divide the weight of total chlorine 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 is used, the owner or operator must derive the appropriate proportion factor subject to approval by the applicable permitting authority.

(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 for the 3 test runs. If the feed rate setting varies during the runs, determine and record the average feed 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]

§ 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 and D/F emission limits.* (1) Use Equation 7 of this section to determine compliance with an emission limit for PM or HCl:

$$E = \frac{C \times Q \times K_1}{P} \qquad (Eq.\ 7)$$

Where:

E = Emission rate of PM or HCl, kg/Mg (lb/ton) of feed;

C = Concentration of PM or HCl, g/dscm (gr/dscf);

Q = Volumetric flow rate of exhaust gases, dscm/hr (dscf/hr);

K_1= Conversion factor, 1 kg/1,000 g (1 lb/7,000 gr); and

P = Production rate, Mg/hr (ton/hr).

(2) Use Equation 7A of this section to determine compliance with an emission limit for D/F:

$$E = \frac{C \times Q}{P} \qquad (Eq.\ 7A)$$

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” (EPA–625/3–89–016), incorporated by reference in §63.1502 of this subpart, available from the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, Virginia, NTIS no. PB 90–145756.

(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).

$$E_{C_{PM}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{PM}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad (Eq.\ 9)$$

Where,

E_{cPM}= The mass-weighted PM emissions for the secondary aluminum processing unit;

E_{tiPM}= Measured PM emissions for individual emission unit i;

T_{ti}= The average feed rate for individual emission unit i during the operating cycle or performance test period; and

n=The number of emission units in the secondary aluminum processing unit.

(2) Use Equation 10 to compute the aluminum mass-weighted HCl emissions for the secondary aluminum processing unit. Compliance is achieved if the mass-weighted emissions for the secondary aluminum processing unit (E_{cHCl}) is less than or equal to the emission limit for the secondary aluminum processing unit (L_{cHCl}) calculated using Equation 2 in §63.1505(k).

$$E_{C_{HCl}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{HCl}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad (Eq.\ 10)$$

Where,

E_{cHCl}= The mass-weighted HCl emissions for the secondary aluminum processing unit; and

E_{tiHCl}= Measured HCl emissions for individual emission unit 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).

$$E_{C_{D/F}} = \frac{\sum_{i=1}^{n}\left(E_{ti_{D/F}} \times T_{ti}\right)}{\sum_{i=1}^{n}\left(T_{ti}\right)} \qquad (Eq.\ 11)$$

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 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).

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004]

§ 63.1514 [Reserved]

Notifications, Reports, And Records

§ 63.1515 Notifications.

(a) *Initial notifications.* The owner or operator must submit initial notifications to the applicable permitting authority 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(a). 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(b) 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, 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).

(10) Startup, shutdown, and malfunction plan, with revisions.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59793, Sept. 24, 2002; 67 FR 79818, Dec. 30, 2002]

§ 63.1516 Reports.

(a) *Startup, shutdown, and malfunction plan/reports.* The owner or operator must develop a written plan as described in §63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by §63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in §63.6(e)(3). In addition to the information required in §63.6(e)(3), the plan must include:

(1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and

(2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.

(b) *Excess emissions/summary report.* The owner or operator 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) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in §63.6(e)(3).

(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.”

(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.

(c) *Annual compliance certifications.* For the purpose of annual certifications of compliance required by 40 CFR part 70 or 71, the owner or operator 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.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53984, Sept. 3, 2004; 71 FR 20461, Apr. 20, 2006]

§ 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, 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 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.

(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.

(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) Startup, shutdown, and malfunction plan;

(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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002]

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--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 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	PM HCl THC D/F[a]	0.08 0.80 0.06 0.25	lb/ton of feed lb/ton of feed lb/ton of feed µg TEQ/Mg of feed
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]	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
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

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New and existing in-line fluxer[e]	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 HCl	0.80 0.40 or 10	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device
New and existing group 1 furnace[c]	PM HCl	0.40 0.40 or 10	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device
	D/F[a]	15.0	µg TEQ/Mg of feed
New and existing group 1 furnace[c] with clean charge only	PM HCl	0.40 0.40 Or 10	lb/ton of feed lb/ton of feed percent of the HCl upstream of an add-on control device
	D/F[a]	No Limit	Clean charge only

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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 all simultaneously constructed new group 1 furnaces and new in-line fluxers)	PM[e]	$L_{t_{PM}} = \frac{\sum_{i=1}^{n} (L_{i_{PM}} \times T_i)}{\sum_{i=1}^{n} (T_i)}$
	HCl[f]	$L_{t_{HCl}} = \frac{\sum_{i=1}^{n} (L_{i_{HCl}} \times T_i)}{\sum_{i=1}^{n} (T_i)}$
	D/F[g]	$L_{t_{D/F}} = \frac{\sum_{i=1}^{n} (L_{i_{D/F}} \times T_i)}{\sum_{i=1}^{n} (T_i)}$

[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} = the HCl emission limit for individual emission unit i in the secondary aluminum processing unit [kg/Mg (lb/ton) of feed]; L_{tHCl} = the overall HCl 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 limit.

[g] Clean charge furnaces cannot be included in this calculation since they are not subject to the D/F limit.

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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 Industrial Ventilation: A Handbook of Recommended Practice; operate in accordance with OM&M plan.[b]
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

Affected source/emission unit	Monitor type/operation/process	Operating requirements
		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 level established during the performance test for continuous injection systems.
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 level established during

Affected source/emission unit	Monitor type/operation/process	Operating requirements
		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]
	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).
	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 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 controls (including those that are part of a secondary aluminum processing unit)	Reactive flux injection rate	Maintain reactive flux injection rate (kg/Mg) (lb/ton) at or below rate used during the performance test for each operating cycle or time period used in the performance test.
	Site-specific monitoring plan[c]	Operate furnace within the range of charge materials, contaminant levels, and parameter values established in the site-specific monitoring plan.
	Feed material	Use only clean charge.

Affected source/emission unit	Monitor type/operation/process	Operating requirements
	(melting/holding furnace)	
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 control devices 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.

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 79818, Dec. 30, 2002; 69 FR 53984, Sept. 3, 2004]

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 standards.
All affected sources and emission units subject to production-based (lb/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 manufacturers 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 “Fabric Filter Bag Leak Detection Guidance”[c]; record voltage output from bag leak detector.
	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.
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

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
		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 "Fabric Filter Bag Leak Detection Guidance[c]; record voltage output from bag leak detector.
	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.
	Lime injection rate	For continuous injection systems, inspect each feed hooper 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.
	Fabric filter inlet temperature.	Continous 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 "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	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
	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 "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	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 "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	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 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).
	Lime injection rate	For continuous injection systems, record feeder setting daily and inspect each feed hopper or silo every 8 hrs to verify that lime is free-flowing; record results of each inspection. If blockage occurs, inspect every 4 hrs for 3 days; return to 8-hour inspections if corrective action results in no further blockage during 3-day period.[d]
In-line fluxer using no reactive flux	Flux materials	Record flux materials; certify every 6 months for no reactive flux.
Group 1 furnace with lime-injected fabric filter	Bag leak detector or	Install and operate in accordance with "Fabric Filter Bag Leak Detection Guidance"[c]; record output voltage from bag leak detector.
	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;

Affected source/Emission unit	Monitor type/Operation/Process	Monitoring requirements
		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.[d]
	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 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).
	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-hour block averages.
	Maintain molten aluminum level in sidewell furnace	Maintain aluminum level operating log; certify every 6 months.
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 manufacturers 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.
	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]Non-triboelectric bag leak detectors must be installed and operated in accordance with manufacturers' specifications.

[d]Permitting agency may approve other alternatives including load cells for lime hopper weight, sensors for carrier gas pressure, or HCl monitoring devices at fabric filter outlet.

[65 FR 15710, Mar. 23, 2000, as amended at 69 FR 53985, Sept. 3, 2004]

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)–(8)		Yes.	
§63.1(a)(9)		No	[Reserved].
§63.1(a) (10)–(14)		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)		No	[Reserved].
§63.1(c)(4)–(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)–(3)	Prohibited Activities	Yes.	
§63.4(a)(4)		No	[Reserved]
§63.4(a)(5)		Yes.	
§63.4(b)–(c)	Circumvention/ Severability	Yes.	
§63.5(a)	Construction and Reconstruction—Applicability	Yes.	
§63.5(b)(1)	Existing, New, Reconstructed Sources—Requirements	Yes.	
§63.5(b)(2)		No	[Reserved].
§63.5(b)(3)–(6)		Yes.	
§63.5(c)		No	[Reserved].
§63.5(d)	Application for Approval of	Yes.	

Citation	Requirement	Applies to RRR	Comment
	Construction/ Reconstruction		
§63.5(e)	Approval of Construction/ Reconstruction	Yes.	
§63.5(f)	Approval of Construction/Reconstruction Based on State Review	Yes.	
§63.6(a)	Compliance with Standards and Maintenance—Applicability	Yes.	
§63.6(b)(1)–(5)	New and Reconstructed Sources—Dates	Yes.	
§63.6(b)(6)		No	[Reserved].
§63.6(b)(7)		Yes.	
§63.6(c)(1)	Existing Sources Dates	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)–(2)	Operation & Maintenance Requirements	Yes	§63.1510 requires plan.
§63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	Yes.	
§63.6(f)	Compliance with Emission Standards	Yes.	
§63.6(g)	Alternative Standard	No	
§63.6(h)	Compliance with Opacity/VE Standards	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)–(h)	Performance Test Requirements-Applicability and Dates	Yes	Except §63.1511 establishes dates for initial performance tests.
§63.7(b)	Notification	Yes.	
§63.7(c)	Quality Assurance/Test Plan	Yes.	
§63.7(d)	Testing Facilities	Yes.	

Citation	Requirement	Applies to RRR	Comment
§63.7(e)	Conduct of Tests	Yes.	
§63.7(f)	Alternative Test Method	Yes.	
§63.7(g)	Data Analysis	Yes.	
§63.7(h)	Waiver of Tests	Yes.	
§63.8(a)(1)	Monitoring Requirements—Applicability	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)–(3)	CMS Operation and Maintenance	Yes.	
§63.8(c)(4)–(8)		Yes.	
§63.8(d)	Quality Control	Yes.	
§63.8(e)	CMS Performance Evaluation	Yes.	
§63.8(f)(1)–(5)	Alternative Monitoring Method	No	§63.1510(w) includes provisions for monitoring alternatives.
§63.8(f)(6)	Alternative to RATA Test	Yes.	
§63.8(g)(1)	Data Reduction	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)	Notification Requirements—Applicability	Yes.	
§63.9(b)	Initial Notifications	Yes.	
§63.9(c)	Request for Compliance Extension	Yes.	
§63.9(d)	New Source Notification for Special Compliance Requirements	Yes.	
63.9(e)	Notification of Performance Test	Yes.	
§63.9(f)	Notification of VE/Opacity Test	Yes.	
§63.9(g)	Additional CMS Notifications	Yes.	
§63.9(h)(1)–(3)	Notification of Compliance Status	Yes	Except §63.1515 establishes dates for notification of compliance status reports.
§63.9(h)(4)		No	[Reserved].

Citation	Requirement	Applies to RRR	Comment
§63.9(h)(5)–(6)		Yes.	
§63.9(i)	Adjustment of Deadlines	Yes.	
§63.9(j)	Change in Previous Information	Yes.	
§63.10(a)	Recordkeeping/Reporting—Applicability	Yes.	
§63.10(b)	General Requirements	Yes	§63.1517 includes additional requirements.
§63.10(c)(1)	Additional CMS Recordkeeping	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(d)(1)	General Reporting Requirements	Yes.	
§63.10(d)(2)	Performance Test Results	Yes.	
§63.10(d)(3)	Opacity or VE Observations	Yes.	
§63.10(d)(4)–(5)	Progress Reports/Startup, Shutdown, and Malfunction Reports	Yes.	
§63.10(e)(1)–(2)	Additional CMS Reports	Yes.	
§63.10(e)(3)	Excess Emissions/CMS Performance Reports	Yes	Reporting deadline given in §63.1516.
§63.10(e)(4)	COMS Data Reports	Yes.	
§63.10(f)	Recordkeeping/Reporting Waiver	Yes.	
§63.11(a)–(b)	Control Device 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	Incorporation by Reference	Yes	Chapters 3 and 5 of ACGIH Industrial Ventilation Manual for capture/collection

Citation	Requirement	Applies to RRR	Comment
			systems; and Interim Procedures for Estimating Risk Associated with Exposure to Mixtures of Chlorinated Dibenzofurans (CDDs and CDFs) and 1989 Update (incorporated by reference in §63.1502).
§63.15	Availability of Information/Confidentiality	Yes.	

[65 FR 15710, Mar. 23, 2000, as amended at 67 FR 59793, Sept. 24, 2002; 67 FR 79818, Dec. 30, 2002; 69 FR 53986, Sept. 3, 2004; 70 FR 75346, Dec. 19, 2005]

Attachment B – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Source Description and Location

Source Name:	Alcoa, Inc. – Lafayette Operations
Source Location:	3131 East Main Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3341 and 3354
Operation Permit Renewal No.:	T157-17676-00001
Issuance Date:	February 6, 2007
Significant Source Modification No.:	157-31323-00001
Significant Permit Modification No.:	157-31329-00001
Permit Reviewer:	Kimberly Cottrell

NSPS [40 CFR Part 60, Subpart IIII]

Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Source: 71 FR 39172, July 11, 2006, unless otherwise noted.

What This Subpart Covers

§ 60.4200 Am I subject to this subpart?

(a) The provisions of this subpart are applicable to manufacturers, owners, and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons as specified in paragraphs (a)(1) through (4) of this section. For the purposes of this subpart, the date that construction commences is the date the engine is ordered by the owner or operator.

(1) Manufacturers of stationary CI ICE with a displacement of less than 30 liters per cylinder where the model year is:

(i) 2007 or later, for engines that are not fire pump engines;

(ii) The model year listed in Table 3 to this subpart or later model year, for fire pump engines.

(2) Owners and operators of stationary CI ICE that commence construction after July 11, 2005, where the stationary CI ICE are:

(i) Manufactured after April 1, 2006, and are not fire pump engines, or

(ii) Manufactured as a certified National Fire Protection Association (NFPA) fire pump engine after July 1, 2006.

(3) Owners and operators of any stationary CI ICE that are modified or reconstructed after July 11, 2005 and any person that modifies or reconstructs any stationary CI ICE after July 11, 2005.

(4) The provisions of §60.4208 of this subpart are applicable to all owners and operators of stationary CI ICE that commence construction after July 11, 2005.

(b) The provisions of this subpart are not applicable to stationary CI ICE being tested at a stationary CI ICE test cell/stand.

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

(d) Stationary CI ICE may be eligible for exemption from the requirements of this subpart as described in 40 CFR part 1068, subpart C (or the exemptions described in 40 CFR part 89, subpart J and 40 CFR part 94, subpart J, for engines that would need to be certified to standards in those parts), except that owners and operators, as well as manufacturers, may be eligible to request an exemption for national security.

(e) Owners and operators of facilities with CI ICE that are acting as temporary replacement units and that are located at a stationary source for less than 1 year and that have been properly certified as meeting the standards that would be applicable to such engine under the appropriate nonroad engine provisions, are not required to meet any other provisions under this subpart with regard to such engines.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

Emission Standards for Manufacturers

§ 60.4201 What emission standards must I meet for non-emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later non-emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 kilowatt (KW) (3,000 horsepower (HP)) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 89.112, 40 CFR 89.113, 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same model year and maximum engine power.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 through 2010 model year non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(c) Stationary CI internal combustion engine manufacturers must certify their 2011 model year and later non-emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder to the certification emission standards for new nonroad CI engines in 40 CFR 1039.101, 40 CFR 1039.102, 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, and 40 CFR 1039.115, as applicable, for all pollutants, for the same maximum engine power.

(d) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(3) Their 2013 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(e) Stationary CI internal combustion engine manufacturers must certify the following non-emergency stationary CI ICE to the certification emission standards and other requirements for new marine CI engines in 40 CFR 1042.101,

40 CFR 1042.107, 40 CFR 1042.110, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year non-emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(f) Notwithstanding the requirements in paragraphs (a) through (c) of this section, stationary non-emergency CI ICE identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 1 to 40 CFR 1042.1 identifies 40 CFR part 1042 as being applicable, 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the Federal Aid Highway System (FAHS); and

(2) Marine offshore installations.

(g) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (e) of this section that are applicable to the model year, maximum engine power, and displacement of the reconstructed stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37967, June 28, 2011]

§ 60.4202 What emission standards must I meet for emergency engines if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power less than or equal to 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (a)(1) through (2) of this section.

(1) For engines with a maximum engine power less than 37 KW (50 HP):

(i) The certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants for model year 2007 engines, and

(ii) The certification emission standards for new nonroad CI engines in 40 CFR 1039.104, 40 CFR 1039.105, 40 CFR 1039.107, 40 CFR 1039.115, and table 2 to this subpart, for 2008 model year and later engines.

(2) For engines with a maximum engine power greater than or equal to 37 KW (50 HP), the certification emission standards for new nonroad CI engines for the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants beginning in model year 2007.

(b) Stationary CI internal combustion engine manufacturers must certify their 2007 model year and later emergency stationary CI ICE with a maximum engine power greater than 2,237 KW (3,000 HP) and a displacement of less than 10 liters per cylinder that are not fire pump engines to the emission standards specified in paragraphs (b)(1) through (2) of this section.

(1) For 2007 through 2010 model years, the emission standards in table 1 to this subpart, for all pollutants, for the same maximum engine power.

(2) For 2011 model year and later, the certification emission standards for new nonroad CI engines for engines of the same model year and maximum engine power in 40 CFR 89.112 and 40 CFR 89.113 for all pollutants.

(c) [Reserved]

(d) Beginning with the model years in table 3 to this subpart, stationary CI internal combustion engine manufacturers must certify their fire pump stationary CI ICE to the emission standards in table 4 to this subpart, for all pollutants, for the same model year and NFPA nameplate power.

(e) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE that are not fire pump engines to the certification emission standards for new marine CI engines in 40 CFR 94.8, as applicable, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2007 model year through 2012 emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder;

(2) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder;

(3) Their 2013 model year emergency stationary CI ICE with a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder; and

(4) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power greater than or equal to 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(f) Stationary CI internal combustion engine manufacturers must certify the following emergency stationary CI ICE to the certification emission standards and other requirements applicable to Tier 3 new marine CI engines in 40 CFR 1042.101, 40 CFR 1042.107, 40 CFR 1042.115, 40 CFR 1042.120, and 40 CFR 1042.145, for all pollutants, for the same displacement and maximum engine power:

(1) Their 2013 model year and later emergency stationary CI ICE with a maximum engine power less than 3,700 KW (4,958 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 15 liters per cylinder; and

(2) Their 2014 model year and later emergency stationary CI ICE with a maximum engine power less than 2,000 KW (2,682 HP) and a displacement of greater than or equal to 15 liters per cylinder and less than 30 liters per cylinder.

(g) Notwithstanding the requirements in paragraphs (a) through (d) of this section, stationary emergency CI internal combustion engines identified in paragraphs (a) and (c) may be certified to the provisions of 40 CFR part 94 or, if Table 2 to 40 CFR 1042.101 identifies Tier 3 standards as being applicable, the requirements applicable to Tier 3 engines in 40 CFR part 1042, if the engines will be used solely in either or both of the following locations:

(1) Areas of Alaska not accessible by the FAHS; and

(2) Marine offshore installations.

(h) Notwithstanding the requirements in paragraphs (a) through (f) of this section, stationary CI internal combustion engine manufacturers are not required to certify reconstructed engines; however manufacturers may elect to do so. The reconstructed engine must be certified to the emission standards specified in paragraphs (a) through (f) of this section that are applicable to the model year, maximum engine power and displacement of the reconstructed emergency stationary CI ICE.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§ 60.4203 How long must my engines meet the emission standards if I am a manufacturer of stationary CI internal combustion engines?

Engines manufactured by stationary CI internal combustion engine manufacturers must meet the emission standards as required in §§60.4201 and 60.4202 during the certified emissions life of the engines.

[76 FR 37968, June 28, 2011]

Emission Standards for Owners and Operators

§ 60.4204 What emission standards must I meet for non-emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of less than 10 liters per cylinder must comply with the emission standards in table 1 to this subpart. Owners and operators of pre-2007 model year non-emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder must comply with the emission standards for new CI engines in §60.4201 for their 2007 model year and later stationary CI ICE, as applicable.

(c) Owners and operators of non-emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the following requirements:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 grams per kilowatt-hour (g/KW-hr) (12.7 grams per horsepower-hr (g/HP-hr)) when maximum engine speed is less than 130 revolutions per minute (rpm);

(ii) $45 \cdot n^{-0.2}$g/KW-hr ($34 \cdot n^{-0.2}$g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012 and before January 1, 2016, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$g/KW-hr ($33 \cdot n^{-0.23}$g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) For engines installed on or after January 1, 2016, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 3.4 g/KW-hr (2.5 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $9.0 \cdot n^{-0.20}$g/KW-hr ($6.7 \cdot n^{-0.20}$g/HP-hr) where n (maximum engine speed) is 130 or more but less than 2,000 rpm; and

(iii) 2.0 g/KW-hr (1.5 g/HP-hr) where maximum engine speed is greater than or equal to 2,000 rpm.

(4) Reduce particulate matter (PM) emissions by 60 percent or more, or limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.15 g/KW-hr (0.11 g/HP-hr).

(d) Owners and operators of non-emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the not-to-exceed (NTE) standards as indicated in §60.4212.

(e) Owners and operators of any modified or reconstructed non-emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed non-emergency stationary CI ICE that are specified in paragraphs (a) through (d) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37968, June 28, 2011]

§ 60.4205 What emission standards must I meet for emergency engines if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of less than 10 liters per cylinder that are not fire pump engines must comply with the emission standards in Table 1 to this subpart. Owners and operators of pre-2007 model year emergency stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards in 40 CFR 94.8(a)(1).

(b) Owners and operators of 2007 model year and later emergency stationary CI ICE with a displacement of less than 30 liters per cylinder that are not fire pump engines must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE.

(c) Owners and operators of fire pump engines with a displacement of less than 30 liters per cylinder must comply with the emission standards in table 4 to this subpart, for all pollutants.

(d) Owners and operators of emergency stationary CI engines with a displacement of greater than or equal to 30 liters per cylinder must meet the requirements in this section.

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$g/KW-hr ($34 \cdot n^{-0.2}$g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/kW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$g/KW-hr ($33 \cdot n^{-0.23}$g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

(e) Owners and operators of emergency stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests in-use must meet the NTE standards as indicated in §60.4212.

(f) Owners and operators of any modified or reconstructed emergency stationary CI ICE subject to this subpart must meet the emission standards applicable to the model year, maximum engine power, and displacement of the modified or reconstructed CI ICE that are specified in paragraphs (a) through (e) of this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4206 How long must I meet the emission standards if I am an owner or operator of a stationary CI internal combustion engine?

Owners and operators of stationary CI ICE must operate and maintain stationary CI ICE that achieve the emission standards as required in §§60.4204 and 60.4205 over the entire life of the engine.

[76 FR 37969, June 28, 2011]

Fuel Requirements for Owners and Operators

§ 60.4207 What fuel requirements must I meet if I am an owner or operator of a stationary CI internal combustion engine subject to this subpart?

(a) Beginning October 1, 2007, owners and operators of stationary CI ICE subject to this subpart that use diesel fuel must use diesel fuel that meets the requirements of 40 CFR 80.510(a).

(b) Beginning October 1, 2010, owners and operators of stationary CI ICE subject to this subpart with a displacement of less than 30 liters per cylinder that use diesel fuel must purchase diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel.

(c) [Reserved]

(d) Beginning June 1, 2012, owners and operators of stationary CI ICE subject to this subpart with a displacement of greater than or equal to 30 liters per cylinder are no longer subject to the requirements of paragraph (a) of this section, and must use fuel that meets a maximum per-gallon sulfur content of 1,000 parts per million (ppm).

(e) Stationary CI ICE that have a national security exemption under §60.4200(d) are also exempt from the fuel requirements in this section.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

Other Requirements for Owners and Operators

§ 60.4208 What is the deadline for importing or installing stationary CI ICE produced in previous model years?

(a) After December 31, 2008, owners and operators may not install stationary CI ICE (excluding fire pump engines) that do not meet the applicable requirements for 2007 model year engines.

(b) After December 31, 2009, owners and operators may not install stationary CI ICE with a maximum engine power of less than 19 KW (25 HP) (excluding fire pump engines) that do not meet the applicable requirements for 2008 model year engines.

(c) After December 31, 2014, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 19 KW (25 HP) and less than 56 KW (75 HP) that do not meet the applicable requirements for 2013 model year non-emergency engines.

(d) After December 31, 2013, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 56 KW (75 HP) and less than 130 KW (175 HP) that do not meet the applicable requirements for 2012 model year non-emergency engines.

(e) After December 31, 2012, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 130 KW (175 HP), including those above 560 KW (750 HP), that do not meet the applicable requirements for 2011 model year non-emergency engines.

(f) After December 31, 2016, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power of greater than or equal to 560 KW (750 HP) that do not meet the applicable requirements for 2015 model year non-emergency engines.

(g) After December 31, 2018, owners and operators may not install non-emergency stationary CI ICE with a maximum engine power greater than or equal to 600 KW (804 HP) and less than 2,000 KW (2,680 HP) and a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder that do not meet the applicable requirements for 2017 model year non-emergency engines.

(h) In addition to the requirements specified in §§60.4201, 60.4202, 60.4204, and 60.4205, it is prohibited to import stationary CI ICE with a displacement of less than 30 liters per cylinder that do not meet the applicable requirements specified in paragraphs (a) through (g) of this section after the dates specified in paragraphs (a) through (g) of this section.

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

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4209 What are the monitoring requirements if I am an owner or operator of a stationary CI internal combustion engine?

If you are an owner or operator, you must meet the monitoring requirements of this section. In addition, you must also meet the monitoring requirements specified in §60.4211.

(a) If you are an owner or operator of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines, you must install a non-resettable hour meter prior to startup of the engine.

(b) If you are an owner or operator of a stationary CI internal combustion engine equipped with a diesel particulate filter to comply with the emission standards in §60.4204, the diesel particulate filter must be installed with a backpressure monitor that notifies the owner or operator when the high backpressure limit of the engine is approached.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

Compliance Requirements

§ 60.4210 What are my compliance requirements if I am a stationary CI internal combustion engine manufacturer?

(a) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of less than 10 liters per cylinder to the emission standards specified in §60.4201(a) through (c) and §60.4202(a), (b) and (d) using the certification procedures required in 40 CFR part 89, subpart B, or 40 CFR part 1039, subpart C, as applicable, and must test their engines as specified in those parts. For the purposes of this subpart, engines certified to the standards in table 1 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89. For the purposes of this subpart, engines certified to the standards in table 4 to this subpart shall be subject to the same requirements as engines certified to the standards in 40 CFR part 89, except

that engines with NFPA nameplate power of less than 37 KW (50 HP) certified to model year 2011 or later standards shall be subject to the same requirements as engines certified to the standards in 40 CFR part 1039.

(b) Stationary CI internal combustion engine manufacturers must certify their stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder to the emission standards specified in §60.4201(d) and (e) and §60.4202(e) and (f) using the certification procedures required in 40 CFR part 94, subpart C, or 40 CFR part 1042, subpart C, as applicable, and must test their engines as specified in 40 CFR part 94 or 1042, as applicable.

(c) Stationary CI internal combustion engine manufacturers must meet the requirements of 40 CFR 1039.120, 1039.125, 1039.130, and 1039.135, and 40 CFR part 1068 for engines that are certified to the emission standards in 40 CFR part 1039. Stationary CI internal combustion engine manufacturers must meet the corresponding provisions of 40 CFR part 89, 40 CFR part 94 or 40 CFR part 1042 for engines that would be covered by that part if they were nonroad (including marine) engines. Labels on such engines must refer to stationary engines, rather than or in addition to nonroad or marine engines, as appropriate. Stationary CI internal combustion engine manufacturers must label their engines according to paragraphs (c)(1) through (3) of this section.

(1) Stationary CI internal combustion engines manufactured from January 1, 2006 to March 31, 2006 (January 1, 2006 to June 30, 2006 for fire pump engines), other than those that are part of certified engine families under the nonroad CI engine regulations, must be labeled according to 40 CFR 1039.20.

(2) Stationary CI internal combustion engines manufactured from April 1, 2006 to December 31, 2006 (or, for fire pump engines, July 1, 2006 to December 31 of the year preceding the year listed in table 3 to this subpart) must be labeled according to paragraphs (c)(2)(i) through (iii) of this section:

(i) Stationary CI internal combustion engines that are part of certified engine families under the nonroad regulations must meet the labeling requirements for nonroad CI engines, but do not have to meet the labeling requirements in 40 CFR 1039.20.

(ii) Stationary CI internal combustion engines that meet Tier 1 requirements (or requirements for fire pumps) under this subpart, but do not meet the requirements applicable to nonroad CI engines must be labeled according to 40 CFR 1039.20. The engine manufacturer may add language to the label clarifying that the engine meets Tier 1 requirements (or requirements for fire pumps) of this subpart.

(iii) Stationary CI internal combustion engines manufactured after April 1, 2006 that do not meet Tier 1 requirements of this subpart, or fire pumps engines manufactured after July 1, 2006 that do not meet the requirements for fire pumps under this subpart, may not be used in the U.S. If any such engines are manufactured in the U.S. after April 1, 2006 (July 1, 2006 for fire pump engines), they must be exported or must be brought into compliance with the appropriate standards prior to initial operation. The export provisions of 40 CFR 1068.230 would apply to engines for export and the manufacturers must label such engines according to 40 CFR 1068.230.

(3) Stationary CI internal combustion engines manufactured after January 1, 2007 (for fire pump engines, after January 1 of the year listed in table 3 to this subpart, as applicable) must be labeled according to paragraphs (c)(3)(i) through (iii) of this section.

(i) Stationary CI internal combustion engines that meet the requirements of this subpart and the corresponding requirements for nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate.

(ii) Stationary CI internal combustion engines that meet the requirements of this subpart, but are not certified to the standards applicable to nonroad (including marine) engines of the same model year and HP must be labeled according to the provisions in 40 CFR parts 89, 94, 1039 or 1042, as appropriate, but the words “stationary” must be included instead of “nonroad” or “marine” on the label. In addition, such engines must be labeled according to 40 CFR 1039.20.

(iii) Stationary CI internal combustion engines that do not meet the requirements of this subpart must be labeled according to 40 CFR 1068.230 and must be exported under the provisions of 40 CFR 1068.230.

(d) An engine manufacturer certifying an engine family or families to standards under this subpart that are identical to standards applicable under 40 CFR parts 89, 94, 1039 or 1042 for that model year may certify any such family that contains both nonroad (including marine) and stationary engines as a single engine family and/or may include any such family containing stationary engines in the averaging, banking and trading provisions applicable for such engines under those parts.

(e) Manufacturers of engine families discussed in paragraph (d) of this section may meet the labeling requirements referred to in paragraph (c) of this section for stationary CI ICE by either adding a separate label containing the information required in paragraph (c) of this section or by adding the words “and stationary” after the word “nonroad” or “marine,” as appropriate, to the label.

(f) Starting with the model years shown in table 5 to this subpart, stationary CI internal combustion engine manufacturers must add a permanent label stating that the engine is for stationary emergency use only to each new emergency stationary CI internal combustion engine greater than or equal to 19 KW (25 HP) that meets all the emission standards for emergency engines in §60.4202 but does not meet all the emission standards for non-emergency engines in §60.4201. The label must be added according to the labeling requirements specified in 40 CFR 1039.135(b). Engine manufacturers must specify in the owner's manual that operation of emergency engines is limited to emergency operations and required maintenance and testing.

(g) Manufacturers of fire pump engines may use the test cycle in table 6 to this subpart for testing fire pump engines and may test at the NFPA certified nameplate HP, provided that the engine is labeled as “Fire Pump Applications Only”.

(h) Engine manufacturers, including importers, may introduce into commerce uncertified engines or engines certified to earlier standards that were manufactured before the new or changed standards took effect until inventories are depleted, as long as such engines are part of normal inventory. For example, if the engine manufacturers' normal industry practice is to keep on hand a one-month supply of engines based on its projected sales, and a new tier of standards starts to apply for the 2009 model year, the engine manufacturer may manufacture engines based on the normal inventory requirements late in the 2008 model year, and sell those engines for installation. The engine manufacturer may not circumvent the provisions of §§60.4201 or 60.4202 by stockpiling engines that are built before new or changed standards take effect. Stockpiling of such engines beyond normal industry practice is a violation of this subpart.

(i) The replacement engine provisions of 40 CFR 89.1003(b)(7), 40 CFR 94.1103(b)(3), 40 CFR 94.1103(b)(4) and 40 CFR 1068.240 are applicable to stationary CI engines replacing existing equipment that is less than 15 years old.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37969, June 28, 2011]

§ 60.4211 What are my compliance requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) If you are an owner or operator and must comply with the emission standards specified in this subpart, you must do all of the following, except as permitted under paragraph (g) of this section:

(1) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions;

(2) Change only those emission-related settings that are permitted by the manufacturer; and

(3) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you.

(b) If you are an owner or operator of a pre-2007 model year stationary CI internal combustion engine and must comply with the emission standards specified in §§60.4204(a) or 60.4205(a), or if you are an owner or operator of a CI fire pump engine that is manufactured prior to the model years in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must demonstrate compliance according to one of the methods specified in paragraphs (b)(1) through (5) of this section.

(1) Purchasing an engine certified according to 40 CFR part 89 or 40 CFR part 94, as applicable, for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's specifications.

(2) Keeping records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in this subpart and these methods must have been followed correctly.

(3) Keeping records of engine manufacturer data indicating compliance with the standards.

(4) Keeping records of control device vendor data indicating compliance with the standards.

(5) Conducting an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in §60.4212, as applicable.

(c) If you are an owner or operator of a 2007 model year and later stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(b) or §60.4205(b), or if you are an owner or operator of a CI fire pump engine that is manufactured during or after the model year that applies to your fire pump engine power rating in table 3 to this subpart and must comply with the emission standards specified in §60.4205(c), you must comply by purchasing an engine certified to the emission standards in §60.4204(b), or §60.4205(b) or (c), as applicable, for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in paragraph (g) of this section.

(d) If you are an owner or operator and must comply with the emission standards specified in §60.4204(c) or §60.4205(d), you must demonstrate compliance according to the requirements specified in paragraphs (d)(1) through (3) of this section.

(1) Conducting an initial performance test to demonstrate initial compliance with the emission standards as specified in §60.4213.

(2) Establishing operating parameters to be monitored continuously to ensure the stationary internal combustion engine continues to meet the emission standards. The owner or operator must petition the Administrator for approval of operating parameters to be monitored continuously. The petition must include the information described in paragraphs (d)(2)(i) through (v) of this section.

(i) Identification of the specific parameters you propose to monitor continuously;

(ii) A discussion of the relationship between these parameters and $NO_X$and PM emissions, identifying how the emissions of these pollutants change with changes in these parameters, and how limitations on these parameters will serve to limit $NO_X$and PM emissions;

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

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

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

(3) For non-emergency engines with a displacement of greater than or equal to 30 liters per cylinder, conducting annual performance tests to demonstrate continuous compliance with the emission standards as specified in §60.4213.

(e) If you are an owner or operator of a modified or reconstructed stationary CI internal combustion engine and must comply with the emission standards specified in §60.4204(e) or §60.4205(f), you must demonstrate compliance according to one of the methods specified in paragraphs (e)(1) or (2) of this section.

(1) Purchasing, or otherwise owning or operating, an engine certified to the emission standards in §60.4204(e) or §60.4205(f), as applicable.

(2) Conducting a performance test to demonstrate initial compliance with the emission standards according to the requirements specified in §60.4212 or §60.4213, as appropriate. The test must be conducted within 60 days after the engine commences operation after the modification or reconstruction.

(f) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. 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 year. Emergency stationary ICE may operate up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving or to generate income for a facility to supply power to an electric grid or otherwise supply non-emergency power as part of a financial arrangement with another entity. For owners and operators of emergency engines, any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as permitted in this section, is prohibited.

(g) If you do not install, configure, operate, and maintain your engine and control device according to the manufacturer's emission-related written instructions, or you change emission-related settings in a way that is not permitted by the manufacturer, you must demonstrate compliance as follows:

(1) If you are an owner or operator of a stationary CI internal combustion engine with maximum engine power less than 100 HP, you must keep a maintenance plan and records of conducted maintenance to demonstrate compliance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, if you do not install and configure the engine and control device according to the manufacturer's emission-related written instructions, or you change the emission-related settings in a way that is not permitted by the manufacturer, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of such action.

(2) If you are an owner or operator of a stationary CI internal combustion engine greater than or equal to 100 HP and less than or equal to 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer.

(3) If you are an owner or operator of a stationary CI internal combustion engine greater than 500 HP, you must keep a maintenance plan and records of conducted maintenance and must, to the extent practicable, maintain and operate the engine in a manner consistent with good air pollution control practice for minimizing emissions. In addition, you must conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after an engine and control device is no longer installed, configured, operated, and maintained in accordance with the manufacturer's emission-related written instructions, or within 1 year after you change emission-related settings in a way that is not permitted by the manufacturer. You must conduct subsequent performance testing every 8,760 hours of engine operation or 3 years, whichever comes first, thereafter to demonstrate compliance with the applicable emission standards.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37970, June 28, 2011]

Testing Requirements for Owners and Operators

§ 60.4212 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of less than 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder who conduct performance tests pursuant to this subpart must do so according to paragraphs (a) through (e) of this section.

(a) The performance test must be conducted according to the in-use testing procedures in 40 CFR part 1039, subpart F, for stationary CI ICE with a displacement of less than 10 liters per cylinder, and according to 40 CFR part 1042, subpart F, for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder.

(b) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1039 must not exceed the not-to-exceed (NTE) standards for the same model year and maximum engine power as required in 40 CFR 1039.101(e) and 40 CFR 1039.102(g)(1), except as specified in 40 CFR 1039.104(d). This requirement starts when NTE requirements take effect for nonroad diesel engines under 40 CFR part 1039.

(c) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8, as applicable, must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in 40 CFR 89.112 or 40 CFR 94.8, as applicable, determined from the following equation:

$$\text{NTE requirement for each pollutant} = (1.25) \times (\text{STD}) \qquad \text{(Eq. 1)}$$

Where:

STD = The standard specified for that pollutant in 40 CFR 89.112 or 40 CFR 94.8, as applicable.

Alternatively, stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR 89.112 or 40 CFR 94.8 may follow the testing procedures specified in §60.4213 of this subpart, as appropriate.

(d) Exhaust emissions from stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) must not exceed the NTE numerical requirements, rounded to the same number of decimal places as the applicable standard in §60.4204(a), §60.4205(a), or §60.4205(c), determined from the equation in paragraph (c) of this section.

Where:

STD = The standard specified for that pollutant in §60.4204(a), §60.4205(a), or §60.4205(c).

Alternatively, stationary CI ICE that are complying with the emission standards for pre-2007 model year engines in §60.4204(a), §60.4205(a), or §60.4205(c) may follow the testing procedures specified in §60.4213, as appropriate.

(e) Exhaust emissions from stationary CI ICE that are complying with the emission standards for new CI engines in 40 CFR part 1042 must not exceed the NTE standards for the same model year and maximum engine power as required in 40 CFR 1042.101(c).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§ 60.4213 What test methods and other procedures must I use if I am an owner or operator of a stationary CI internal combustion engine with a displacement of greater than or equal to 30 liters per cylinder?

Owners and operators of stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder must conduct performance tests according to paragraphs (a) through (f) of this section.

(a) Each performance test must be conducted according to the requirements in §60.8 and under the specific conditions that this subpart specifies in table 7. The test must be conducted within 10 percent of 100 percent peak (or the highest achievable) load.

(b) You may not conduct performance tests during periods of startup, shutdown, or malfunction, as specified in §60.8(c).

(c) You must conduct three separate test runs for each performance test required in this section, as specified in §60.8(f). Each test run must last at least 1 hour.

(d) To determine compliance with the percent reduction requirement, you must follow the requirements as specified in paragraphs (d)(1) through (3) of this section.

(1) You must use Equation 2 of this section to determine compliance with the percent reduction requirement:

$$\frac{C_i - C_o}{C_i} \times 100 = R \qquad \text{(Eq. 2)}$$

Where:

C_i= concentration of NO_Xor PM at the control device inlet,

C_o= concentration of NO_Xor PM at the control device outlet, and

R = percent reduction of NO_Xor PM emissions.

(2) You must normalize the NO_Xor PM concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen (O_2) using Equation 3 of this section, or an equivalent percent carbon dioxide (CO_2) using the procedures described in paragraph (d)(3) of this section.

$$C_{adj} = C_d \frac{5.9}{20.9 - \%\,O_2} \qquad \text{(Eq. 3)}$$

Where:

C_{adj}= Calculated NO_Xor PM concentration adjusted to 15 percent O_2.

C_d= Measured concentration of NO_Xor PM, uncorrected.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

$\%O_2$= Measured O_2concentration, dry basis, percent.

(3) If pollutant concentrations are to be corrected to 15 percent O_2 and CO_2 concentration is measured in lieu of O_2 concentration measurement, a CO_2 correction factor is needed. Calculate the CO_2 correction factor as described in paragraphs (d)(3)(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:

$$F_o = \frac{0.209 F_d}{F_c} \qquad \text{(Eq. 4)}$$

Where:

F_o = Fuel factor based on the ratio of O_2 volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is O_2, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

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

$$X_{CO_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 5)}$$

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 NO_X and PM gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = C_d \frac{X_{CO_2}}{\%CO_2} \qquad \text{(Eq. 6)}$$

Where:

C_{adj} = Calculated NO_X or PM concentration adjusted to 15 percent O_2.

C_d = Measured concentration of NO_X or PM, uncorrected.

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

(e) 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 7 of this section:

$$ER = \frac{C_d \times 1.912 \times 10^{-3} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 7)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_d= Measured NO_Xconcentration in ppm.

1.912×10^{-3}= Conversion constant for ppm $NO_X$to grams per standard cubic meter at 25 degrees Celsius.

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

T = Time of test run, in hours.

KW-hour = Brake work of the engine, in KW-hour.

(f) To determine compliance with the PM mass per unit output emission limitation, convert the concentration of PM in the engine exhaust using Equation 8 of this section:

$$ER = \frac{C_{adj} \times Q \times T}{\text{KW-hour}} \qquad \text{(Eq. 8)}$$

Where:

ER = Emission rate in grams per KW-hour.

C_{adj}= Calculated PM concentration in grams per standard cubic meter.

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

T = Time of test run, in hours.

KW-hour = Energy output of the engine, in KW.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

Notification, Reports, and Records for Owners and Operators

§ 60.4214 What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary CI internal combustion engine?

(a) Owners and operators of non-emergency stationary CI ICE that are greater than 2,237 KW (3,000 HP), or have a displacement of greater than or equal to 10 liters per cylinder, or are pre-2007 model year engines that are greater than 130 KW (175 HP) and not certified, must meet the requirements of paragraphs (a)(1) and (2) of this section.

(1) Submit an initial notification as required in §60.7(a)(1). The notification must include the information in paragraphs (a)(1)(i) through (v) of this section.

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

(ii) The address of the affected source;

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

(iv) Emission control equipment; and

(v) Fuel used.

(2) Keep records of the information in paragraphs (a)(2)(i) through (iv) of this section.

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

(ii) Maintenance conducted on the engine.

(iii) If the stationary CI internal combustion is a certified engine, documentation from the manufacturer that the engine is certified to meet the emission standards.

(iv) If the stationary CI internal combustion is not a certified engine, documentation that the engine meets the emission standards.

(b) If the stationary CI internal combustion engine is an emergency stationary internal combustion engine, the owner or operator is not required to submit an initial notification. Starting with the model years in table 5 to this subpart, if the emergency engine does not meet the standards applicable to non-emergency engines in the applicable model year, the owner or operator must keep records of the operation of the engine in emergency and non-emergency service that are recorded through the non-resettable hour meter. The owner must record the time of operation of the engine and the reason the engine was in operation during that time.

(c) If the stationary CI internal combustion engine is equipped with a diesel particulate filter, the owner or operator must keep records of any corrective action taken after the backpressure monitor has notified the owner or operator that the high backpressure limit of the engine is approached.

Special Requirements

§ 60.4215 What requirements must I meet for engines used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands?

(a) Stationary CI ICE with a displacement of less than 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the applicable emission standards in §§60.4202 and 60.4205.

(b) Stationary CI ICE that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are not required to meet the fuel requirements in §60.4207.

(c) Stationary CI ICE with a displacement of greater than or equal to 30 liters per cylinder that are used in Guam, American Samoa, or the Commonwealth of the Northern Mariana Islands are required to meet the following emission standards:

(1) For engines installed prior to January 1, 2012, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 17.0 g/KW-hr (12.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $45 \cdot n^{-0.2}$g/KW-hr ($34 \cdot n^{-0.2}$g/HP-hr) when maximum engine speed is 130 or more but less than 2,000 rpm, where n is maximum engine speed; and

(iii) 9.8 g/KW-hr (7.3 g/HP-hr) when maximum engine speed is 2,000 rpm or more.

(2) For engines installed on or after January 1, 2012, limit the emissions of NO_Xin the stationary CI internal combustion engine exhaust to the following:

(i) 14.4 g/KW-hr (10.7 g/HP-hr) when maximum engine speed is less than 130 rpm;

(ii) $44 \cdot n^{-0.23}$g/KW-hr ($33 \cdot n^{-0.23}$g/HP-hr) when maximum engine speed is greater than or equal to 130 but less than 2,000 rpm and where n is maximum engine speed; and

(iii) 7.7 g/KW-hr (5.7 g/HP-hr) when maximum engine speed is greater than or equal to 2,000 rpm.

(3) Limit the emissions of PM in the stationary CI internal combustion engine exhaust to 0.40 g/KW-hr (0.30 g/HP-hr).

[71 FR 39172, July 11, 2006, as amended at 76 FR 37971, June 28, 2011]

§ 60.4216 What requirements must I meet for engines used in Alaska?

(a) Prior to December 1, 2010, owners and operators of stationary CI ICE with a displacement of less than 30 liters per cylinder located in areas of Alaska not accessible by the FAHS should refer to 40 CFR part 69 to determine the diesel fuel requirements applicable to such engines.

(b) Except as indicated in paragraph (c) of this section, manufacturers, owners and operators of stationary CI ICE with a displacement of less than 10 liters per cylinder located in areas of Alaska not accessible by the FAHS may meet the requirements of this subpart by manufacturing and installing engines meeting the requirements of 40 CFR parts 94 or 1042, as appropriate, rather than the otherwise applicable requirements of 40 CFR parts 89 and 1039, as indicated in sections §§60.4201(f) and 60.4202(g) of this subpart.

(c) Manufacturers, owners and operators of stationary CI ICE that are located in areas of Alaska not accessible by the FAHS may choose to meet the applicable emission standards for emergency engines in §60.4202 and §60.4205, and not those for non-emergency engines in §60.4201 and §60.4204, except that for 2014 model year and later non-emergency CI ICE, the owner or operator of any such engine that was not certified as meeting Tier 4 PM standards, must meet the applicable requirements for PM in §60.4201 and §60.4204 or install a PM emission control device that achieves PM emission reductions of 85 percent, or 60 percent for engines with a displacement of greater than or equal to 30 liters per cylinder, compared to engine-out emissions.

(d) The provisions of §60.4207 do not apply to owners and operators of pre-2014 model year stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS.

(e) The provisions of §60.4208(a) do not apply to owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS until after December 31, 2009.

(f) The provisions of this section and §60.4207 do not prevent owners and operators of stationary CI ICE subject to this subpart that are located in areas of Alaska not accessible by the FAHS from using fuels mixed with used lubricating oil, in volumes of up to 1.75 percent of the total fuel. The sulfur content of the used lubricating oil must be less than 200 parts per million. The used lubricating oil must meet the on-specification levels and properties for used oil in 40 CFR 279.11.

[76 FR 37971, June 28, 2011]

§ 60.4217 What emission standards must I meet if I am an owner or operator of a stationary internal combustion engine using special fuels?

Owners and operators of stationary CI ICE that do not use diesel fuel may petition the Administrator for approval of alternative emission standards, if they can demonstrate that they use a fuel that is not the fuel on which the manufacturer of the engine certified the engine and that the engine cannot meet the applicable standards required in

§60.4204 or §60.4205 using such fuels and that use of such fuel is appropriate and reasonably necessary, considering cost, energy, technical feasibility, human health and environmental, and other factors, for the operation of the engine.

[76 FR 37972, June 28, 2011]

General Provisions

§ 60.4218 What parts of the General Provisions apply to me?

Table 8 to this subpart shows which parts of the General Provisions in §§60.1 through 60.19 apply to you.

Definitions

§ 60.4219 What definitions apply to this subpart?

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

Certified emissions life means the period during which the engine is designed to properly function in terms of reliability and fuel consumption, without being remanufactured, specified as a number of hours of operation or calendar years, whichever comes first. The values for certified emissions life for stationary CI ICE with a displacement of less than 10 liters per cylinder are given in 40 CFR 1039.101(g). The values for certified emissions life for stationary CI ICE with a displacement of greater than or equal to 10 liters per cylinder and less than 30 liters per cylinder are given in 40 CFR 94.9(a).

Combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), and any ancillary components and sub-components comprising any simple cycle combustion turbine, any regenerative/recuperative cycle combustion turbine, the combustion turbine portion of any cogeneration cycle combustion system, or the combustion turbine portion of any combined cycle steam/electric generating system.

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

Date of manufacture means one of the following things:

(1) For freshly manufactured engines and modified engines, date of manufacture means the date the engine is originally produced.

(2) For reconstructed engines, date of manufacture means the date the engine was originally produced, except as specified in paragraph (3) of this definition.

(3) Reconstructed engines are assigned a new date of manufacture if the fixed capital cost of the new and refurbished components exceeds 75 percent of the fixed capital cost of a comparable entirely new facility. An engine that is produced from a previously used engine block does not retain the date of manufacture of the engine in which the engine block was previously used if the engine is produced using all new components except for the engine block. In these cases, the date of manufacture is the date of reconstruction or the date the new engine is produced.

Diesel fuel means any liquid obtained from the distillation of petroleum with a boiling point of approximately 150 to 360 degrees Celsius. One commonly used form is number 2 distillate oil.

Diesel particulate filter means an emission control technology that reduces PM emissions by trapping the particles in a flow filter substrate and periodically removes the collected particles by either physical action or by oxidizing (burning off) the particles in a process called regeneration.

Emergency stationary internal combustion engine means any stationary internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. 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. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

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

Fire pump engine means an emergency stationary internal combustion engine certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.

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

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

Manufacturer has the meaning given in section 216(1) of the Act. In general, this term includes any person who manufactures a stationary engine for sale in the United States or otherwise introduces a new stationary engine into commerce in the United States. This includes importers who import stationary engines for sale or resale.

Maximum engine power means maximum engine power as defined in 40 CFR 1039.801.

Model year means the calendar year in which an engine is manufactured (see “date of manufacture”), except as follows:

(1) Model year means the annual new model production period of the engine manufacturer in which an engine is manufactured (see “date of manufacture”), if the annual new model production period is different than the calendar year and includes January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year.

(2) For an engine that is converted to a stationary engine after being placed into service as a nonroad or other non-stationary engine, model year means the calendar year or new model production period in which the engine was manufactured (see “date of manufacture”).

Other internal combustion engine means any internal combustion engine, except combustion turbines, which is not a reciprocating internal combustion engine or rotary internal combustion engine.

Reciprocating internal combustion engine means any internal combustion engine which uses reciprocating motion to convert heat energy into mechanical work.

Rotary internal combustion engine means any internal combustion engine which uses rotary motion to convert heat energy into mechanical work.

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

Stationary internal combustion engine means any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE differ from mobile ICE in that a stationary internal combustion engine is not a nonroad engine as defined at 40 CFR 1068.30 (excluding paragraph (2)(ii) of that definition), and is not used to propel a motor vehicle, aircraft, or a vehicle used solely for competition. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

Subpart means 40 CFR part 60, subpart IIII.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 1 to Subpart IIII of Part 60—Emission Standards for Stationary Pre-2007 Model Year Engines With a Displacement of <10 Liters per Cylinder and 2007–2010 Model Year Engines >2,237 KW (3,000 HP) and With a Displacement of <10 Liters per Cylinder

[As stated in §§60.4201(b), 60.4202(b), 60.4204(a), and 60.4205(a), you must comply with the following emission standards]

Maximum engine power	Emission standards for stationary pre-2007 model year engines with a displacement of <10 liters per cylinder and 2007–2010 model year engines >2,237 KW (3,000 HP) and with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)				
	NMHC + NO_X	HC	NO_X	CO	PM
KW<8 (HP<11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8≤KW<19 (11≤HP<25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19≤KW<37 (25≤HP<50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37≤KW<56 (50≤HP<75)			9.2 (6.9)		
56≤KW<75 (75≤HP<100)			9.2 (6.9)		
75≤KW<130 (100≤HP<175)			9.2 (6.9)		
130≤KW<225 (175≤HP<300)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
225≤KW<450 (300≤HP<600)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
450≤KW≤560 (600≤HP≤750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)
KW>560 (HP>750)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

Table 2 to Subpart IIII of Part 60—Emission Standards for 2008 Model Year and Later Emergency Stationary CI ICE <37 KW (50 HP) With a Displacement of <10 Liters per Cylinder

[As stated in §60.4202(a)(1), you must comply with the following emission standards]

Engine power	Emission standards for 2008 model year and later emergency stationary CI ICE <37 KW (50 HP) with a displacement of <10 liters per cylinder in g/KW-hr (g/HP-hr)			
	Model year(s)	NO_X+ NMHC	CO	PM
KW<8 (HP<11)	2008+	7.5 (5.6)	8.0 (6.0)	0.40 (0.30)
8≤KW<19 (11≤HP<25)	2008+	7.5 (5.6)	6.6 (4.9)	0.40 (0.30)
19≤KW<37 (25≤HP<50)	2008+	7.5 (5.6)	5.5 (4.1)	0.30 (0.22)

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

Table 3 to Subpart IIII of Part 60—Certification Requirements for Stationary Fire Pump Engines

As stated in §60.4202(d), you must certify new stationary fire pump engines beginning with the following model years:

Engine power	Starting model year engine manufacturers must certify new stationary fire pump engines according to §60.4202(d)[1]
KW<75 (HP<100)	2011
75≤KW<130 (100≤HP<175)	2010
130≤KW≤560 (175≤HP≤750)	2009
KW>560 (HP>750)	2008

[1]Manufacturers of fire pump stationary CI ICE with a maximum engine power greater than or equal to 37 kW (50 HP) and less than 450 KW (600 HP) and a rated speed of greater than 2,650 revolutions per minute (rpm) are not required to certify such engines until three model years following the model year indicated in this Table 3 for engines in the applicable engine power category.

[71 FR 39172, July 11, 2006, as amended at 76 FR 37972, June 28, 2011]

Table 4 to Subpart IIII of Part 60—Emission Standards for Stationary Fire Pump Engines

[As stated in §§60.4202(d) and 60.4205(c), you must comply with the following emission standards for stationary fire pump engines]

Maximum engine power	Model year(s)	NMHC + NO_X	CO	PM
KW<8 (HP<11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8≤KW<19 (11≤HP<25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19≤KW<37 (25≤HP<50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37≤KW<56 (50≤HP<75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
56≤KW<75 (75≤HP<100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+[1]	4.7 (3.5)		0.40 (0.30)
75≤KW<130 (100≤HP<175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+[2]	4.0 (3.0)		0.30 (0.22)
130≤KW<225 (175≤HP<300)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
225≤KW<450 (300≤HP<600)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+[3]	4.0 (3.0)		0.20 (0.15)
450≤KW≤560 (600≤HP≤750)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)
KW>560 (HP>750)	2007 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2008+	6.4 (4.8)		0.20 (0.15)

[1]For model years 2011–2013, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 revolutions per minute (rpm) may comply with the emission limitations for 2010 model year engines.

[2]For model years 2010–2012, manufacturers, owners and operators of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2009 model year engines.

[3]In model years 2009–2011, manufacturers of fire pump stationary CI ICE in this engine power category with a rated speed of greater than 2,650 rpm may comply with the emission limitations for 2008 model year engines.

Table 5 to Subpart IIII of Part 60—Labeling and Recordkeeping Requirements for New Stationary Emergency Engines

[You must comply with the labeling requirements in §60.4210(f) and the recordkeeping requirements in §60.4214(b) for new emergency stationary CI ICE beginning in the following model years:]

Engine power	Starting model year
19≤KW<56 (25≤HP<75)	2013
56≤KW<130 (75≤HP<175)	2012
KW≥130 (HP≥175)	2011

Table 6 to Subpart IIII of Part 60—Optional 3-Mode Test Cycle for Stationary Fire Pump Engines

[As stated in §60.4210(g), manufacturers of fire pump engines may use the following test cycle for testing fire pump engines:]

Mode No.	Engine speed[1]	Torque (percent)[2]	Weighting factors
1	Rated	100	0.30
2	Rated	75	0.50
3	Rated	50	0.20

[1]Engine speed: ±2 percent of point.

[2]Torque: NFPA certified nameplate HP for 100 percent point. All points should be ±2 percent of engine percent load value.

Table 7 to Subpart IIII of Part 60—Requirements for Performance Tests for Stationary CI ICE With a Displacement of ≥30 Liters per Cylinder

[As stated in §60.4213, you must comply with the following requirements for performance tests for stationary CI ICE with a displacement of ≥30 liters per cylinder:]

For each	Complying with the requirement to	You must	Using	According to the following requirements
1. Stationary CI internal combustion engine with a displacement of ≥30 liters per cylinder	a. Reduce NO_X emissions by 90 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for NO_Xconcentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurements for NO_Xconcentration.
		iv. Measure NO_Xat the inlet and outlet of the control device	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO_Xconcentration 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.
	b. Limit the concentration of NO_Xin the stationary CI internal combustion engine exhaust.	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and,	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurement for NO_Xconcentration.
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and,	(3) Method 4 of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(c) Measurements to determine moisture content must be made at the same time as the measurement for NO_Xconcentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iv. Measure NO_Xat the exhaust of the stationary internal combustion engine	(4) Method 7E of 40 CFR part 60, appendix A, Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03 (incorporated by reference, see §60.17)	(d) NO_Xconcentration 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.
	c. Reduce PM emissions by 60 percent or more	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device;	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.
		iii. If necessary, measure moisture content at the inlet and outlet of the control device; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine and moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the inlet and outlet of the control device	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM 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.
	d. Limit the concentration of PM in the stationary CI internal combustion engine exhaust	i. Select the sampling port location and the number of traverse points;	(1) Method 1 or 1A of 40 CFR part 60, appendix A	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration of the stationary internal combustion engine exhaust at the sampling port location; and	(2) Method 3, 3A, or 3B of 40 CFR part 60, appendix A	(b) Measurements to determine O_2concentration must be made at the same time as the measurements for PM concentration.

For each	Complying with the requirement to	You must	Using	According to the following requirements
		iii. If necessary, measure moisture content of the stationary internal combustion engine exhaust at the sampling port location; and	(3) Method 4 of 40 CFR part 60, appendix A	(c) Measurements to determine moisture content must be made at the same time as the measurements for PM concentration.
		iv. Measure PM at the exhaust of the stationary internal combustion engine	(4) Method 5 of 40 CFR part 60, appendix A	(d) PM 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.

Table 8 to Subpart IIII of Part 60—Applicability of General Provisions to Subpart IIII

[As stated in §60.4218, 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 §60.4219.
§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 §60.4214(a).
§60.8	Performance tests	Yes	Except that §60.8 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder and engines that are not certified.
§60.9	Availability of information	Yes	
§60.10	State Authority	Yes	
§60.11	Compliance with standards and maintenance requirements	No	Requirements are specified in subpart IIII.
§60.12	Circumvention	Yes	

General Provisions citation	Subject of citation	Applies to subpart	Explanation
§60.13	Monitoring requirements	Yes	Except that §60.13 only applies to stationary CI ICE with a displacement of (≥30 liters per cylinder.
§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	

Attachment C – National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Source Description and Location

Source Name:	Alcoa, Inc. – Lafayette Operations
Source Location:	3131 East Main Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3341 and 3354
Operation Permit Renewal No.:	T157-17676-00001
Issuance Date:	February 6, 2007
Significant Source Modification No.:	157-31323-00001
Significant Permit Modification No.:	157-31329-00001
Permit Reviewer:	Kimberly Cottrell

NESHAP [40 CFR Part 63, Subpart ZZZZ]

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.

[69 FR 33506, June 15, 2004, as amended at 73 FR 3603, Jan. 18, 2008]

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

This subpart applies to each affected source.

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

(1) *Existing stationary RICE.*

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(vi) Existing residential emergency stationary RICE located at an area source of HAP emissions;

(vii) Existing commercial emergency stationary RICE located at an area source of HAP emissions; or

(viii) Existing institutional emergency stationary RICE located at an area source of HAP emissions.

(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]

§ 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 and operating limitations 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 and operating limitations 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 and operating limitations 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]

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 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 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.

[75 FR 51589, Aug. 20, 2010]

§ 63.6603 What emission limitations and operating limitations 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 1b and Table 2b to this subpart that apply to you.

(b) If you own or operate an existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the Federal Aid Highway System (FAHS) you do not have to meet the numerical CO emission limitations specified in Table 2d to this subpart. Existing stationary non-emergency CI RICE greater than 300 HP located at area sources in areas of Alaska not accessible by the FAHS must meet the management practices that are shown for stationary non-emergency CI RICE less than or equal to 300 HP in Table 2d to this subpart.

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

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

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. Existing non-emergency CI stationary RICE located in Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, or at area sources in areas of Alaska not accessible by the FAHS are exempt from the requirements of this section.

[75 FR 51589, Aug. 20, 2010]

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 and operating limitations 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]

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.

(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.

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

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

Where:

C_i= concentration of CO or formaldehyde at the control device inlet,

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

R = percent reduction of CO or formaldehyde emissions.

(2) You must normalize the carbon monoxide (CO) 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_2concentration is measured in lieu of oxygen concentration measurement, a CO_2correction factor is needed. Calculate the CO_2correction 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:

$$F_o = \frac{0.209\, F_d}{F_c} \qquad \text{(Eq. 2)}$$

Where:

F_o= Fuel factor based on the ratio of oxygen volume to the ultimate CO_2volume 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, dsm^3 /J (dscf/10^6 Btu).

F_c= Ratio of the volume of CO_2produced to the gross calorific value of the fuel from Method 19, dsm^3 /J (dscf/10^6 Btu).

(ii) Calculate the CO_2correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$X_{co_2} = \frac{5.9}{F_o} \qquad \text{(Eq. 3)}$$

Where:

X_{co2}= CO_2correction factor, percent.

5.9 = 20.9 percent O_2−15 percent O_2, the defined O_2correction value, percent.

(iii) Calculate the $NO_X$and SO_2gas concentrations adjusted to 15 percent O_2using CO_2as follows:

$$C_{adj} = C_d \frac{X_{co_2}}{\%CO_2} \qquad \text{(Eq. 4)}$$

Where:

$\%CO_2$= Measured CO_2concentration 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]

§ 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 oxygen or CO_2at both the inlet and the outlet of the control device according to the requirements in paragraphs (a)(1) through (4) of this section.

(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_2concentration.

(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 (5) 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) 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 landfill or digester gas stationary RICE located at an area source of HAP emissions;

(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 (g)(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 not accessible by the FAHS do not have to meet the requirements of paragraph (g) of this section.

(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 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 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 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 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]

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

(a) You must demonstrate initial compliance with each emission and operating limitation 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.

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 and operating limitations?

(a) You must demonstrate continuous compliance with each emission limitation and operating limitation 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) [Reserved]

(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) *Requirements for emergency stationary RICE.* (1) 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, 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 was installed on or after June 12, 2006, or an existing emergency stationary RICE located at an area source of HAP emissions, you must operate the emergency stationary RICE according to the requirements in paragraphs (f)(1)(i) through (iii) of this section. Any operation other than emergency operation, maintenance and testing, and operation in non-emergency situations for 50 hours per year, as described in paragraphs (f)(1)(i) through (iii) of this section, is prohibited. If you do not operate the engine according to the requirements in paragraphs (f)(1)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. 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 year.

(iii) You may operate your emergency stationary RICE up to 50 hours per year in non-emergency situations, but those 50 hours are counted towards the 100 hours per year provided for maintenance and testing. The 50 hours per year for non-emergency situations cannot be used for peak shaving 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; except that owners and operators may operate the emergency engine for a maximum of 15 hours per year as part of a demand response program if the regional transmission organization or equivalent balancing authority and transmission operator has determined there are emergency conditions that could lead to a potential electrical blackout, such as unusually low frequency, equipment overload, capacity or energy deficiency, or unacceptable voltage level. The engine may not be operated for more than 30 minutes prior to the time when the emergency condition is expected to occur, and the engine operation must be terminated immediately after the facility is notified that the emergency condition is no longer imminent. The 15 hours per year of demand response operation are counted as part of the 50 hours of operation per year provided for non-emergency situations. The supply of emergency power to another entity or entities pursuant to financial arrangement is not limited by this paragraph (f)(1)(iii), as long as the power provided by the financial arrangement is limited to emergency power.

(2) If you own or operate an emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions that was installed prior to June 12, 2006, you must operate the engine according to the conditions described in paragraphs (f)(2)(i) through (iii) of this section. If you do not operate the engine according to the requirements in paragraphs (f)(2)(i) through (iii) of this section, the engine will not be considered an emergency engine under this subpart and will need to meet all requirements for non-emergency engines.

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

(ii) You may operate your emergency stationary RICE for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by the manufacturer, the vendor, or the insurance company associated with the engine. Required testing of such units should be minimized, but there is no time limit on the use of emergency stationary RICE in emergency situations and for routine testing and maintenance.

(iii) You may operate your emergency stationary RICE for an additional 50 hours per year in non-emergency situations. The 50 hours per year for non-emergency situations cannot be used for peak shaving 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.

[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]

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).

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

§ 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.

[69 FR 33506, June 15, 2004, as amended at 75 FR 9677, Mar. 3, 2010]

§ 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) or (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 engines are used for demand response operation, the owner or operator must keep records of the notification of the emergency situation, and the time the engine was operated as part of demand response.

(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]

§ 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:

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.

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 internal combustion engine whose operation is limited to emergency situations and required testing and maintenance. 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.* Stationary RICE used for peak shaving are not considered emergency stationary RICE. Stationary RICE used to supply power to an electric grid or that supply non-emergency power as part of a financial arrangement with another entity are not considered to be emergency engines, except as permitted under §63.6640(f). 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.

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.

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]

Table 1ato 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 1bto Subpart ZZZZ of Part 63—Operating Limitations for Existing, New, and Reconstructed Spark Ignition 4SRB Stationary RICE >500 HP Located at a Major Source of HAP Emissions and Existing Spark Ignition 4SRB Stationary RICE >500 HP Located at an Area 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 and existing 4SRB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 4SRB stationary RICE 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 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 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.
2. 4SRB stationary RICE 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 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 350 ppbvd or less at 15 percent O2 and not using NSCR; or 4SRB stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd or less at 15 percent O2 and not using NSCR.	Comply with any operating limitations approved by the Administrator.

[76 FR 12867, Mar. 9, 2011]

Table 2ato 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_2until 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	
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 2bto Subpart ZZZZ of Part 63— Operating Limitations for New and Reconstructed 2SLB and Compression Ignition 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 Compression Ignition Stationary RICE >500 HP, and Existing 4SLB Stationary RICE >500 HP Located at an Area Source of HAP Emissions

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 compression ignition stationary RICE 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 compression ignition stationary RICE >500 HP; and existing 4SLB stationary RICE >500 HP located at an area source of HAP emissions that operate more than 24 hours per calendar year:

For each . . .	You must meet the following operating limitation . . .
1. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit 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 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. 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to reduce CO emissions and not using an oxidation catalyst; or 2SLB and 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of formaldehyde in the stationary RICE exhaust and not using an oxidation catalyst; or 4SLB stationary RICE and CI stationary RICE complying with the requirement to limit the concentration of CO in the stationary RICE exhaust and not using an oxidation catalyst	Comply with any operating limitations approved by the Administrator.

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

[75 FR 51593, Aug. 20, 2010, as amended at 76 FR 12867, Mar. 9, 2011]

Table 2cto 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; 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;	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.[3]	
3. Non-Emergency, non-black start CI stationary RICE 100≤HP≤300 HP	Limit concentration of CO in the stationary RICE exhaust to 230 ppmvd or less at 15 percent O_2	
4. Non-Emergency, non-black start CI stationary RICE 300<HP≤500	a. Limit concentration of CO in the stationary RICE exhaust to 49 ppmvd or less at 15 percent O_2; or	
	b. Reduce CO emissions by 70 percent or more.	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
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;	
	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;	
	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;	
	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 landfill or digester gas-fired stationary RICE 100≤HP≤500	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) 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.

[75 FR 51593, Aug. 20, 2010]

Table 2dto 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]	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.
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
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]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect air cleaner every 1,000 hours of operation or annually, whichever comes first; and	
	c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.	
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 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	
	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]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; 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 stationary RICE >500 HP	a. Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O_2; or	
	b. Reduce CO emissions by 93 percent or more.	
9. 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	
	c. Inspect all hoses and belts every 1,440 hours of operation or annually, whichever comes first, and replace as necessary.	
10. Non-emergency, non-black start 4SRB stationary RICE >500 HP	a. Limit concentration of formaldehyde in the stationary RICE exhaust to 2.7 ppmvd at 15 percent O_2; or	
	b. Reduce formaldehyde emissions by 76 percent or more.	
11. Non-emergency, non-black start landfill or digester gas-fired stationary RICE	a. Change oil and filter every 1,440 hours of operation or annually, whichever comes first;[1]	

For each . . .	You must meet the following requirement, except during periods of startup . . .	During periods of startup you must . . .
	b. Inspect spark plugs every 1,440 hours of operation or annually, whichever comes first; and	
	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) 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.

[75 FR 51595, Aug. 20, 2010]

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 with a brake horsepower >500 located at major sources; new or reconstructed 4SLB stationary RICE with a brake horsepower ≥250 located at major sources; and new or reconstructed CI stationary RICE with a brake horsepower >500 located at major sources	Reduce CO emissions and not using a CEMS	Conduct subsequent performance tests semiannually.[1]
2. 4SRB stationary RICE with a brake horsepower ≥5,000 located at major sources	Reduce formaldehyde emissions	Conduct subsequent performance tests semiannually.[1]
3. Stationary RICE with a brake horsepower >500 located at major sources and new or reconstructed 4SLB stationary RICE with a brake horsepower 250≤HP≤500 located at major sources	Limit the concentration of formaldehyde in the stationary RICE exhaust	Conduct subsequent performance tests semiannually.[1]

For each . . .	Complying with the requirement to . . .	You must . . .
4. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are not limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year that are not limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. or 3 years, whichever comes first.
5. Existing non-emergency, non-black start CI stationary RICE with a brake horsepower >500 that are limited use stationary RICE; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE located at an area source of HAP emissions with a brake horsepower >500 that are operated more than 24 hours per calendar year and are limited use stationary RICE	Limit or reduce CO or formaldehyde emissions	Conduct subsequent performance tests every 8,760 hrs. 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.

[75 FR 51596, Aug. 20, 2010]

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

As stated in §§63.6610, 63.6611, 63.6612, 63.6620, and 63.6640, you must comply with the following requirements for performance tests for stationary RICE:

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
1. 2SLB, 4SLB, and CI stationary RICE	a. Reduce CO emissions	i. Measure the O_2 at the inlet and outlet of the control device; and	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[a](incorporated by reference, see §63.14). Measurements to determine O_2 must be made at the same time as the measurements for CO concentration.
		ii. Measure the CO at the inlet and the outlet of the control device	(1) Portable CO and O_2 analyzer	(a) Using ASTM D6522–00 (2005)[ab](incorporated by reference, see §63.14) or Method 10 of 40 CFR appendix A. 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 of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) Sampling sites must be located at the inlet and outlet of the control device.
		ii. Measure O_2at the inlet and outlet of the control device; and	(1) Method 3 or 3A or 3B of 40 CFR part 60, appendix A, or ASTM Method D6522–00m (2005)	(a) Measurements to determine O_2concentration must be made at the same time as the measurements for formaldehyde 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, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.
		iv. Measure formaldehyde at the inlet and the outlet of the control device	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c]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.
3. Stationary RICE	a. Limit the concentration of formaldehyde or CO in the stationary RICE exhaust	i. Select the sampling port location and the number of traverse points; and	(1) Method 1 or 1A of 40 CFR part 60, appendix A §63.7(d)(1)(i)	(a) If using a control device, the sampling site must be located at the outlet of the control device.
		ii. Determine the O_2concentration 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, or ASTM Method D6522–00 (2005)	(a) Measurements to determine O_2concentration must be made at the same time and location as the measurements for formaldehyde concentration.
		iii. Measure moisture content of the stationary RICE exhaust at the sampling port location; and	(1) Method 4 of 40 CFR part 60, appendix A, or Test Method 320 of 40 CFR part 63, appendix A, or ASTM D 6348–03	(a) Measurements to determine moisture content must be made at the same time and location as the measurements for formaldehyde concentration.

For each . . .	Complying with the requirement to . . .	You must . . .	Using . . .	According to the following requirements . . .
		iv. Measure formaldehyde at the exhaust of the stationary RICE; or	(1) Method 320 or 323 of 40 CFR part 63, appendix A; or ASTM D6348–03,[c] provided in ASTM D6348–03 Annex A5 (Analyte Spiking Technique), the percent R must be greater than or equal to 70 and less than or equal to 130	(a) Formaldehyde concentration must be at 15 percent O_2, dry basis. Results of this test consist of the average of the three 1-hour or longer runs.
		v. Measure CO at the exhaust of the stationary RICE	(1) Method 10 of 40 CFR part 60, appendix A, ASTM Method D6522–00 (2005),[a] Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03	(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 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. ASTM–D6522–00 (2005) may be used to test both CI and SI stationary RICE.

[b]You may also use Method 320 of 40 CFR part 63, appendix A, or ASTM D6348–03.

[c]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.

[75 FR 51597, Aug. 20, 2010]

Table 5 to Subpart ZZZZ of Part 63—Initial Compliance With Emission Limitations and Operating Limitations

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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Reduce CO emissions, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at 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, existing non-emergency stationary CI RICE >500 HP located at an area source of HAP, and existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of CO, and using a CEMS	i. You have installed a CEMS to continuously monitor CO and either O_2or CO_2at 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.

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
7. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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; 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.
8. Non-emergency 4SRB stationary RICE >500 HP located at a major source of HAP, and existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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; 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. Existing non-emergency 4SRB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	a. Limit the concentration of formaldehyde and not using NSCR	i. The average formaldehyde concentration determined from the initial performance test 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.
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	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

For each . . .	Complying with the requirement to . . .	You have demonstrated initial compliance if. . .
		iii. You have recorded the catalyst pressure drop and catalyst inlet temperature during the initial performance test.
11. 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	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.
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. Reduce CO or formaldehyde 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.
13. 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.

[76 FR 12867, Mar. 9, 2011]

Table 6 to Subpart ZZZZ of Part 63—Continuous Compliance With Emission Limitations, Operating Limitations, Work Practices, and Management Practices

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

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
1. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.
2. New or reconstructed non-emergency 2SLB stationary RICE >500 HP located at a major source of HAP, new or reconstructed non-emergency 4SLB stationary RICE ≥250 HP located at a major source of HAP, and new or reconstructed non-emergency CI stationary RICE >500 HP located at a major source of HAP	a. Reduce CO emissions and not using an oxidation catalyst, and using a CPMS	i. Conducting semiannual performance tests for CO to demonstrate that the required CO percent reduction is achieved;[a]and ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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, existing non-emergency stationary CI RICE >500 HP, existing non-emergency 4SLB stationary RICE >500 HP located at an area source of HAP that are operated more than 24 hours per calendar year	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.
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.[a]

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
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 landfill or digester gas stationary SI RICE located at an area source of HAP, 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	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, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using oxidation catalyst or NSCR	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.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
11. Existing stationary CI RICE >500 HP that are not limited use stationary RICE, and existing 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year and are not limited use stationary RICE	a. Reduce CO or formaldehyde emissions, or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 3 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the approved operating parameter (if any) data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the operating parameters established during the performance test.
12. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and using an oxidation catalyst or NSCR	i. Conducting performance tests every 8,760 hours or 5 years, whichever comes first, for CO or formaldehyde, as appropriate, to demonstrate that the required CO or formaldehyde, as appropriate, percent reduction is achieved or that your emissions remain at or below the CO or formaldehyde concentration limit; and
		ii. Collecting the catalyst inlet temperature data according to §63.6625(b); and
		iii. Reducing these data to 4-hour rolling averages; and
		iv. Maintaining the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature; and
		v. Measuring the pressure drop across the catalyst once per month and demonstrating that the pressure drop across the catalyst is within the operating limitation established during the performance test.

For each . . .	Complying with the requirement to . . .	You must demonstrate continuous compliance by . . .
13. Existing limited use CI stationary RICE >500 HP and existing limited use 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP that operate more than 24 hours per calendar year	a. Reduce CO or formaldehyde emissions or limit the concentration of formaldehyde or CO in the stationary RICE exhaust, and not using an oxidation catalyst or NSCR	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.

[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.

[76 FR 12870, Mar. 9, 2011]

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; existing non-emergency, non-black start 4SLB and 4SRB stationary RICE >500 HP located at an area source of HAP and operated more than 24 hours per calendar year; 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 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 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)(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. i. Semiannually according to the requirements in §63.6650(b). i. Semiannually according to the requirements in §63.6650(b).	

For each ...	You must submit a ...	The report must contain ...	You must submit the report ...
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.	

[75 FR 51603, Aug. 20, 2010]

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]		

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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.	
§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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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	Yes.	
§63.8(c)(1)(ii)	SSM not in Startup Shutdown Malfunction Plan	Yes.	
§63.8(c)(1)(iii)	Compliance with operation and maintenance requirements	Yes.	
§63.8(c)(2)–(3)	Monitoring system installation	Yes.	
§63.8(c)(4)	Continuous monitoring system (CMS) requirements	Yes	Except that subpart ZZZZ does not require Continuous Opacity Monitoring System (COMS).
§63.8(c)(5)	COMS minimum procedures	No	Subpart ZZZZ does not require COMS.
§63.8(c)(6)–(8)	CMS requirements	Yes	Except that subpart ZZZZ does not require COMS.
§63.8(d)	CMS quality control	Yes.	
§63.8(e)	CMS performance evaluation	Yes	Except for §63.8(e)(5)(ii), which applies to COMS.

General provisions citation	Subject of citation	Applies to subpart	Explanation
		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.	

General provisions citation	Subject of citation	Applies to subpart	Explanation
§63.9(h)(1)–(6)	Notification of compliance status	Yes	Except that notifications for sources using a CEMS are due 30 days after completion of performance evaluations. §63.9(h)(4) is reserved.
			Except that §63.9(h) only applies as specified in §63.6645.
§63.9(i)	Adjustment of submittal deadlines	Yes.	
§63.9(j)	Change in previous information	Yes.	
§63.10(a)	Administrative provisions for recordkeeping/reporting	Yes.	
§63.10(b)(1)	Record retention	Yes.	
§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.

General provisions citation	Subject of citation	Applies to subpart	Explanation
§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]

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

Source Name:	Alcoa, Inc. – Lafayette Operations
Source Location:	3131 East Main Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3341 and 3354
Operation Permit Renewal No.:	T157-17676-00001
Operation Permit Renewal Issuance Date:	February 6, 2007
Significant Source Modification No.:	157-31323-00001
Significant Permit Modification No.:	157-31329-00001
Permit Reviewer:	Kimberly Cottrell

Public Notice Information

On April 2, 2012, the Office of Air Quality (OAQ) had a notice published in the Journal & Courier in Lafayette, Indiana, stating that Alcoa, Inc. – Lafayette Operations had applied for a significant modification to their Part 70 Operating Permit Renewal issued on February 6, 2007 to construct and operate a new secondary aluminum cast house at the existing Lafayette, Indiana, facility for the purpose of producing high strength, low weight aluminum-lithium alloys for the aerospace industry. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Alcoa Comments and IDEM's Responses

On March 30, 2012, OAQ received comments from Patrick Gorman, on behalf of Alcoa, Inc. – Lafayette Operations. The summary of the comments and IDEM, OAQ responses, including changes to the permit (language deleted is shown in ~~strikeout~~ and language added is shown in **bold**) are as follows:

Company Comment 1:

Change No. 5 in the Technical Support Document (page 30) indicates that IDEM reduced the flux limit from 175 to 96.7 tons per twelve (12) consecutive month period with compliance determined at the end of each month; however, the draft permit does not include this change (page 35). Alcoa intends to reduce flux usage in accordance with the proposed lower limit and requests that IDEM update the permit to match the revisions approved in the Technical Support Document.

IDEM Response:

IDEM agrees. Condition D.1.5 is updated as follows:

D.1.5 Hazardous Air Pollutants (HAPs) Minor Source Limit [326 IAC 2-4.1] [40 CFR Part 63]

(a) The total amount of flux added to the furnaces at the source shall not exceed ~~175~~ **96.7** tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) The limits on flux usage in conjunction with the ammonium fluoroborate (AFB or NH_4BF_4) usage limits in Condition D.2.1 shall limit source wide single HAP emissions to less than ten (10) tons per year and the total combination of HAPs to less than twenty five (25) tons per year. Compliance with these limits shall render 326 IAC 2-4.1 not applicable. Compliance with these limits shall render the source an area source for HAP under 40 CFR Part 63.

Other Changes

Upon further review, the OAQ has decided to make the following revisions to the permit:

Change No. 1:

Condition D.1.7(a) referred to compliance with a non-existent “D.1.1(a)(1)”; it was corrected to be “D.1.1(a)".

D.1.7 Testing Requirements [326 IAC 2-7-6(1),(6)]

(a) Between April 2007 and October 2007, the Permittee shall conduct PM testing for melting furnaces #2-2 and #2-3, utilizing methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.1(a)~~(1)~~. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

(b) Between April 2007 and October 2007, the Permittee shall conduct PM and NO_X testing for furnace #2-6, utilizing methods as approved by the Commissioner, in order to demonstrate compliance with Condition D.1.1(b). This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C- Performance Testing.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
kcottrel@idem.in.gov

Please refer to Significant Source Modification No. 157-31323-00001 and Significant Permit Modification No. 157-31329-00001 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

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

Source Description and Location

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Permit Reviewer:	Kimberly Cottrell

Existing Approvals

The source was issued Part 70 Operating Permit Renewal No. T157-17676-00001 on February 6, 2007. The source has since received the following approvals:

(a) Administrative Amendment No. 157-24634-00001**,** issued on June 7, 2007;

(b) Administrative Amendment No. 157-26562-00001**,** issued on June 19, 2008;

(c) Administrative Amendment No. 157-27695-00001**,** issued on August 10, 2009; and

(d) Administrative Amendment No. 157-30914-00001**,** issued on September 19, 2011.

County Attainment Status

The source is located in Tippecanoe County.

County Attainment Status	
Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Attainment effective February 12, 2007, for the Fort Wayne area, including Allen County, for the 8-hour ozone standard.[1]
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Not designated.

[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005.
Unclassifiable or attainment effective April 5, 2005, for $PM_{2.5}$.

(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 $PM_{2.5}$. On May 8, 2008, U.S. EPA promulgated the requirements for Prevention of Significant Deterioration (PSD) for $PM_{2.5}$ emissions. These rules became effective on July 15, 2008. On May 4, 2011 the air pollution control board issued an emergency rule establishing the direct $PM_{2.5}$ significant level at ten (10) tons per year. This rule became effective, June 28, 2011. Therefore, direct $PM_{2.5}$ and SO_2 emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2. See the State Rule Applicability – Entire Source section.

(c) Other Criteria Pollutants
Tippecanoe County has been classified as attainment or unclassifiable in Indiana for SO_2, CO, PM_{10}, NO_2, and Pb. 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 production facility, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2 or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD and Part 70 Permit applicability.

Source Status

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:

Table 1: Source Status PTE

Pollutant	**Emissions** (ton/yr)
CO	**>100**
NO_x	**>100**
PM	<100
PM_{10}	<100
$PM_{2.5}$	<100
SO_2	<100
VOC	**>100**
GHGs as CO_2e	**>100,000**
Single HAP	**<10**
Total HAP	**<25**

(a) This existing source is a major stationary source, under PSD (326 IAC 2-2), because a regulated pollutant is emitted at a rate of 100 tons per year or more, emissions of GHGs are equal to or greater than one hundred thousand (100,000) tons of CO_2 equivalent emissions (CO_2e) per year 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 an area source of HAPs, as defined in 40 CFR 63.41, because HAP emissions are 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, this source is an area source under Section 112 of the Clean Air Act (CAA).

(c) These emissions are based upon Part 70 Operating Permit No. T157-17676-00001, issued on February 6, 2007.

Actual Emissions

The following table shows the actual emissions as reported by the source. This information reflects the 2009 OAQ emission data.

Table 2: Actual Emissions

Pollutant	Actual Emissions (tons/year)
CO	11.61
NO_x	12.49
PM	3.24
PM_{10}	3.24
$PM_{2.5}$	3.24
SO_2	0.10
VOC	26.16
HAP Hexane	0.10
HAP HCl	1.26
HAP HF	1.00
HAP Cl_2	0.04
Total HAP	2.40

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted by Alcoa, Inc. – Lafayette Operations on December 30, 2011, relating to construction and operation of a new secondary aluminum cast house at the existing Lafayette, Indiana facility for the purpose of producing high strength, low weight aluminum-lithium alloys for the aerospace industry. The following is a list of the proposed new emission units:

One (1) aluminum-lithium alloy cast house, permitted in 2012, located in existing Building 380 and new Building 380 expansion, consisting of the following emission units:

(a) One (1) primary aluminum melter, identified as ALLI-1, permitted in 2012, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs/cycle), with a natural gas furnace rated at 20.0 MMBtu/hr, exhausting to stack ALLI-S1.

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, permitted in 2012, 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) Four (4) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-20, permitted in 2012, each with a maximum time-weighted average throughput of 37.5 lb of molten lithium per hour (900.0 lb of molten lithium per cycle).

(d) One (1) electric flowable aluminum-lithium scrap melting furnace, identified as ALLI-21, permitted in 2012, with a maximum time-weighted average throughput of 2.0 tons of molten aluminum-lithium per hour.

(e) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(f) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, permitted in 2012, each with a maximum time-weighted average melting capacity of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle).

(g) One (1) 3-stage A622 filter, identified as ALLI-26, permitted in 2012, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle).

(h) Two (2) natural gas fired homogenizing ovens, identified as ALLI-27 and ALLI-28, permitted in 2012, each with a maximum capacity of 3.33 tons per hour (400,000 lbs/charge), and each rated at 27.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

(i) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting internally.

(k) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting to stack ALLI-S30.

(j) One (1) slab saw, identified as ALLI-31, permitted in 2012, with a maximum throughput of 2,170 pounds per hour (Process Weight = 1.085 ton/hr), exhausting internally.

(l) One (1) skim cooling operation, identified as ALLI-32, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average).

(m) One (1) skim loadout operation, identified as ALLI-33, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average).

(n) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34.

(o) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput of 1,000 gallons per minute.

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

(q) Paved roads supporting the new Building 380 expansion.

Enforcement Issues

IDEM is not aware of any enforcement action against the source.

Stack Summary

The following table summarizes the stacks that correspond to the new emission units.

Table 3: Stack Summary

Stack ID	Operation	Height (ft)	Diameter (ft)	Flow Rate (acfm)	Temperature (^{0}F)
ALLI-S1	Prime Aluminum Melter	30	2.0	4,000	400
ALLI-S22	scrap drying oven #1	30	1.0	5,000	300
ALLI-S23	scrap drying oven #2	30	1.0	5,000	300
ALLI-S27A	homogenizing oven #1	30	3.5	28,000	500
ALLI-S27B	homogenizing oven #1	30	3.5	28,000	500
ALLI-S28A	homogenizing oven #2	30	3.5	28,000	500
ALLI-S28B	homogenizing oven #2	30	3.5	28,000	500
ALLI-S30	billet peeler lathe	20	1.0	4,000	Ambient (70)
ALLI-S34	emergency generator	30	0.6	2,000	800

Emission Calculations

See Appendix A of this document for detailed emission calculations.

Permit Level Determination – Part 70

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emission unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA, IDEM, or the appropriate local air pollution control agency."

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Table 4: Total PTE Increase due to the Modification

Pollutant	PTE New Emission Units (ton/yr)	Increase to PTE of Modified Emission Units (ton/yr)	Total PTE for New and Modified Units (ton/yr)
CO	79.36	1.53	80.89
NO_X	95.62	1.82	97.44
PM	196.31	0.03	196.34
PM_{10}	200.54	0.14	200.68
$PM_{2.5}$	200.33	0.14	200.47
SO_2	0.67	0.01	0.68

Table 4: Total PTE Increase due to the Modification			
Pollutant	**PTE New Emission Units** (ton/yr)	**Increase to PTE of Modified Emission Units** (ton/yr)	**Total PTE for New and Modified Units** (ton/yr)
VOC	5.30	0.10	5.40
CO_2e	113,637	2,199	115,835
HAP lead	0.0047	0.0001	0.0048
HAP fluorides	3.79	1.44	5.23
HAP HF	3.99	1.51	5.51
HAP beryllium	6.2e-6	--	6.2e-6
HAP HCl	0.69	--	0.69
HAP manganese	2.9e-2	--	2.9e-2
HAP formaldehyde	0.7.2e-2	1.4e-3	0.7.2e-2
HAP hexane	1.69	3.3e-2	1.73
Total HAPs	10.28	2.98	13.26

This source modification is subject to 326 IAC 2-7-10.5(f)(4) because the potential to emit of NO_X is greater than twenty-five (25) tons per year. Additionally, the modification will be incorporated into the Part 70 Operating Permit through a significant permit modification issued pursuant to 326 IAC 2-7-12(d), because the modification involves case-by-case determinations of emission limitations and standards.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 modification, and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

	Table 5: Potential to Emit after Issuance (ton/yr)										
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO_2e**	**Pb**	**F**	**Be**
Al-Li Project Natural Gas Sources Prime Aluminum Melting Furnace #1; Scrap Drying Oven #1; Scrap Drying Oven #2; Homogenizing Oven #1; Homogenizing Oven #2; Space Heating	79.02	36.53	1.79	7.15	2.78	0.56	5.17	44,102	0.0047	--	--
Prime Aluminum Melting Furnace #1 (PM only; no NG)	--	--	6.81	3.41	3.41	--	--	--	--	--	3.4E-06
Lithium Melting Furnace Fugitive Emissions	--	--	1.99	0.05	0.05	--	--	--	--	--	5.0E-09
Flowable Scrap Melting Furnace Fugitive Emissions	--	--	1.20	0.72	0.30	--	--	--	--	--	2.6E-07
Electric Induction Melting Furnaces (2) Fugitive Emissions	--	--	7.12	1.78	1.78	--	--	--	--	--	1.8E-06
A622 Filter	--	--	0.17	0.17	0.17	--	--	--	--	--	--

	Table 5: Potential to Emit after Issuance (ton/yr)										
Process / Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$***	**SO_2**	**VOC**	**CO_2e**	**Pb**	**F**	**Be**
Homogenizing Oven #1 - AFB Usage	--	--	--	--	--	--	--	--	--	0.76	--
Homogenizing Oven #2 - AFB Usage	--	--				--	--	--	--	0.76	--
Log Peeler Emissions	--	--	0.57	0.57	0.57	--	--	--	--	--	5.7E-07
Log Saw Emissions	--	--	0.22	0.22	0.22	--	--	--	--	--	7.6E-11
Slab Saw Emissions	--	--	**	**	**	--	--	--	--	--	**
Skim Cooling	--	--	1.71	0.20	0.20	--	--	--	--	--	2.0E-07
Skim Loadout Fugitive Emissions	--	--	1.71	0.08	0.08	--	--	--	--	--	1.6E-07
200 hp Emergency Generator	0.33	1.54	0.11	0.11	0.11	0.10	0.13	57.59	--	--	--
Cooling Tower Emissions	--	--	0.10	0.08	0.08	--	--	--	--	--	--
Vehicular Roadway Fugitive Emissions	--	--	1.39	0.28	0.07	--	--	--	--	--	--
Total for Modification	**79.36**	**38.07**	**24.89**	**14.81**	**9.81**	**0.67**	**5.30**	**44,159**	**0.0047**	**1.51**	**6.2E-06**
Increase from de-bottlenecking of existing Units I and II	1.53	1.82	0.03	0.14	0.14	0.01	0.10	2,199	0.0001	*1.44*	--
Total for Modification after de-bottlenecking	**80.89**	**39.89**	**24.92**	**14.95**	**9.95**	**0.68**	**5.40**	**46,358**	**0.0048**	**2.95**	**6.2E-06**
Significant Level	100	40	25	15	10	40	40	75,000	0.6	3	0.0004

*$PM_{2.5}$ listed is direct $PM_{2.5}$.
**An estimated 70% of logs will be processed in the Log Sawing operation, and 30% will be processed into slabs (Slab Sawing). Log Sawing emission rates are the worst case for particulate emissions; therefore, the potential to emit listed for Log Sawing is estimated at 100% and this accounts for the emissions that would be generated by the Billet Sawing.

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, the PSD requirements do not apply.

The source has elected to take federally enforceable emission limits to keep this modification minor under the PSD rules. These limits are discussed in more detail under the section titled "State Rule Applicability Determination".

Federal Rule Applicability Determination

The following federal rules are applicable to the source due to this modification:

(a) New Source Performance Standards (NSPS)
The diesel engine (ALLI-34) is subject to the Standards of Performance for Stationary Compression Ignition Internal Combustion Engines (40 CFR 60, Subpart IIII).

The emergency generator (ALLI-34) is subject to the following portions of Subpart IIII, which is incorporated by reference as 326 IAC 12.

(1) 40 CFR 60.4200(a)(4), (c), and (d)
(2) 40 CFR 60.4205(b), (d), (d)(2), and (d)(3)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (d), (f), (g), (g)(2),
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 5 to 40 CFR 60, Subpart IIII
(13) Table 8 to 40 CFR 60, Subpart IIII

- For ALLI-34, the displacement is 8.8 liters per cylinder, and the model year is 2012.

The provisions of 40 CFR 60 Subpart A – General Provisions, which are incorporated as 326 IAC 12-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 60.4218 and Table 8 to 40 CFR 60, Subpart IIII.

(b) Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAPs)
There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14 and 40 CFR Part 61) included in the permit for this proposed modification.

(c) Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

(1) The cooling tower (ALLI-35) is not subject to the requirements of the National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers under 40 CFR 63, Subpart Q, because the cooling tower is not operated with chromium-based water treatment chemicals, it is not located at a major source of HAP emissions, and it is not an integral part of a facility that is a major source of HAP emissions, as defined in 40 CFR 63.401.

(2) The natural gas fired scrap drying ovens (ALLI-22 and ALLI-23) are subject to the following portions of the National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production (40 CFR 63, Subpart RRR), which is incorporated by reference as 326 IAC 20-70:

(1) 40 CFR 63.1500(a), (c), (e), and (f)
(2) 40 CFR 63.1501
(3) 40 CFR 63.1502
(4) 40 CFR 63.1503
(5) 40 CFR 63.1505(a) and (d)
(6) 40 CFR 63.1506(a), (b), (d), (g), and (p)
(7) 40 CFR 63.1510(a), (b), (c), (e), and (w)
(8) 40 CFR 63.1511
(9) 40 CFR 63.1512(c), (k), and (r)
(10) 40 CFR 63.1513
(11) 40 CFR 63.1515
(12) 40 CFR 63.1516
(13) 40 CFR 63.1517

(14) 40 CFR 63.1518
(15) 40 CFR 63.1519
(16) Table 1 to 40 CFR 63, Subpart RRR
(17) Table 2 to 40 CFR 63, Subpart RRR
(18) Table 3 to 40 CFR 63, Subpart RRR
(19) Appendix A to 40 CFR 63, Subpart RRR

The provisions of 40 CFR 63 Subpart A – General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the facility described in this section except when otherwise specified in 40 CFR 63.1518 and Appendix A of 40 CFR 63 Subpart RRR.

(3) The emergency generator (ALLI-34) is subject to the following portions of the National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63, Subpart ZZZZ), which is incorporated by reference as 326 IAC 20-82:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (a)(2), (c), and (c)(1)
(4) 40 CFR 63.6595(a)(7) and (c)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(h)
(7) 40 CFR 63.6635
(8) 40 CFR 63.6640
(9) 40 CFR 63.6645
(10) 40 CFR 63.6650
(11) 40 CFR 63.6655
(12) 40 CFR 63.6660
(13) 40 CFR 63.6665
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 8 to 40 CFR 63 Subpart ZZZZ

(d) Compliance Assurance Monitoring (CAM)
Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to new or modified emission units that involve a pollutant-specific emission unit and meet the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The proposed modification will not add any control devices; therefore, the requirements of 40 CFR Part 64, CAM, are not applicable to any of the new and modified emission units as part of this modification.

State Rule Applicability Determination

The following state rules are applicable to the source due to the modification:

326 IAC 2-2 (PSD)

The potential to emit of the aluminum-lithium cast house modification is greater than forty (40) tons of NO_X per year, greater than twenty-five (25) tons of PM per year, greater than fifteen (15) tons of PM_{10} per year, greater than ten (10) tons of $PM_{2.5}$ per year, greater than three (3) tons of Fluoride (F) per year, and greater than seventy-five thousand (75,000) tons of CO_2 equivalent emissions (CO_2e) per year, this source has elected to limit the potential to emit of this modification as follows:

Natural Gas Combustion

(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), and space heaters associated with the aluminum-lithium cast house modification shall not exceed 731.6 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) CO_2 emissions from natural gas combustion shall not exceed 120,000 pounds per million cubic feet (lb/MMCF).

(d) CH_4 emissions from natural gas combustion shall not exceed 2.3 pounds per million cubic feet (lb/MMCF).

(e) N_2O emissions from natural gas combustion shall not exceed 2.2 pounds per million cubic feet (lb/MMCF).

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

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

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

Melting

(a) The amount of metal charged in the flowable scrap melting furnace (ALLI-21) shall not exceed 5,128 tons of charge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.4 pounds of PM per ton of charge.

(c) PM_{10} emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.12 pounds of PM_{10} per ton of charge.

(d) $PM_{2.5}$ emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

(h) PM emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.4 pounds of PM per ton of charge.

(i) PM_{10} emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of PM_{10} per ton of charge.

(j) $PM_{2.5}$ emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

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

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

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

Ovens

(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 PM, PM_{10} $PM_{2.5}$, NO_X CO_2, CH_4, N_2O, and fluoride (F) emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than twenty-five (15) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, less than ten (10) tons per year of $PM_{2.5,}$ less than forty (40) tons per year of NO_X, less than three (3) tons of Flouride (F), and seventy-five thousand (75,000) tons of CO_2 equivalent emissions (CO_2e) per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the melting operations for the aluminum-lithium cast house modification.

326 IAC 2-4.1 (Major Sources of Hazardous Air Pollutants (HAP))
Each emission unit of the aluminum-lithium cast house project has PTE 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 of the Al-Li project.

326 IAC 2-6 (Emission Reporting)
This source is located in Tippecanoe County. This source is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM_{10} is less than 250 tons per year; and the potential to emit of CO, NO_X, and SO_2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2014, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

326 IAC 5-1 (Opacity Limitations)
Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Exemptions), opacity shall meet the following, unless otherwise stated in the 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.

326 IAC 6-2 (Particulate Emissions Limitations for Source of Indirect Heating)
(a) The emergency generator (ALLI-34) is not subject to 326 IAC 6-2 because it is an internal combustion engine and not a source of indirect heating.

(b) The scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), and space heaters are not subject to 326 IAC 6-2 because there is contact between the combustion gases and material being heated,

(c) The primary aluminum melter furnace (ALLI-1), electric induction melting furnaces (ALLI-24 and ALLI-25), and flowable scrap melting furnace (ALLI-21), are not subject to 326 IAC 6-2 because there are emission limits established for these units under 326 IAC 2-2, which are more stringent than the 326 IAC 6-2 limit.

326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the following processes shall not exceed the emission rate listed below:

Table 6: Summary of Process Weight Rate Limits

Unit ID	Process	**P** (ton/hr)	**E** (lb/hr)
ALLI-1	Prime Aluminum Melting Furnace	3.89	10.19
ALLI-21	Flowable Scrap Melting Furnace	2.00	6.52
ALLI-22 & ALLI-23	2 Scrap Drying Ovens	3.89	10.19
ALLI-24 --- ALLI-25	2 Electric Induction Melting Furnaces	2.03 (each)	6.59 (each)
ALLI-26	A622 Filter	4.06	10.49
ALLI-27 & ALLI-28	2 Homogenizing Ovens	3.89	10.19
ALLI-30	Log Peeler	3.62	9.70
ALLI-29	Log Saw	3.62	9.70
ALLI-31	Slab Saw	1.09	4.33

Table 6: Summary of Process Weight Rate Limits

Unit ID	Process	**P** (ton/hr)	**E** (lb/hr)
ALLI-32	Skim Cooling	0.30	1.82
ALLI-33	Skim Loadout	0.30	1.82

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

326 IAC 6-4 (Fugitive Dust Emissions)
Pursuant to 326 IAC 6-4 (Fugitive Dust Emissions), the Permittee shall be in violation of 326 IAC 6-4 (Fugitive Dust Emissions) if any of the criteria specified in 326 IAC 6-4-2(1) though (4) are violated pursuant to 326 IAC 6-4-5(c). Observations of visible emissions crossing the property line of the source at or near ground level must be made by a qualified representative of IDEM.

326 IAC 8-1-6 (New facilities; general reduction requirements)
Each of the emissions units associated with the aluminum-lithium cast house modification will have a potential to emit of VOC that is less than 25 tons per year. Therefore, the requirements of 8-1-6 (BACT) do not apply.

326 IAC 9 (Carbon Monoxide Emission Limits)
Pursuant to 326 IAC 9 (Carbon Monoxide Emission Limits), the source is subject to this rule because it is a stationary source which emits CO emissions and commenced operation after March 21, 1972. Under this rule, there is not a specific emission limit because the source is not an operation listed under 326 IAC 9-1-2.

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.

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

Table 7: Summary of Testing Requirements

Emission Unit	Control Device & Stack	Timeframe for Testing	Pollutant	Frequency of Testing	Limit or Requirement
primary aluminum melter furnace (ALLI-1)	no controls stack ALLI-S1	no later than 180 days after start-up of unit being tested	PM < 0.4 lb/ton Al PM_{10} < 0.2 lb/ton Al $PM_{2.5}$ < 0.2 lb/ton Al	one time	326 IAC 2-2
scrap drying ovens (ALLI-22 and ALLI-23)	no controls stacks ALLI-S22 and ALLI-S23	no later than 180 days after start-up of unit being tested	D/F per NESHAP RRR	one time	40 CFR 63, Subpart RRR
homogenizing ovens (ALLI-27 and ALLI-28)	no controls stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B	no later than 180 days after start-up of unit being tested	F < 0.722 lb/ lb AFB	one time	326 IAC 2-2
Lithium Melting Furnaces (ALLI-2 --- ALLI-20)	no controls; no stacks	no later than 180 days after start-up of unit being tested	PM < 0.4 lb/ton Al PM_{10} < 0.1 lb/ton Al $PM_{2.5}$ < 0.1 lb/ton Al	one time (test only one unit)	326 IAC 2-2
Flowable Scrap Melting Furnace (ALLI-21) Electric Induction Melting/ Holding Furnaces (ALLI-24 --- ALLI-25)	no controls; no stacks	no later than 180 days after start-up of unit being tested	PM < 0.4 lb/ton Al PM_{10} < 0.12 lb/ton Al $PM_{2.5}$ < 0.1 lb/ton Al	one time (test only one unit)	326 IAC 2-2

Compliance Monitoring Requirements
There are no Compliance Monitoring Requirements included for this modification.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit Renewal No. T157-17676-00001. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No. 1 The emission unit descriptions in Section A of the permit have been updated as follows to include all unpermitted emission units in addition to the new emission units:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(~~15~~**14**)]

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

...

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, permitted in 2012, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs/cycle), with a natural gas furnace rated at 20.0 MMBtu/hr, exhausting to stack ALLI-S1.

(b) Two (2) natural gas fired homogenizing ovens, identified as ALLI-27 and ALLI-28, permitted in 2012, each with a maximum time weighted average throughput of 3.33 tons per hour (400,000 lbs/charge), and each rated at 27.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

...

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(~~15~~**14**)]

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

...

Aluminum-Lithium Alloy Cast House

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23. [40 CFR 63, Subpart RRR]

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, permitted in 2012, 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). [326 IAC 6-3-2]

(c) Four (4) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-20, permitted in 2012, 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). [326 IAC 6-3-2]

(d) One (1) electric flowable aluminum-lithium scrap melting furnace, identified as ALLI-21, permitted in 2012, with a maximum time-weighted average throughput capacity of 2.0 tons of molten aluminum-lithium per hour(69,637 lbs/cycle). [326 IAC 6-3-2]

(e) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, permitted in 2012, each with a maximum time-weighted average melting of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle). [326 IAC 6-3-2]

(f) One (1) 3-stage A622 filter, identified as ALLI-26, permitted in 2012, with a maximum time-weighted average throughput of 8,124 pounds per hour (62,000 lbs/cycle). [326 IAC 6-3-2]

(g) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting internally. [326 IAC 6-3-2]

(h) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting to stack ALLI-S30. [326 IAC 6-3-2]

(i) One (1) slab saw, identified as ALLI-31, permitted in 2012, with a maximum throughput capacity of 2,170 pounds per hour (Process Weight = 1.085 ton/hr), exhausting internally. [326 IAC 6-3-2]

(j) One (1) skim cooling operation, identified as ALLI-32, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average). [326 IAC 6-3-2]

(k) One (1) skim loadout operation, identified as ALLI-33, permitted in 2012, with a maximum time-weighted average throughput of 600.12 pounds per hour (time-weighted average). [326 IAC 6-3-2]

(l) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput capacity of 1,000 gallons per minute. [326 IAC 2-2]

...

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

This stationary source also includes the following insignificant activities which are not specifically regulated, as defined in 326 IAC 2-7-1(21):

Aluminum-Lithium Alloy Cast House

(a) Natural gas fired space heaters, identified as ALLI-36, 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.

Change No. 2 Certain Conditions of Section B are updated as follows to incorporate recent changes made to the standard conditions of the Operating permit.

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,~~ **The Part 70 Operating Permit Renewal**, T157-17676-00001, 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) ...

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. ~~The submittal by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~ Upon request, the Permittee shall also furnish to IDEM, OAQ copies of records required to be kept by this permit.

(b) ...

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

(a) ~~Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance~~**A** certification ~~submitted shall contain~~**required by this permit meets the requirements of 326 IAC 2-7-6(1) if:**

(i) **it contains a** certification by ~~the~~**a** "responsible official" ~~of truth, accuracy,~~**as defined by 326 IAC 2-7-1(34),** and ~~completeness. This~~

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

(b) ~~One (1) certification shall be included, using~~**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** ~~The~~ "responsible official" is defined at 326 IAC 2-7-1(34).

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

(a) The Permittee shall annually submit a compliance certification report ~~that~~**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. ~~The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent~~ **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~~**April 15** of each year to:

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

and

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

(b) ...

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

(1) - (5) ...

The submittal by the Permittee does require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

B.10 Preventive Maintenance Plan [326 IAC ~~1-6-3] [326 IAC~~ 2-7-5(~~1),(3) and (13~~**12**)] [326 IAC ~~2-7-6(1)~~**1-6-3]**

(a) A Preventive Maintenance Plan meets the requirements of 326 IAC 1-6-3 if it includes, at a minimum:

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

(2) A description of the items or conditions that will be inspected and ~~(6)]~~**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.

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

(1) - (3) ...

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(34).

The Permittee shall implement the PMPs.

(~~b~~**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~~ or potential to emit.~~**.** The PMPs **and their submittal** do not require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(~~c~~**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) - (3) ...

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

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance and Enforcement Branch), or
Telephone Number: 317-233-0178 (ask for **Office of Air Quality,** Compliance ~~Section~~**and Enforcement Branch**)
Facsimile Number: 317-233-6865
Northwest Regional Office phone: (219) 757-0265; fax: (219) 757-0267.

(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) - (C) ...

The notification which shall be submitted by the Permittee does not require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(6) ...

(c) - (d) ...

(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)(~~9~~**8**) be revised in response to an emergency.

(f) - (g) ...

~~(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.~~

~~B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-7-5(3)(C)(ii)]~~

~~(a) Deviations from any permit requirements (for emergencies see Section B – Emergency Provisions), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported 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~~

~~using the attached Quarterly Deviation and Compliance Monitoring Report, or its equivalent. 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.~~

~~The Quarterly Deviation and Compliance Monitoring Report does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.~~

~~B.16~~**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 ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(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) - (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(~~c~~**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.~~17~~**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(40). The renewal application does require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

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.~~18~~**17** Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12] ~~[40 CFR 72]~~

(a) - (c) ...

B.~~19~~**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) ...

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

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

(1) - (4) ...

(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)~~,~~ **or** (c~~), or (e)~~. 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)~~, and (e)(2)~~.

(b) ...

(1) - (4) ...

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 ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

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

(d) Alternative Operating Scenarios [326 IAC 2-7-20(~~c~~**d**)]
...

(e) ...

B.~~23~~**22** Transfer of Ownership or Operational Control [326 IAC 2-7-11]

(a) ...

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

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

~~The~~**Any such** application ~~which shall be submitted by the Permittee~~ does require ~~the~~**a** certification ~~by the~~**that meets the requirements of 326 IAC 2-7-6(1) by a** "responsible official" as defined by 326 IAC 2-7-1(34).

(c) ...

Change No. 3 Certain Conditions of Section C are updated as follows to incorporate recent changes made to the standard conditions of the Operating permit.

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) - (b) ...

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. ~~326 IAC 4-1-3 (a)(2)(A) and (B) are not federally enforceable.~~

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

The Permittee shall not operate an incinerator ~~or incinerate any waste or refuse~~ except as provided in 326 IAC 4-2 ~~and 326 IAC 9-1-2~~**or in this permit.** ~~326 IAC 9-1-2 is not federally enforceable.~~ **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.7 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR ~~Part~~ 61, Subpart M]1 **Subpart M]**

(a) - (c) ...

(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 61-52~~,~~ 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 **a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(e) Procedures for Asbestos Emission Control
...

(f) Demolition and Renovation
...

(g) Indiana ~~Accredited~~**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 ~~Accredited~~**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.**

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

~~(a) All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this permit, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.~~

(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 ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(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 ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

(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.

C.10 Compliance Monitoring [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1~~]~~**)]**

Unless otherwise specified in this permit, **for** all monitoring ~~and record keeping~~ requirements not already legally required ~~shall be implemented within ninety (90) days of permit issuance. If required by Section D~~, the Permittee shall be ~~responsible for installing any necessary equipment and initiating any required~~**allowed up to ninety (90) days from the date of permit issuance or of initial start-up, whichever is later, to begin such** monitoring ~~related to that equipment.~~**.** If due to circumstances beyond ~~its~~**the Permittee's** control, ~~that~~**any monitoring** equipment **required by this permit** cannot be installed and operated ~~within~~**no later than** ninety (90) days **after permit issuance or the date of initial startup, whichever is later**, 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 ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

Unless otherwise specified in the approval for the new emission unit(s), compliance monitoring for new emission units or emission units added through a source modification shall be implemented when operation begins.

~~C.11 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]~~

~~Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.~~

~~C.13~~**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~~ on March 18, 1999~~.

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

~~C.14~~**C.13** Risk Management Plan [326 IAC 2-7-5(~~12~~**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 [326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

(b) The response shall include minimizing the period of any startup, shutdown or malfunction ~~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). Corrective actions may include, but are~~**. 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 ~~within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.~~**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 ~~maintain the following records:~~**record the reasonable response steps taken.**

~~(1) monitoring data;~~

~~(2) monitor performance data, if applicable; and~~

~~(3) corrective actions taken.~~

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 ~~take appropriate response actions. The Permittee shall~~ submit a description of ~~these~~**its** response actions to IDEM, OAQ, ~~within thirty (30~~**no later than seventy-five (75**) days ~~of receipt~~**after the date** of the test ~~results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented~~.

(b) A retest to demonstrate compliance shall be performed ~~within~~**no later than** one hundred ~~twenty (120~~**eighty (180**) days ~~of receipt of~~**after** the ~~original~~**date of the** test ~~results~~. Should the Permittee demonstrate to IDEM, OAQ**,** that retesting in one hundred ~~twenty (120~~**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 ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34).

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

(a) ...

The emission statement does require ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** “responsible official” as defined by 326 IAC 2-7-1(34).

~~(b) The emission statement 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.17 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6] [326 IAC 2-3] [326 IAC 2-2]

(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:**

(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:

(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 ~~implemented within~~**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 ~~40 CFR 51.165(a)(6)(vi)(A), 40 CFR 51.165(a)(6)(vi)(B), 40 CFR 51.166(r)(6)(vi)(a), and/or 40 CFR 51.166(r)(6)(vi)(b)~~ **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(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **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(~~ee~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **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(~~rr~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **kk**)), the Permittee shall comply with following:

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

(A) - (B)...

(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) - (ii) ...

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

(iv) ...

(d) If there is a reasonable possibility (as defined in ~~40 CFR 51.165(a)(6)(vi)(A) and/or 40 CFR 51.166(r)(6)(vi)(a)~~ **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(~~qq~~ **oo**) and/or 326 IAC 2-3-1(~~ll~~ **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(~~ee~~ **dd**) and/or 326 IAC 2-3-1(~~z~~ **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(~~rr~~ **pp**) and/or 326 IAC 2-3-1(~~mm~~ **kk**)), the Permittee shall comply with following:

(1) - (2) ...

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]

(a) The Permittee shall submit the attached Quarterly Deviation and Compliance Monitoring Report or its equivalent. ~~-~~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 ~~within~~**not later than** thirty (30) days ~~of~~ **after** the end of the reporting period.~~-~~ The Quarterly Deviation and Compliance Monitoring Report shall include ~~the~~**a** certification **that meets the requirements of 326 IAC 2-7-6(1)** by ~~the~~**a** "responsible official" as defined by 326 IAC 2-7-1(34). **A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit.**

(b) The **address for** report ~~required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to~~**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) ~~Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

~~(e)~~ 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.

(~~f~~**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(~~qq~~**oo**) and/or 326 IAC 2-3-1(~~ll~~**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(~~xx~~**ww**) and/or 326 IAC 2-3-1(~~qq~~**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).

(~~g~~**f**) The report for a project at an existing emissions unit shall be submitted within 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 deems fit to include in this report~~,~~**.**

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

(~~h~~**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.

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 the **applicable** standards for recycling and emissions reduction~~:~~

~~(a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156.~~

~~(b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158.~~

~~(c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.~~

Change No. 4 Condition D.1.1 is updated as follows to remove the references to melting furnaces #10, #8, and #7 because these units were removed from the facility after installation of the tilting-melting-holding furnaces #2-2 and #2-3. The changes are as follows:

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

(a) Pursuant to CP 157-2316 issued April 9, 1992, the ~~following conditions shall apply to the tilting-melting-holding furnaces #2-2 and #2-3:~~

~~(1) The~~ PM emission rate from each of the tilting-melting-holding furnaces #2-2 and #2-3 shall not exceed 1.14 pounds per hour. Compliance with this limit will also satisfy the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations).

~~(2) The melting furnaces #10, #8, and #7 shall not be operated.~~

(b) Pursuant to CP 157-4219, issued June 12, 1995, 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 1.89 pounds per hour. Compliance with this limit will also satisfy the requirements of 326 IAC 6-3-2 (Particulate Emission Limitations).

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

(3) In order to comply with the requirements of 326 IAC 2-2, 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.

Therefore, the requirements of 326 IAC 2-2 (PSD) will not apply **to the tilting-melting-holding furnaces #2-2, #2-3, and #2-6**.

Change No. 5 The HAP limits in Condition D.1.5 and D.2.1 are clarified as follows:

D.1.5 Hazardous Air Pollutants (HAPs) **MinorSource Limit** [326 IAC 2-4.1] **[40 CFR Part 63]**

The total amount of flux added to the furnaces at the source shall not exceed ~~175~~ **96.7** tons per twelve (12) consecutive month period with compliance determined at the end of each month.

The limits on flux usage in conjunction with the **ammonium fluoroborate (**AFB **or NH_4BF_4)** usage limit**s** in Condition D.2.1 shall limit source wide single HAP emissions to less than ten (10) tons per year and the total combination of HAPs to less than twenty five (25) tons per year. Compliance with these limits shall render 326 IAC 2-4.1 not applicable. **Compliance with these limits shall render the source an area source for HAP under 40 CFR Part 63.**

D.2.1 Hazardous Air Pollutants (HAPs) **Minor Source Limit** [326 IAC 2-4.1] **[40 CFR Part 63]**

The source-wide usage of ammonium fluoroborate (AFB **or NH_4BF_4**) shall not exceed 12.75 tons per twelve (12) consecutive month period with compliance determined at the end of each month. The limit on AFB in conjunction with the flux usage limit in Condition D.1.5 shall limit source wide single HAP emissions to less than ten (10) tons per year and the total combination of HAPs to less than twenty five (25) tons per year. Compliance with these limits shall render 326 IAC 2-4.1 not applicable. **Compliance with these limits shall render the source an area source for HAP under 40 CFR Part 63.**

Change No. 6 Section D.11 is added to incorporate the applicable requirements for the emission units associated with the Aluminum-Lithium Alloy Cast House as follows:

SECTION D.11 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Cast House

(a) One (1) primary aluminum melter, identified as ALLI-1, permitted in 2012, with a maximum time-weighted average throughput of 3.89 tons of molten aluminum per hour (70,000 lbs/cycle), with a natural gas furnace rated at 20.0 MMBtu/hr, exhausting to stack ALLI-S1.

(b) Two (2) natural gas fired homogenizing ovens, identified as ALLI-27 and ALLI-28, permitted in 2012, each with a maximum capacity of 3.33 tons per hour (400,000 lbs/charge), and each rated at 27.0 MMBtu/hr, exhausting to stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B.

Insignificant Activities

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(b) Fifteen (15) small electric lithium melters, identified as ALLI-2 through ALLI-16, permitted in 2012, each with a maximum time-weighted average throughput capacity of 5.18 lb of molten lithium per hour (44.0 lb of molten lithium per cycle).

(c) Four (4) large electric lithium melter/holder furnaces, identified as ALLI-17 through ALLI-20, permitted in 2012, 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) One (1) electric flowable aluminum-lithium scrap melting furnace, identified as ALLI-21, permitted in 2012, with a maximum time-weighted average throughput capacity of 2.0 tons of molten aluminum-lithium per hour.

(e) Two (2) electric induction melting/holding furnaces, identified as ALLI-24 and ALLI-25, permitted in 2012, each with a maximum time-weighted average melting capacity of 4,062 pounds of molten aluminum-lithium per hour (69,637 lbs/cycle).

(f) One (1) 3-stage A622 filter, identified as ALLI-26, permitted in 2012, with a maximum time-weighted average throughput capacity of 8,124 pounds per hour (62,000 lbs/cycle).

(g) One (1) billet saw, identified as ALLI-29, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting internally.

(h) One (1) billet peeler lathe, identified as ALLI-30, permitted in 2012, with a maximum throughput capacity of 7,233 pounds per hour (Process Weight = 3.6165 ton/hr), exhausting to stack ALLI-S30.

(i) One (1) slab saw, identified as ALLI-31, permitted in 2012, with a maximum throughput

capacity of 2,170 pounds per hour (Process Weight = 1.085 ton/hr), exhausting internally.

(j) One (1) skim cooling operation, identified as ALLI-32, permitted in 2012, with a maximum time-weighted average throughput capacity of 600.12 pounds per hour (time-weighted average).

(k) One (1) skim loadout operation, identified as ALLI-33, permitted in 2012, with a maximum time-weighted average throughput capacity of 600.12 pounds per hour (time-weighted average).

(l) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34. [40 CFR 60, Subpart IIII] [40 CFR 63, Subpart ZZZZ]

(m) One (1) contact cooling water evaporative cooling tower, identified as ALLI-35, permitted in 2012, with a maximum throughput capacity of 1,000 gallons per minute. [326 IAC 2-2]

(n) 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.

(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.11.1 PSD Minor Limits [326 IAC 2-2]

(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), and space heaters associated with the aluminum-lithium cast house modification shall not exceed 731.6 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) CO_2 emissions from natural gas combustion shall not exceed 120,000 pounds per million cubic feet (lb/MMCF).

(d) CH_4 emissions from natural gas combustion shall not exceed 2.3 pounds per million cubic feet (lb/MMCF).

(e) N_2O emissions from natural gas combustion shall not exceed 2.2 pounds per million cubic feet (lb/MMCF).

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

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

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

Compliance with these emission limits and the limits in Conditions D.11.2, D11.3 and D.11.4, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.2 PSD Minor Limit [326 IAC 2-2]

(a) The amount of metal charged in the flowable scrap melting furnace (ALLI-21) shall not exceed 5,128 tons of charge per twelve (12) consecutive month period, with compliance determined at the end of each month.

(b) PM emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.4 pounds of PM per ton of charge.

(c) PM_{10} emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.12 pounds of PM_{10} per ton of charge.

(d) $PM_{2.5}$ emissions from the flowable scrap melting furnace (ALLI-21) and electric induction melting/holding furnaces (ALLI-24 and ALLI-25) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

(h) PM emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.4 pounds of PM per ton of charge.

(i) PM_{10} emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of PM_{10} per ton of charge.

(j) $PM_{2.5}$ emissions from the electric lithium melting furnaces (ALLI-2 through ALLI-20) shall not exceed 0.1 pounds of $PM_{2.5}$ per ton of charge.

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

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

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

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

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

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

Compliance with these emission limits and the limits in Conditions D.11.1, D11.3 and D.11.4, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.3 PSD Minor Limit [326 IAC 2-2]

(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 and the limits in Conditions D.11.1,D.11.2, and D11.3, combined with the potential to emit NO_X, PM, PM_{10}, $PM_{2.5}$, CO_2, CH_4, and N_2O emissions from all other emission units associated with the aluminum-lithium cast house modification, will limit the potential to emit from this modification to less than forty (40) tons per year of NO_X, less than seventy-five thousand (75,000) tons per year of carbon dioxide equivalent (CO_2e), less than twenty-five (25) tons per year of PM, less than fifteen (15) tons per year of PM_{10}, and less than ten (10) tons per year of $PM_{2.5}$, and fluoride to less than 3 tons per year. Therefore the requirements of 326 IAC 2-2 (PSD) are not applicable to the 2012 modification.

D.11.4 Particulate Emission Limitations for Manufacturing Processes [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the particulate matter (PM) from the following processes shall not exceed the emission rate listed below:

Summary of Process Weight Rate Limits			
Unit ID	**Process**	**P (ton/hr)**	**E (lb/hr)**
ALLI-1	Prime Aluminum Melting Furnace	3.89	10.19
ALLI-21	Flowable Scrap Melting Furnace	2.00	6.52
ALLI-22 & ALLI-23	2 Scrap Drying Ovens	3.89	10.19
ALLI-24 --- ALLI-25	2 Electric Induction Melting Furnaces	2.03 (each)	6.59 (each)
ALLI-26	A622 Filter	4.06	10.49
ALLI-27 & ALLI-28	2 Homogenizing Ovens	3.89	10.19
ALLI-30	Log Peeler	3.62	9.70

Summary of Process Weight Rate Limits			
Unit ID	**Process**	**P (ton/hr)**	**E (lb/hr)**
ALLI-29	**Log Saw**	**3.62**	**9.70**
ALLI-31	**Slab Saw**	**1.09**	**4.33**
ALLI-32	**Skim Cooling**	**0.30**	**1.82**
ALLI-33	**Skim Loadout**	**0.30**	**1.82**

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

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

D.11.5 Testing Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

(a) In order to demonstrate compliance with Conditions D.11.3(b) and to verify the F emission factor, the Permittee shall conduct F testing for one (1) of the homogenizing ovens (ALLI-27 and ALLI-28, stacks ALLI-S27A, ALLI-S27B, ALLI-S28A, and ALLI-S28B) no later than one hundred eighty (180) days after start-up utilizing methods as approved by the Commissioner.

(b) In order to verify the PM, PM_{10}, and $PM_{2.5}$ emission factors, the Permittee shall conduct PM, PM_{10}, and $PM_{2.5}$ testing for the primary aluminum melter furnace (ALLI-1, stack ALLI-S1), one (1) of the lithium melting furnaces (ALLI-2 --- ALLI-20), and one (1) of either the flowable scrap melting furnace (ALLI-21) or one of the electric induction melting furnaces (ALLI-24 and ALLI-25), A622 filter (ALLI-26), no later than one hundred eighty (180) days after start-up utilizing methods as approved by the Commissioner. PM_{10} and $PM_{2.5}$ includes filterable and condensible PM.

(c) Testing shall be conducted in accordance with 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 Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.11.6 Record Keeping Requirements

(a) To document the compliance status with Condition D.11.1(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.11.2(a), the Permittee shall maintain monthly records of the amount of metal charged in the flowable scrap melting furnace (ALLI-21).

(c) To document the compliance status with Condition D.11.3(a), the Permittee shall maintain monthly records of the AFB usage for the homogenizing ovens (ALLI-27 and ALLI-28).

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

D.11.7 Reporting Requirements

A quarterly summary of the information to document the compliance status with Conditions D.11.1(a), D.11.2(a), and D.11.3(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 six (6) month period. 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(34). Section C - General Reporting Requirements contains the Permittee's obligations with regard to the record keeping required by this condition.

Part 70 Quarterly Report

Facility: **primary aluminum melter furnace (ALLI-1), scrap drying ovens (ALLI-22 and ALLI-23), homogenizing ovens (ALLI-27 and ALLI-28), and space heaters associated with the aluminum-lithium cast house modification**
Parameter: **natural gas usage**
Limit: **731.6 MMCF per twelve (12) consecutive month period with compliance determined at the end of each month.**

Part 70 Quarterly Report

Facility: **flowable scrap melting furnace (ALLI-21)**
Parameter: **Amount of Metal Charged**
Limit: **5,128 tons per twelve (12) consecutive month period with compliance determined at the end of each month.**

Part 70 Quarterly Report

Facility: **homogenizing ovens (ALLI-27 and ALLI-28)**
Parameter: **AFB usage**
Limit: **4,191 pounds per twelve (12) consecutive month period with compliance determined at the end of each month.**

Change No. 7 Section E.1 is updated as follows to incorporate the applicable requirements of NESHAP RRR for the emission units associated with the Aluminum-Lithium Alloy Cast House:

SECTION E.1NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Ingot Department

(a) one (1) #2-2 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 89-8;

(b) one (1) #2-3 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 90-8;

(c) one (1) #2-4 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 88-8;

(d) one (1) #2-5 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 87-8;

(e) one (1) #2-6 natural gas-fired 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, with emissions uncontrolled and exhausting to stack 94-8; and

(f) one (1) #4 natural gas-fired melting furnace, identified as emission unit 7, constructed ~~in 1980 and modified in 2004~~ **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, with emissions uncontrolled and exhausting to stack 5-8

Aluminum-Lithium Alloy Casthouse

(a) Two (2) natural gas fired scrap drying ovens, identified as ALLI-22 and ALLI-23, permitted in 2012, each rated at 4.0 MMBtu/hr, exhausting to stacks ALLI-S22 and ALLI-S23.

(The information describing the process contained in this facility 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 NESHAP RRR [40 CFR 63, Subpart A] [326 IAC 20-1-1]

Pursuant to 40 CFR 63.1518, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Appendix A of 40 CFR Part 63, Subpart RRR in accordance with schedule in 40 CFR 63 Subpart RRR, for the #2-2, #2-3, #2-4, #2-5, and #2-6 tilting-melting-holding furnaces, ~~and~~ the #4 melting furnace**, and natural gas fired scrap drying ovens (ALLI-22 & ALLI-23)**.

E.1.2 National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production [40 CFR Part 63, Subpart RRR] **[326 IAC 20-70]**

Pursuant to 40 CFR 63.1501, the Permittee shall comply with the following provisions of 40 CFR 63, Subpart RRR (National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production), which are included as Attachment A and 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, on and after March 24, 2003:

(1) 40 CFR 63.1500 (a), (c), (c)(1-4), (e), (f)
(2) 40 CFR 63.1501 (a), (c)
(3) 40 CFR 63.1502
(4) 40 CFR 63.1503
(5) 40 CFR 63.1505 (a), (a)(i), (a)(i)(3)
(6) 40 CFR 63.1506 (a), (b), (b)(1-2), (d), (d)(1-2), (n), (n)(1-3)

(7) 40 CFR 63.1510 (a), (b), (c), (e), (o), (p), (s)
(8) 40 CFR 63.1511 (a), (b), (c), (f)
(9) 40 CFR 63.1512 (e), (e)(1), (k), (n), (n)(1-3), (o), (o)(2), (o)(4), (o)(5)
(10) 40 CFR 63.1515 (a), (a)(6), (b), (b)(1-4), (b)(9-10)
(11) 40 CFR 63.1516 (a), (a)(1-2), (b), (b)(1)(iv-vii), (b)(3), (c), (c)(1-2)
(12) 40 CFR 63.1517 (a), (a)(1-3), (b), (b)(5), (b)(7-8), (b)(13), (b)(15-16)
(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 natural gas fired scrap drying ovens (ALLI-22 & ALLI-23) upon startup:

(1) 40 CFR 63.1500(a), (c), (e), and (f)
(2) 40 CFR 63.1501
(3) 40 CFR 63.1502
(4) 40 CFR 63.1503
(5) 40 CFR 63.1505(a) and (d)
(6) 40 CFR 63.1506(a), (b), (d), (g), and (p)
(7) 40 CFR 63.1510(a), (b), (c), (e), and (w)
(8) 40 CFR 63.1511
(9) 40 CFR 63.1512(c), (k), and (r)
(10) 40 CFR 63.1513
(11) 40 CFR 63.1515
(12) 40 CFR 63.1516
(13) 40 CFR 63.1517
(14) 40 CFR 63.1518
(15) 40 CFR 63.1519
(16) Table 1 to 40 CFR 63, Subpart RRR
(17) Table 2 to 40 CFR 63, Subpart RRR
(18) Table 3 to 40 CFR 63, Subpart RRR
(19) Appendix A to 40 CFR 63, Subpart RRR

Change No. 8 Section E.2 is added as follows to incorporate the applicable requirements of NSPS for the diesel engines:

SECTION E.2NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Casthouse

(n) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34.

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

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

E.2.1 General Provisions Relating to NSPS IIII [40 CFR 60, Subpart A] [326 IAC 12-1-1]

Pursuant to 40 CFR 60.4218, the Permittee shall comply with the provisions of 40 CFR Part 60, Subpart A – General Provisions, as specified in Table 8 to 40 CFR 60, Subpart IIII, in accordance with schedule in 40 CFR 60, Subpart IIII, for emergency generator (ALLI-34).

E.2.2 Standards of Performance for Stationary Compression Ignition Internal Combustion Engines [40 CFR Part 60, Subpart IIII] [326 IAC 12]

Pursuant to 40 CFR 60.1501, the Permittee shall comply with the following provisions of 40 CFR 60, Subpart IIII (Standards of Performance for Stationary Compression Ignition Internal Combustion Engines), which are included as Attachment B and incorporated by reference as 326 IAC 12, for the emergency generator (ALLI-34):

(1) 40 CFR 60.4200(a)(4), (c), and (d)
(2) 40 CFR 60.4205(b), (d), (d)(2), and (d)(3)
(3) 40 CFR 60.4206
(4) 40 CFR 60.4207
(5) 40 CFR 60.4208
(6) 40 CFR 60.4209
(7) 40 CFR 60.4211(a), (c), (d), (f), (g), (g)(2)
(8) 40 CFR 60.4212
(9) 40 CFR 60.4214
(10) 40 CFR 60.4218
(11) 40 CFR 60.4219
(12) Table 5 to 40 CFR 60, Subpart IIII
(13) Table 8 to 40 CFR 60, Subpart IIII

Change No. 9 Section E.3 is added as follows to incorporate the applicable requirements of NESHAP ZZZZ for the diesel engines:

SECTION E.3NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS

Emissions Unit Description [326 IAC 2-7-5(14)]:

Aluminum-Lithium Alloy Casthouse

(n) One (1) diesel fired emergency generator, identified as ALLI-34, permitted in 2012, rated at 200 horsepower (1.4 MMBtu/hr), exhausting to stack ALLI-S34.

(The information describing the process contained in this facility 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 NESHAP ZZZZ [40 CFR 63, Subpart A] [326 IAC 20-1-1]

Pursuant to 40 CFR 63.6665, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, as specified in Table 8 to 40 CFR 63 Subpart ZZZZ, in accordance with schedule in 40 CFR 63 Subpart ZZZZ, for the emergency generator (ALLI-34).

E.3.2 National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines [40 CFR Part 63, Subpart ZZZZ] [326 IAC 20-82]

Pursuant to 40 CFR 63.6595, the Permittee shall comply with the following provisions of 40 CFR 63, Subpart ZZZZ (National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines), which are included as Attachment C and incorporated by reference as 326 IAC 20-82, for the emergency generator (ALLI-34) upon startup:

(1) 40 CFR 63.6580
(2) 40 CFR 63.6585, (a), (c), and (d)
(3) 40 CFR 63.6590, (a), (a)(2), (c), and (c)(1)
(4) 40 CFR 63.6595(a)(7) and (c)
(5) 40 CFR 63.6605
(6) 40 CFR 63.6625(h)
(7) 40 CFR 63.6635
(8) 40 CFR 63.6640
(9) 40 CFR 63.6645
(10) 40 CFR 63.6650
(11) 40 CFR 63.6655
(12) 40 CFR 63.6660
(13) 40 CFR 63.6665
(14) 40 CFR 63.6670
(15) 40 CFR 63.6675
(16) Table 8 to 40 CFR 63 Subpart ZZZZ

Recommendation and Conclusion

The construction and operation of this proposed modification shall be subject to the conditions of the attached proposed Significant Source Modification No. 157-31323-00001 and Significant Permit Modification No. 157-31329-00001.

(1) Based on the facts, conditions and evaluations made, OAQ recommends to the IDEM Commissioner that the Significant Source Modification No. 157-31323-00001 and Significant Permit Modification No. 157-31329-00001 be approved.

(2) A copy of the preliminary findings is also available on the Internet at: www.in.gov/idem/permits/air/pending.html.

(3) For additional information about air permits and how the public and interested parties can participate, refer to the IDEM's Guide for Citizen Participation and Permit Guide on the Internet at: www.in.gov/idem/permits/guide/.

IDEM Contact

Questions regarding this proposed permit can be directed to:

Kimberly Cottrell
Indiana Department Environmental Management
Office of Air Quality
100 North Senate Avenue
MC 61-53, Room 1003
Indianapolis, Indiana 46204-2251
Toll free (within Indiana): 1-800-451-6027 extension 3-0870
Or dial directly: (317) 233-0870
Fax: (317) 232-6749 attn: Kimberly Cottrell
Email: kcottrel@idem.in.gov

Please refer to Significant Source Modification No. 157-31323-00001 and Significant Permit Modification No. 157-31329-00001 in all correspondence.

Indiana Department of Environmental Management
Office of Air Quality

Appendix A – Emission Calculations
Technical Support Document (TSD)
Part 70 Significant Source Modification
Part 70 Significant Permit Modification

Source Description and Location

Company Name:	Alcoa, Inc. – Lafayette Operations
Address City IN Zip:	3131 East Main Street, Lafayette, Indiana 47905
County:	Tippecanoe
SIC Code:	3341 3354
Part 70 Operating Permit No.:	T157-17676-00001
Issuance Date:	February 6, 2007
Significant Source Modification No.:	157-31323-00001
Significant Permit Modification No.:	157-31329-00001
Permit Reviewer:	Kimberly Cottrell
Date:	March 27, 2012

Summary of Potential to Emit

Alcoa, Inc. – Lafayette Operations is proposing to construct and operate a new secondary aluminum cast house at the existing Lafayette, Indiana facility for the purpose of producing high strength, low weight aluminum-lithium alloys for the aerospace industry.

The subsequent pages of this document contain the detailed calculations for the proposed new construction at Alcoa, Inc., Lafayette Operations.

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Emissions Inventory & Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

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%		

Prime Aluminum Melting Furnace			
Natural Gas Burner Capacity	20.0	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	
Particulate Emissions Factor (uncontrolled, AP-42)	***4.3***	***lb/ton***	PM/PM10/PM2.5 Data
PM Emissions Rate (Melting Only)	16.72	lb/hr	
	73.24	ton/yr	
PM Emissions Factor (MACT Limit) *	***0.4***	***lb/ton***	
Restricted PM Emissions (Melting Only)	1.56	lb/hr	
	6.81	ton/yr	
PM10 Emissions Factor (PSD Limit) *	***0.2***	***lb/ton***	
PM10 Emissions Rate (Melting Only)	0.78	lb/hr	
	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)	33208.18667	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 clear 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.

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Scrap Drying Ovens			
Scrap Drying Oven #1	4.0	MMBTU/hr	
Scrap Drying Oven #2	4.0	MMBTU/hr	

All scrap must be dried prior to charging in the Electric Melting Furnaces. The scrap drying ovens are natural gas fired. The drying ovens are used for moisture removal only.

Lithium Melting Furances (Electric)			
Large Electric Lithium Melting Furnaces	4	Furnaces	Large Lithium Melting Furnaces (4)
Large Lithium Melter Capacity (lbs)	900	lbs per charge	
Large Lithium Melt Cycle (hrs)	24	hours per charge cycle	
Large Lithium Melting Furnace Melt Capacity (lbs/hr) - per furnace	37.50	lbs per hour melted - per furnace	
Large Lithium Melting Furnace Melt Capacity (lbs/yr) - per furnace	328,500	lbs/yr - per furnace	
Large Lithium Melting Furnace Melt Capacity (tons/yr) - per furnace	164.25	tons/yr - per furnace	
Total Large Lithium Melting Furnace Melt Capacity (tons/yr) - 2 furnaces	657.00	tons/yr - All 4 Furnaces	
Small Electric Lithium Melting "tube" Furnaces	15	Furnaces	Small Lithium Melting Furnaces (15)
Small Lithium Melter Capacity (lbs)	44	lbs per charge	
Small Lithium Melt Cycle (hrs)	8.5	hours per charge cycle	
Small Lithium Melting Furnace Melt Capacity (lbs/hr) - per furnace	5.18	lbs per hour melted per furnace	
Small Lithium Melting Furnace Melt Capacity (lbs/yr) - per furnace	45,346	lbs/yr - per furnace	
Small Lithium Melting Furnace Melt Capacity (tons/yr) - per furnace	22.67	tons/yr - per furnace	
Total Small Lithium Melting Furnace Melt Capacity (tons/yr) - 15 furnaces	340.09	tons/yr - 15 Small Furnaces	
UNRESTRICTED Total Lithium Melting Furnace Capacity (tons/yr) - All furnaces	997.09	tons/yr - all furnaces	Lithium Melter Furnace Capacity
Unrestricted Lithium Loading/Unloading PM/PM10/PM2.5 (fugitive) Emissions Factor	**4.00**	lb/ton	Lithium Melter Fugitive** PM/PM10/PM2.5 Emissions
Unrestricted Lithium Melting PM/PM10/PM2.5 Emissions	3,988.4	lb/yr	
	1.99	tons/yr	
RESTRICTED Lithium Loading/Unloading PM (fugitive) Emissions Factor	**0.40**	lb/ton	
RESTRICTED Lithium Melting PM Melting Emissions	398.8	lb/yr	
	0.199	tons/yr	
RESTRICTED Lithium Loading/Unloading PM10 (fugitive) Emissions Factor	**0.10**	lb/ton	
RESTRICTED Lithium Melting PM10 Melting Emissions	99.7	lb/yr	
	0.05	tons/yr	
RESTRICTED Lithium Loading/Unloading PM2.5 (fugitive) Emissions Factor	**0.10**	lb/ton	
RESTRICTED Lithium Melting PM2.5 Melting Emissions	99.7	lb/yr	
	0.05	tons/yr	

**The Lithium melter is an electric furnace that is inerted with an argon atmosphere. This renders the furnace completely inert, with near zero emissions. Therefore the emission factor for this process is associated only with fugitive emissions.

Alcoa Inc.
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Flowable Scrap Melting Furnace (Vortex - Electric)			
Furnace Melting Capacity	**4,000**	lbs/hr	Flowable Scrap Melting Production Data
Furnace Melting Capacity	2.0	tons/hr	
Unrestricted Flowable Scrap Melting Capacity	35,040,000	lbs/yr	
RESTRICTED Flowable Scrap Melting Charge Rate (lbs/yr)	***12,000,000***	***lbs/yr***	
	6,000	***ton/yr***	
Flowable Scrap Melting Skim Melt Loss (lbs/yr)	300,000	lbs/yr	
Flowable Scrap Melting PM/PM10/PM2.5 Emissions (lbs/yr)	600.00	lbs/yr	
Flowable Scrap Melting Production Output (lbs/yr)	10,000,000	lbs/yr	
Unrestricted Flowable Scrap Melting PM/PM10/PM2.5 Emissions Factor	4.0	lbs/ton	PM/PM10/PM2.5 Data
Unrestricted Flowable Scrap Melting PM/PM10/PM2.5 Emissions Rate	70,080.00	lbs/yr	
	35.04	tons/yr	
RESTRICTED Flowable Scrap Melting restricted PM emissions Rate	**0.40**	lb/ton	
RESTRICTED Flowable Scrap Melting PM Emissions Rate	2,400.00	lbs/yr	
	1.20	tons/yr	
RESTRICTED Flowable Scrap Melting restricted PM10 emissions Rate	**0.24**	lb/ton	
RESTRICTED Flowable Scrap Melting PM10 Emissions Rate	1,440.00	lbs/yr	
	0.72	tons/yr	
RESTRICTED Flowable Scrap Melting restricted PM2.5emissions Rate	**0.10**	lb/ton	
RESTRICTED Flowable Scrap Melting PM2.5 Emissions Rate	600.00	lbs/yr	
	0.30	tons/yr	
Melt Loss (skim %)	2.5%		Melt Loss Data
Melt Loss (lbs/yr)	300,000	lbs/yr	

The Flowable Scrap Vortex Melting Furnace has an average melting capacity of 1,142 lbs/hr
The Flowable Scrap Melting Furnace has a maximum melting rate of 4,000 lbs/hr; the maximum melting quantity will not be greater than 10.0 million pounds per year.

Flowable Scrap Maximum Charge Input
Maximum Desired Finished Flowable Scrap Output - 10 million lbs/yr
Anticipated Skim Melt Loss - 2.5% of Charge Input (0.025 * charge input)
PM/PM10/PM2.5 Emissions Rate - 0.1 lbs/ton (0.00005 * input)
Total Charge Input = Melt Loss + PM/PM10/PM2.5 emissions + Finished Product
Input = (0.025 * input) + (0.00005 * input) + 10 million lbs/yr
Input = 10,000,000 / (1 - 0.025 - 0.00005)

The flowable scrap melting furnace will have a melt loss from skimming at 2.5%
The Flowable Scrap furnace is an electric furnace that is inerted with an atmosphere of argon to minimize oxide formation and metal loss

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Electric Induction Melter Furnace Design Information			
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/heat)	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	
Unrestricted Melting PM/PM10/PM2.5 Emissions Factor	***4.0***	***lbs/ton metal melted***	PM/PM10/PM2.5 Emissions Data
Unrestricted Melting PM/PM10/PM2.5 Emissions Rate - (one furnace)	71,169	lb/yr	
	35.58	ton/yr	
RESTRICTED Melting PM Emissions Factor	***0.4***	***lbs/ton metal melted***	
Restricted Melting PM Emissions Rate - (one furnace)	7,117	lb/yr	
	3.56	ton/yr	
Restricted Melting PM10 Emissions Factor	***0.1***	***lbs/ton metal melted***	
Restricted Melting PM10 Emissions Rate - (one furnace)	1,779	lb/yr	
	0.89	ton/yr	
Restricted Melting PM2.5 Emissions Factor	***0.1***	***lbs/ton metal melted***	
Restricted Melting PM2.5 Emissions Rate - (one furnace)	1,779	lb/yr	
	0.89	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
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 = 1022 drops/yr (1.4 drops-fce/day * 2 fces * 365 days/yr
Anticipated Skim Melt Loss - 4.5% of Charge Input (0.045 * charge input)
PM/PM10/PM2.5 Emissions Rate - 0.1 lbs/ton (0.00005 * input)
Total Charge Input = Melt Loss + PM/PM10/PM2.5 emissions + Finished Product + fce. flush + drain par
Input = (0.045 * input) + (0.00005 * input) + ((62,000 lbs/cycle + 3,000 lbs/cycle + 1,500 lbs/cycle)* 1,022 cycles/yr
Charge Rate Input = ((62,000+3,000+1,500) * 1022) / (1 - 0.045 - 0.00005)

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.

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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	
Argon Purge Rate	300.0	scfh	A622 Argon Use
Argon Flux Rate	330.0	scfh	
Chlorine Flux Rate	1.65	scfh	A622 Chlorine Use
Chlorine Density	0.1869	lbs/ft3	
Chlorine PTE mass flow rate	2,701	lbs/yr	
Available Cl2 for reacting to HCl	50%		
Available Chlorine to hydrolize to HCl	1,351	lbs/yr	
Conversion of Cl2 to HCl	1.028	lb/lb	
HCl formation from available Cl2	1,389	lbs/yr HCl	
Melt Loss (skim %)	***0.66%***		Melt Loss Data
Melt Loss (lb/drop)	50.0	lbs/drop	
Melt Loss (lbs/yr)	51,100	lbs/yr	

There will be no natural gas burners at the A622 filter box because it is designed to be an argon gas inert atmosphere
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).
Alcoa 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. Alcoa also runs 300SCFH into the head space of the box at all times to keep the oxygen content in the head space down. Alcoa 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).

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%

Assume that 50% of the chlorine gas is used in the chemical reaction. The balance is hydrolized to HCl with available moisture in the air
The conversion of Cl2 gas to HCL is as follows:

2Cl2 + 2H2O => 2HCl + O2	So, Cl2/HCl = (70.906/36.45) = 1.945
Therefore, 2Cl2 => 4HCl, or Cl2 => 2HCl	Cl2 = HCl (1.945)
MW Cl2 = 2*35.45 = 70.906	so, 1 mole Cl2 yields 2 moles HCl
MW HCl = 1+35.45 = 36.45	and Cl2 = 1.945 lb HCl, then
Therefore, Cl2 => 2HCl	1 lb Cl2 = 1.028 lbs HCl

Al-Li Casting Pit			
A622 Natural Gas Burner Capacity	0	MMBTU/hr	No gas burners used
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

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Homogenizing Ovens AFB Usage Information			
Homogenizing Oven Natural Gas Burner Capacity	27.0	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 Additions per load (weighted average)	14.35	lbs/load	
AFB Additions per load (weighted average)	229.66	oz/load	
Limited Annual AFB Consumption	4,191	lbs AFB/yr (both ovens)	
	2.10	tons AFB/yr (both ovens)	
HF Emission Factor	0.76	lbs HF per lb AFB	HF Emissions
Max PTE HF Emissions (lbs/yr)	7,989	lbs HF / yr	
Max PTE HF Emissions (tons/yr)	3.99	**tons HF/yr**	
Limited PTE HF Emissions (lbs/yr)	3,185	lbs HF / yr	
Limited PTE HF Emissions (tons/yr)	**1.59**	**tons HF/yr**	
F Emission Factor	0.95	lbs F per lb HF	F Emissions
Max PTE F Emissions (lbs/yr)	7,590	lbs F / yr	
Max PTE F Emissions (tons/yr)	3.79	**tons F/yr**	
Limited PTE F Emissions (lbs/yr)	3,026	lbs F / yr	
Limited PTE F Emissions (tons/yr)	**1.51**	**tons F/yr**	

AFB usage in Ingot ALLI alloys is 3 lbs/load, but may be as high as 6, or 9 lbs/load.
For Lafayette facility wide AFB usage, Alcoa requsests for IDEM to continue to limit the overall facility usage of AFB at 12.75 tons/yr total consumption.

HF Generation from AFB
There are 0.76 lbs HF generated from each lb AFB based on stoichiometric chemistry as follows
2NH4BF4+3H2O --> 2NH3+8HF+B2O3
The molecular weight of 2NH4BF4 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

Fluoride Emission Rate:
0.722 lb F / lb AFB

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Saw & Peeler Calculations			
Maximum Total Cast Weight (2 furnaces)	31,682	tons/yr	Log Saw Emissions
Maximum Total Cast Weight (2 furnaces)	63,364,000	pounds/yr	
Log Production (% of total production)	70%	percent of total cast production	
Log Production (% of total production)	100%	percent of total cast production (WORST CASE)	
Log Production (lbs/yr)	44,354,800	pounds logs/yr	
Logs Cast Per Drop Cycle	6	logs/drop cycle	
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	
Peeled Log Diameter	20.6	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%		
Uncontrolled Aluminum Emissions generated from saw cuts (lbs/yr)	432.2	lbs/yr @ 100%	
Uncontrolled Aluminum Emissions generated from saw cuts (tons/yr)	0.2	tons/yr @ 100%	
Uncontrolled Aluminum Emissions generated from saw cuts (lbs/yr)	302.5	lbs/yr @ 70%	
Uncontrolled Aluminum Emissions generated from saw cuts (tons/yr)	0.151	tons/yr @ 70%	
Peeled Billet Diameter (inches)	20.563	inches	Log Peeler 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 log peeling (lbs/yr)	1,148.1	lbs/yr @ 100%	
Uncontrolled Aluminum Emissions generated from log peeling (tons/yr)	0.6	tons/yr @ 100%	
Uncontrolled Aluminum Emissions generated from log peeling (lbs/yr)	803.7	lbs/yr @ 70%	
Uncontrolled Aluminum Emissions generated from log peeling (tons/yr)	0.402	tons/yr @ 70%	

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Emissions Inventory & Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Saw & Peeler Calculations (continued)			
Slab Production	30%	percent of total melt production	Slab Saw Emissions
Slab Production	19,009,200	pounds/yr	
Slab Width (inches)	60	inches	
Slab Thickness (inches)	16	inches	
Slab Length (inches)	244	inches	
Uncropped Slab Volume (in3)	234,240	cubic inches	
Uncropped Slab Volume (ft3)	135.56	cubic feet	
Uncropped Slab Weight (lbs)	22,253	lbs per slab	
Maximum Number of Slabs	854	# Slabs	
Slab Cross-sectional Area (in2)	960.0	square inches (in2)	
Saw Blade Thickness (in)	0.25	inches	
Volume of metal removed per cut	240	in3/cut	
Number of Slab Crop Cuts	2	number of cuts	
Total Volume metal removed per slab	480.0	cubic inches per slab	
Total mass of metal removed from each slab from saw cuts	45.6	lbs/slab	
Total Mass removed from all slabs	38,942	total lbs/yr metal from all slab cuts	
% Aluminum Emissions generated from saw cuts	0.10%		
Uncontrolled Aluminum Emissions generated from slab saw cuts (lbs/yr)	38.9	lbs/yr @ 30%	
Uncontrolled Aluminum Emissions generated from slab saw cuts (tons/yr)	0.019	tons/yr @ 30%	

***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 yea
Estimate of aluminum emissions generated as a percentage of total aluminum mass peeled.

Slab thickness varies from 16 inches to 18 inches depending on width.
Slab width can vary from 50" (16"), 58" (18") and 60" (16")
Slab length (uncropped) is 244 "
Slab Butt Crop: 25"
Slab Head Crop: 5"

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.

Estimate of aluminum emissions generated as a percentage of total aluminum mass cut

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Emissions Inventory & Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Skim Generation, Cooling, & Load Out			
Skim Generation (lbs/yr) - both electric melters & prime furnace	5,257,046	lbs/yr	Skim Generation
Skim Generation	2,629	tons/yr	
	600.12	lb/hr (time-weighted average)	
Unrestricted Skim Cooling PM/PM10/PM2.5 Emission Factor	4.0	lbs/ton	Skim Cooling
Unrestricted Skim Cooling PM/PM10/PM2.5 Emissions	10,514.09	lbs/yr	
	5.26	ton/yr	
Restricted Skim Cooling PM Emission Factor	**1.3**	**lbs/ton**	
Restricted Skim Cooling PM Emissions	3,417.08	lbs/yr	
	1.71	ton/yr	
Restricted Skim Cooling PM10 Emission Factor	**0.15**	**lbs/ton**	
Restricted Skim Cooling PM10 Emissions	394.28	lbs/yr	
	0.20	ton/yr	
Restricted Skim Cooling PM2.5 Emission Factor	**0.15**	**lbs/ton**	
Restricted Skim Cooling PM2.5 Emissions	394.28	lbs/yr	
	0.20	ton/yr	
Unrestricted Skim Loadout PM/PM10/PM2.5 Emission Factor	**4.0**	**lbs/ton**	Skim Load Out Emissions
Unrestricted Skim Loadout PM/PM10/PM2.5 Emissions	10,514.09	lbs/yr	
	5.26	ton/yr	
Restricted Skim Loadout PM Emission Factor	**1.3**	**lbs/ton**	
Restricted Skim Loadout PM Emissions	3,417.08	lbs/yr	
	1.71	ton/yr	
Restricted Skim Loadout PM10/PM2.5 Emission Factor	**0.06**	**lbs/ton**	
Restricted Skim Loadout PM10/PM2.5 Emissions	157.71	lbs/yr	
	0.08	ton/yr	
Restricted Skim Loadout PM10/PM2.5 Emission Factor	**0.06**	**lbs/ton**	
Restricted Skim Loadout PM10/PM2.5 Emissions	157.71	lbs/yr	
	0.08	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 (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 PM2.5 is assumed equal to PM10

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
De-bottlenecking Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

De-bottlenecking Analysis				
Hignest Melter Production 2-Year Average	184.28	million lbs/yr	Historical Melter Production	Melting
Maximum Aluminum-Lithium Melted Metal Production	71.17	million lbs melted/yr	Antipated Maximum Melted Metal Al-Li Production	
Extrusion Units 1 & 2 Natural Gas Usage Average	101.28	mmcf/yr	Historical Natural Gas Consumption	Natural Gas Usage Calculations
Production to Gas Ratio	1.95	mmlbs melted/mmcf		
Anticipated Natural Gas Usage Increase at Existing Lafayette Extrusion Unit 1 & Unit 2	36.42	mmcf/yr	Projected Increases of Natural Gas & AFB at Existing Extrusion Units from New Al-Li Casthouse	
Lafayette facility wide AFB Usage (all areas) Average	15,972	lbs AFB /yr	Historical AFB Consumption	AFB Usage Calculations
Production to AFB Ratio	17.88	mmlbs melted/ 1000 lbs AFB		
HF to AFB Emission Factor	0.76	lbs HF / lb AFB	derived from stoichiometry and MW (see below)	
Fluoride to HF Emission Factor	0.95	lbs F/ lb HF		
Fluoride to AFB Emission Factor	0.722	lbs F/ lb AFB		
AFB - Increased Extrusion Units 1 & 2 Usage	3,980	lbs/yr	Projected Increases of AFB	
New Al-Li Homo Ovens	4,191	lbs AFB /yr		
Total Anticipated Future AFB Usage	12.07	ton AFB /yr	Anticipated maximum facility-wide AFB usage	

Notes:
Because the de-bottlenecking analysis is based on lbs of metal melted, the calculations are based on the total metal charged to the elecric induction melter holder furnaces of 71.17 million lbs/y
not the expected maximum finished production of 50 million lbs/yr sent to Extrusion Units 1 and Unit 2.
The maximum finished production of billets and slabs at the Aluminum-Lithium casthouse is 50.0 million pounds per yea
Finished production is defined as billets and slabs that have been cast, sawed, and peelec

Total future AFB usage consists of the following
(1) Total Existing Lafayette AFB Usage, plus
(2) Additional AFB used in existing Lafayette Extrusion Units 1 & Unit 2 due to increased production from Al-Li project, plus
(3) Additional AFB usage from new Homogenizing Ovens at Al-Li project

Current Lafayette Title 5 AFB Limit is 12.75 tpy to Maintain Area Source Status. Alcoa proposes to maintain this limit

Methodology:
Maximum allowable Aluminum-Lithium homogenizing oven AFB usage is based on the following

Fluorides generated from AFB Usage from:
(1) Anticipated increased AFB usage at Lafayette Extrusion Units 1 & Unit 2 from extruding additional newly cast Al-Li alloy, an
(2) Anticipated AFB usage at new Al-Li Homogenizing Ovens

Maximum Allowable Fluoride Emissions Increase under PSD = 3 tons/yr (6,000 lbs/yr
Maximum Allowable Fluorides from Homogenizing Ovens = (Total Allowable Fluordes) - (Fluorides from increased production at Lafayette Extrusion Units 1 & Unit

Fluoride/AFB Emission Factor = 0.722 lbs Fluoride per lb AFE
Maximum Allowable AFB = (6000 lbs F) / (0.722 lbs F/lb AFB) = 8310 lbs AFB total allowable usage to equal 6000 lbs fluorid

The fluoride to AFB emission factor is determined as follows

HF Generation from AFB
There are 0.76 lbs HF generated from each lb AFB based on stoichiometric chemistry as follows
2NH4BF4+3H2O --> 2NH3+8HF+B2O3
The molecular weight of 2NH4BF4 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

F Generation from AFB
(0.76 lbs HF/lb AFB) * (0.95 lbs F/lb HF) = 0.722 lbs Fluoride per lb AFE

Maximum allowable Aluminum-Lithium homogenizing oven AFB usage is based on the following

Fluorides generated from AFB Usage from:
(1) Anticipated increased AFB usage at Lafayette Extrusion Units 1 & Unit 2 from extruding additional newly cast Al-Li alloy, an
(2) Anticipated AFB usage at new Al-Li Homogenizing Ovens

Maximum Allowable Fluoride Emissions Increase under PSD = 3.0 tons/yr (6,000 lbs/yr
Maximum Allowable Fluorides from Homogenizing Ovens = (Total Allowable Fluordes) - (Fluorides from increased production at Lafayette Extrusion Units 1 & Unit

Fluoride/AFB Emission Factor = 0.722 lbs Fluoride per lb AFE
Maximum Allowable AFB = (6000 lbs F) / (0.722 lbs F/lb AFB) = 8310 lbs AFB total allowable usage to equal 6000 lbs fluorid

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Historical Metling, AFB Usage, and Natural Gas Usage

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Estimated Additional Natural Gas Usage in Units 1 & 2 from this modification: 10.12%

Date	Melter Production (lbs/month)	Melter Production (MMlbs/mo)	AFB Usage - Units 1 & 2 Only (Pounds)	Natural Gas Usage - Total (MMCF)	Natural Gas Usage - Units 1 & 2 (MMCF)	Melter Average Annual Total (from 2yr Total) (MMlbs/yr)	AFB Average Annual Total (from 2yr Total) (lbs/yr)	NG Average Annual Total (from 2yr Total) (MMCF/yr)	Melter Production 24 month Rolling Average (mmlbs/month)	AFB 24 month Rolling Average (lbs/month)	Natural Gas 24 month Rolling Average (mmcf/month)	AFB Ratio in Extrusion Units 1 & 2 (mmlbs melted /1000 lbs AFB)	Natural Gas Ratio at Extrusion (mmlbs melted/mmcf)
Jan-05	16,023,808	16.02	902	119.09	12.05								
Feb-05	17,380,166	17.38	869	104.87	10.61								
Mar-05	16,891,515	16.89	854	103.86	10.51								
Apr-05	15,738,737	15.74	1,396	76.93	7.78								
May-05	16,262,696	16.26	1,510	70.51	7.13								
Jun-05	15,547,658	15.55	1,513	65.94	6.67								
Jul-05	8,485,033	8.49	1,549	44.55	4.51								
Aug-05	14,421,891	14.42	1,466	63.39	6.41								
Sep-05	15,520,707	15.52	1,499	67.84	6.86								
Oct-05	13,004,971	13.00	1,652	73.60	7.45								
Nov-05	12,822,085	12.82	1,463	74.84	7.57								
Dec-05	11,022,836	11.02	1,283	74.33	7.52								
Jan-06	16,045,658	16.05	880	99.86	10.10								
Feb-06	13,661,242	13.66	814	96.27	9.74								
Mar-06	15,561,922	15.56	1,128	89.94	9.10								
Apr-06	16,968,630	16.97	1,457	71.76	7.26								
May-06	17,734,570	17.73	1,718	70.67	7.15								
Jun-06	16,118,172	16.12	1,450	61.56	6.23								
Jul-06	8,544,479	8.54	1,507	43.27	4.38								
Aug-06	15,833,209	15.83	1,654	66.70	6.75								
Sep-06	16,314,983	16.31	1,590	65.58	6.63								
Oct-06	15,004,663	15.00	1,478	73.09	7.39								
Nov-06	16,620,272	16.62	1,272	84.21	8.52								
Dec-06	12,634,417	12.63	899	89.61	9.07								
Jan-07	16,003,600	16.00	875	108.76	11.00	177.08	15,898	93.70	14.76	1,324.85	7.81	11.14	1.89
Feb-07	12,490,457	12.49	1,044	109.52	11.08	177.07	15,885	93.18	14.76	1,323.73	7.76	11.15	1.90
Mar-07	15,892,693	15.89	776	81.78	8.27	174.63	**15,972**	93.41	14.55	**1,331.02**	7.78	10.93	1.87
Apr-07	15,297,580	15.30	1,303	74.49	7.54	174.13	15,933	92.30	14.51	1,327.77	7.69	10.93	1.89
May-07	16,724,920	16.72	1,129	65.94	6.67	173.91	15,887	92.17	14.49	1,323.88	7.68	10.95	1.89
Jun-07	15,770,010	15.77	1,504	60.81	6.15	174.14	15,696	91.94	14.51	1,308.00	7.66	11.09	1.89
Jul-07	11,332,247	11.33	1,014	50.25	5.08	174.25	15,692	91.68	14.52	1,307.65	7.64	11.10	1.90
Aug-07	16,784,711	16.78	1,113	66.22	6.70	175.67	15,425	91.97	14.64	1,285.38	7.66	11.39	1.91
Sep-07	16,604,340	16.60	1,349	63.55	6.43	176.85	15,248	92.11	14.74	1,270.67	7.68	11.60	1.92
Oct-07	16,317,408	16.32	1,249	71.30	7.21	177.40	15,173	91.90	14.78	1,264.42	7.66	11.69	1.93
Nov-07	16,656,200	16.66	1,167	91.32	9.24	179.05	14,972	91.78	14.92	1,247.65	7.65	11.96	**1.95**
Dec-07	14,924,860	14.92	708	108.24	10.95	180.97	14,824	92.61	15.08	1,235.31	7.72	12.21	1.95
Jan-08	16,186,100	16.19	808	114.71	11.61	182.92	14,536	94.33	15.24	1,211.35	7.86	12.58	1.94
Feb-08	15,020,598	15.02	709	109.30	11.06	182.99	14,500	95.08	15.25	1,208.35	7.92	12.62	1.92
Mar-08	15,597,276	15.60	741	115.86	11.72	183.67	14,448	95.74	15.31	1,204.00	7.98	12.71	1.92
Apr-08	17,708,247	17.71	1,220	83.80	8.48	183.69	14,255	97.05	15.31	1,187.90	8.09	12.89	1.89
May-08	17,227,220	17.23	1,337	74.30	7.52	184.06	14,136	97.66	15.34	1,178.02	8.14	13.02	1.88
Jun-08	13,022,450	13.02	1,438	63.39	6.41	183.80	13,946	97.84	15.32	1,162.13	8.15	13.18	1.88
Jul-08	11,436,438	11.44	1,333	56.39	5.70	182.26	13,940	97.93	15.19	1,161.63	8.16	13.07	1.86
Aug-08	16,989,336	16.99	1,782	70.62	7.14	183.70	13,853	98.60	15.31	1,154.38	8.22	13.26	1.86
Sep-08	14,669,316	14.67	1,762	65.42	6.62	**184.28**	13,917	98.80	**15.36**	1,159.71	8.23	13.24	1.87
Oct-08	12,116,403	12.12	1,283	74.33	7.52	183.46	14,003	98.79	15.29	1,166.88	8.23	13.10	1.86
Nov-08	10,348,404	10.35	511	85.83	8.68	182.01	13,905	98.85	15.17	1,158.73	8.24	13.09	1.84
Dec-08	11,690,630	11.69	600	109.70	11.10	178.88	13,524	98.93	14.91	1,127.02	8.24	13.23	1.81
Jan-09	14,478,298	14.48	629	130.64	13.22	178.41	13,375	99.95	14.87	1,114.58	8.33	13.34	1.78
Feb-09	13,606,488	13.61	444	101.52	10.27	177.64	13,252	101.06	14.80	1,104.33	8.42	13.41	1.76
Mar-09	14,716,164	14.72	477	92.27	9.33	178.20	12,952	100.65	14.85	1,079.33	8.39	13.76	1.77
Apr-09	12,730,386	12.73	911	76.40	7.73	177.61	12,803	101.18	14.80	1,066.88	8.43	13.87	1.76
May-09	11,751,424	11.75	830	60.15	6.09	176.33	12,607	**101.28**	14.69	1,050.56	**8.44**	13.99	1.74
Jun-09	13,114,148	13.11	996	62.80	6.35	173.84	12,457	100.98	14.49	1,038.10	8.42	13.96	1.72
Jul-09	7,271,549	7.27	652	45.65	4.62	172.51	12,203	101.09	14.38	1,016.92	8.42	14.14	1.71
Aug-09	11,577,853	11.58	738	63.93	6.47	170.48	12,022	100.85	14.21	1,001.83	8.40	14.18	1.69
Sep-09	10,757,540	10.76	733	57.07	5.77	167.88	11,834	100.74	13.99	986.19	8.39	14.19	1.67
Oct-09	11,551,155	11.55	704	70.16	7.10	164.96	11,526	100.41	13.75	960.52	8.37	14.31	1.64
Nov-09	11,120,122	11.12	351	75.45	7.63	162.57	11,254	100.35	13.55	937.81	8.36	14.45	1.62
Dec-09	7,511,627	7.51	378	93.68	9.48	159.81	10,846	99.55	13.32	903.83	8.30	14.73	1.61
Jan-10	11,988,093	11.99	418	122.85	12.43	156.10	10,681	98.81	13.01	890.10	8.23	14.61	1.58

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Historical Metling, AFB Usage, and Natural Gas Usage

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Estimated Additional Natural Gas Usage in Units 1 & 2 from this modification: 10.12%

Date	Melter Production (lbs/month)	Melter Production (MMlbs/mo)	AFB Usage - Units 1 & 2 Only (Pounds)	Natural Gas Usage - Total (MMCF)	Natural Gas Usage - Units 1 & 2 (MMCF)	Melter Average Annual Total (from 2yr Total) (MMlbs/yr)	AFB Average Annual Total (from 2yr Total) (lbs/yr)	NG Average Annual Total (from 2yr Total) (MMCF/yr)	Melter Production 24 month Rolling Average (mmlbs/month)	AFB 24 month Rolling Average (lbs/month)	Natural Gas 24 month Rolling Average (mmcf/month)	AFB Ratio in Extrusion Units 1 & 2 (mmlbs melted /1000 lbs AFB)	Natural Gas Ratio at Extrusion (mmlbs melted/mmcf)
Feb-10	11,372,837	11.37	397	103.23	10.44	154.00	10,487	99.23	12.83	873.88	8.27	14.69	1.55
Mar-10	11,757,162	11.76	517	80.65	8.16	152.18	10,330	98.92	12.68	860.87	8.24	14.73	1.54
Apr-10	10,916,715	10.92	738	60.86	6.16	150.26	10,218	97.14	12.52	851.52	8.09	14.70	1.55
May-10	9,751,105	9.75	799	58.82	5.95	146.86	9,977	95.98	12.24	831.44	8.00	14.72	1.53
Jun-10	10,297,155	10.30	765	59.07	5.98	143.12	9,709	95.19	11.93	809.06	7.93	14.74	1.50
Jul-10	7,627,053	7.63	549	44.53	4.51	141.76	9,373	94.97	11.81	781.04	7.91	15.13	1.49
Aug-10	11,340,143	11.34	867	64.38	6.51	139.86	8,981	94.37	11.65	748.38	7.86	15.57	1.48
Sep-10	11,881,073	11.88	690	66.27	6.70	137.03	8,523	94.06	11.42	710.28	7.84	16.08	1.46
Oct-10	12,015,507	12.02	693	70.77	7.16	135.64	7,988	94.10	11.30	665.63	7.84	16.98	1.44
Nov-10	11,570,004	11.57	373	84.85	8.58	135.59	7,693	93.92	11.30	641.05	7.83	17.63	1.44
Dec-10	6,842,545	6.84	317	96.82	9.80	136.20	7,623	93.87	11.35	635.28	7.82	17.87	1.45
						133.77	7,482	93.22	11.15	623.48	7.77	**17.88**	1.44
					Maximum Values:	**184.28**	**15,972**	**101.28**	**15.36**	**1,331.02**	**8.44**	**17.88**	**1.95**

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
PSD Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Unrestricted Potential to Emit (tons/yr)																	
Emission Unit	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO_2e**	**Pb**	**F**	**HF**	**Be**	**HCl**	**Mn**	**Form**	**Hex**	**Total HAP**
Al-Li Project Natural Gas Sources	*79.02*	*94.08*	*1.79*	*7.15*	*7.15*	*0.56*	*5.17*	*113,579*	*0.0047*						*0.071*	*1.69*	*1.78*
Prime Aluminum Melting Furnace #1 (NG combustion)	7.21	8.59	0.16	0.65	0.65	0.05	0.47	10,369	0.0004						6.4E-03	0.15	0.16
Scrap Drying Oven #1	1.44	1.72	0.03	0.13	0.13	0.01	0.09	2,074	0.0001						1.3E-03	0.03	0.03
Scrap Drying Oven #2	1.44	1.72	0.03	0.13	0.13	0.01	0.09	2,074	0.0001						1.3E-03	0.03	0.03
Homogenizing Oven #1 - natural gas combustion	9.74	11.59	0.22	0.88	0.88	0.07	0.64	13,998	0.0006						8.7E-03	0.21	0.22
Homogenizing Oven #2 - natural gas combustion	9.74	11.59	0.22	0.88	0.88	0.07	0.64	13,998	0.0006						8.7E-03	0.21	0.22
Natural Gas Space Heating	49.45	58.87	1.12	4.47	4.47	0.35	3.24	71,068	0.0029						0.044	1.06	1.11
Prime Aluminum Melting Furnace #1 (PM only; no NG)			73.24	73.24	73.24							6.8E-06		3.4E-02			
Lithium Melting Furnace Fugitive Emissions			1.99	1.99	1.99							5.0E-08		2.5E-04			2.5E-04
Flowable Scrap Melting Furnace Fugitive Emissions			35.04	35.04	35.04							3.0E-07		1.5E-03			1.5E-03
Electric Induction Melting Furnaces (2) Fugitive Emissions			71.17	71.17	71.17							7.1E-05		3.6E-01			3.6E-01
A622 Filter			0.17	0.17	0.17								0.69				0.69
Homogenizing Oven #1 - AFB Usage										1.90	1.997						3.89
Homogenizing Oven #2 - AFB Usage										1.90	1.997						3.89
Log Peeler Emissions			0.57	0.57	0.57							4.0E-07		1.0E-06			1.4E-06
Log Saw Emissions			0.22	0.22	0.22							7.6E-11		3.8E-07			3.8E-07
Skim Cooling			5.26	5.26	5.26							2.0E-07		9.9E-04			9.9E-04
Skim Loadout Fugitive Emissions			5.26	5.26	5.26							1.7E-06		8.5E-03			8.5E-03
200 hp Emergency Generator	0.33	1.54	0.11	0.11	0.11	0.10	0.13	57.59							4.1E-04		2.3E-03
Cooling Tower Emissions			0.10	0.08	0.08												
Vehicular Roadway Fugitive Emissions			1.39	0.28	0.07												
Total Emissions from New Construction	**79.36**	**95.62**	**196.31**	**200.54**	**200.33**	**0.67**	**5.30**	**113,637**	**0.0047**	**3.79**	**3.995**	**8.1E-05**	**0.69**	**4.0E-01**	**0.071**	**1.69**	**10.63**
Projected Actual Emissions (Extrusion Units I & II)	*5.78*	*6.88*	*0.13*	*0.52*	*0.52*	*0.04*	*0.38*	*8,312*	*0.0003*						*0.01*	*0.12*	*0.13*
Baseline Actual Emissions (Extrusion Units I & II) [May 2007 through April 2009]	*4.25*	*5.06*	*0.10*	*0.38*	*0.38*	*0.03*	*0.28*	*6,114*	*0.0003*						*3.80E-03*	*0.09*	*0.10*
Projected Actual Emissions (AFB Usuage for Extrusion Units I & II)										*7.20*	*7.58*						*14.78*
Baseline Actual Emissions (AFB Usuage for Extrusion Units I & II) [March 2005 through February 2007]										*5.77*	*6.07*						*11.84*
Debottlenecked Downstream Extrusion Units I & II Emissions Increases	*1.53*	*1.82*	*0.03*	*0.14*	*0.14*	*0.01*	*0.10*	*2,199*	*0.0001*	*1.44*	*1.51*				*1.37E-03*	*0.03*	*2.98*
Project Total Emissions Increase	**80.89**	**97.44**	**196.34**	**200.68**	**200.47**	**0.68**	**5.40**	**115,835**	**0.0048**	**5.23**	**5.51**	**8.1E-05**	**0.69**	**4.0E-01**	**7.2E-02**	**1.73**	**13.62**
PSD Significant Levels	100	40	25	15	10	40	40	75,000	0.6	3.0	NA	0.0004	NA	NA	NA	NA	NA

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
PSD Analysis

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Limited Potential to Emit (ton/yr)																	
Emission Source	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**CO_2e**	**Pb**	**F**	**HF**	**Be**	**HCl**	**Mn**	**Form**	**Hex**	**Total HAP**
Al-Li Project Natural Gas Sources	79.02	**36.53**	1.79	7.15	**2.78**	0.56	5.17	**44,102**	0.0047						7.1E-02	1.69	0.69
Prime Aluminum Melting Furnace #1 (NG combustion)																	
Scrap Drying Oven #1																	
Scrap Drying Oven #2																	
Homogenizing Oven #1 - natural gas combustion																	
Homogenizing Oven #2 - natural gas combustion																	
Natural Gas Space Heating																	
Prime Aluminum Melting Furnace #1 (PM only; no NG)			**6.81**	**3.41**	**3.41**							6.8E-06		3.4E-02			
Lithium Melting Furnace Fugitive Emissions			1.99	**0.05**	**0.05**							5.0E-08		2.5E-04			2.5E-04
Flowable Scrap Melting Furnace Fugitive Emissions			**1.20**	**0.72**	**0.30**							3.0E-07		1.5E-03			1.5E-03
Electric Induction Melting Furnaces (2) Fugitive Emissions			**7.12**	**1.78**	**1.78**							7.1E-05		3.6E-01			3.6E-01
A622 Filter			0.17	0.17	0.17								0.69				
Homogenizing Oven #1 - AFB Usage										**0.76**	2.00						3.89
Homogenizing Oven #2 - AFB Usage										**0.76**	2.00						3.89
Log Peeler Emissions			0.57	0.57	0.57							4.0E-07		1.0E-06			1.4E-06
Log Saw Emissions			0.22	0.22	0.22							7.6E-11		3.8E-07			3.8E-07
Skim Cooling			**1.71**	**0.20**	**0.20**							2.0E-07		9.9E-04			9.9E-04
Skim Loadout Fugitive Emissions			**1.71**	**0.08**	**0.08**							1.7E-06		8.5E-03			8.5E-03
200 hp Emergency Generator	0.33	1.54	0.11	0.11	0.11	0.10	0.13	57.59							4.1E-04		2.3E-03
Cooling Tower Emissions			0.10	0.08	0.08												
Vehicular Roadway Fugitive Emissions			1.39	0.28	0.07												
Total Emissions from New Construction	**79.36**	**38.07**	**24.89**	**14.81**	**9.81**	**0.67**	**5.30**	**44,159**	**0.0047**	**1.51**	**3.99**	**8.1E-05**	**0.69**	**4.0E-01**	**7.1E-02**	**1.69**	**8.85**
Projected Actual Emissions (NG Usuage for Extrusion Units I & II)	*5.78*	*6.88*	*0.13*	*0.52*	*0.52*	*0.04*	*0.38*	*8,312*	*0.0003*						*5.16E-03*	*1.24E-01*	*1.30E-01*
Baseline Actual Emissions (NG Usuage for Extrusion Units I & II) [May 2007 through April 2009]	*4.25*	*5.06*	*0.10*	*0.38*	*0.38*	*0.03*	*0.28*	*6,114*	*0.0003*						*3.80E-03*	*9.12E-02*	*9.59E-02*
Projected Actual Emissions (AFB Usuage for Extrusion Units I & II)										*7.20*	*7.58*						
Baseline Actual Emissions (AFB Usuage for Extrusion Units I & II) [March 2005 through February 2007]										*5.77*	*6.07*						
Debottlenecked Downstream Extrusion Units I & II Emissions Increases	*1.53*	*1.82*	*0.03*	*0.14*	*0.14*	*0.01*	*0.10*	*2,199*	*0.0001*	*1.44*	*1.51*				*1.37E-03*	*3.28E-02*	*3.45E-02*
Project Total Emissions Increase	**80.89**	**39.89**	**24.92**	**14.95**	**9.95**	**0.68**	**5.40**	**46,358**	**0.0048**	**2.95**	**5.51**	**8.1E-05**	**0.69**	**4.0E-01**	**7.2E-02**	**1.73**	**8.88**
PSD Significant Levels	100	40	NA	15	10	40	40	75,000	0.6	3.0	NA	0.0004	NA	NA	NA	NA	NA

Notes:
No emissions for NOX, SOX, CO, VOC, Lead and CO2 are estimated from non-combustion electric heated process furnaces and equipment.
The PSD major modification pollutant is fluorides, with a major modification threshold increase of 3.0 tons.
The molecular weight of H=1.0 and F=19.0. Therefore, there are (19/20) F per mole of HF.
PM-PM10-PM2.5 emissions for the Electric Melting Furances includes only process melting emissions because there is no natural gas combustion associated with this process.
PM-PM10-PM2.5 emissions for the Flowable Scrap Melting Furance is includes only process melting emissions because there is no natural gas combustion.
PM emissions for the A622 Filter are estimated at 0.01 lbs/ton because the units are periodically skimmed. Otherwise, the process is inert with no natural gas combustion.
HAP emissions are based on the percentage of HAP in the alloy multiplied by the PM2.5 melt loss emissions.

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Recirculating Cooling Tower Emissions

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Density of Water	8.34	lbs/gallon
Recirculation Flow Rate (gpm)	1,000	gallons/minute
Cooing Tower Drift	0.005%	% of Recirc. Rate
Cooling Tower Drift (gal/day)	72	gallons/day
Cooling Tower Drift (lbs/day)	600	lbs/day
Cooling Tower Drift (lbs/day)	0.0006	million lbs/day
Recirculating Water Conductivity	674	micro-mho
Conductivity to TDS Ratio	65%	
Total Dissolved Solids (mg/l)	438.1	mg/l
Cooling Tower Cycles of Concentration	2.10	
PM Drift Emissions Rate (lbs/yr)	202	lbs/yr
PM Drift Emissions Rate (tons/yr)	0.10	tons/yr
Percentage of PM-10 in PM emissions	82%	
PM-10 Drift Emissions Rate (lbs/yr)	165.35	lbs/yr
PM-10 Drift Emissions Rate (tons/yr)	0.08	tons/yr
Percentage of PM2.5 in PM emissions	82%	
PM2.5 Drift Emissions Rate (lbs/yr)	165.35	lbs/yr
PM2.5 Drift Emissions Rate (tons/yr)	0.08	tons/yr

Notes:

Conductivity for raw make up water at Alcoa Lafayette, IN was obtained from the Ashland Water Technologies Service water report for Extrusion Unit #2 dated 11-7-2011.

Raw make up water conductivity was reported at 674 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%.

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Paved Road Fugitive Emissions

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

$EF = [k (sL)^{0.91}(W)^{1.02}](1-(P/4N))$ Equation (2) - AP-42 13.2.1 Paved Roads

Where:
EF = Emission Factor lbs/VMT
k = Particle Size Multiplier for Paved Road Equation
sL = Road Surface Silt Loading (grams per square meter (g/m2))
W = average weight (tons) of vehicles traveling the road.
P = number of days with at least 0.01 in of precipitation during averaging period
N = number of days in the averaging period (e.g. 365 for annual)

Total Vehicle Miles Traveled for Paved Road			
Basis	**Value**	**Units**	**Reference**
Daily number of trucks	24	trucks/day	Alcoa Specification
Length of paved road	0.78	miles	Google Earth from entrance to building 380
Number of trips on road	2	trips/truck	Accounts for distance to and from building 380

Fugitive Emissions Calculations for Paved Road			
Basis	**Value**	**Units**	**Reference**
Particle Size Multiplier for Paved Road Equation (k)	0.00054	lbs $PM_{2.5}$/VMT	AP-42, Table 13.2.1-1
Particle Size Multiplier for Paved Road Equation (k)	0.0022	lbs PM_{10}/VMT	AP-42, Table 13.2.1-1
Particle Size Multiplier for Paved Road Equation (k)	0.011	lbs PM/VMT	AP-42, Table 13.2.1-1
Road Surface Silt Loading (sL)	0.6	g/m2	AP-42, Table 13.2.1-2
Mean Vehicle Weight (W)	30.0	tons	Alcoa Estimate
Number of wet days per year (P)	120	days/year	AP-42, Figure 13.2.1-2
Number of days in averaging period (N)	365	days/year	PTE number of days in averaging period
Total miles traveled	13,665.60	miles/year	Based on segment distance and number of trips

Paved Road Emissions for $PM_{2.5}$, PM_{10}, and PM			
Emission Fraction	**EF (lbs/VMT)**	**lbs/yr**	**tons/yr**
$PM_{2.5}$ Emissions	0.01000	136.63	0.07
PM_{10} Emissions	0.04073	556.65	0.28
PM Emissions	0.20367	2,783.27	1.39

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
ALLI-34 Diesel Emergency Generator
Emission Calculations

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Maximum Horsepower	200
Conversion hp to Btu/hr	7,000
Heat Input Rating - MMBtu/hr	1.40
Permit Limit - hrs/yr	500
Annual Operating Hours - hrs/yr	500

Pollutant	Diesel Fuel AP 42 Section 3.4 Emission Factor	Unit	Emission Rate (lbs/hr)	Limited Emissions (lbs/yr)	Limited Emissions (tons/yr)	Maximum Emissions (lbs/yr)	Maximum Emissions (tons/yr)	GWP
CO	0.95	lb/MMBtu	1.33	665.00	0.33	665.00	0.33	
NOx	4.41	lb/MMBtu	6.17	3,087.00	1.54	3,087.00	1.54	
PM	0.31	lb/MMBtu	0.43	217.00	0.11	217.00	0.11	
PM10	0.31	lb/MMBtu	0.43	217.00	0.11	217.00	0.11	
PM2.5	0.31	lb/MMBtu	0.43	217.00	0.11	217.00	0.11	
SOx	0.29	lb/MMBtu	0.41	203.00	0.10	203.00	0.10	
VOC	0.36	lb/MMBtu	0.50	252.00	0.13	252.00	0.13	
CO2	164	lb/MMBtu	229.60	114,800.00	57.40	114,800	57.40	1
CH4	6.61E-03	lb/MMBtu	9.26E-03	4.63	2.31E-03	4.63	2.31E-03	21
N20	1.32E-03	lb/MMBtu	1.85E-03	0.93	4.63E-04	0.93	4.63E-04	310
CO2e			230.37	115,184	57.59	115,184	57.59	
Benzene	9.33E-04	lb/MMBtu	1.31E-03	0.65	3.27E-04	6.53E-01	3.27E-04	
Toluene	4.09E-04	lb/MMBtu	5.73E-04	0.29	1.43E-04	2.86E-01	1.43E-04	
Xylenes	2.85E-04	lb/MMBtu	3.99E-04	0.20	9.98E-05	2.00E-01	9.98E-05	
Propylene	2.58E-03	lb/MMBtu	3.61E-03	1.81	9.03E-04	1.81E+00	9.03E-04	
1,3-Butadiene	3.91E-05	lb/MMBtu	5.47E-05	0.03	1.37E-05	2.74E-02	1.37E-05	
Formaldehyde	1.18E-03	lb/MMBtu	1.65E-03	0.83	4.13E-04	8.26E-01	4.13E-04	
Acetaldehyde	7.67E-04	lb/MMBtu	1.07E-03	0.54	2.68E-04	5.37E-01	2.68E-04	
Acrolein	9.25E-05	lb/MMBtu	1.30E-04	0.06	3.24E-05	6.48E-02	3.24E-05	
Total PAH	1.68E-04	lb/MMBtu	2.35E-04	0.12	5.88E-05	1.18E-01	5.88E-05	
				Total HAP:	2.26E-03	Total HAP:	2.26E-03	

Methodology:
Emission Factors obtained from AP 42 Section 3.3 Gasoline and Diesel Industrial Engines
CH_4 and N_2O emission factors are from 40 CFR 98, Table C-2.
CO_2e (ton/yr) = CO_2 Potential Emission (ton/yr) x CO_2 GWP + CH4 Potential Emission (ton/yr) x CH_4 GWP + N_2O Potential Emission (ton/yr) x N_2O GWP

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Natural Gas Emissions

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

													1	*21*	*310*	*<--- GWP*
Natural Gas Emission Factors (lbs/mmcf)			84	100	1.9	7.6	7.6	0.6	5.5	0.075	1.8	0.005	1.89	120,000	2.3	2.2	NA

NATURAL GAS EMISSIONS SOURCES			**Unrestricted Emissions (tons/yr)**														
Emission Unit	**Burner Rating** (MMBTU/hr)	**Natural Gas Usage** (MMCF/yr)	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**Formal-dehyde**	**Hexane**	**LEAD**	**Total HAP**	**CO_2**	**CH_4**	**N_20**	**CO_2e**
Prime Aluminum Melting Furnace	20.0	171.76	7.21	8.59	0.16	0.65	0.65	0.05	0.47	0.006	0.155	0.0004	0.16	10,306	0.20	0.19	10,369
Scrap Drying Oven #1	4.0	34.35	1.44	1.72	0.03	0.13	0.13	0.01	0.09	0.001	0.031	0.0001	0.03	2,061	0.04	0.04	2,074
Scrap Drying Oven #2	4.0	34.35	1.44	1.72	0.03	0.13	0.13	0.01	0.09	0.001	0.031	0.0001	0.03	2,061	0.04	0.04	2,074
Homogenizing Furnace #1	27.0	231.88	9.74	11.59	0.22	0.88	0.88	0.07	0.64	0.009	0.209	0.0006	0.22	13,913	0.27	0.26	13,998
Homogenizing Furnace #2	27.0	231.88	9.74	11.59	0.22	0.88	0.88	0.07	0.64	0.009	0.209	0.0006	0.22	13,913	0.27	0.26	13,998
Natural Gas Space Heaters	137.1	1,177.30	49.45	58.87	1.12	4.47	4.47	0.35	3.24	0.044	1.060	0.0029	1.11	70,638	1.35	1.30	71,068
Total Emissions from New Construction			79.02	94.08	1.79	7.15	7.15	0.56	5.17	0.071	1.693	0.0047	1.78	112,892	2.16	2.07	113,579
Projected Actual Emissions (Extrusion Units I & II)	NA	137.70	5.78	6.88	0.13	0.52	0.52	0.04	0.38	0.005	0.124	0.0003	0.13	8,262	0.16	0.15	8,312
Baseline Actual Emissions (Extrusion Units I & II) [May 2007 through April 2009]	NA	101.28	4.25	5.06	0.10	0.38	0.38	0.03	0.28	0.004	0.091	0.0003	0.10	6,077	0.12	0.11	6,114
Projected Natural Gas Increase at Extrusion Units (mmcf/yr)	NA	36.42	1.53	1.82	0.03	0.14	0.14	0.01	0.10	0.001	0.033	0.0001	0.03	2,185	0.04	0.04	2,199
TOTALS	**82.0**	**1,917.96**	**80.55**	**95.90**	**1.82**	**7.29**	**7.29**	**0.58**	**5.27**	**0.072**	**1.726**	**0.0048**	**1.82**	**115,077**	**2.21**	**2.11**	**115,778**

NATURAL GAS EMISSIONS SOURCES			**Limited Emissions (tons/yr)**														
Emission Unit	**Burner Rating** (MMBTU/hr)	**Natural Gas Usage** (MMCF/yr)	**CO**	**NO_X**	**PM**	**PM_{10}**	**$PM_{2.5}$**	**SO_2**	**VOC**	**Formal-dehyde**	**Hexane**	**LEAD**	**Total HAP**	**CO_2**	**CH_4**	**N_20**	**CO_2e**
Prime Aluminum Melting Furnace	20.0	730.58	30.68	36.53	0.69	2.78	2.78	0.22	2.01	0.027	0.658	0.0018	0.69	43,835	0.84	0.80	44,102
Scrap Drying Oven #1	4.0																
Scrap Drying Oven #2	4.0																
Homogenizing Furnace #1	27.0																
Homogenizing Furnace #2	27.0																
Natural Gas Space Heaters	137.1																
Total Emissions from New Construction			30.68	36.53	0.69	2.78	2.78	0.22	2.01	0.027	0.658	0.0018	0.69	43,835	0.84	0.80	44,102
Projected Actual Emissions (Extrusion Units I & II)	NA	137.70	5.78	6.88	0.13	0.52	0.52	0.04	0.38	0.005	0.124	0.0003	0.13	8,262	0.16	0.15	8,312
Baseline Actual Emissions (Extrusion Units I & II) [May 2007 through April 2009]	NA	101.28	4.25	5.06	0.10	0.38	0.38	0.03	0.28	0.004	0.091	0.0003	0.10	6,077	0.12	0.11	6,114
Projected Natural Gas Increase at Extrusion Units (mmcf/yr)	NA	36.42	1.53	1.82	0.03	0.14	0.14	0.01	0.10	0.001	0.033	0.0001	0.03	2,185	0.04	0.04	2,199
TOTALS	**82.0**	**767.00**	**32.21**	**38.35**	**0.73**	**2.91**	**2.91**	**0.23**	**2.11**	**0.029**	**0.690**	**0.0019**	**0.73**	**46,020**	**0.88**	**0.84**	**46,300**

Methodology:

Natural Gas emissions factor obtained from AP-42, Tables 1.4-1, 14-2, 14-3, and 14-4.

CO_2e (ton/yr) = CO_2 Potential Emission (ton/yr) x CO_2 GWP + CH4 Potential Emission (ton/yr) x CH_4 GWP + N_2O Potential Emission (ton/yr) x N_2O GWP

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project
Sourcewide PTE HAP Emissions

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

	Units	Al-Li Project
PTE Natural Gas (mmcf/yr)	mmcf/yr	730.58
Sourcewide PTE AFB Consumption (tons/yr)	tons/yr	12.75

	Pollutant	Emission Factor	EF Units	lbs/yr	tons/yr
METAL MELTING HAP	Manganese			802.38	0.40
	Beryllium			0.16	8.06E-05
	Chromium			NA	NA
	Ni			NA	NA
	Lead			NA	NA
AFB HAP	HF	0.76	lbs HF/lb AFB	NA	
622 HAP	HCl			1,388.55	0.69
	Cl2			NA	NA
Natural Gas Combustion Speciated Organic HAP Compounds	2-Methylnaphthalene	2.40E-05	lbs/mmcf	1.75E-02	8.77E-06
	3-Methylchloranthrene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	7, 12-Dimethylbenz(a)anthracene	1.60E-05	lbs/mmcf	1.17E-02	5.84E-06
	Acenaphthene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Acenaphthylene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Anthracene	2.40E-06	lbs/mmcf	1.75E-03	8.77E-07
	Benz(a)anthracene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Benzene	2.10E-03	lbs/mmcf	1.53	7.67E-04
	Benzo(a)pyrene	1.20E-06	lbs/mmcf	8.77E-04	4.38E-07
	Benzo(b)fluoranthene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Benzo(g,h,i)perylene	1.20E-06	lbs/mmcf	8.77E-04	4.38E-07
	Benzo(k)fluoranthene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Chrysene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Dibenzo(a,h)anthracene	1.20E-06	lbs/mmcf	8.77E-04	4.38E-07
	Dichlorobenzene	1.20E-03	lbs/mmcf	8.77E-01	4.38E-04
	Fluoranthene	3.00E-06	lbs/mmcf	2.19E-03	1.10E-06
	Fluorene	2.80E-06	lbs/mmcf	2.05E-03	1.02E-06
	Formaldehyde	7.50E-02	lbs/mmcf	54.79	0.03
	Hexane	1.80E+00	lbs/mmcf	1315.04	0.66
	Indeno(1,2,3-cd)pyrene	1.80E-06	lbs/mmcf	1.32E-03	6.58E-07
	Naphthalene	6.10E-04	lbs/mmcf	4.46E-01	2.23E-04
	Phenanathrene	1.70E-05	lbs/mmcf	1.24E-02	6.21E-06
	Pyrene	5.00E-06	lbs/mmcf	3.65E-03	1.83E-06
	Toluene	3.40E-03	lbs/mmcf	2.48	1.24E-03
Natural Gas Combustion Metal HAP's	Arsenic	2.00E-04	lbs/mmcf	1.46E-01	7.31E-05
	Beryllium	1.20E-05	lbs/mmcf	8.77E-03	4.38E-06
	Cadmium	1.10E-03	lbs/mmcf	8.04E-01	4.02E-04
	Chromium	1.40E-03	lbs/mmcf	1.02	5.11E-04
	Cobalt	8.40E-05	lbs/mmcf	6.14E-02	3.07E-05
	Lead	0.005	lbs/mmcf	3.65	0.0018
	Manganese	3.80E-04	lbs/mmcf	2.78E-01	1.39E-04
	Mercury	2.60E-04	lbs/mmcf	0.19	9.50E-05
	Nickel	2.10E-03	lbs/mmcf	1.53	7.67E-04
	Selenium	2.40E-05	lbs/mmcf	1.75E-02	8.77E-06

Total HAP (*NG only*):	0.69

Total HAP:	1.79

Methodology:
Natural Gas emissions factor obtained from AP-42, Table 1.4-3 for speciated organic compounds for natural gas combustion.
Natural Gas emissions factor obtained from AP-42, Table 1.4-2 for criteria pollutants, metals, and greenhouse gasses for natural gas combustion.

Alcoa Inc.
Lafayette Operations
Aluminum-Lithium Cast House Project

Significant Source Modification No.: 157-31323-00001
Significant Permit Modification No.: 157-31329-00001

Particulate Emission Limitations for Manufacturing Processes

326 IAC 6-3-2

			Process Weight, P		P<=60,000 lb/hr
			each unit	each unit	$E = 4.10\ P^{0.67}$
PM Control Device	**Unit ID**	**Process**	P (lb/hr)	P (ton/hr)	E (lb/hr)
none	ALLI-1	Prime Aluminum Melting Furnace	7,780	3.89	10.19
none	ALLI-2 --- ALLI-16	(15) Lithium Melting Furnaces	5.18	2.6E-03	0.551
none	ALLI-17 --- ALLI-20	(4) Lithium Melting Furnaces	37.50	1.9E-02	0.551
none	ALLI-21	Flowable Scrap Melting Furnace	4,000	2.00	6.52
none	ALLI-22 & ALLI-23	(2) Scrap Drying Ovens	7,780	3.89	10.19
none	ALLI-24 --- ALLI-25	(2) Electric Induction Melting Furnaces	4,062	2.03	6.59
none	ALLI-26	(2) Homogenizing Ovens	8,124	3.89	10.19
none	ALLI-27 & ALLI-28	A622 Filter	8,125	4.06	10.49
none	ALLI-30	Log Peeler	7,233	3.62	9.70
none	ALLI-29	Log Saw	7,233	3.62	9.70
none	ALLI-31	Slab Saw	2,170	1.09	4.33
none	ALLI-32	Skim Cooling	595.15	0.30	1.82
none	ALLI-33	Skim Loadout	596	0.30	1.82

$E = 4.10\ P^{0.67}$ where: E = Rate of emission in pounds per hour.
P = Process weight rate in tons per hour.

(c) This rule shall not apply if a particulate matter limitation established in:
(1) 326 IAC 2-2-3, concerning prevention of significant deterioration (PSD) best available control technology (BACT) determinations contained in a permit;
(2) 326 IAC 2-3-3, concerning lowest achievable emission rate (LAER) determinations contained in a permit;
(3) 326 IAC 6.5 and 326 IAC 6.8, concerning particulate matter emissions;
(4) 326 IAC 11, concerning existing emission limitations for specific operations;
(5) 326 IAC 12, concerning new source performance standards; or
(6) 326 IAC 20, concerning national emission standards for hazardous air pollutants;