



Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

**New Source Construction and
FEDERALLY ENFORCEABLE STATE
OPERATING PERMIT (FESOP)
OFFICE OF AIR QUALITY**

Alumitech of Wabash, Inc.
State Route 15 and Dimension Avenue
Wabash, Indiana 46992

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

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-8 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.: F 169-15363-00035	
Issued by:Original signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date:February 21, 2003 Expiration Date:February 21, 2008

TABLE OF CONTENTS

SECTION A SOURCE SUMMARY 6

- A.1 General Information [326 IAC 2-8-3(b)]
- A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]
- A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(l)]
- A.4 FESOP Applicability [326 IAC 2-8-2]
- A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

SECTION B GENERAL CONDITIONS 9

- B.1 Permit No Defense [IC 13]
- B.2 Definitions [326 IAC 2-8-1]
- B.3 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]
- B.4 Enforceability [326 IAC 2-8-6]
- B.5 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]
- B.6 Severability [326 IAC 2-8-4(4)]
- B.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]
- B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]
- B.9 Compliance Order Issuance [326 IAC 2-8-5(b)]
- B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]
- B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]
- B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]
- B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]
- B.14 Emergency Provisions [326 IAC 2-8-12]
- B.15 Deviations from Permit Requirements and Conditions [326 IAC 2-8-4(3)(C)(ii)]
- B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination
[326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]
- B.17 Permit Renewal [326 IAC 2-8-3(h)]
- B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]
- B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]
- B.20 Permit Revision Requirement [326 IAC 2-8-11.1]
- B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]
- B.22 Transfer of Ownership or Operational Control [326 IAC 2-8-10]
- B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16]
- B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

SECTION C SOURCE OPERATION CONDITIONS 19

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- C.1 Particulate Emission Limitations For Processes With Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]
- C.2 Overall Source Limit [326 IAC 2-8]
- C.3 Opacity [326 IAC 5-1]
- C.4 Open Burning [326 IAC 4-1] [IC 13-17-9]
- C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]
- C.6 Fugitive Dust Emissions [326 IAC 6-4]
- C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]
- C.8 Stack Height [326 IAC 1-7]
- C.9 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61 Subpart M]

Testing Requirements [326 IAC 2-8-4(3)]

C.10 Performance Testing [326 IAC 3-6]

Compliance Requirements [326 IAC 2-1.1-11]

- C.11 Compliance Requirements [326 IAC 2-1.1-11]
- C.12 Compliance Schedule [40 CFR 63, Subpart RRR]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]
- C.14 Monitoring Methods [326 IAC 3] [40 CFR 60][40 CFR 63]
- C.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)] [326 IAC 2-8-5(1)]

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]
- C.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4] [326 IAC 2-8-5]
- C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

- C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]
- C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

Stratospheric Ozone Protection

- C.21 Compliance with 40 CFR 82 and 326 IAC 22-1

SECTION D.1 FACILITY OPERATION CONDITIONS: Oxygen Rotary Furnaces & Salt Cake Cooling Rack 27

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR 63, Subpart A]
- D.1.2 HCl (HAP) Limitations [326 IAC 2-8-4]
- D.1.3 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]
- D.1.4 PM Limitations [326 IAC 2-2]
- D.1.5 Particulate [326 IAC 6-3-2]
- D.1.6 Secondary Aluminum Production Limits [40 CFR Part 63.1500 (Subpart RRR)]
- D.1.7 Labeling [40 CFR Part 63.1506(b)]
- D.1.8 Capture/Collection Systems [40 CFR Part 63.1506(c)]
- D.1.9 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR Part 63.1510(b)]
- D.1.10 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]
- D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [40 CFR 63.1511, 63.1512]
- D.1.13 HAPs Emissions
- D.1.14 Particulate Control and Capture/Collection Systems
- D.1.15 Feed/Charge Determination [40 CFR 63.1506(d)]
- D.1.16 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]
- D.1.17 Secondary Aluminum Production Compliance Determination [40 CFR Part 63, Subpart RRR]

D.1.18 Fabric Filter Inlet Temperature Monitoring Requirements [40 CFR 63.1510(h)]

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

- D.1.19 Labeling [40 CFR 63.1510(c)]
- D.1.20 Capture/Collection System [40 CFR 63.1510(d)]
- D.1.21 Feed/Charge Determination [40 CFR 63.1510(e)]
- D.1.22 Corrective Action [40 CFR 63.1506(p)]
- D.1.23 Compliance Monitoring Requirements [40 CFR 63.1510(t)] [40 CFR 63.1510(u)]
- D.1.24 Parametric Monitoring
- D.1.25 Baghouse Inspections
- D.1.26 Broken or Failed Bag Detection
- D.1.27 Visible Emissions Notations

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

- D.1.28 Record Keeping Requirements
- D.1.29 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]
- D.1.30 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

SECTION D.2 FACILITY OPERATION CONDITIONS: Tumbler 43

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.2.1 Particulate [326 IAC 6-3-2]
- D.2.2 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]
- D.2.3 PM Limitations [326 IAC 2-2]
- D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.2.5 Particulate Control
- D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.2.7 Visible Emissions Notations
- D.2.8 Parametric Monitoring
- D.2.9 Baghouse Inspections
- D.2.10 Broken or Failed Bag Detection
- D.2.11 Cyclone Inspections
- D.2.12 Cyclone Failure Detection

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.2.13 Record Keeping Requirements

SECTION D.3 FACILITY OPERATION CONDITIONS: Sizing Line 47

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.3.1 Particulate [326 IAC 6-3-2]
- D.3.2 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]
- D.3.3 PM Limitations [326 IAC 2-2]
- D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.3.5 Particulate Control

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 6 of 75
F 169-15363-00035

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.3.6 Visible Emissions Notations
- D.3.7 Parametric Monitoring
- D.3.8 Baghouse Inspections
- D.3.9 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.3.10 Record Keeping Requirements

SECTION D.4 FACILITY CONDITIONS: Screening Line 50

General Construction Conditions

- D.4.1 Permit No Defense
- D.4.2 Effective Date of the Permit [IC 13-15-5-3]
- D.4.3 Modification to Construction Conditions [326 IAC 2]
- D.4.4 Affidavit of Construction

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.4.5 Particulate [326 IAC 6-3-2]
- D.4.6 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]
- D.4.7 PM Limitations [326 IAC 2-2]
- D.4.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

Compliance Determination Requirements

- D.4.9 Particulate Control

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

- D.4.10 Visible Emissions Notations
- D.4.11 Parametric Monitoring
- D.4.12 Baghouse Inspections
- D.4.13 Broken or Failed Bag Detection

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

- D.4.14 Record Keeping Requirements

SECTION D.5 FACILITY OPERATION CONDITIONS: Insignificant Activities 54

Emission Limitations and Standards [326 IAC 2-8-4(1)]

- D.5.1 Raw Material Unloading and Storage
- D.5.2 Fugitive Particulate From Roadways

Certification 55

Emergency Occurrence Report 56

Quarterly Deviation and Compliance Monitoring Report 58

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 2-8-3(b)]

The Permittee owns and operates a stationary secondary aluminum production source processing aluminum dross and scrap aluminum.

Authorized Individual:	President
Source Address:	State Route 15 and Dimension Avenue, Wabash, Indiana 46992
Mailing Address:	P.O. Box 747, Wabash, Indiana 46992
General Source Phone Number:	219 563-2409
SIC Code:	3341
County Location:	Wabash
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Federally Enforceable State Operating Permit (FESOP) Minor Source, under PSD Rules; Minor Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-8-3(c)(3)]

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

- (a) Two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, rated at 6.0 million British thermal units per hour each, controlled with a baghouse with lime injection, identified as FB1, exhausting through Stack S-FB1, installed in 1998 and 2000, respectively, capacity: 3.5 tons per hour of aluminum dross or aluminum scrap each.
- (b) One (1) enclosed salt cake cooling rack with hood, installed in 2000, controlled with a baghouse, identified as FB1, exhausting through Stack S-FB1, capacity: 5.5 tons of salt cake per hour.
- (c) One (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, controlled with a cyclone connected in series with a baghouse, identified as MB1, exhausting through Stack S-MB1, installed in 1996, capacity: 12.0 tons of aluminum dross and/or salt cake per hour.
- (d) One (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks, all controlled with a baghouse, identified as MB2, exhausting through Stack S-MB2, installed in 1998, capacity: 12.0 tons of aluminum dross and salt cake per hour.
- (e) One (1) screening line, consisting of screening and conveying processes, controlled with a baghouse, identified as MB2, exhausting through Stack S-MB2, to be installed, capacity: 39.0

tons of aluminum dross per hour.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-8-3(c)(3)(I)]

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour with a total heat input capacity of 0.465 million British thermal units per hour consisting of:
 - (1) One (1) office hot water heater, rated at 0.040 million British thermal units per hour.
 - (2) One (1) office furnace, rated at 0.070 million British thermal units per hour.
 - (3) Two (2) brake room furnaces, rated at 0.070 million British thermal units per hour each.
 - (4) One (1) brake room hot water heater, rated at 0.040 million British thermal units per hour.
 - (5) One (1) maintenance furnace, rated at 0.075 million British thermal units per hour.
 - (6) One (1) maintenance heater, rated at 0.100 million British thermal units per hour.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, consisting of a 20-hp gasoline fired portable welder.
- (c) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (d) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;
 - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (e) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (f) Paved roads and parking lots with public access.
- (g) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (h) Raw material unloading and storage.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 10 of 75
F 169-15363-00035

A.4 FESOP Applicability [326 IAC 2-8-2]

This stationary source, otherwise required to have a Part 70 permit as described in 326 IAC 2-7-2(a), has applied to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Federally Enforceable State Operating Permit (FESOP).

A.5 Prior Permits Superseded [326 IAC 2-1.1-9.5]

- (a) All terms and conditions of previous permits issued pursuant to permitting programs approved into the state implementation plan have been either
- (1) incorporated as originally stated,
 - (2) revised, or
 - (3) deleted
- by this permit.
- (b) All previous registrations and permits are superseded by this permit.

SECTION B GENERAL CONDITIONS

B.1 Permit No Defense [IC 13]

Indiana statutes from IC 13 and rules from 326 IAC, quoted in conditions in this permit, are those applicable at the time the permit was issued. The issuance or possession of this permit shall not alone constitute a defense against an alleged violation of any law, regulation or standard, except for the requirement to obtain a FESOP under 326 IAC 2-8.

B.2 Definitions [326 IAC 2-8-1]

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.3 Permit Term [326 IAC 2-8-4(2)] [326 IAC 2-1.1-9.5]

This permit 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.

B.4 Enforceability [326 IAC 2-8-6]

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 Termination of Right to Operate [326 IAC 2-8-9] [326 IAC 2-8-3(h)]

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 2-8-3(h) and 326 IAC 2-8-9.

B.6 Severability [326 IAC 2-8-4(4)]

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.7 Property Rights or Exclusive Privilege [326 IAC 2-8-4(5)(D)]

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

**B.8 Duty to Supplement and Provide Information [326 IAC 2-8-3(f)] [326 IAC 2-8-4(5)(E)]
[326 IAC 2-8-5(a)(4)]**

(a) The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The submittal by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

(b) 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1). Upon request, the Permittee shall also furnish to IDEM, OAQ, copies of records required to be kept by this permit.

- (c) 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.9 Compliance Order Issuance [326 IAC 2-8-5(b)]

IDEM, OAQ, may issue a compliance order to this Permittee upon discovery that this permit is in nonconformance with an applicable requirement. The order may require immediate compliance or contain a schedule for expeditious compliance with the applicable requirement.

B.10 Compliance with Permit Conditions [326 IAC 2-8-4(5)(A)] [326 IAC 2-8-4(5)(B)]

- (a) The Permittee must comply with all conditions of this permit. Noncompliance with any provisions of this permit is grounds for:
 - (1) Enforcement action;
 - (2) Permit termination, revocation and reissuance, or modification; and
 - (3) Denial of a permit renewal application.
- (b) 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.
- (c) 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.

B.11 Certification [326 IAC 2-8-3(d)] [326 IAC 2-8-4(3)(C)(i)] [326 IAC 2-8-5(1)]

- (a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by an authorized individual of truth, accuracy, and completeness. This certification, shall state 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 attached Certification Form, with each submittal requiring certification.
- (c) An authorized individual is defined at 326 IAC 2-1.1-1(1).

B.12 Annual Compliance Certification [326 IAC 2-8-5(a)(1)]

- (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. The initial certification shall cover the time period from the date of final permit issuance through December 31 of the same year. All subsequent certifications shall cover the time period from January 1 to December 31 of the

previous year, and shall be submitted in letter form no later than July 1 of each year to:

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

- (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 2-8-4(3); and
 - (5) Such other facts as specified in Sections D of this permit, IDEM, OAQ, may require to determine the compliance status of the source.

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

B.13 Preventive Maintenance Plan [326 IAC 1-6-3] [326 IAC 2-8-4(9)] [326 IAC 2-8-5(a)(1)]

- (a) If required by specific condition(s) in Section D of this permit, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit, 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 Branch, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 16 of 75
F 169-15363-00035

The PMP extension notification does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (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 contributes to any violation. The PMP does not require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept 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.14 Emergency Provisions [326 IAC 2-8-12]

- (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, except as provided in 326 IAC 2-8-12.
- (b) An emergency, as defined in 326 IAC 2-7-1(12), constitutes an affirmative defense to an action brought for noncompliance with a health-based or technology-based emission limitation if the affirmative defense of an emergency is demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that describes 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 No.: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section)
or,
Telephone No.: 317-233-5674 (ask for Compliance Section)
Facsimile No.: 317-233-5967
 - (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:

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 18 of 75
F 169-15363-00035

Indiana Department of Environmental Management
Compliance Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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 2-8-4(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 the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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) IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-8-3(c)(6) 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 2-8 and any other applicable rules.
- (g) Operations may continue during an emergency only if the following conditions are met:
 - (1) 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.
 - (2) If an emergency situation causes a deviation from a health-based limit, the Permittee may not continue to operate the affected emissions facilities unless:
 - (A) The Permittee immediately takes all reasonable steps to correct the emergency situation and to minimize emissions; and
 - (B) Continued operation of the facilities is necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw material of substantial economic value.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 20 of 75
F 169-15363-00035

Any operations shall continue no longer than the minimum time required to prevent the situations identified in (g)(2)(B) of this condition.

- (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 2-8-4(3)(C)(ii)]

- (a) Deviations from any permit requirements (for emergencies see Section B - Emergency Provision), the probable cause of such deviations, and any response steps or preventive measures taken shall be reported to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (b) A deviation is an exceedance of a permit limitation or a failure to comply with a requirement of the permit or a rule. It does not include:
 - (1) An excursion from compliance monitoring parameters as identified in Section D of this permit unless tied to an applicable rule or limit; or
 - (2) Failure to implement elements of the Preventive Maintenance Plan unless such failure has caused or contributed to a deviation.

A Permittee's failure to take the appropriate response step when an excursion of a compliance monitoring parameter has occurred is a deviation.

B.16 Permit Modification, Reopening, Revocation and Reissuance, or Termination [326 IAC 2-8-4(5)(C)] [326 IAC 2-8-7(a)] [326 IAC 2-8-8]

- (a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a FESOP 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 2-8-4(5)(C)] The notification by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 2-8-8(a)]
- (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 2-8-8(b)]
- (d) The reopening and revision of this permit, under 326 IAC 2-8-8(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 2-8-8(c)]

B.17 Permit Renewal [326 IAC 2-8-3(h)]

- (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 2-8-3. 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 certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Request for renewal shall be submitted to:

Indiana Department of Environmental Management
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, IN 46206-6015

- (b) Timely Submittal of Permit Renewal [326 IAC 2-8-3]
 - (1) A timely renewal application is one that is:
 - (A) Submitted at least nine (9) months prior to the date of the expiration of this permit; and
 - (B) 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.
 - (2) If IDEM, OAQ, upon receiving a timely and complete permit application, fails to issue or deny the permit renewal prior to the expiration date of this permit, this existing permit shall not expire and all terms and conditions shall continue in effect until the renewal permit has been issued or denied.
- (c) Right to Operate After Application for Renewal [326 IAC 2-8-9]

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 2-8 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 in writing by IDEM, OAQ, any additional information identified as needed to process

the application.

B.18 Permit Amendment or Revision [326 IAC 2-8-10] [326 IAC 2-8-11.1]

- (a) Permit amendments and revisions are governed by the requirements of 326 IAC 2-8-10 or 326 IAC 2-8-11.1 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015
- Any such application shall be certified by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (c) The Permittee may implement the administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.19 Operational Flexibility [326 IAC 2-8-15] [326 IAC 2-8-11.1]

- (a) The Permittee may make any change or changes at this source that are described in 326 IAC 2-8-15(b) through (d), without 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 approval required by 326 IAC 2-8-11.1 has been obtained;
- (3) The changes do not result in emissions which exceed the emissions allowable under 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015
- 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 which document, on a rolling five (5) year

basis, all such changes and emissions trading that are subject to 326 IAC 2-8-15(b) through (d) and makes such records available, upon reasonable request, to public review.

Such records shall consist of all information required to be submitted to IDEM, OAQ, in the notices specified in 326 IAC 2-8-15(b)(2), (c)(1), and (d).

- (c) Emission Trades [326 IAC 2-8-15(c)]
The Permittee may trade increases and decreases in emissions in 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 2-8-15(c).
- (d) Alternative Operating Scenarios [326 IAC 2-8-15(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 2-8-4(7). No prior notification of IDEM, OAQ or U.S. EPA is required.

B.20 Permit Revision Requirement [326 IAC 2-8-11.1]

A modification, construction, or reconstruction is governed by the requirements of 326 IAC 2 and 326 IAC 2-8-11.1.

B.21 Inspection and Entry [326 IAC 2-8-5(a)(2)] [IC 13-14-2-2]

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 FESOP source is located, or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
- (b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
- (c) Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit;
- (d) Sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with this permit or applicable requirements; and
- (e) 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 2-8-10]

- (a) The Permittee must comply with the requirements of 326 IAC 2-8-10 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
Permits Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

The application which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (c) The Permittee may implement administrative amendment changes addressed in the request for an administrative amendment immediately upon submittal of the request. [326 IAC 2-8-10(b)(3)]

B.23 Annual Fee Payment [326 IAC 2-7-19] [326 IAC 2-8-4(6)] [326 IAC 2-8-16] [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) 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 317-233-4325 (ask for OAQ, I/M & Billing Section), to determine the appropriate permit fee.

B.24 Advanced Source Modification Approval [326 IAC 2-8-4(11)] [326 IAC 2-1.1-9]

- (a) The requirements to obtain a permit revision under 326 IAC 2-8-11.1 are satisfied by this permit for the proposed emission units, control equipment or insignificant activities in Sections A.2 and A.3.
- (b) Pursuant to 326 IAC 2-1.1-9 any permit authorizing construction may be revoked if construction of the emission unit has not commenced within eighteen (18) months from the date of issuance of the permit, or if during the construction work is suspended for a continuous period of one (1) year or more.

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

Emissions Limitations and Standards [326 IAC 2-8-4(1)]

C.1 Particulate Emission Limitations For Processes With Process Weight Rates Less Than One Hundred (100) pounds per hour [40 CFR 52 Subpart P][326 IAC 6-3-2]

- (a) Pursuant to 40 CFR 52 Subpart P, the allowable particulate matter emissions rate from any process not already regulated by 326 IAC 6-1 or any New Source Performance Standard, and which has a maximum process weight rate less than one hundred (100) pounds per hour shall not exceed 0.551 pounds per hour.
- (b) Pursuant to 326 IAC 6-3-2(e)(2), the allowable particulate emissions rate from any process not exempt under 326 IAC 6-3-1(b) or (c) which has a maximum process weight rate less than one hundred (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 Overall Source Limit [326 IAC 2-8]

The purpose of this permit is to limit this source's potential to emit to less than major source levels for the purpose of Section 502(a) of the Clean Air Act.

- (a) Pursuant to 326 IAC 2-8:
 - (1) The potential to emit any regulated pollutant from the entire source shall be limited to less than one-hundred (100) tons per twelve (12) consecutive month period. This limitation shall also make the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable;
 - (2) The potential to emit any individual hazardous air pollutant (HAP) from the entire source shall be limited to less than ten (10) tons per twelve (12) consecutive month period; and
 - (3) The potential to emit any combination of HAPs from the entire source shall be limited to less than twenty-five (25) tons per twelve (12) consecutive month period.
- (b) This condition shall include all emission points at this source including those that are insignificant as defined in 326 IAC 2-7-1(21). The source shall be allowed to add insignificant activities not already listed in this permit, provided that the source's potential to emit does not exceed the above specified limits.
- (c) Section D of this permit contains independently enforceable provisions to satisfy this requirement.

C.3 Opacity [326 IAC 5-1]

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

- (a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute

averaging period as determined in 326 IAC 5-1-4.

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

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

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

C.5 Incineration [326 IAC 4-2] [326 IAC 9-1-2(3)]

The Permittee shall not operate an incinerator or incinerate any waste or refuse except as provided in 326 IAC 4-2 and in 326 IAC 9-1-2.

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

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

C.7 Operation of Equipment [326 IAC 2-8-5(a)(4)]

Except as otherwise provided by statute, rule or in this permit, all air pollution control equipment listed in this permit and used to comply with an applicable requirement shall be operated at all times that the emission units vented to the control equipment are in operation.

C.8 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.

C.9 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
Asbestos Section, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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 by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 14-10-4 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) **Indiana Accredited 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 Asbestos Inspector to thoroughly inspect the affected portion of the facility for the presence of asbestos. The requirement that the inspector be accredited, pursuant to the provisions of 40 CFR 61, Subpart M, is federally enforceable.

Testing Requirements [326 IAC 2-8-4(3)]

C.10 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 test protocol, except as provided elsewhere in this permit, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The protocol submitted by the Permittee does not require certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

- (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 certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (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 source 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.11 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.

C.12 Compliance Schedule [40 CFR 63, Subpart RRR]

On December 3, 2002, IDEM, OAQ approved an extension of the final compliance standards and date contained in 40 CFR Part 63, Subpart RRR for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The termination date of this extension is March 23, 2004, which is the final compliance date for 40 CFR Part 63, Subpart RRR and the Permittee shall operate all facilities in compliance with emission limits by March 23, 2004.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.13 Compliance Monitoring [326 IAC 2-8-4(3)] [326 IAC 2-8-5(a)(1)]

Unless otherwise specified in this permit, 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 monitoring related to that equipment. If due to circumstances beyond its control, that equipment cannot be installed and operated within ninety (90) days, 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 Branch, Office of Air Quality
100 North Senate Avenue, P.O. Box 6015
Indianapolis, Indiana 46206-6015

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

The notification which shall be submitted by the Permittee does require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Unless otherwise specified in the approval for the new emissions unit, compliance monitoring for new emission units or emission units added through a permit revision shall be implemented when operation begins.

C.14 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing performed 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.15 Pressure Gauge and Other Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-8-4(3)]
[326 IAC 2-8-5(1)]

- (a) Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (b) Whenever a condition in this permit requires the measurement of a temperature or flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.
- (c) The Preventive Maintenance Plan for the pH meter 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 pH point.
- (d) The Permittee may request the IDEM, OAQ approve the use of a pressure gauge or other instrument that does not meet the above specifications provided the Permittee can demonstrate an alternative pressure gauge or other instrument specification will adequately ensure compliance with permit conditions requiring the measurement of pressure drop or other parameters.

Corrective Actions and Response Steps [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

C.16 Risk Management Plan [326 IAC 2-8-4] [40 CFR 68.215]

If a regulated substance, subject to 40 CFR 68, is present at a source in more than a threshold quantity, 40 CFR 68 is an applicable requirement and the Permittee shall submit:

- (a) A compliance schedule for meeting the requirements of 40 CFR 68; or
- (b) As a part of the annual compliance certification submitted under 326 IAC 2-7-6(5), a certification statement that the source is in compliance with all the requirements of 40 CFR 68, including the registration and submission of a Risk Management Plan (RMP).

All documents submitted pursuant to this condition shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

C.17 Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-8-4]
[326 IAC 2-8-5]

- (a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. A CRP shall be submitted to IDEM, OAQ, upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:
 - (1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking reasonable response steps.
 - (2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan and the Permittee documents

such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

- (b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:
 - (1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan; or
 - (2) If none of the reasonable response steps listed in the Compliance Response Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.
 - (3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, the IDEM, OAQ shall be promptly notified of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.
 - (4) Failure to take reasonable response steps shall constitute a violation of the permit.
- (c) The Permittee is not required to take any further response steps for any of the following reasons:
 - (1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the permit, and such request has not been denied.
 - (3) An automatic measurement was taken when the process was not operating.
 - (4) The process has already returned or is returning to operating within "normal" parameters and no response steps are required.
- (d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B-Deviations from Permit Requirements and Conditions.
- (e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-8-12 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.
- (f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities.

C.18 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-8-4] [326 IAC 2-8-5]

- (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 response actions to IDEM, OAQ, within thirty (30) days of receipt 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 one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) 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 documents submitted pursuant to this condition do require the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)]

C.19 General Record Keeping Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-5]

- (a) Records of all required data, reports and support information shall be retained for a period of at least five (5) years from the date of monitoring sample, measurement, report, or application. These records shall be kept 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, all record keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.20 General Reporting Requirements [326 IAC 2-8-4(3)(C)] [326 IAC 2-1.1-11]

- (a) The source 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. This report shall be submitted within thirty (30) days of the end of the reporting period. The Quarterly Deviation and Compliance Monitoring Report shall include the certification by the "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (b) The report required in (a) of this condition and reports required by conditions in Section D of this permit shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (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 report 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 "authorized individual" as defined by 326 IAC 2-1.1-1(1).
- (e) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

Stratospheric Ozone Protection

C.21 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 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.

SECTION D.1

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Oxygen Rotary Furnaces & Salt Cake Cooling Rack

- (a) Two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, rated at 6.0 million British thermal units per hour each, controlled with a baghouse with lime injection, identified as FB1, exhausting through Stack S-FB1, installed in 1998 and 2000, respectively, capacity: 3.5 tons per hour of aluminum dross or aluminum scrap each.
- (b) One (1) enclosed salt cake cooling rack with hood, installed in 2000, controlled with a baghouse, identified as FB1, exhausting through Stack S-FB1, capacity: 5.5 tons of salt cake per hour.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.1.1 General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR 63, Subpart A]

Effective March 23, 2004, the provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, described in this section except when otherwise specified in 40 CFR 63 Subpart RRR.

D.1.2 HCl (HAP) Limitations [326 IAC 2-8-4]

- (a) The hydrogen chloride (HCl) emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, including fluxing exhausting through Stack S-FB1, shall be less than 2.28 pounds per hour, equivalent to less than 10.0 tons per year.
- (b) Compliance with this limit shall satisfy the requirements of 326 IAC 2-8-4 and the area source definition of 40 CFR 63, Subpart A.

D.1.3 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The PM₁₀ emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, including fluxing, shall not exceed 0.936 pounds per hour.
- (b) Compliance with this limit shall satisfy the requirements of 326 IAC 2-8-4 and also make the requirements of 326 IAC 2-2 not applicable.

D.1.4 PM Limitations [326 IAC 2-2]

- (a) The PM emissions from two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, including fluxing, shall not exceed 0.936 pounds per hour.
- (b) Compliance with this limit shall make the requirements of 326 IAC 2-2 not applicable.

D.1.5 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 two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, shall not exceed 15.1 pounds per hour, when operating at a total process weight rate of 7.0 tons per hour.

The pounds per hour limitation was 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:

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

D.1.6 Secondary Aluminum Production Limits [40 CFR Part 63.1500 (Subpart RRR)]

- (a) Effective March 23, 2004, pursuant to 40 CFR Part 63.1505(k)(3), the Permittee shall comply with the emission limit calculated using the following equation for dioxins and furans (D/F, which means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans) for each of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D/F in excess of:

$$L_{cDF} = \frac{\sum_{i=1}^n (L_{iDF} \times T_i)}{\sum_{i=1}^n T_i}$$

where L_{iDF} = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

L_{cDF} = The D/F emission limit for secondary aluminum processing unit.

- (b) Pursuant to 40 CFR 63.1505(k)(5), the Permittee may demonstrate compliance with the emission limits of 40 CFR 63.1505(k)(3) by demonstrating that each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, is in compliance with the following emission limit of 40 CFR 63.1505(i)(3):

15 ug of D/F TEQ per Mg (2.1 x 10⁻⁴ gr of D/F TEQ per ton) of feed/charge from a group 1 furnace.

- (1) TEQ means the international method of expressing toxicity equivalents for D/F as defined in "Interim Procedures for Estimating Risks Associated with Exposures to Mixtures of Chlorinated Dibenzop-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.
- (2) The Permittee may determine the emission standards for each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, 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.

D.1.7 Labeling [40 CFR Part 63.1506(b)]

By March 23, 2004, the Permittee shall provide and maintain easily visible labels that shall be posted at the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. Said labels shall

identify the applicable emission limits and means of compliance, including:

- (a) The type of affected source or emission unit (e.g., group 1 furnace, group 2 furnace, in-line fluxer); and
- (b) 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.

D.1.8 Capture/Collection Systems [40 CFR Part 63.1506(c)]

By March 23, 2004, pursuant to 40 CFR 63.1506(c), the Permittee shall:

- (a) 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: 40 CFR 63.1502)
- (b) 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
- (c) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

D.1.9 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR Part 63.1510(b)]

By March 23, 2004, the Permittee shall submit the OM&M plan for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, to the IDEM, OAQ.

The plan shall be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR 63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee shall comply with all of the provisions of the OM&M plan as submitted to the IDEM, OAQ unless and until the plan is revised in accordance with the following procedures. If the IDEM, OAQ determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 40 CFR 63.1510(b) or Subpart RRR, the Permittee shall promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the IDEM, OAQ.

Each plan shall contain the following information:

- (a) Process and baghouse parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
- (c) Procedures for the proper operation and maintenance of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2 and the baghouse used to meet the applicable emission limits or standards in 40 CFR 63.1505.

- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (1) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (2) Procedures for the quality control and quality assurance of continuous emission as required by the general provisions in Subpart A of this part.
- (e) 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.
- (f) Corrective actions to be taken when process or operating parameters or baghouse parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including:
 - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and their baghouse that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

D.1.10 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices. If the OM&M plan required by Condition D.1.9 is developed in accordance with Section B- Preventive Maintenance Plans, then after the OM&M plan has been approved, it shall satisfy the requirements of this condition

Compliance Determination Requirements

D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

-
- (a) By November 3, 2003, in order to demonstrate compliance with Conditions D.1.3, D.1.4 and D.1.5, the Permittee shall perform PM and PM₁₀ testing of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C- Performance Testing.
 - (b) Within 180 days of issuance of this permit, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform HCl testing of both natural gas-fired oxygen rotary furnaces, identified as F1 or F2, while fluxing and exhausting to Stack S-FB1, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.

D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [40 CFR 63.1511, 63.1512, and 63.1513]

-
- (a) Pursuant to 40 CFR 63.1511(a), prior to conducting any performance test required by 40 CFR

Part 63, Subpart RRR, the Permittee shall prepare a site-specific test plan which satisfies all of the requirements, and shall obtain approval of the plan pursuant to the procedures, set forth in 40 CFR 63.7(c) (General Provisions).

- (b) Pursuant to 40 CFR 63.1511(b), following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and report the results in the notification of compliance status report as described in 40 CFR 63.1515(b). The Permittee shall conduct this initial performance test no later than September 23, 2004, which is 180 days after the March 23, 2004 compliance date in order to demonstrate compliance with Condition D.1.6 and 40 CFR Part 63 Subpart RRR. The Permittee shall conduct each performance test in accordance with the requirements and procedures set forth in 40 CFR 63.7(c) and 63.1511(b), (c), and (d) (Performance test/compliance demonstration general requirements). The Permittee is subject only to those performance testing requirements pertaining to D/F.
- (c) Pursuant to 40 CFR 63.1511(g), the Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. To establish the minimum or maximum value or range, the Permittee shall use the appropriate procedures in 40 CFR 63.1511(g) and submit the information required by 40 CFR 63.1515(b)(4) in the notification of compliance status report. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the conditions in 40 CFR 63.1511(g) are met to the satisfaction of the IDEM, OAQ.
- (d) Pursuant to 40 CFR 63.1512(d)(1), the Permittee shall conduct performance tests to measure emissions of D/F at the outlet of the lime-injected baghouse controlling Furnaces F1 and F2. Pursuant to 40 CFR 63.1512(j), the results of the performance tests for the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, are used to establish emission rates in ug 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 40 CFR 63.1510(t).
- (e) Pursuant to Paragraphs (k), (n), (o), and (p) respectively of 40 CFR 63.1512, during the performance tests the Permittee shall comply with the requirements and use the procedures in these sections of the NESHAP for:
- (1) Measuring or otherwise determining feed/charge weight to the natural gas-fired oxygen rotary furnaces, identified as F1 and F2;
 - (2) Establishing an operating parameter value or range for the inlet gas temperature at the inlet to the baghouse controlling the natural gas-fired oxygen rotary furnaces, identified as F1 and F2;
 - (3) Establishing an operating parameter value or range for the total reactive chlorine flux injection rate; and
 - (4) Establishing an operating parameter value for the lime injection system feeder setting for each operating cycle or time period used in the performance test.
- (f) Pursuant to Paragraphs (b), (d), and (e)(3) and (4) respectively of 40 CFR 63.1513 (Equations for determining compliance), the Permittee shall comply with the requirements and use the equations, references, and/or procedures in these sections of the NESHAP for:

- (1) Determining compliance with an emission limit for D/F;
- (2) Conversion of D/F measurements to TEQ units; and
- (3) Determining compliance with emission limits for a secondary aluminum processing unit.

D.1.13 HAPs Emissions

In order to comply with Condition D.1.2 a continuous lime injection system shall be in operation and control HCl emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at all times that the furnaces are in operation.

D.1.14 Particulate Control and Capture/Collection Systems [326 IAC 2-8-4]

In order to comply with Conditions D.1.3 and D.1.5, the baghouse for particulate control shall be in operation and control emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at all times that the furnaces are in operation.

D.1.15 Feed/Charge Determination [40 CFR 63.1506(d)]

By March 23, 2004, pursuant to 40 CFR 63.1506, the Permittee shall install and operate a device that measures and records or otherwise determines the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test. The Permittee shall operate each measurement system or other weight determination procedure in accordance with the Operation, Maintenance, and Monitoring Plan. Alternatively, the Permittee may choose to measure and record aluminum production weight from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, rather than feed/charge weight provided that the aluminum production weight is measured for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, within a secondary aluminum processing unit and all calculations to demonstrate compliance with the emission limits for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, are based on aluminum production weight rather than feed/charge weight.

D.1.16 Fabric Filter Monitoring Requirements [40 CFR 63.1510(f)]

By March 23, 2004, the following requirements apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2:

- (a) The Permittee shall install and operate a bag leak detection system for each exhaust stack of a fabric filter.
- (b) Each triboelectric bag leak detection system shall be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997).
- (c) The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
- (d) The bag leak detection system sensor shall provide output of relative or absolute PM loadings.
- (e) The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.
- (f) The bag leak detection system shall 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 shall be located where it is easily heard by plant operating personnel.

- (g) For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.
- (h) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
- (i) The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
- (j) Following initial adjustment of the system, the Permittee shall 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 one hundred (100%) percent or decreased more than fifty (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.

D.1.17 Secondary Aluminum Production Compliance Determination [40 CFR Part 63, Subpart RRR]

Effective March 23, 2004, pursuant to 40 CFR Part 63.1510, the following conditions shall apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2:

- (a) Pursuant to 40 CFR 63.1506(m), for each furnace, the Permittee shall:
 - (1) Initiate corrective action within one (1) hour of a bag leak detection system alarm; complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5%) percent of the operating time during a six (6) month 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 one (1) hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.
 - (2) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus twenty-five (25) degrees Fahrenheit.
 - (3) For a continuous-lime injection system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.
 - (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.
- (b) The Permittee shall use a continuous lime-injected fabric filter to comply with the requirements of 40 CFR 63, Subpart RRR; and therefore pursuant to 40 CFR 63.1510(i), the Permittee shall:

- (1) Verify that the lime (or other alkaline agent) is always free-flowing by inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period.
- (2) The Permittee shall also record the feeder setting once each day of operation.
- (c) Pursuant to 40 CFR 63.1510(j), for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, the Permittee shall:
 - (1) Record, for each fifteen (15) minute time 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 solid reactive flux.
 - (2) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
- (d) Pursuant to 40 CFR 63.1510(s)(1), the Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
 - (1) The identification of each emission unit in the secondary aluminum processing unit;
 - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;
 - (3) The emission limit calculated for each secondary aluminum processing unit and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
 - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
 - (5) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the three- (3-) day, twenty-four- (24-) hour rolling average using the procedure in 40 CFR 63.1510(t).
- (e) The SAPU compliance procedures within the OM&M plan may not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv).

D.1.18 Fabric Filter Inlet Temperature Monitoring Requirements [40 CFR 63.1510(h)]

- (a) By March 23, 2004, the Permittee shall install, calibrate, maintain, and operate a device to continuously monitor and record the temperature of the fabric filter inlet gases entering bag-house, identified as FB1 consistent with the requirements for continuous monitoring systems in 40 CFR Part 63, Subpart A.

- (b) The temperature monitoring device shall meet each of these performance and equipment specifications:
- (1) The monitoring system shall record the temperature in fifteen- (15-) minute block averages and calculate and record the average temperature for each three- (3-) hour block period.
 - (2) The recorder response range shall include zero (0) and one and one half (1.5) times the average temperature established according to the requirements in 40 CFR 63.1512(n).
 - (3) The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system or alternate reference, subject to approval by the Administrator.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.1.19 Labeling [40 CFR 63.1510(c)]

Effective March 23, 2004 for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, the Permittee shall inspect the labels required in Condition D.1.7 at least once per calendar month to confirm that the posted labels as required by the operational standard in 40 CFR 63.1506(b) are intact and legible.

D.1.20 Capture/Collection System [40 CFR 63.1510(d)]

Effective March 23, 2004 for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, the Permittee shall 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 pursuant to 40 CFR 63.1506(c) and record the results of each inspection.

D.1.21 Feed/Charge Determination [40 CFR 63.1510(e)]

By March 23, 2004 for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, the Permittee shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from each furnace over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs shall be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure shall be ± 1 percent of the weight being measured.

D.1.22 Corrective Action [40 CFR 63.1506(p)]

Effective March 23, 2004, when a process parameter or baghouse operating parameter deviates from the value or range established and incorporated in the OM&M plan, the Permittee shall initiate corrective action. The corrective action taken, shall restore operation of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and/or baghouse FB1 to their normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions.

In addition, the corrective actions taken shall include follow-up actions necessary to return the process or baghouse parameter level(s) to the applicable value or range of values, and steps to prevent the likely recurrence of the cause of a deviation.

D.1.23 Compliance Monitoring Requirements [40 CFR 63.1510(t)] [40 CFR 63.1510(u)]

Pursuant to 40 CFR 63, Subpart RRR, on and after the date the initial performance test to show

compliance with Condition D.1.11 is required to be completed, the Permittee shall monitor the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and the baghouse FB1 according to the following requirements:

- (a) The Permittee shall calculate and record the three- (3-) day, twenty-four (24-) hour rolling average emissions of D/F for each furnace on a daily basis. To calculate the three- (3-) day, twenty-four (24-) hour rolling average, the Permittee shall:
- (1) Calculate and record the total weight of material charged to each furnace for each twenty-four- (24-) hour day of operation using the feed/charge weight information required in 40 CFR 63.1510(e). If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.
 - (2) To provide emissions for each furnace for the twenty-four- (24-) hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the twenty-four- (24-) hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
 - (3) Divide the total emissions for each furnace for the twenty-four- (24-) hour period by the total material charged to the furnace, or the weight of aluminum produced by the furnace over the twenty-four- (24-) hour period to provide the daily emission rate for the furnace.
 - (4) Compute the twenty-four- (24-) hour daily emission rate using the following equation:

$$E_{\text{day}} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

where,

E_{day} = The daily 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);

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or mg/Mg of feed/charge); and

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

- (5) Calculate and record the three- (3-) day, twenty-four- (24-) hour rolling average for each pollutant each day by summing the daily emission rates for D/F over the three (3) most recent consecutive days and dividing by three (3).
- (b) Pursuant to 40 CFR63.1510(u), as an alternative to the procedures in (a)(1) above, the Permittee may demonstrate through performance tests, that each individual furnace is in

compliance with the applicable emission limit.

D.1.24 Parametric Monitoring

Effective until March 22, 2004, the Permittee shall record the total static pressure drop across the baghouse FB1 used in conjunction with the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at least once per shift when the melting and cooling processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.25 Baghouse Inspections

Effective until March 22, 2004, an inspection shall be performed within the last month of each calendar quarter of all bags controlling the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. All defective bags shall be replaced.

D.1.26 Broken or Failed Bag Detection

Effective until March 22, 2004, in the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

D.1.27 Visible Emissions Notations

- (a) Effective until March 22, 2004, visible emission notations of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, stack exhaust S-FB1 shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions

are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirements [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.1.28 Record Keeping Requirements

-
- (a) To document compliance with Condition D.1.2(a), the Permittee shall maintain monthly records of the amount of flux added to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
 - (b) To document compliance with Condition D.1.2(a), the Permittee shall maintain monthly records of the amount of chlorine injected to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
 - (c) Effective until March 22, 2004, to document compliance with Condition D.1.24, the Permittee shall maintain records of the total static pressure once per shift during normal operation.
 - (d) Effective until March 22, 2004, to document compliance with Condition D.1.25, the Permittee shall maintain records of the results of the inspections required under Condition D.1.25.
 - (e) Effective until March 22, 2004, to document compliance with Condition D.1.27, the Permittee shall maintain records of visible emission notations of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, stack exhaust S-FB1 once per shift.
 - (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.1.29 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]

Effective March 23, 2004, pursuant to 40 CFR Part 63.1517, the Permittee shall:

- (a) As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.
- (b) The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of

records may be retained off site.

- (c) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.10(b), the Permittee of a furnace with a lime-injected fabric filter shall maintain records of:
 - (1) The number of total operating hours for the affected source or emission unit during each six- (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.
 - (2) For the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of fifteen- (15-) minute block average inlet temperatures for the lime-injected baghouse, including any period when the three- (3-) hour block average temperature exceeds the compliant operating parameter value +14EC (+25EF), with a brief explanation of the cause of the excursion and the corrective action taken.
 - (3) The following regarding lime injection:

Records of inspections at least once every eight- (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 four- (4-) hour period for the subsequent three (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;

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.
 - (4) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of fifteen- (15-) minute block average weights of total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective action taken.
 - (5) For each continuous monitoring system, records required by 40 CFR 63.10(c).
 - (6) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
 - (7) Records of monthly inspections for proper unit labeling for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, subject to labeling requirements.

- (8) Records of annual inspections of emission capture/collection and closed vent systems.
- (9) Records for any approved alternative monitoring or test procedure.
- (10) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (A) Startup, shutdown, and malfunction plan;
 - (B) OM&M plan; and
 - (C) Site-specific secondary aluminum processing unit emission plan.
- (11) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of total charge weight, or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced for each twenty-four- (24-) hour period and calculations of three- (3-) day, twenty-four (24-) hour rolling average emissions.

D.1.30 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1515(b), the Permittee shall submit a notification of compliance status report within sixty (60) days after the compliance date of March 23, 2004. The notification shall be signed by the responsible official who shall certify its accuracy. A complete notification of compliance status report shall include the information specified in paragraphs (1) through (8) below. 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. If a Permittee 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 shall include:
 - (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations.
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
 - (4) The compliant operating parameter value or range established for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, 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, 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 40 CFR 63.1506(c).

- (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).
 - (7) The OM&M plan.
 - (8) Startup, shutdown, and malfunction plan, with revisions.
- (b) Pursuant to 40 CFR 63.1516(a), the Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and baghouses used to comply with the standard. The Permittee shall also keep records of each event as required by 40 CFR 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 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan shall 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 baghouse, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (c) Pursuant to 40 CFR 63.1516(b), the Permittee shall submit semiannual reports within sixty (60) days after the end of each six- (6-) month period. Each report shall contain the information specified in 40 CFR 63.10 (c). When no deviations of parameters have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period.

A report shall be submitted if any of these conditions occur during a six- (6-) month reporting period:

- (1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
- (2) 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, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
- (3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
- (4) Either or both of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, were not operated according to the requirements of Subpart RRR.
- (5) A deviation from the three- (3-) day, twenty-four- (24-) hour rolling average emission limit for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 53 of 75
F 169-15363-00035

- (d) Pursuant to 40 CFR 63.1516(b)(3), the Permittee shall submit the results of any performance test conducted during the reporting period, including one (1) 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.
- (e) Pursuant to 40 CFR 63.1516(c), for the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions:
 - (1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and
 - (2) All monitoring, record keeping, and reporting requirements were met during the year.

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Tumbler

- (c) One (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, controlled with a cyclone connected in series with a baghouse, identified as MB1, exhausting through Stack S-MB1, installed in 1996, capacity: 12.0 tons of aluminum dross and/or salt cake per hour.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.2.1 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 one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers shall not exceed 21.7 pounds per hour when operating at a process weight rate of 12.0 tons per hour. The pounds per hour limitation was 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:

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

D.2.2 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The PM₁₀ emissions from the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers shall not exceed 14.9 pounds per hour.
- (b) Compliance with this limit shall satisfy the requirements of 326 IAC 2-8-4 and also make the requirements of 326 IAC 2-2 not applicable.

D.2.3 PM Limitations [326 IAC 2-2]

- (a) The PM emissions from the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, shall not exceed 14.9 pounds per hour.
- (b) Compliance with this limit shall make the requirements of 326 IAC 2-2 not applicable.

D.2.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.2.5 Particulate Control

In order to comply with D.2.1, the cyclone and baghouse for particulate control shall be in operation and control emissions from the tumbler at all times that the tumbler are in operation.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 56 of 75
F 169-15363-00035

To demonstrate compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM₁₀ for the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, shall be performed by March 11, 2003 which corresponds to five (5) years from the date of the last valid stack test.

D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days of issuance of this permit, in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3 the Permittee shall perform PM and PM₁₀ testing of the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C- Performance Testing.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.2.7 Visible Emissions Notations

- (a) Visible emission notations of the tumbler stack exhaust S-MB1 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.8 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse, identified as MB1, used in conjunction with the tumbler processes, at least once per shift when the tumbler processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 58 of 75
F 169-15363-00035

D.2.9 Baghouse Inspections

An inspection shall be performed within the last month of each calendar quarter of all bags controlling the tumbler processes. All defective bags shall be replaced.

D.2.10 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

D.2.11 Cyclone Inspections

An inspection shall be performed within the last month of each calendar quarter of all cyclones controlling the tumbler processes. Inspections are optional when venting to the indoors.

D.2.12 Cyclone Failure Detection

In the event that cyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have 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). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.2.13 Record Keeping Requirements

- (a) To document compliance with Condition D.2.7, the Permittee shall maintain records of visible emission notations of the tumbler stack exhaust S-MB1 once per shift.
- (b) To document compliance with Condition D.2.8, the Permittee shall maintain per shift records of the total static pressure drop during normal operation.

- (c) To document compliance with Condition D.2.9, the Permittee shall maintain records of the results of the inspections required under Condition D.2.9 and the dates the vents are redirected.
- (d) To document compliance with Condition D.2.11, the Permittee shall maintain records of the results of the inspections required under Condition D.2.11 and the dates the vents are redirected.
- (e) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.3 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Sizing Line

- (d) One (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks, all controlled with a baghouse, identified as MB2, exhausting through Stack S-MB2, installed in 1998, capacity: 12.0 tons of aluminum dross and salt cake per hour.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.3.1 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 one (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks shall not exceed 21.7 pounds per hour when operating at a process weight rate of 12.0 tons per hour. The pounds per hour limitation was 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:

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

D.3.2 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The PM₁₀ emissions from the one (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks shall not exceed 0.338 pounds per hour.
- (b) Compliance with this limit shall satisfy the requirements of 326 IAC 2-8-4 and also make the requirements of 326 IAC 2-2 not applicable.

D.3.3 PM Limitations [326 IAC 2-2]

- (a) The PM emissions from the one (1) tumbler, consisting of one (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks, shall not exceed 1.14 pounds per hour.
- (b) Compliance with this limit shall make the requirements of 326 IAC 2-2 not applicable.

D.3.4 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.3.5 Particulate Control

In order to comply with D.3.1, the baghouse for particulate control shall be in operation and control emissions from the sizing line at all times that the sizing line is in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.3.6 Visible Emissions Notations

- (a) Visible emission notations of the sizing line exhaust S-MB2 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3.7 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse, identified as MB2, used in conjunction with the sizing line processes, at least once per shift when the sizing line processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.8 Baghouse Inspections

An inspection shall be performed within the last month of each calendar quarter of all bags controlling the sizing line processes. All defective bags shall be replaced.

D.3.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the bag-house's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.3.10 Record Keeping Requirements

- (a) To document compliance with Condition D.3.6, the Permittee shall maintain records of visible emission notations of the sizing line stack exhaust S-MB2 once per shift.
- (b) To document compliance with Condition D.3.7, the Permittee shall maintain per shift records of the total static pressure drop during normal operation.
- (c) To document compliance with Condition D.3.8, the Permittee shall maintain records of the results of the inspections required under Condition D.3.8 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.4

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Screening Line

- (e) One (1) screening line, consisting of screening and conveying processes, controlled with a baghouse, identified as MB2, exhausting through Stack S-MB2, to be installed, capacity: 39.0 tons of aluminum dross per hour.

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

THIS CONSTRUCTION CONDITION SECTION OF THE PERMIT IS BEING ISSUED UNDER THE PROVISIONS OF 326 IAC 2-1 AND 326 IAC 2-8-11.1, WITH CONDITIONS LISTED BELOW.

Construction Conditions

General Construction Conditions

D.4.1 Permit No Defense

This permit to construct does not relieve the Permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.

D.4.2 Effective Date of the Permit [IC 13-15-5-3]

Pursuant to IC 13-15-5-3, this Construction Condition section of this permit becomes effective upon its issuance.

D.4.3 Modification to Construction Conditions [326 IAC 2]

All requirements of these construction conditions shall remain in effect unless modified in a manner consistent with procedures established for revisions pursuant to 326 IAC 2.

D.4.4 Affidavit of Construction

Pursuant to 326 IAC 2-5.1-3,

- (a) The attached Affidavit of Construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section.
 - (1) If the Affidavit of Construction verifies that the facilities covered in this Construction Permit were constructed as proposed in the application, then the facilities may begin operating on the date the Affidavit of Construction is postmarked or hand delivered to IDEM.
 - (2) If the Affidavit of Construction does not verify that the facilities covered in this Construction Permit were constructed as proposed in the application, then the Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section prior to beginning operation of the facilities.
- (b) If construction is completed in phases; i.e., the entire construction is not done continuously,

a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.

- (c) Upon receipt of the Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section, the Permittee shall attach it to this document.

Operation Conditions

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.4.5 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 one (1) screening line, consisting of screening and conveying processes, shall not exceed 42.1 pounds per hour when operating at a process weight rate of 39.0 tons per hour. The pounds per hour limitation was calculated using the following equation:

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

$$E = 55 P^{0.11} - 40 \quad \text{where } E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour}$$

D.4.6 PM₁₀ Limitations [326 IAC 2-8-4] [326 IAC 2-2]

- (a) The PM₁₀ emissions from the one (1) screening line, consisting of screening and conveying processes shall not exceed 0.731 pounds per hour.
- (b) Compliance with this limit shall satisfy the requirements of 326 IAC 2-8-4 and also make the requirements of 326 IAC 2-2 not applicable.

D.4.7 PM Limitations [326 IAC 2-2]

- (a) The PM emissions from the one (1) screening line, consisting of screening and conveying processes, shall not exceed 1.55 pounds per hour.
- (b) Compliance with this limit shall make the requirements of 326 IAC 2-2 not applicable.

D.4.8 Preventive Maintenance Plan [326 IAC 2-8-4(9)]

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

Compliance Determination Requirements

D.4.9 Particulate Control

In order to comply with D.4.5, the baghouse for particulate control shall be in operation and control emissions from the screening line at all times that the screening line is in operation.

Compliance Monitoring Requirements [326 IAC 2-8-4] [326 IAC 2-8-5(a)(1)]

D.4.10 Visible Emissions Notations

- (a) Visible emission notations of the screening line exhaust S-MB2 shall be performed once per shift during normal daylight operations when exhausting to the atmosphere. A trained

employee shall record whether emissions are normal or abnormal.

- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.4.11 Parametric Monitoring

The Permittee shall record the total static pressure drop across the baghouse, identified as MB2, used in conjunction with the screening line processes, at least once per shift when the screening line processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.4.12 Baghouse Inspections

An inspection shall be performed within the last month of each calendar quarter of all bags controlling the screening line processes. All defective bags shall be replaced.

D.4.13 Broken or Failed Bag Detection

In the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the bag-

house's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

Record Keeping and Reporting Requirement [326 IAC 2-8-4(3)] [326 IAC 2-8-16]

D.4.14 Record Keeping Requirements

- (a) To document compliance with Condition D.4.10, the Permittee shall maintain records of visible emission notations of the screening line stack exhaust S-MB2 once per shift.
- (b) To document compliance with Condition D.4.11, the Permittee shall maintain per shift records of the total static pressure drop during normal operation.
- (c) To document compliance with Condition D.4.12, the Permittee shall maintain records of the results of the inspections required under Condition D.4.12 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

SECTION D.5

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-8-4(10)]: Insignificant Activities

- (f) Paved roads and parking lots with public access.
- (h) Raw material unloading and storage.

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

Emission Limitations and Standards [326 IAC 2-8-4(1)]

D.5.1 Raw Material Unloading and Storage

Pursuant to Agreed Order Case No. 3645, formerly 4642, signed on May 16, 2001, the following:

- (a) By June 1, 2001, all raw materials consisting of fines and all waste dross including any waste dross stored outside shall be unloaded and stored in an enclosed building or a three- (3) walled structure that includes a permanent roof and floor
- (b) The Permittee shall develop and implement procedures for the delivery of raw materials. The written procedures shall be made readily available upon an IDEM inspector's request.

D.5.2 Fugitive Particulate From Roadways

Pursuant to Agreed Order Case No. 3645, formerly 4642, signed on May 16, 2001, the following:

- (a) The Permittee shall sweep the plant's roadways no less than once per day unless weather conditions prohibit or major mechanical malfunctions.
- (b) The Permittee shall maintain a written log documenting when sweeping was performed, or if not performed the weather conditions or major mechanical failures that prevented it from occurring. The log shall be made readily available upon and IDEM inspector's request.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
CERTIFICATION**

Source Name: Alumitech of Wabash, Inc.
Source Address: State Route 15 and Dimension Avenue, Wabash, Indiana 46992
Mailing Address: P.O. Box 747, Wabash, Indiana 46992
FESOP No.: F 169-15363-00035

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:

- 9 Annual Compliance Certification Letter
- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Affidavit (specify) _____
- 9 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:

Date:

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE BRANCH
P.O. Box 6015
100 North Senate Avenue
Indianapolis, Indiana 46206-6015
Phone: 317-233-5674
Fax: 317-233-5967**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
EMERGENCY OCCURRENCE REPORT**

Source Name: Alumitech of Wabash, Inc.
Source Address: State Route 15 and Dimension Avenue, Wabash, Indiana 46992
Mailing Address: P.O. Box 747, Wabash, Indiana 46992
FESOP No.: F 169-15363-00035

This form consists of 2 pages

Page 1 of 2

- 9** This is an emergency as defined in 326 IAC 2-7-1(12)
- The Permittee must notify the Office of Air Quality (OAQ), within four (4) business hours (1-800-451-6027 or 317-233-5674, ask for Compliance Section); and
 - The Permittee must submit notice in writing or by facsimile within two working (2) days (Facsimile Number: 317-233-5967), and follow the other requirements of 326 IAC 2-7-16

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

Facility/Equipment/Operation:

Control Equipment:

Permit Condition or Operation Limitation in Permit:

Description of the Emergency:

Describe the cause of the Emergency:

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

Page 2 of 2

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N 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: _____

A certification is not required for this report.

**INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY
COMPLIANCE DATA SECTION**

**FEDERALLY ENFORCEABLE STATE OPERATING PERMIT (FESOP)
QUARTERLY DEVIATION AND COMPLIANCE MONITORING REPORT**

Source Name: Alumitech of Wabash, Inc.
Source Address: State Route 15 and Dimension Avenue, Wabash, Indiana 46992
Mailing Address: P.O. Box 747, Wabash, Indiana 46992
FESOP No.: F 169-15363-00035

Months: _____ to _____ Year: _____

Page 1 of 2

This report shall be submitted quarterly based on a calendar year. Any deviation from the requirements, the date(s) of each deviation, the probable cause of the deviation, and the response steps taken must be reported. Deviations that are required to be reported by an applicable requirement shall be reported according to the schedule stated in the applicable requirement and do 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".

9 NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

9 THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

Permit Requirement (specify permit condition #)

Date of Deviation:

Duration of Deviation:

Number of Deviations:

Probable Cause of Deviation:

Response Steps Taken:

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

9 No deviation occurred in this quarter.

9 Deviation/s occurred in this quarter.
Deviation has been reported on: _____

Form Completed By: _____

Title/Position: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for Federally Enforceable State Operating Permit (FESOP)

Source Name: Alumitech of Wabash, Inc.
Source Location: State Route 15 and Dimension Avenue, Wabash, Indiana 46992
County: Wabash
FESOP: F 169-15363-00035
SIC Code: 3341
Permit Reviewer: Frank P. Castelli

On December 20, 2002, the Office of Air Quality (OAQ) had a notice published in the Wabash Plain Dealer, Wabash, Indiana, stating that Alumitech of Wabash, Inc. had applied for a Federally Enforceable State Operating Permit (FESOP) to operate a secondary aluminum processing source. The notice also stated that OAQ proposed to issue a FESOP for this operation and provided information on how the public could review the proposed FESOP 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 FESOP should be issued as proposed.

On January 17, 2003, Ron Ward and Eugene Paik of Cornerstone Environmental, on behalf of Alumitech of Wabash, Inc., submitted comments on the proposed FESOP. The comments are as follows: The permit language, if changed, has deleted language as ~~strikeouts~~ and new language **bolded**.

Comment 1:

Please note that all future correspondence should be directed to Mr. Phillip Brown, General Manager; Lisa Shemwell is no longer affiliated with the Wabash facility. Other than this, we do not find any further corrections at this time to Sections A, B, or C of the proposed permit. Our comments below regard the specific facility conditions in Section D of the permit. The applicable requirements implemented in Section D are extensive and complicated, and our concern is for the permit to be as clear and accurate as possible. We found it useful to segregate our comments on the Secondary Aluminum Production NESHAP from non-NESHAP ones, and respectfully recommend the following for IDEM's consideration.

Response 1:

It is duly noted that all correspondence for this source shall be now directed to Mr. Phillip Brown, General Manager. The authorized individual (President) in Condition A.1 is unaffected by this change. Therefore, no changes to the proposed permit are necessary.

Comment 2:

Condition D.1.2: To be clear, initially define the chemical symbol HCl as "Hydrogen Chloride" in this condition.

Response 2:

Condition D.1.2(a) has been revised to define HCl and the symbol for hydrogen chloride has been corrected throughout the proposed permit as HCl from HCL as follows:

D.1.2 HClE (HAP) Limitations [326 IAC 2-8-4]

- (a) The **hydrogen chloride (HClE)** emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, including fluxing exhausting through Stack S-FB1, shall be less than 2.28 pounds per hour, equivalent to less than 10.0 tons per year.

Comment 3:

Condition D.1.11: The proposal that PM and PM₁₀ testing be repeated every two and one half (2 ½) years for the two natural gas-fired oxygen rotary furnaces is unsupported by the underlying applicable requirement and should be changed to every five (5) years, the normal frequency for compliance testing. The several compliance conditions proposed elsewhere in the permit associated with the furnaces, lime injection, and baghouse operation act to assure compliance with the PM and PM₁₀ limits on an on-going basis and negate the need for testing at less than a five (5) year interval.

Response 3:

Since previous PM tests for the oxygen rotary furnaces showed that the furnaces were in compliance, the test frequency in Condition D.1.11(a) has been revised to once every five (5) years as follows:

D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (a) By November 3, 2003, in order to demonstrate compliance with Conditions D.1.3, D.1.4 and D.1.5, the Permittee shall perform PM and PM₁₀ testing of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every **five (5)** ~~two and half (2.5)~~ years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C- Performance Testing.

Comment 4:

We further request that the words "associated with the fluxing and chlorine injection operations" be removed. Alumitech does not inject chlorine, and although flux is likely the major source of HCl, it may not be the only source. Thus, it does not add clarity to the testing requirement to mention fluxing or chlorine injection that is not performed.

Response 4:

HCL testing shall be performed during fluxing of the furnaces since fluxing is the major source of HCL emissions. The reference to chlorine injection has been removed since this activity is not performed on these furnaces. Therefore the wording of Condition D.1.11(b) has been revised as shown below:

D.1.11 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

- (b) Within 180 days of issuance of this permit, in order to demonstrate compliance with Condition D.1.2, the Permittee shall perform HClE testing of both natural gas-fired oxygen rotary furnaces, identified as F1 or F2, ~~associated with the~~ **while** fluxing and ~~chlorine injection operations~~ exhausting to Stack S-FB1, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.

Comment 5:

Condition D.1.13: This condition seems more appropriately placed under the Emission Limitations and Standards instead of the Compliance Determination Requirements section of the permit.

Response 5:

IDEM has determined that Condition D.1.13 (HAPs Emissions) shown below is a compliance determination and is not a specific emission limitation. Therefore, no changes to the proposed permit are required as a result of this comment.

D.1.13 HAPs Emissions

In order to comply with Condition D.1.2 a continuous lime injection system shall be in operation and control HClE emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at all times that the furnaces are in operation.

Comment 6:

Condition D.1.14: Remove "40 CFR 63.1506(c)" from the condition title. This condition appears intended to enable compliance with the PM FESOP limit, not the NESHAP, and Condition D.1.8 is already proposed to implement this NESHAP section. This condition also seems more appropriately placed under the Emission Limitations and Standards instead of the Compliance Determination Requirements section of the permit.

Response 6:

The citation in the heading for Condition D.1.14 has been revised as follows since this condition relates to the State rule 326 IAC 2-8-4 and does not relate to 40 CFR 63.1506(c):

D.1.14 Particulate Control and Capture/Collection Systems ~~[40 CFR 63.1506(c)] 326 IAC 2-8-4~~

In order to comply with Conditions D.1.3 and D.1.5, the baghouse for particulate control shall be in operation and control emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at all times that the furnaces are in operation.

Comments 7 and 8:

Conditions D.1.24, D.1.25, D.1.26, and D.1.27: Due to the NESHAP requirements to install and operate a bag-leak detection monitoring and alarm system and the further requirements for corrective actions in conjunction with the bag-leak detection system, these four conditions are unnecessary and should be deleted. The NESHAPs of 40 CFR Part 63 are considered to satisfy the requirements for compliance assurance monitoring (CAM). These four conditions are model provisions that only need be included where an applicable requirement does not specify monitoring that qualifies as CAM. That is not the case here, making inclusion of these four monitoring conditions redundant and uncalled for.

Condition D.1.28: This condition is unnecessary and should be deleted. Proposed Subconditions (a) and (b) are unnecessary given the requirement to test initially for HCl compliance and duplicative given the NESHAP requirements to record the same. The two Subconditions (c) (a typo) and (d) are unnecessary since the inspections are unnecessary per the previous comments.

Responses 7 and 8:

IDEM, OAQ has determined that Subpart RRR is a post-1990 NESHAP that contains sufficient compliance monitoring PM and PM₁₀. Therefore, the proposed additional compliance monitoring contained in Conditions D.1.24 (Parametric Monitoring), D.1.25 (Baghouse Inspections), D.1.26 (Broken or Failed, Bag Detection) and D.1.27 (Visible Emissions Notations) and their associated record keeping requirements contained in Condition D.1.28 will not be necessary on or after the compliance date of March 23, 2004 approved by IDEM, OAQ. Thus, these conditions have been revised as follows:

Note proposed Conditions D.1.28(a) and (b) are not specifically cited and duplicative of any other record keeping requirements listed in Condition D.1.29.

D.1.24 Parametric Monitoring

Effective until March 22, 2004, The Permittee shall record the total static pressure drop across the baghouse FB1 used in conjunction with the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at least once per shift when the melting and cooling processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.1.25 Baghouse Inspections

Effective until March 22, 2004, An inspection shall be performed within the last month of each calendar quarter of all bags controlling the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. All defective bags shall be replaced.

D.1.26 Broken or Failed Bag Detection

Effective until March 22, 2004, in the event that bag failure has been observed:

- (a) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
- (b) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an

opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

D.1.27 Visible Emissions Notations

- (a) **Effective until March 22, 2004,** ~~v~~Visible emission notations of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, stack exhaust S-FB1 shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for these units shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.1.28 Record Keeping Requirements

- (a) To document compliance with Condition D.1.2(a), the Permittee shall maintain monthly records of the amount of flux added to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
- (b) To document compliance with Condition D.1.2(a), the Permittee shall maintain monthly records of the amount of chlorine injected to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
- (c) **Effective until March 22, 2004,** ~~f~~o document compliance with Condition D.1.24, the Permittee shall maintain records of the total static pressure once per shift during normal operation.
- (~~d~~e) **Effective until March 22, 2004,** ~~f~~o document compliance with Condition D.1.25, the Permittee shall maintain records of the results of the inspections required under Condition D.1.25.
- (~~e~~d) **Effective until March 22, 2004,** ~~f~~o document compliance with Condition D.1.27, the Permittee shall maintain records of visible emission notations of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, stack exhaust S-FB1 once per shift.
- (~~f~~e) All records shall be maintained in accordance with Section C - General Record Keeping

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer: FPC/MES

Page 6 of 26
OP No. F 169-15363-00035

Requirements, of this permit.

Comment 9:

General Comments: These comments refer to all the proposed conditions that implement the Secondary Aluminum Production NESHAP (also referred to as MACT standard), 40 CFR Part 63, Subpart RRR. This federal rule is the most significant applicable requirement facing Alumitech. Due to its complexity, we ask that to the extent possible words not be added to or changed in the text of the rule. Doing so could inadvertently change intent or reduce Alumitech's flexibility of choice among options.

To reduce potential misunderstanding by Alumitech or agency personnel evaluating compliance after permit issuance, we also request that the specific section or subsection of the NESHAP that is the underlying applicable requirement be cited in each condition pertaining to the NESHAP. In some cases, even repeating the paragraph structure of the NESHAP is useful for clarity and understanding.

Where cited, the NESHAP section is considered incorporated by reference in the permit. Therefore, Alumitech considers the published rule as the primary source for determining what they must do to comply with a NESHAP section. If at any point in the term of the permit, it is discovered that language in the permit differs in a significant way from the NESHAP text, because of an initial mistake or due to further amendment of the NESHAP, IDEM will be notified of the need for a permit reopening and revision pursuant to 326 IAC 2-8-8.

Response 9:

Specific comments on the proposed conditions relating to the NESHAP are addressed in the following specific responses to specific conditions.

Comment 10:

Condition D.1.1: We recommend moving this condition to immediately before the conditions implementing the NESHAP, i.e., making it Condition D.1.5 instead as it pertains to the MACT program as well as the conditions that specifically implement the Subpart RRR MACT standard.

Response 10:

The position of Condition D.1.1 (General Provisions Relating to HAPs [326 IAC 20-1-1] [40 CFR 63, Subpart A]) in the Emissions Limitations section of the Section D.1 does not affect the purpose and intent of this condition. Moving this condition will result in unnecessary renumbering of all subsequent conditions. The numbering of all the internal citations would also have to be renumbered. Therefore, this condition has not been moved.

Comment 11:

Condition D.1.6: The proposed Subcondition (b) regarding labeling is unnecessary as it is stated more properly in Condition D.1.7, so it can be deleted. Also, to more clearly state the choice of emission standards available for the Group 1 furnaces, we recommend the entire condition be revised to read as follows:

D.1.6 Secondary Aluminum Production NESHAP [40 CFR Part 63, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1505(k)(3), on and after March 23, 2004, the Permittee shall comply with the emission limit calculated using the following equation for dioxins and furans (D/F, which means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans) for each

of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D/F in excess of:

[Equation reproduced in permit]

- (b) Pursuant to 40 CFR 63.1505(k)(5), the Permittee may demonstrate compliance with the emission limits of 40 CFR 63.1505(k)(3) by demonstrating that each furnace F1 and F2 is in compliance with the following emission limit of 40 CFR 63.1505(i)(3):

15 ug of D/F TEQ per Mg (2.1 x 10⁻⁴ gr of D/F TEQ per ton) of feed/charge from a group 1 furnace.

- (1) TEQ means the international method of expressing toxicity equivalents for D/F 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.
- (2) The Permittee may determine the emission standards for each Furnace F1 and F2 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.

Response 11:

Condition D.1.6(a) has been revised into two (2) parts and Condition D.1.6(b) has been deleted since it is redundant with Condition D.1.7(a) as follows:

D.1.6 Secondary Aluminum Production Limits [40 CFR Part 63.1500 (Subpart RRR)]

- (a) Effective March 23, 2004, pursuant to 40 CFR Part 63.1505(k)(3), the Permittee shall comply with the emission limit calculated using the following equation for dioxins and furans (D/F, which means tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans) for each of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of D/F in excess of: and (5); the following conditions shall apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2:**

- ~~(a) The Permittee shall not discharge or allow to be discharged to the atmosphere any 3-day, 24-hour rolling average emissions of total tetra-, penta-, hexa-, and octachlorinated dibenzo dioxins and furans (D/F) in excess of:~~

$$L_{cDF} = \frac{\sum_{i=l}^n (L_{iDF} X T_i)}{\sum_{i=l}^{\wedge} T_i}$$

where L_{iDF} = The D/F emission limit for individual emission unit in the secondary aluminum processing unit; and

L_{cDF} = The D/F emission limit for secondary aluminum processing unit.

~~The D/F emission limit (L_{cDF}) for a Group 1 furnace without an in-line fluxer (two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2) at a secondary aluminum production facility shall be 15 micrograms of D/F TEQ per megagram (2.1×10^{-4} gr of D/F TEQ per ton) per ton of feed/charge or per ton of aluminum produced. Where TEQ is the 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". [40 CFR 63.1505(i)] [40 CFR 63.1505(k)]~~

- (b) ~~Identification, emission limits and means of compliance shall be posted on the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.~~

Pursuant to 40 CFR 63.1505(k)(5), the Permittee may demonstrate compliance with the emission limits of 40 CFR 63.1505(k)(3) by demonstrating that each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, is in compliance with the following emission limit of 40 CFR 63.1505(i)(3):

15 ug 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.

- (1) **TEQ means the international method of expressing toxicity equivalents for D/F 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.**
- (2) **The Permittee may determine the emission standards for each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, 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.**

Comment 12:

Condition D.1.8: Change the condition title to be the same as in the NESHAP, "Capture/ Collection Systems" instead of "Capture/Control Systems," since this NESHAP section pertains to the duct-work, not the control device.

Response 12:

The title of Condition D.1.8 has been changed as follows:

D.1.8 Capture/**Collection** and Control Systems [40 CFR Part 63.1506(c)]

Comment 13:

Condition D.1.9: To incorporate the wording in the NESHAP amendments promulgated September 24, 2002, delete the following sentences in the introductory text:

The Permittee shall submit the plan to the IDEM, OAQ for review and approval as part of the application for a Part 70 or Part 71 permit. Any subsequent changes to the plan shall be submitted to the IDEM, OAQ for review and approval. Pending approval by the IDEM, OAQ of an initial or amended plan, the Permittee shall comply with the provisions of the submitted plan.

and replace them with:

The Permittee shall submit the OM&M plan to the IDEM, OAQ no later than March 23, 2004.

Furthermore, the following new text from the NESHAP amendments of December 30, 2002 should be inserted prior to the last sentence in the introductory text ("Each plan shall"):

The plan shall be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of this section and is otherwise consistent with the requirements of this subpart. The Permittee shall comply with all of the provisions of the OM&M plan as submitted to the IDEM, OAQ unless and until the plan is revised in accordance with the following procedures. If the IDEM, OAQ 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 Permittee shall promptly make all necessary revisions and resubmit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the IDEM, OAQ.

Finally, add to the beginning of Subcondition (e) the following clause from the original NESHAP text, which was omitted:

Procedures for monitoring process and control device parameters, including procedures for annual inspections of afterburners, and if applicable, . . .

Response 13:

Condition D.1.9 has been updated to account for the changes in the NESHAP as follows:

D.1.9 Operation, Maintenance, and Monitoring (OM&M) Plan [40 CFR Part 63.1510(b)]

By March 23, 2004, the Permittee shall **submit the OM&M plan for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, to the IDEM, OAQ.** ~~prepare and implement for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee shall submit the plan to the IDEM, OAQ for review and approval as part of the application for a Part 70 or Part 71 permit. Any subsequent changes to the plan shall be submitted to the IDEM, OAQ for review and approval. Pending approval by the IDEM, OAQ of an initial or amended plan, the Permittee shall comply with the provisions of the submitted plan.~~

The plan shall be accompanied by a written certification by the Permittee that the OM&M plan satisfies all requirements of 40 CFR 63.1510(b) and is otherwise consistent with the requirements of Subpart RRR. The Permittee shall comply with all of the provisions of the OM&M plan as submitted to the IDEM, OAQ unless and until the plan is revised in accordance with

the following procedures. If the IDEM, OAQ determines at any time after receipt of the OM&M plan that any revisions of the plan are necessary to satisfy the requirements of 40 CFR 63.1510(b) or Subpart RRR, the Permittee shall promptly make all necessary revisions and re-submit the revised plan. If the Permittee determines that any other revisions of the OM&M plan are necessary, such revisions will not become effective until the Permittee submits a description of the changes and a revised plan incorporating them to the IDEM, OAQ.

Each plan shall contain the following information:

- (a) Process and baghouse parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
- (b) A monitoring schedule for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
- (c) Procedures for the proper operation and maintenance of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2 and the baghouse used to meet the applicable emission limits or standards in 40 CFR 63.1505.
- (d) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (1) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (2) Procedures for the quality control and quality assurance of continuous emission as required by the general provisions in Subpart A of this part.
- (e) **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.**
- (f) Corrective actions to be taken when process or operating parameters or baghouse parameters deviate from the value or range established in 40 CFR 63.1510(b)(1), including:
 - (1) Procedures to determine and record the cause of an deviation or excursion, and the time the deviation or excursion began and ended; and
 - (2) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (g) A maintenance schedule for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and their baghouse that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.

Comment 14:

Condition D.1.12: The proposal in this paragraph (a) of this condition to require repeat D/F testing at least once every 2.5 years is sharply at odds with the NESHAP and should be removed; no repeat D/F testing should be required. The NESHAP only requires repeat D/F testing for major HAP sources,

which Alumitech is not, and then only at a 5-year frequency. The NESHAP does require area sources such as Alumitech to conduct D/F performance testing, but only initially.

This proposal would add stringency to the NESHAP that U.S. EPA did not intend. Moreover, because of the higher cost of D/F testing and analysis relative to other chemical species, the proposal would add an economic burden to Alumitech that is not faced by other sources in the NESHAP category outside Indiana. These factors were considered by U.S. EPA in developing the NESHAP, and the absence of a repeat D/F testing requirement for area sources is not unintentional. We do not believe IDEM can justify the need for greater stringency in this matter, and then rulemakings, not individual permits, are the mechanism for attempting to do so.

In addition to removing the proposal for repeat testing, to state more precisely the specific NESHAP performance testing and compliance determination requirements that are applicable, we recommend the following revision of this condition:

D.1.12 NESHAP Testing Requirements [40 CFR 63.1511, 63.1512, and 63.1513]

- (a) Pursuant to 40 CFR 63.1511(a), prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee shall prepare a site-specific test plan which satisfies all of the requirements, and shall obtain approval of the plan pursuant to the procedures, set forth in 40 CFR 63.7(c) (General Provisions).
- (b) Pursuant to 40 CFR 63.1511(b), following approval of the site-specific test plan, the Permittee shall 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 40 CFR 63.1515(b). The Permittee shall conduct this initial performance test no later than September 23, 2004, which is 180 days after the March 23, 2004 compliance date. The Permittee shall conduct each performance test in accordance with the requirements and procedures set forth in 40 CFR 63.7(c) and 63.1511(b), (c), and (d) (Performance test/compliance demonstration general requirements). The Permittee is subject only to those performance testing requirements pertaining to D/F.
- (c) Pursuant to 40 CFR 63.1511(g), the Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit or standard. To establish the minimum or maximum value or range, the Permittee shall use the appropriate procedures in 40 CFR 63.1511(g) and submit the information required by 40 CFR 63.1515(b)(4) in the notification of compliance status report. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the conditions in 40 CFR 63.1511(g) are met to the satisfaction of the IDEM, OAQ.
- (d) Pursuant to 40 CFR 63.1512(d)(1), the Permittee shall conduct performance tests to measure emissions of D/F at the outlet of the lime-injected baghouse controlling Furnaces F1 and F2. Pursuant to 40 CFR 63.1512(j), the results of the performance tests for Furnaces F1 and F2 are used to establish emission rates in ug 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 40 CFR 63.1510(t).

- (e) Pursuant to Paragraphs (k), (n), (o), and (p) respectively of 40 CFR 63.1512, during the performance tests the Permittee shall comply with the requirements and use the procedures in these sections of the NESHAP for:
 - (1) Measuring or otherwise determining feed/charge weight to Furnaces F1 and F2;
 - (2) Establishing an operating parameter value or range for the inlet gas temperature at the inlet to the baghouse controlling Furnaces F1 and F2;
 - (3) Establishing an operating parameter value or range for the total reactive chlorine flux injection rate; and
 - (4) Establishing an operating parameter value for the lime injection system feeder setting for each operating cycle or time period used in the performance test.
- (f) Pursuant to Paragraphs (b), (d), and (e)(3) and (4) respectively of 40 CFR 63.1513 (Equations for determining compliance), the Permittee shall comply with the requirements and use the equations, references, and/or procedures in these sections of the NESHAP for:
 - (1) Determining compliance with an emission limit for D/F;
 - (2) Conversion of D/F measurements to TEQ units; and
 - (3) Determining compliance with emission limits for a secondary aluminum processing unit.

Response 14:

Pursuant to 40 CFR 63.1511(e), only facilities that are major sources of HAPs must conduct a performance test every five (5) years following the initial performance test. In addition, the suggested wording has been accepted and the changes are as follows:

D.1.12 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11] [40 CFR 63.1511, 63.1512, and 63.1513 Subpart RRR]

- (a) Pursuant to 40 CFR 63.1511(a), prior to conducting any performance test required by 40 CFR Part 63, Subpart RRR, the Permittee shall prepare a site-specific test plan which satisfies all of the requirements, and shall obtain approval of the plan pursuant to the procedures, set forth in 40 CFR 63.7(c) (General Provisions).**
- (b) Pursuant to 40 CFR 63.1511(b), following approval of the site-specific test plan, the Permittee shall demonstrate initial compliance with each applicable emission, equipment, work practice, or operational standard for each of the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and report the results in the notification of compliance status report as described in 40 CFR 63.1515(b). The Permittee shall conduct this initial performance test no later than September 23, 2004, which is 180 days after the March 23, 2004 compliance date in order to demonstrate compliance with Condition D.1.6 and 40 CFR Part 63 Subpart RRR. The Permittee shall conduct each performance test in accordance with the requirements and procedures set forth in 40 CFR 63.7(c) and 63.1511(b), (c), and (d) (Performance test/compliance demonstration general requirements). The Permittee is subject only to those performance testing requirements pertaining to D/F.**

- ~~(a) By September 23, 2004, which is 180 days after the March 23, 2004 compliance date, in order to demonstrate compliance with Condition D.1.6 and 40 CFR Part 63 Subpart RRR, the Permittee shall perform D/F testing of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, using methods as approved by the Commissioner, in accordance with the requirements in 40 CFR 63, Subpart A and 40 CFR 63, Subpart RRR. These tests shall be repeated at least once every two and one-half (2.5) years from the date of this valid compliance demonstration. Testing shall be conducted in accordance with Section C-Performance Testing.~~
- (c) Pursuant to 40 CFR 63.1511(g), the Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. To establish the minimum or maximum value or range, the Permittee shall use the appropriate procedures in 40 CFR 63.1511(g) and submit the information required by 40 CFR 63.1515(b)(4) in the notification of compliance status report. The Permittee may use existing data in addition to the results of performance tests to establish operating parameter values for compliance monitoring provided each of the conditions in 40 CFR 63.1511(g) are met to the satisfaction of the IDEM, OAQ.**
- ~~(b) The Permittee shall establish a minimum or maximum operating parameter value, or an operating parameter range for each parameter to be monitored as required by 40 CFR 63.1510 that ensures compliance with the applicable emission limit for D/F. The Permittee may use existing data in addition to the results of the performance test to establish operating parameter values for compliance monitoring provided the requirements of 40 CFR 63.1511 (g) are met.~~
- (d) Pursuant to 40 CFR 63.1512(d)(1), the Permittee shall conduct performance tests to measure emissions of D/F at the outlet of the lime-injected baghouse controlling Furnaces F1 and F2. Pursuant to 40 CFR 63.1512(j), the results of the performance tests for the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, are used to establish emission rates in ug 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 40 CFR 63.1510(t).**
- (e) Pursuant to Paragraphs (k), (n), (o), and (p) respectively of 40 CFR 63.1512, during the performance tests the Permittee shall comply with the requirements and use the procedures in these sections of the NESHAP for:**
- (1) Measuring or otherwise determining feed/charge weight to the natural gas-fired oxygen rotary furnaces, identified as F1 and F2;**
 - (2) Establishing an operating parameter value or range for the inlet gas temperature at the inlet to the baghouse controlling the natural gas-fired oxygen rotary furnaces, identified as F1 and F2;**
 - (3) Establishing an operating parameter value or range for the total reactive chlorine flux injection rate; and**

- (4) **Establishing an operating parameter value for the lime injection system feeder setting for each operating cycle or time period used in the performance test.**
- (f) **Pursuant to Paragraphs (b), (d), and (e)(3) and (4) respectively of 40 CFR 63.1513 (Equations for determining compliance), the Permittee shall comply with the requirements and use the equations, references, and/or procedures in these sections of the NESHAP for:**
 - (1) **Determining compliance with an emission limit for D/F;**
 - (2) **Conversion of D/F measurements to TEQ units; and**
 - (3) **Determining compliance with emission limits for a secondary aluminum processing unit.**

Comment 15:

Condition D.1.17: This condition also seems more appropriately placed under the Emissions Limitations and Standards or Compliance Monitoring Requirements sections of the permit instead of Compliance Determination Requirements. Other changes to this condition we request be made are as follows:

In sub-condition (a)(4), the word "chlorine" should be added between the words "reactive" and "flux."

Subconditions (c)(1) and (2) should be deleted. These provisions refer only to gaseous or liquid reactive flux, which Alumitech does not use and does not intend to use in the future. Then, at the end of Paragraph (3), the word "solid" should be added before "reactive flux."

The last sentence of the condition implementing 40 CFR 63.1506(a)(2) should be deleted as it has been removed by December 30, 2002 amendments to the NESHAP.

Response 15:

IDEM has determined that this condition is a compliance determination and not a specific emission limitation. Therefore there are no changes to the proposed permit based upon this comment.

The following revisions to Condition D.1.17 have been made since this source does not use gaseous or liquid flux. Revisions resulting from the recent rule changes are also shown below:

D.1.17 Secondary Aluminum Production Compliance Determination [40 CFR Part 63, Subpart RRR]

Effective March 23, 2004, pursuant to 40 CFR Part 63.1510, the following conditions shall apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2:

- (a) Pursuant to 40 CFR 63.1506(m), for each furnace, the Permittee shall:
 - (1) Initiate corrective action within one (1) hour of a bag leak detection system alarm; complete the corrective action procedures in accordance with the Operation, Maintenance, and Monitoring Plan; and operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5%) percent of the operating time during a six (6) month 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 one (1) hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.
- (2) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus twenty-five (25) degrees Fahrenheit.
 - (3) For a continuous-lime injection system, the Permittee shall maintain free-flowing alkaline agent in the hopper to the feed device at all times and maintain the alkaline agent feeder setting at the same level established during the performance test. For the purposes of this rule lime means calcium oxide or other alkaline reagent; and lime-injection means the continuous addition of lime upstream of the fabric filter.
 - (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.
- (b) The Permittee shall use a continuous lime-injected fabric filter to comply with the requirements of 40 CFR 63, Subpart RRR; and therefore pursuant to 40 CFR 63.1510(i), the Permittee shall:
- (1) Verify that the lime (or other alkaline agent) is always free-flowing by inspecting the feed hopper or silo at least once each eight (8) hour period and recording the results of each inspection. If the lime or other alkaline agent is found not to be free-flowing during any of the eight (8) hour periods, the Permittee shall increase the frequency of inspections to at least once every four (4) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime or other alkaline agent during the three (3) day period.
 - (2) The Permittee shall also record the feeder setting once each day of operation.
- (c) Pursuant to 40 CFR 63.1510(j), for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, the Permittee shall:
- (1) ~~Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or reactive liquid flux injected into each furnace. The monitoring system shall record the weight for each fifteen (15) minute period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test. The accuracy of the weight measurement shall be within one (1%) percent of the weight of the reactive component of the flux being measured. The Permittee may apply to IDEM, OAQ 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 within one (1%) percent accuracy impracticable. The Permittee shall 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 six (6) months.~~

- (2) ~~Calculate and record the flux injection rate (kilogram per megagram or pound per ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(e).~~
 - (1 3) Record, for each fifteen (15) minute time 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 **solid** reactive flux.
 - (2 4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test.
- (d) Pursuant to 40 CFR 63.1510(s)(1), the Permittee shall include, within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
- (1) The identification of each emission unit in the secondary aluminum processing unit;
 - (2) The specific control technology of pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;
 - (3) The emission limit calculated for each secondary aluminum processing unit and performance test result with supporting calculations demonstrating initial compliance with each applicable emission limit;
 - (4) Information and data demonstrating compliance for each emission unit with all applicable design equipment work practice or operational standards of Subpart RRR; and
 - (5) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the three- (3-) day, twenty-four- (24-) hour rolling average using the procedure in 40 CFR 63.1510(t).
- (e) The SAPU compliance procedures within the OM&M plan may not contain any of the information provided in 40 CFR 63.1510(s)(2)(i) through (iv).

~~Pursuant to 40 CFR 63.1506(a)(2), the completion of the initial performance tests for the secondary aluminum processing units shall be considered to be the date of approval of the Operation, Maintenance and Monitoring Plan by IDEM, OAQ.~~

Comment 16:

Condition D.1.23: To state more precisely the specific NESHAP monitoring requirements that are applicable, we recommend the following changes to this condition:

At the end of Subcondition (a)(1), replace “data collected as required under Subpart RRR” with “information required in 40 CFR 63.1510(e).” Also add the following from 40 CFR 63.1510(t)(1), which was omitted:

If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the furnaces, all performance test

emissions results and all calculations must be conducted on the aluminum production weight basis.

Add the following from 40 CFR 63.1510(t)(3) and (4), which again was omitted:

- Divide the total emissions for each furnace for the 24-hour period by the total material charged to each furnace, or the weight of aluminum produced by each furnace over the 24-hour period to provide the daily emission rate for each furnace.

- Compute the 24-hour daily emission rate using the following equation:

[insert equation 4 from the NESHAP]

Response 16:

Condition D.1.23 has been revised in light of the above comments as follows:

D.1.23 Compliance Monitoring Requirements [40 CFR 63.1510(t)] [40 CFR 63.1510(u)]

Pursuant to 40 CFR 63, Subpart RRR, on and after the date the initial performance test to show compliance with Condition D.1.11 is required to be completed, the Permittee shall monitor the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and the baghouse FB1 according to the following requirements:

- (a) The Permittee shall calculate and record the three- (3-) day, twenty-four (24-) hour rolling average emissions of D/F for each furnace on a daily basis. To calculate the three- (3-) day, twenty-four (24-) hour rolling average, the Permittee shall:
- (1) Calculate and record the total weight of material charged to each furnace for each twenty-four- (24-) hour day of operation using the feed/charge weight **information required in 40 CFR 63.1510(e)** ~~data collected as required under Subpart RRR. If the Permittee chooses to comply on the basis of weight of aluminum produced by the emission unit, rather than weight of material charged to the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, all performance test emissions results and all calculations must be conducted on the aluminum production weight basis.~~
 - (2) To provide emissions for each furnace for the twenty-four- (24-) hour period, in pounds: multiply the total feed/charge weight to the furnace or the weight of aluminum produced by the furnace for the twenty-four- (24-) hour period, by the emission rate (in lb/ton of feed/charge) for that furnace (as determined during the emission test).
 - (3) **Divide the total emissions for each furnace for the twenty-four- (24-) hour period by the total material charged to the furnace, or the weight of aluminum produced by the furnace over the twenty-four- (24-) hour period to provide the daily emission rate for the furnace.**
 - (4) **Compute the twenty-four- (24-) hour daily emission rate using the following equation:**

$$E_{\text{day}} = \frac{\sum_{i=1}^n (T_i \times ER_i)}{\sum_{i=1}^n T_i}$$

where,

E_{day} = The daily 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);

ER_i = The measured emission rate for emission unit i as determined in the performance test (lb/ton or mg/Mg of feed/charge); and

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

- (53) Calculate and record the three- (3-) day, twenty-four- (24-) hour rolling average for each pollutant each day by summing the daily emission rates for D/F over the three (3) most recent consecutive days and dividing by three (3).
- (b) Pursuant to 40 CFR63.1510(u), as an alternative to the procedures in (a)(1) above, the Permittee may demonstrate through performance tests, that each individual furnace is in compliance with the applicable emission limit.

Comment 17:

Condition D.1.29: To state more precisely the specific NESHAP recordkeeping requirements that are applicable, we recommend the following changes to this condition:

In the Subcondition (d) introductory text, correct the NESHAP citation to "40 CFR 63.10(b)." Also add the following from 40 CFR 63.1517(b)(3), which was omitted:

For Furnaces F1 and F2, records of 15-minute block average inlet temperatures for the lime-injected baghouse, including any period when the 3-hour block average temperature exceeds the compliant operating parameter value +14EC (+25EF), with a brief explanation of the cause of the excursion and the corrective action taken.

In Subcondition (d)(2), add the following from 40 CFR 63.1517(b)(4)(ii), an option Alumitech may employ:

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.

In Subcondition (d)(3), delete the words "gaseous or liquid reactive flux injection" from the 2nd line and "gaseous, liquid or" from the 4th line. As stated previously, Alumitech does not currently use and will not use gaseous or liquid flux.

In Subcondition (d)(5), before the word "weights" add the words "records of feed/charge (or throughput)" from the NESHAP text, which was omitted.

In Subcondition (d)(9)(B); remove the words "For major sources," per the December 30, 2002 NESHAP amendments.

In the second line of Subcondition (d)(10), between the words "weight" and "for" add the clause "or if the owner or operator chooses to comply on the basis of aluminum production, total aluminum produced" from the NESHAP text, which was omitted.

Response 17:

D.1.29 Secondary Aluminum Production Record Keeping Requirements [40 CFR Part 63, Subpart RRR]
Effective March 23, 2004, pursuant to 40 CFR Part 63.1517, the Permittee shall:

- (a) As required by 40 CFR 63.10(b), the Permittee shall maintain files of all information (including all reports and notifications) required by the general provisions and Subpart RRR.

- (b) The Permittee shall retain each record for at least five (5) years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent two (2) years of records shall be retained at the source. The remaining three (3) years of records may be retained off site.
- (c) The Permittee may retain records on microfilm, computer disks, magnetic tape, or microfiche; and report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (d) In addition to the general records required by 40 CFR 63.4510(b), the Permittee of a furnace with a lime-injected fabric filter shall maintain records of:
 - (1) The number of total operating hours for the affected source or emission unit during each six- (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.
 - (2) **For the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of fifteen- (15-) minute block average inlet temperatures for the lime-injected baghouse, including any period when the three- (3-) hour block average temperature exceeds the compliant operating parameter value +14EC (+25EF), with a brief explanation of the cause of the excursion and the corrective action taken.**
 - (32) The following regarding lime injection:

Records of inspections at least once every eight- (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 four- (4-) hour period for the subsequent three (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;

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.
 - (43) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of fifteen- (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.
 - (54) For each continuous monitoring system, records required by 40 CFR 63.10(c).

- (65) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, **records of feed/charge (or throughput)** weights for each operating cycle or time period used in the performance test.
- (76) Records of monthly inspections for proper unit labeling for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, subject to labeling requirements.
- (87) Records of annual inspections of emission capture/collection and closed vent systems.
- (98) Records for any approved alternative monitoring or test procedure.
- (109) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (A) Startup, shutdown, and malfunction plan;
 - (B) ~~For major sources,~~ OM&M plan; and
 - (C) Site-specific secondary aluminum processing unit emission plan.
- (114) For the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, records of total charge weight, **or if the Permittee chooses to comply on the basis of aluminum production, total aluminum produced** for each twenty-four- (24-) hour period and calculations of three- (3-) day, twenty-four (24-) hour rolling average emissions.

Comment 18:

Condition D.1.30: To state more precisely the specific NESHAP reporting requirements that are applicable, we recommend the following changes to this condition:

Regarding Subcondition (a), we cannot find a requirement in 40 CFR 63.1510 or 63.1516 for notification of the anticipated date for conducting performance tests. There is a requirement for advance notification in 40 CFR 63.1511(a) for a site-specific test plan. In a comment above, we recommended including a condition regarding this plan, and when it is included this Subcondition (a) should be deleted.

In Subcondition (b), add the words "Pursuant to 40 CFR 63.1515(b)." In the 4th line, change (10) to (8) since there are only 8 paragraphs in this subcondition.

In Subcondition (b)(1), refer to Furnaces F1 and F2 instead.

In Subcondition (b)(7), replace the word "Approved" with the word "The" per the December 30, 2002 amendments to the NESHAP.

Cite the specific applicable NESHAP section in the remaining subconditions as follows:

- Subcondition (c): "Pursuant to 40 CFR 63.1516(a)"
- Subcondition (d): "Pursuant to 40 CFR 63.1516(b)"
- Subcondition (e): "Pursuant to 40 CFR 63.1516(b)(3)"

Subcondition (f): "Pursuant to 40 CFR 63.1516(c)"

Response 18:

Condition D.1.30 has been changed as suggested as follows:

D.1.30 Secondary Aluminum Production Reporting Requirements [40 CFR Part 63, Subpart RRR]

- (a) ~~Effective March 23, 2004, pursuant to 40 CFR 63.1510 and 63.1516, the Permittee shall provide notification of the anticipated date for conducting performance tests. The Permittee shall notify the IDEM, OAQ of the intent to conduct a performance test at least sixty (60) days before the performance test is scheduled.~~
- (b) **Pursuant to 40 CFR 63.1515(b),** the Permittee shall submit a notification of compliance status report within sixty (60) days after the compliance date of March 23, 2004. The notification shall be signed by the responsible official who shall certify its accuracy. A complete notification of compliance status report shall include the information specified in paragraphs (1) through ~~(8)~~ **below**. 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. If a Permittee 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 shall include:
- (1) All information required in 40 CFR 63.9(h). The Permittee shall provide a complete performance test report for the **two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, 30.0 metric ton reverberatory furnace (H), known as EU-01, the 40.0 metric ton reverberatory furnace (E), known as EU-02, and the 20.0 metric ton reverberatory furnace (M), known as EU-03,** for which a performance test is required. A complete performance test report includes all data, associated measurements, and calculations.
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system.
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
 - (4) The compliant operating parameter value or range established for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, 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, 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 40 CFR 63.1506(c).
 - (6) If applicable, analysis and supporting documentation demonstrating conformance with EPA guidance and specifications for bag leak detection systems in 40 CFR 63.1510(f).

- (7) **The** ~~Approved~~ OM&M plan.
 - (8) Startup, shutdown, and malfunction plan, with revisions.
- (be) **Pursuant to 40 CFR 63.1516(a)**, ~~t~~The Permittee shall develop and implement a written plan that contains specific procedures to be followed for operating and maintaining the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and baghouses used to comply with the standard. The Permittee shall also keep records of each event as required by 40 CFR 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 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan shall 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 baghouse, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (cd) **Pursuant to 40 CFR 63.1516(b)**, ~~t~~The Permittee shall submit semiannual reports within sixty (60) days after the end of each six- (6-) month period. Each report shall contain the information specified in 40 CFR 63.10 (c). When no deviations of parameters have occurred, the Permittee shall submit a report stating that no excess emissions occurred during the reporting period.
- A report shall be submitted if any of these conditions occur during a six- (6-) month reporting period:
- (1) The corrective action specified in the OM&M plan for a bag leak detection system alarm was not initiated within 1 hour.
 - (2) 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, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - (3) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (4) Either or both of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, were not operated according to the requirements of Subpart RRR.
 - (5) A deviation from the three- (3-) day, twenty-four- (24-) hour rolling average emission limit for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
- (de) **Pursuant to 40 CFR 63.1516(b)(3)**, ~~f~~The Permittee shall submit the results of any performance test conducted during the reporting period, including one (1) 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.

(ef) Pursuant to 40 CFR 63.1516(c), for the purpose of annual certifications of compliance required by 40 CFR Part 70 or 71, the Permittee shall certify continuing compliance based upon, but not limited to, the following conditions:

- (1) Any period of excess emissions, as defined the semiannual report, that occurred during the year were reported as required by this subpart; and
- (2) All monitoring, record keeping, and reporting requirements were met during the year.

Comment 19:

Condition D.2.6: The condition contains the requirement that the tumbler be tested by March 11, 2003 for PM and PM₁₀ emissions. Alumitech requests that the date be extended by 180 days to September 11, 2003 due to the shortness of time. A five (5) year retesting requirement is not a condition of the construction permit CP 169-5377-00035 that addresses this emission unit, which might have otherwise alerted the need for stack testing.

Response 19:

The original testing requirement for this emission unit did not contain a provision to retest within five (5) years. Therefore, the testing requirement of Condition D.2.6 has been revised since the issuance date of this permit may be after March 11, 2003 as follows:

D.2.6 Testing Requirements [326 IAC 2-8-5(a)(1), (4)] [326 IAC 2-1.1-11]

Within 180 days of issuance of this permit, ~~By March 11, 2003 which corresponds to five (5) years from the date of the last valid stack test,~~ in order to demonstrate compliance with Conditions D.2.1, D.2.2 and D.2.3 the Permittee shall perform PM and PM₁₀ testing of the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM₁₀ includes filterable and condensable PM₁₀. Testing shall be conducted in accordance with Section C- Performance Testing.

On January 20, 2003, Galen L. Bremmer, President of the Wabash Chamber of Commerce, submitted a comment on the proposed FESOP. The comment is as follows:

Comment:

The purpose of this letter is in support of the application made by Alumitech of Wabash Inc., in Wabash County for a Federally Enforceable State Operating Permit for stationary aluminum production. Alumitech is very important to the economy of Wabash County providing stable quality employment for 30 plus employees. On behalf of the members and Board of Directors of the Wabash Area Chamber of Commerce, I would like to voice our support for their growth and expansion in Wabash. They are good corporate citizens and have exercised great diligence in installing proper equipment as to protect the air quality and citizens of Wabash from any harmful effects of their production process. In fact they have exercised great diligence in cleaning up problems that they inherited. We hope that they will grow to become an even larger contributor to our community's employment base. Please grant them the permits applied for.

Response:

The proposed operating permit for this source will contain enforceable requirements that will insure that Alumitech of Wabash, Inc. will continue to control emissions of air pollutants in a manner consistent with all applicable Federal and State regulations. Therefore, no changes to the proposed permit are necessary as a result of this comment.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD)
for a Federally Enforceable State Operating Permit (FESOP)

Source Background and Description

Source Name: Alumitech of Wabash, Inc.
Source Location: State Route 15 and Dimension Avenue, Wabash, Indiana 46992
County: Wabash
FESOP: F 169-15363-00035
SIC Code: 3341
Permit Reviewer: Frank P. Castelli

The Office of Air Quality (OAQ) has reviewed a FESOP application from Alumitech of Wabash, Inc. relating to the operation of a stationary secondary aluminum production source processing aluminum dross and scrap aluminum.

History

An administratively complete Part 70 Operating Permit application was received from S & R Enterprises, Incorporated, now Alumitech of Wabash, Inc., on November 7, 1996. On December 14, 2001, IDEM, OAQ received a request from the source to convert their Part 70 Operating Permit application to a FESOP application.

In 1990, Alumitech of Wabash, Inc. received Construction Permit CP 169-1887-00035 to construct and operate the source. In 1996, Alumitech of Wabash, Inc. received Construction Permit CP 169-5377-00035 for a tumbler with rated capacity of 12.5 tons per hour of salt cake and dross. Later in 1996 Alumitech of Wabash, Inc. received Amendment A 169-6850-00035 to the 1990 permit allowing relocation of the dross/salt cake cooling operation and requiring separate control of the emissions of particulate matter (PM) from the relocated cooling operation.

In 1998, Alumitech of Wabash, Inc. received Construction Permit CP 169-10043-00035 for three (3) new natural gas-fired oxygen furnaces, capacity 3.5 tons per hour each, to replace the three (3) existing furnaces. This construction permit also allowed installation of a new sizing line with a 25 ton per hour processing capacity of aluminum dross and salt cake. Only new furnaces #2 and #3 were constructed; Furnace #1 was never constructed.

The new management Alumitech of Wabash, Inc has concluded that their request to revise the capacity of Furnace #3 to 5.0 tons per hour is not necessary since this capacity is not achievable. After reviewing the production history since 1999, and evaluating current operating constraints, Alumitech of Wabash, Inc. has determined Furnace #3's maximum capacity is the 3.5 tons per hour that was originally stated in the 1998 construction permit. Therefore the application for a significant

source modification, SSM 169-11147-00035, was withdrawn on December 14, 2001.

The request to convert Alumitech of Wabash, Inc. operating permit from a Part 70 Operating Permit to a FESOP is prompted by two (2) developments. First, Furnace #1 approved in the 1998 construction permit was never constructed, and Alumitech of Wabash, Inc. no longer wishes to install it. Secondly all three (3) old furnaces were taken out of operation, so only the new oxygen Furnaces #2 and #3 are being operated at Alumitech of Wabash, Inc. Alumitech of Wabash, Inc. had previously accepted a 99 ton per year PM and PM₁₀ emission limitation for the entire source to make 326 IAC 2-2 (PSD) not applicable. Now that Alumitech of Wabash, Inc. will only operate two (2) furnaces and because Furnace #3's capacity has not increased, this PM/PM₁₀ limit is even more achievable.

On November 4, 2002, Alumitech of Wabash, Inc. requested to add a proposed screening line to this existing source. The screening line, with a capacity of thirty nine (39) tons of aluminum scrap per hour, will share a baghouse with the existing sizing line. The existing sizing and proposed screening lines will not operate concurrently. All materials processed by the proposed screening line will be charged directly to the furnaces.

The potential PM and PM₁₀ emissions from the proposed screening line are greater than five (5) tons per year, but less than ten (10) tons per year shown on page 9 of 13 for PM and page 11 of 13 for PM₁₀ of Appendix A. Therefore this proposed construction is at a minor permit revision level of new source review.

Permitted Emission Units and Pollution Control Equipment

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

- (a) Two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, rated at 6.0 million British thermal units per hour each, controlled with a baghouse with lime injection, identified as FB1, exhausting through Stack S-FB1, installed in 1998 and 2000, respectively, capacity: 3.5 tons per hour of aluminum dross or aluminum scrap each.
- (b) One (1) enclosed salt cake cooling rack with hood, installed in 2000, controlled with a baghouse, identified as FB1, exhausting through Stack S-FB1, capacity: 5.5 tons of salt cake per hour.
- (c) One (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, controlled with a cyclone connected in series with a baghouse, identified as MB1, exhausting through Stack S-MB1, installed in 1996, capacity: 12.0 tons of aluminum dross and/or salt cake per hour.
- (d) One (1) sizing line, consisting of one (1) grizzly feeder, one (1) primary crusher (Mega Slam), one (1) secondary crusher (Cage Mill), eight (8) conveyors, two (2) augers, two (2) screens, and three (3) holding tanks, all controlled with a baghouse, identified as MB2, exhausting through Stack S-MB2, installed in 1998, capacity: 12.0 tons of aluminum dross and salt cake per hour.

Unpermitted Emission Units and Pollution Control Equipment

There are no unpermitted facilities operating at this source during this review process.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

- (e) One (1) screening line, consisting of screening and conveying processes, controlled with a

baghouse, identified as MB2, exhausting through Stack S-MB2, to be installed, capacity: 39.0 tons of aluminum dross per hour.

Insignificant Activities

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

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) British thermal units per hour with a total heat input capacity of 0.465 million British thermal units per hour consisting of:
 - (1) One (1) office hot water heater, rated at 0.040 million British thermal units per hour.
 - (2) One (1) office furnace, rated at 0.070 million British thermal units per hour.
 - (3) Two (2) brake room furnaces, rated at 0.070 million British thermal units per hour each.
 - (4) One (1) brake room hot water heater, rated at 0.040 million British thermal units per hour.
 - (5) One (1) maintenance furnace, rated at 0.075 million British thermal units per hour.
 - (6) One (1) maintenance heater, rated at 0.100 million British thermal units per hour.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 British thermal units per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 British thermal units per hour, consisting of a 20-hp gasoline fired portable welder.
- (c) Application of oils, greases lubricants or other nonvolatile materials applied as temporary protective coatings.
- (d) Cleaners and solvents characterized as follows:
 - (1) having a vapor pressure equal to or less than 2 kiloPascals; 15 millimeters of mercury; or 0.3 pounds per square inch measured at 38EC (100EF) or;
 - (2) having a vapor pressure equal to or less than 0.7 kiloPascals; 5 millimeters of mercury; or 0.1 pounds per square inch measured at 20EC (68EF); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.
- (e) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (f) Paved roads and parking lots with public access.
- (g) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.

- (h) Raw material unloading and storage.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

- (a) CP 169-1887-00035, issued on December 21, 1990,
- (b) CP 169-5377-00035, issued on August 12, 1996,
- (c) A 169-6850-00035, issued on October 23, 1996,
- (d) CP 169-10043-00035, issued on December 31, 1998, and
- (e) Agreed Order Case No. 3645, formerly 4642, signed on May 16, 2001.

All conditions from previous approvals were incorporated into this FESOP except the following:

- (a) CP 169-1887-00035, issued on December 21, 1990.

All conditions

Reason not incorporated: The three (3) rotary furnaces have been replaced by two (2) natural gas-fired oxygen rotary furnaces permitted by CP 169-10043-00035, issued on December 31, 1998.

- (b) A 169-6850-00035 issued on October 23, 1996.

Operation Condition No. 7

Reason not incorporated: Again, the three (3) rotary furnaces have been replaced by two (2) natural gas-fired oxygen rotary furnaces covered by CP 169-10043-00035, issued December 31, 1998.

- (c) CP 169-10043-00035, issued on December 31, 1998.

Operation Conditions 11(a) and (b)

Reason not incorporated: The 12.1 pound per hour PM limit for the three (3) oxygen furnaces and the 5.0 pound per hour PM limit for the aluminum dross and salt cake sizing line were truncated 326 IAC 6-3-2 limits. These limits were truncated to rates that were less than the 326 IAC 6-3-2 allowable limits to render the requirements of 326 IAC 2-2 not applicable. This proposed FESOP contains the full allowable PM emission rates pursuant to 326 IAC 6-3-2 and utilizes an overall hourly PM limit for the entire source to remain a minor source pursuant to 326 IAC 2-2.

Enforcement Issue

There are no enforcement actions pending.

Agreed Order Case No. 3645, formerly 4642, signed on May 16, 2001 resulted in the following:

- (a) By June 1, 2001, all raw materials consisting of fines and all waste dross including any waste

gross stored outside shall be unloaded and stored in an enclosed building or a three-walled structure that includes a permanent roof and floor. In addition, Respondent shall develop and implement procedures for the delivery of raw materials. The written procedures shall be made readily available upon an IDEM inspector's request.

- (b) Respondent shall sweep the plant's roadways no less than once per day unless weather conditions prohibit or major mechanical malfunctions. Respondent shall maintain a written log documenting when sweeping was performed, or if not performed the weather conditions or major mechanical failures that prevented it from occurring. The log shall be made readily available upon and IDEM inspector's request.

These conditions have been incorporated into the proposed FESOP.

Recommendation

The staff recommends to the Commissioner that the FESOP be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An administratively complete Part 70 permit application was received from S & R Enterprises, Incorporated, now Alumitech of Wabash, Inc., on November 7, 1996. Additional information was received on May 29 as well as on November 30, 1998 to update the application for the changes in the source permitted by CP 169-10043-00035, issued on December 31, 1998. On December 14, 2001, IDEM, OAQ received a request from the source to convert their Part 70 permit application to a FESOP application. Additional information was received on April 29, July 22, August 12, 2002 and on November 4, 2002 (request for the proposed screening line).

There was no notice of completeness letter for the FESOP mailed to the source.

Emission Calculations

See pages 1 through 13 of Appendix A of this document for detailed emissions calculations.

Potential To Emit

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls of the entire source. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	Potential To Emit (tons/year)
PM	65,699

Pollutant	Potential To Emit (tons/year)
PM ₁₀	2,305
SO ₂	0.532
VOC	2.29
CO	4.92
NO _x	0.523

Note: For the purpose of determining Title V applicability for particulates, PM₁₀, not PM, is the regulated pollutant in consideration.

HAPs	Potential To Emit (tons/year)
Lead	2.38
Antimony	0.402
Arsenic	0.012
Beryllium	0.002
Cadmium	0.124
Chromium	0.151
Cobalt	0.003
Manganese	0.601
Mercury	0.003
Nickel	0.072
Selenium	0.010
Benzene	0.0001
Dichlorobenzene	0.001
Formaldehyde	0.004
Hexane	0.095
Toluene	0.0002
HCL	67.5
D/F	0.00000006
TOTAL	71.8

- (a) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of PM₁₀ is equal to or greater than one hundred (100) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.

- (b) The potential to emit (as defined in 326 IAC 2-1.1-1(16)) of any single HAP is equal to or greater than ten (10) tons per year and the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is greater than or equal to twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7.
- (c) Fugitive Emissions

Since this type of operation is one of the twenty-eight (28) listed source categories under 326 IAC 2-2 the fugitive emissions are counted toward determination of PSD applicability.
- (d) This source, otherwise required to obtain a Title V permit, has agreed to accept a permit with federally enforceable limits that restrict its PTE to below the Title V emission levels. Therefore, this source will be issued a Federally Enforceable State Operating Permit (FESOP), pursuant to 326 IAC 2-8.

Actual Emissions

The following table shows the actual emissions from the source. This information reflects the 2000 OAQ emission data. HAPs data were not reported.

Pollutant	Actual Emissions (tons/year)
PM	-
PM ₁₀	1
SO ₂	0
VOC	0
CO	1
NO _x	0
HAP	Not Reported

Potential to Emit After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Federally Enforceable State Operating Permit.

Process/facility	Limited Potential to Emit (tons/year)						
	PM	PM ₁₀	SO ₂	VOC	CO	NO _x	HAPs
Two (2) oxygen rotary furnaces (F1 & F2) (1998 & 2000) including one (1) enclosed salt cake cooling rack with hood (2000) (process only)	4.10	4.10	-	-	-	-	6.14 (HCL)
Two (2) oxygen rotary furnaces (F1 & F2) (1998 & 2000) (combustion only)	0.0001	0.0004	0.032	0.289	4.42	0.023	0.099
One (1) tumbler (1996)	65.2	65.2	-	-	-	-	0.002
One (1) sizing line with fugitives (1998)	4.99	1.48	-	-	-	-	0.0000001
Proposed screening line with fugitives	6.77	3.20	-	-	-	-	0.00016
Insignificant activities & additional fugitives	1.0	1.0	0.5	2	0.5	0.5	0.5
Total Emissions	82.1	75.0					Single Less Than 10 Total Less Than 25

The after control potential to emit PM and PM₁₀ emission rates for the oxygen furnaces, including the fluxing and cooling operations, were scaled upwards by a factor of eight (0.512 TPY * 8). The factor of eight (8) adjusted the after control potential to emit PM and PM₁₀ to assure that the Permittee would comply with the stack tests to verify compliance with hourly PM and PM₁₀ emission rates in the proposed permit. The after control potential to emit PM for the tumbler was used, but the potential to emit PM₁₀ was set equal to the PM emission rate. The potential to emit PM and PM₁₀ emissions from the sizing line and the proposed screening line were set equal to the potential to emit PM and PM₁₀ before controls. Therefore, as requested by the Permittee, the total potential to emit PM₁₀ for the entire source are limited to less than one hundred (100) tons per year, including insignificant activities. This makes the requirements of 326 IAC 2-7 not applicable. Similarly, the total potential to emit PM are limited to less than one hundred (100) tons per year, including fugitives and insignificant activities which makes the requirements of 326 IAC 2-2 (PSD) not applicable.

The Permittee has requested to set both the PM and PM₁₀ limits at levels significantly less than one hundred (100) tons per year so that in the future additional emission units can be added to the source without requiring adjustments to all of the existing limits set by this FESOP.

County Attainment Status

The source is located in Wabash County.

Pollutant	Status
PM ₁₀	Attainment
SO ₂	Attainment
NO ₂	Attainment
Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Wabash County has been designated as attainment or unclassifiable for ozone.
- (b) Wabash County has been classified as attainment or unclassifiable for all remaining criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) applicable to this source.
- (b) Alumitech of Wabash, Inc is now subject to the National Emission Standards for Hazardous Air Pollutants, 326 IAC 14 and 40 CFR 63.1500, Subpart RRR.

On December 3, 2002, IDEM, OAQ approved an extension of the compliance standards and date of March 24, 2003 contained in 40 CFR Part 63, Subpart RRR for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The termination date of this extension is March 23, 2004, which is the final compliance date.

The termination date of this extension also applies to:

- (1) Submission of the site specific test plan and notice for conducting the initial performance test.
- (2) Conducting the initial performance test.
- (3) Submission of the initial notification of the compliance status report.
- (4) Submission of the operation, maintenance, and monitoring (OM&M) plans and the start-up, shutdown and malfunction plan.

The two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, are considered Group 1 furnaces. These two (2) furnaces are therefore subject to the "area source" requirements of the National Emission Standards for Hazardous Air Pollutants (NESHAPs), 40 CFR 63, Subpart RRR Secondary Aluminum Production pertaining to dioxins and furans (D/F) because the potential to emit HAPs is limited to less than ten (10) tons per year for the worst case single HAP and to less than twenty five (25) tons per year for the combination of HAPs. Therefore, this source is a minor source for HAPs. The source is an existing secondary aluminum process facility containing Group 1 furnaces since it includes two (2)

natural gas-fired oxygen rotary furnaces processing other than clean charge. The Permittee shall comply with the following requirements on or before March 23, 2004:

A summary of the requirements is as follows:

- (1) The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, except when otherwise specified in 40 CFR 63 Subpart RRR.
- (2) Identification, emission limits and means of compliance shall be posted on all affected sources and emission units.
- (3) The two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, shall be controlled by a baghouse with a continuous lime injection system.
- (4) A bag leak detector system shall be installed in accordance with "Fabric Filter Bag Leak Detection Guidance" and operated for baghouses.
- (5) A reactive flux injection rate monitoring system shall be installed and operated.
- (6) A baghouse inlet temperature monitoring system shall be installed and operated for baghouses.
- (7) The total polychlorinated dibenzofurans (D/F) emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, shall not exceed fifteen (15) micrograms per megagram of feed.
- (8) A scale or scales with an accuracy of plus or minus one (1%) percent shall be installed and utilized to record the weight of each charge and of the reactive flux injection rate.
- (9) An operations, malfunction, and maintenance plan shall be developed for the emission capture and collection system, charge monitoring system, reactive flux injection system, and baghouse inlet temperature monitoring system.

State Rule Applicability - Entire Source

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is one of the twenty eight (28) major PSD source categories. Since the potential to emit each of the criterial pollutants, including particulate matter (PM), is limited to less than one hundred (100) tons per year, this source is a minor source pursuant to this rule.

326 IAC 2-6 (Emission Reporting)

This source is located in Wabash County and the potential to emit PM₁₀ including fugitives, is less than one hundred (100) tons per year. Therefore 326 IAC 2-6 does not apply.

326 IAC 2-8-4 (FESOP)

Pursuant to this rule, the amount of PM₁₀ shall be limited to less than one hundred (100) tons per year.

In addition the amount of a single HAP and combination of HAPs shall be limited to less than ten (10) tons per year and twenty-five (25) tons per year, respectively. Therefore, the requirements of 326 IAC 2-7, do not apply.

The PM₁₀ emissions will be limited by the proper operation of the applicable control devices while the only HAP that is potentially emitted at a rate greater than ten (10) tons per year, HCL, will be limited by requiring lime injection into both oxygen furnaces at all times that the furnaces are operating. The potential to emit HCL with lime injection is only 3.07 tons per year for each of the two (2) furnaces as shown on page 2 of Appendix A.

326 IAC 5-1 (Opacity Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) 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 Part 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.

State Rule Applicability - Individual Facilities

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

- (a) The particulate from the two (2) oxygen furnaces and the enclosed salt cake cooling rack shall not exceed 15.1 pounds per hour when operating at a process weight rate of 7.0 tons per hour.
- (b) The particulate from the tumbler shall not exceed 21.7 pounds per hour when operating at a process weight rate of 12.0 tons per hour.
- (c) The particulate from the sizing line shall not exceed 21.7 pounds per hour when operating at a process weight rate of 12.0 tons per hour.
- (d) The particulate from the proposed screening line shall not exceed 42.3 pounds per hour when operating at a process weight rate of 39.0 tons per hour.
- (e) These limitations are based upon the following:

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:

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

or

Interpolation and extrapolation of the data for the process weight rate in excess of sixty

thousand (60,000) pounds per hour shall be accomplished by use of the equation:

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

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

The cyclone and the baghouses shall be in operation at all times that these facilities are in operation, in order to comply with these limits.

State Rule Applicability - Insignificantly Activities

The only requirements for the insignificant activities at this source are covered under the Agreed Order, Case No. 3645, formerly 4642, signed on May 16, 2001. These conditions are detailed in the Enforcement Issue section of this document and are included in the proposed permit.

Testing Requirements

(a) Previous Stack Tests

- (1) A rotary furnace that has subsequently been removed from service was stack test on April 2, 1992 for PM and was shown in compliance.
- (2) On March 11, 1998, the tumbler exhaust was stack tested for PM and showed an emission rate of 0.147 pounds per hour which verified compliance with the stated allowable emission rate of 22.3 pounds per hour pursuant to 326 IAC 6-3-2 with a process weight rate of 12.5 tons per hour.
- (3) On February 7, 2002, the oxygen furnaces exhaust was stack tested for PM and showed an emission rate of 0.3 pounds per hour which verified compliance with the stated allowable emission rate of 12.1 pounds per hour pursuant to CP 169-10043-00035, issued on December 31, 1998. This limit was truncated to less than the allowable emission rate pursuant to 326 IAC 6-3-2 to make the requirements of 326 IAC 2-2 (PSD) not applicable.

(b) Proposed Stack Tests

All testing requirements from previous approvals were incorporated into this FESOP. These stack tests for the oxygen furnaces and the tumbler were required to show compliance with the PM and PM₁₀ emission limits.

- (1) To demonstrate compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM₁₀ for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, including the one (1) enclosed salt cake cooling rack, shall be performed by August 7, 2004 which corresponds to two and a half (2.5) years from the date of the last valid stack test.
- (2) To demonstrate compliance with 326 IAC 6-3-2, 326 IAC 2-8-4 and 326 IAC 2-2, a compliance stack test of PM and PM₁₀ for the one (1) tumbler, consisting of one (1) screen, one (1) conveyor, one (1) feeding conveyor, and five (5) augers, shall be performed by March 11, 2003 which corresponds to five (5) years from the date of the last valid stack test.

- (c) The following new testing requirements were incorporated into this FESOP- Subpart RRR Stack Tests
- (1) Within 180 days of issuance of this proposed permit, stack testing of HCl emissions from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2 is proposed to show compliance with the requirements of 326 IAC 2-8-4.
 - (2) On December 3, 2002, IDEM, OAQ approved an extension of the final compliance standards including the date contained in 40 CFR Part 63, Subpart RRR for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2. The termination date of this extension is March 23, 2004, which is the final compliance date. Therefore, stack testing of D/F emissions is proposed to show compliance with the requirements of 40 CFR Part 63, Subpart RRR prior to September 23, 2004 which is within 180 days of the compliance date of March 23, 2004.

Compliance Requirements

Permits issued under 326 IAC 2-8 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-8-4. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this source are as follows:

- (a) The two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, and the one (1) enclosed salt cake cooling rack with PM emissions controlled by a baghouse, identified as FB1, exhausting through Stack S-FB1, have applicable compliance monitoring conditions as specified below:
 - (1) Visible emissions notations of the stack exhaust S-FB1 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit

shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (2) The Permittee shall record the total static pressure drop across the baghouse, identified as FB1, used in conjunction with the melting and cooling processes, at least once per shift when the melting and cooling processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (3) An inspection shall be performed within the last month of each calendar quarter of all bags controlling the melting and cooling processes. All defective bags shall be replaced.
- (4) In the event that bag failure has been observed:
 - (A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (B) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).
- (5) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

(b) The one (1) tumbler operation equipped with a cyclone connected in series with a baghouse, identified as MB1, exhausting through Stack S-MB1 has applicable compliance monitoring conditions as specified below:

(1) Visible emissions notations of the tumbler stack exhaust S-MB1 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

(2) The Permittee shall record the total static pressure drop across the baghouse, identified as MB1, used in conjunction with the tumbler processes, at least once per shift when the tumbler processes are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

(3) An inspection shall be performed within the last month of each calendar quarter of all bags controlling the tumbler processes. All defective bags shall be replaced.

(4) In the event that bag failure has been observed:

(A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.

(B) For single compartment baghouses, if failure is indicated by a significant drop

in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).

- (5) An inspection shall be performed within the last month of each calendar quarter of the cyclone controlling the tumbler processes. Inspections are optional when venting to the indoors.
 - (6) In the event that cyclone failure has been observed the failed unit and the associated process will be shut down immediately until the failed unit has been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.
 - (7) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.
- (c) The one (1) sizing line and the proposed screening line, equipped with a shared baghouse, identified as MB2, exhausting through Stack S-MB2 have applicable compliance monitoring conditions as specified below:
- (1) Visible emissions notations of the stack exhaust S-MB2 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (2) The Permittee shall record the total static pressure drop across the baghouse, identified as MB2, used in conjunction with the sizing line, at least once per shift when the sizing line and/or the screening line are in operation. When for any one reading, the pressure drop across the baghouse is outside the normal range of 0.5 and 6.5 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C- Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports,

shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

- (3) An inspection shall be performed within the last month of each calendar quarter of all bags controlling the sizing line and screening line. All defective bags shall be replaced.
- (4) In the event that bag failure has been observed:
 - (A) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion.
 - (B) For single compartment baghouses, if failure is indicated by a significant drop in the baghouse's pressure readings with abnormal visible emissions or the failure is indicated by an opacity violation, or if bag failure is determined by other means, such as gas temperatures, flow rates, air infiltration, leaks, dust traces or triboflows, then failed units and the associated process will be shut down immediately until the failed units have 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).
- (5) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These monitoring conditions are necessary because the baghouses and cyclone must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-8 (FESOP) and to make the requirements of 326 IAC 2-2 (PSD) not applicable.

- (d) The two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2 have additional applicable compliance monitoring conditions to comply with Subpart RRR as specified below:
 - (1) The two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, shall be controlled by a baghouse with continuous lime injection system.
 - (2) The Permittee shall install, operate, and maintain a capture/collection system for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, equipped with a baghouse; and 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 40 CFR 63.1506(c) and record the results of each inspection.

- (3) The Permittee of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, using a fabric filter or lime-injected fabric filter to comply with the requirements of this subpart shall install, calibrate, maintain, and continuously operate a bag leak detection system.
 - (A) The Permittee shall install and operate a bag leak detection system for each exhaust stack of a fabric filter.
 - (B) Each triboelectric bag leak detection system shall 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 shall be installed, operated, calibrated, and maintained in a manner consistent with the manufacturer's written specifications and recommendations.
 - (C) The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.
 - (D) The bag leak detection system sensor shall provide output of relative or absolute PM loadings.
 - (E) The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.
 - (F) The bag leak detection system shall 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 shall be located where it is easily heard by plant operating personnel.
 - (G) For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.
 - (H) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.
 - (I) The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.
 - (J) Operate each fabric filter system such that the bag leak detection system alarm does not sound more than five (5%) percent of the operating time during a six (6) month 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 one (1) hour. If the Permittee takes longer than one (1) hour to initiate corrective action, the alarm time shall be counted as the actual amount of time taken by the Permittee to initiate corrective action.

- (K) Maintain the three (3) hour average inlet temperature for each fabric filter at or below the average temperature established during the performance test plus twenty-five (25) degrees Fahrenheit.
 - (L) Following initial adjustment of the system, the Permittee shall 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 one hundred (100%) percent or decreased more than fifty (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.
- (4) The Permittee shall install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each oxygen furnace.
- (A) The monitoring system shall record the weight for each fifteen- (15-) minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
 - (B) The accuracy of the weight measurement device shall be ± 1 percent of the weight of the reactive component of the flux being measured.
 - (C) The Permittee shall 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 six (6) months.
 - (D) Calculate and record the gaseous or liquid reactive flux injection rate (kilograms per megagram or pounds per ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
 - (E) Record, for each fifteen- (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.
 - (F) 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 40 CFR 63.1512(o).

- (5) The Permittee shall 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. The temperature monitoring device shall meet each of these performance and equipment specifications:
 - (A) The monitoring system shall record the temperature in fifteen- (15-)minute block averages and calculate and record the average temperature for each three- (3-) hour block period.
 - (B) The recorder response range shall include zero (0) and one and half (1.5) times the average temperature established according to the requirements in 40 CFR 63.1512(n).

- (C) The reference method shall be a National Institute of Standards and Technology calibrated reference thermocouple-potentiometer system, subject to approval by the Administrator.
- (6) The Permittee of a continuous lime injection system shall verify that lime is always free-flowing by either:
 - (A) Inspecting each feed hopper or silo at least once each eight- (8-) hour period and recording the results of each inspection. If lime is found not to be free-flowing during any of the eight- (8-) hour periods, the owner or operator shall increase the frequency of inspections to at least once every four- (4-) hour period for the next three (3) days. The Permittee may return to inspections at least once every eight (8) hour period if corrective action results in no further blockages of lime during the three- (3-) day period; or
 - (B) Subject to the approval of the IDEM, OAQ, 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 Permittee shall promptly initiate and complete corrective action, or
 - (C) Subject to the approval of the IDEM, OAQ, 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 Permittee shall promptly initiate and complete corrective action.
 - (7) The Permittee of a continuous lime injection system shall record the lime feeder setting once each day of operation.
 - (8) A Permittee who intermittently adds lime to a lime coated fabric filter shall obtain approval from the permitting authority for a lime addition monitoring procedure. The IDEM, OAQ 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.
 - (9) The Permittee of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, subject to an emission limit in kilogram per megagram (pounds per ton) or micrograms per megagram (grams per ton) of feed/charge shall install, calibrate, operate, and maintain a device to measure and record the total weight of feed/ charge to, or the aluminum production from the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs shall be measured and recorded on an emission unit-by-emission unit basis. The accuracy of the weight measurement device or procedure shall be ± 1 percent of the weight being measured.
 - (10) Pursuant to 40 CFR Part 63.1510 the Permittee shall inspect the labels for each of the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, at least once per calendar month to confirm that posted labels as required by the operational standard in 40CFR 63.1506(b) are intact and legible.

Alumitech of Wabash, Inc.
Wabash, Indiana
Permit Reviewer:FPC/MES

Page 25 of 28
F 169-15363-00035

- (11) The Permittee shall calculate and record the three- (3-) day, twenty-four (24-) hour rolling average emissions of D/F for two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, on a daily basis. To calculate the three- (3-) day, twenty-four (24-) hour rolling average, the Permittee shall:
- (A) Calculate and record the total weight of material charged to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, for each twenty-four (24-) hour day of operation using the feed/charge weight data collected as required under Subpart RRR. If the Permittee chooses to comply on the basis of weight of aluminum produced by the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, rather than weight of material charged to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, all performance test emissions results and all calculations shall be conducted on the aluminum production weight basis.
 - (B) Multiply the total feed/charge weight to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, or the weight to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, or the weight of aluminum produced by the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, for the twenty-four (24-) hour period by the emission rate (in lb/ton of feed/charge) for that the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, (as determined during the emission test) to provide emissions for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, for the twenty-four (24-) hour period, in pounds.
 - (C) Divide the total emissions for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, for the twenty-four (24-) hour period by the total material charged to the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, or the total weight of aluminum produced by the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, over the twenty-four (24-) hour period to provide the daily emission rate for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2.
 - (D) Compute the twenty-four (24-) hour daily emission rate using the equation:

$$E_{day} = \frac{\sum_{i=1}^n (T_{ix}ER_i)}{\sum_{i=1}^n T_i}$$

Where,

E_{day}=The daily respective D/F emission rate for the secondary aluminum processing unit for the twenty-four (24-) hour period;

T_i=The total amount of feed, or aluminum produced, for emission unit i for the twenty-four (24-) hour period in tons;

ER_i=The measured emission rate for emission unit *i* as determined in the performance test (lb/ton or µg/m³ /Mg or feed/charge); and

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

- (E) Calculate and record the three- (3-) day, twenty-four (24-) hour rolling average for each pollutant each day by summing the daily emission rates for DF over the three (3) most recent consecutive days and dividing by three (3).
- (12) The Permittee shall prepare and implement for the two (2) natural gas-fired oxygen rotary furnaces, identified as F1 and F2, a written operation, maintenance, and monitoring (OM&M) plan. The Permittee shall submit the plan to the applicable permitting authority for review and approval as part of the application for a Part 70 or Part 71 permit. Any subsequent changes to the plan shall be submitted to the IDEM, OAQ for review and approval. Pending approval by the IDEM, OAQ of an initial or amended plan, the Permittee shall comply with the provisions of the submitted plan. Each plan shall contain the following information:
- (A) 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.
 - (B) A monitoring schedule for each affected source and emission unit.
 - (C) 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 40 CFR 63.1505.
 - (D) 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 six (6) months, according to the manufacturer's instructions; and
 - (ii) Procedures for the quality control and quality assurance of continuous emission systems as required by the general provisions in Subpart A of this part.
 - (E) 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.
 - (F) 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 an 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.
- (G) A maintenance schedule for each process and baghouse that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (13) Additional inspections and preventive measures shall be performed as prescribed in the Preventive Maintenance Plan.

These additional compliance monitoring conditions are necessary because the baghouse for the natural gas-fired oxygen rotary furnaces, identified as F1 and F2, must operate properly to ensure compliance with NESHAP Subpart RRR.

Conclusion

The operation of this stationary secondary aluminum production source processing aluminum dross and scrap aluminum shall be subject to the conditions of the attached proposed FESOP No.: F 169-15363-00035.

**Appendix A: Emission Calculations
Secondary Aluminum Smelting**

Company Name: Alumitech of Wabash, Inc.
Address City IN Zip: 305 Dimension Avenue, Wabash IN 46992
FESOP: F 169-15363
Pit ID: 169-00035
Reviewer: Frank P. Castelli
Date: December 14, 2001

Two Oxygen Furnaces Including Cooling Rack Emissions
Process

Process	@3.5 tons/hr each	Total Metal Charged tons/hr	
		PM*	PM-10*
2-Oxy Furnaces F1 and F2		7.0	
Emission Factors lbs/ton charged		16.7	16.7
Potential Emissions lbs/hr		116.9	116.9
Potential Emissions tons/yr		512.0	512.0
Potential Emissions After Controls tons/yr		0.512	0.512

PM Control
 99.9%

*** PM emission factors from stack test on identical furnaces (Scepter Industries)**

Process Rate	Process Weight Rate (tons/hr)	Allowable PM Emission Rate (lbs/hr)
Both Oxy Furnaces	7.00	15.10

Methodology
 Allowable Emissions = 4.10(Process Weight Rate)^{0.67}

Natural Gas Combustion From the Two (2) Oxy Furnaces Rated at 6.0 MMBtu/hr, each

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr	Pollutant					
12.0	105.1	PM 1.9	PM10 7.6	SO2 0.6	NOx 0.44	VOC 5.5	CO 84.0
		Potential Emission (tpy) 0.100	0.399	0.032	0.023	0.289	4.415
		Controlled Potential Emission (tpy) 0.00010	0.00040	0.032	0.023	0.289	4.415

PM Control
 99.9%

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
 Emission Factors for NOx: uncontrolled = 100, Low NOx Burner = 17, Flue gas recirculation = 36 Vendor verified low NOx, oxygen-fired burner = 0.44
 Methodology
 All emission factors are based on normal firing.
 MMBtu = 1,000,000 Btu MMCF = 1,000,000 Cubic Feet of Gas
 Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
 Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
 Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPs - Organics

Emission Factor in lb/MMcf	Benzene 2.1E-03	Dichlorobenzene 1.2E-03	Formaldehyde 7.5E-02	Hexane 1.8E+00	Toluene 3.4E-03
Potential Emission in tons/yr	0.0001	0.0001	0.0039	0.0946	0.0002

HAPs - Metals

Emission Factor in lb/MMcf	Lead 5.0E-04	Cadmium 1.1E-03	Chromium 1.4E-03	Manganese 3.8E-04	Nickel 2.1E-03	Total HAPs
Potential Emission in tons/yr	0.00003	0.00006	0.00007	0.00002	0.00011	0.099

Methodology is the same as above

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.

HAPs Emissions

HAP	Concentration of HAP in Furnace Baghouse Dust (mg/kg)	Potential PM Before Controls (TPY)	Potential PM Before Controls (kg/yr)	Potential HAP Before Controls (mg/yr)	Potential HAP Before Controls (tons/yr)	Potential HAP After Controls (tons/yr)
Lead	2740.0	512	464499	1272725957	1.403	0.00140
Antimony	462.0	512	464499	214598318	0.237	0.00024
Arsenic	13.7	512	464499	6363630	0.007	0.00001
Beryllium	2.0	512	464499	928997	0.001	0.00000
Cadmium	143.0	512	464499	66423289	0.073	0.00007
Chromium	174.0	512	464499	80822743	0.089	0.00009
Colbalt	3.5	512	464499	1625745	0.002	0.00000
Manganese	692.0	512	464499	321432979	0.354	0.00035
Mercury	3.3	512	464499	1532845	0.002	0.00000
Nickel	82.9	512	464499	38506928	0.042	0.00004
Selenium	11.5	512	464499	5341733	0.006	0.00001
Total	4327.9				2.22	0.002

Methodology

Concentration of HAPs in Furnace Baghouse Dust Measured at Alumitech of Wabash, Inc.

Conversion of TPY to kg/yr, multiply by 907.1847

Potential HAPs Before Controls (mg/yr) = HAP Furnace Baghouse Dust (mg/kg) times PM PTE (kg/yr)

Potential HAPs Before Controls (TPY) = Potential HAPs Before Controls (mg/yr) times 907184700 mg/ton

HAPs from Fluxing the Furnaces & Dioxins and Furans

HCL Emissions Without Lime Injection Control

	Capacity (tons charged per hour)	HCL Emission Factor (lbs/ton charged)	Potential HCL (lbs/hr)	Potential HCL (tons/yr)
Furnace, F1	3.5	2.2	7.7	33.726
Furnace, F2	3.5	2.2	7.7	33.726

HCL Emissions With Lime Injection Control

	Capacity (tons charged per hour)	HCL Emission Factor (lbs/ton charged)	Potential HCL (lbs/hr)	Potential HCL (tons/yr)
Furnace, F1	3.5	0.20	0.700	3.07
Furnace, F2	3.5	0.20	0.700	3.07

Potential to Emit Dioxins and Furans (D/F) With Lime Injection Control

	Capacity (tons charged per hour)	D/F Emission Factor (ug/Mg charged)	Potential D/F (lbs/hr)	Potential D/F (tons/yr)
Furnace, F1	3.5	2.026	0.000000142	0.000000062
Furnace, F2	3.5	2.026	0.000000142	0.000000062

HCL and D/F emission factors are from Table 9 and Figures 10 and 11 of NESHP Subpart RRR

Potential HCL emission (lbs/hr) = Charge rate (tons/hr) times the emission factor (lbs/ton)

Potential D/F emission (lbs/hr) = Charge rate (tons/hr) times the emission factor (ug/Mg) times 1 Mg/1,000,000,000,000 ug times 2,000 lbs/ton

Appendix A: Emission Calculations

Company Name: Alumitech of Wabash, Inc.
 Address City IN Zip: 305 Dimension Avenue, Wabash IN 46992
 FESOP: F 169-15363
 Plt ID: 169-00035
 Reviewer: Frank P. Castelli
 Date: December 14, 2001

Tumbler Process

Total Throughput **12.00** tons/hr
 Cyclone/Baghouse Control Efficiency = **99.9%**

Operation	Emission Factor (lbs/ton)	Potential Before Controls		Potential After Controls		
		PM (TPY)	PM-10 (TPY)	PM (TPY)	PM-10 (TPY)	
Tumbler PM	1240	65174	-	65.2	-	
Tumbler PM-10	34	-	1787	-	1.79	
		Total	65174.40	1787.04	65.17	1.79

Emission (tons/yr) = Emission Factor (lb/ton) x throughput (tons/hr) x 8760 (hrs/yr) / 2,000 (lb/ton)
 PM and PM-10 emission factors based on applicant's tests on tumbler operations.

Process	Allowable PM Emission Rate (lbs/hr)
12	21.7

Pursuant to 326 IAC 6-3-2

Methodology: Allowable PM emission rate (lbs/hr) = 4.10 (Process Weight Rate (tons/hr) ^0.67

HAPs Emissions

HAP	Concentration of HAP in Furnace Baghouse Dust (mg/kg)	Relative Conc. (%)	Indexed to Tumbler Dust TCLP Lead Value x 20 (mg/kg)	Potential PM Before Controls (TPY)	Potential PM Before Controls (kg/yr)	Potential HAP Before Controls (mg/yr)	With 150% Safety Factor Potential HAP Before Controls (TPY)	With 150% Safety Factor Potential HAP After Controls (TPY)
Lead	2740.0	63.31%	10.0000	65174	59125219	591252185	0.9776	0.000978
Antimony	462.0	10.67%	1.6861	65174	59125219	99692887	0.1648	0.000165
Arsenic	13.7	0.32%	0.0500	65174	59125219	2956261	0.0049	0.000005
Beryllium	2.0	0.05%	0.0073	65174	59125219	431571	0.0007	0.000001
Cadmium	143.0	3.30%	0.5219	65174	59125219	30857322	0.0510	0.000051
Chromium	174.0	4.02%	0.6350	65174	59125219	37546672	0.0621	0.000062
Colbalt	3.5	0.08%	0.0128	65174	59125219	755249	0.0012	0.000001
Manganese	692.0	15.99%	2.5255	65174	59125219	149323545	0.2469	0.000247
Mercury	3.3	0.08%	0.0120	65174	59125219	712092	0.0012	0.000001
Nickel	82.9	1.92%	0.3026	65174	59125219	17888615	0.0296	0.000030
Selenium	11.5	0.27%	0.0420	65174	59125219	2481533	0.0041	0.000004
Total	4327.9	100.00%					1.5442	0.001544

Methodology

Concentration of HAPs in Furnace Baghouse Dust Measured at Alumitech of Wabash, Inc.

Relative Concentration in percent in the percent of total HAPs

The Indexed to Tumbler Dust Most Recent Tumbler RCRA Waste Determination Analysis (TCLP) of Lead x 20 (measured leachable and back calculated solids for lead)

For the other HAPs it is the Lead Value (10) Times the Ratio of the Concentration of the HAP to the Concentration of Lead

Conversion of TPY to kg/yr, multiply by 907.1847

Potential HAPs Before Controls (mg/yr) = HAP Indexed to Tumbler Dust (mg/kg) times PM PTE (kg/yr)

Potential HAPs Before Controls (TPY) with 150% Safety Factor = 1.5 times Potential HAPs Before Controls (mg/yr) times 907184700 mg/ton

Company Name:	Alumitech of Wabash, Inc.
Plant Location:	305 Dimension Avenue, Wabash, Indiana 46992
County:	Wabash
Date Received:	December 14, 2001
FESOP:	F 169-15363
Plt ID:	169-00035
Permit Reviewer:	Frank P. Castelli

Sizing Line

** PM emissions before controls **

Storage		** see page 5 **				0.000 tons/yr	AP-42 Ch.11.2.3
Transporting (paved roads)		** see page 7 **				2.568 tons/yr	AP-42 Ch.11.2.1
Loading & Unloading	12 ton/hr x	0.0016	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.085 tons/yr	AP-42 Ch.11.2.3
Crushing (primary)	12 ton/hr x	0.00504	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.265 tons/yr	AP-42 Ch.11.19.2
Crushing (secondary)	12 ton/hr x	0.00504	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.265 tons/yr	AP-42 Ch.11.19.2
Crushing (tertiary)	0 ton/hr x	0.00504	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.000 tons/yr	AP-42 Ch.11.19.2
Screening	12 ton/hr x	0.0315	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	1.656 tons/yr	AP-42 Ch.11.19.2
Conveyor Transfer	12 ton/hr x	0.00294	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.155 tons/yr	AP-42 Ch.11.19.2
Total PM emissions before controls:						4.993 tons/yr	(5th ed. 1/95)

** PM emissions after controls **

Storage	0.000 tons/yr x	10% emitted after controls =	0.000 tons/yr
Transporting (paved roads)	2.568 tons/yr x	50% emitted after controls =	1.284 tons/yr
Loading & Unloading	0.085 tons/yr x	100% emitted after controls =	0.085 tons/yr
Crushing (primary)	0.265 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Crushing (secondary)	0.265 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Crushing (tertiary)	0.000 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Screening	1.656 tons/yr x	0.1% emitted after controls =	0.002 tons/yr
Conveying	0.155 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Total PM emissions after controls:			1.371 tons/yr

Process	Allowable PM
Weight Rate	Emission Rate
(tons/hr)	(lbs/hr)
12	21.7

Pursuant to 326 IAC 6-3-2

Methodology: Allowable PM emission rate (lbs/hr) = 4.10 (Process Weight Rate (tons/hr) ^0.67

** PM fugitive vs. nonfugitive **

Storage	0.00 tons/yr x	10% emitted after controls =	0.00 tons/yr
Transporting (paved roads)	2.57 tons/yr x	50% emitted after controls =	1.28 tons/yr
<u>Loading / Unloading</u>	<u>0.08 tons/yr x</u>	<u>100% emitted after controls =</u>	<u>0.08 tons/yr</u>
Total PM fugitive emissions:			1.369 tons/yr
Crushing (primary)	0.26 tons/yr x	0.1% emitted after controls =	0.0003 tons/yr
Crushing (secondary)	0.26 tons/yr x	0.1% emitted after controls =	0.0003 tons/yr
Crushing (tertiary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Screening	1.66 tons/yr x	0.1% emitted after controls =	0.0017 tons/yr
<u>Conveying:</u>	<u>0.15 tons/yr x</u>	<u>0.1% emitted after controls =</u>	<u>0.0002 tons/yr</u>
Total PM nonfugitive emissions:			0.0023 tons/yr

** storage **

Storage PM emissions, which result from wind erosion, are determined by the following calculations:

$$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365-p) / 235 \cdot (f/15)$$

= 1.85 lb/acre/day

where s = 1.6 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 15 % of wind greater than or equal to 12 mph

$$E_p (\text{storage}) = 0 \text{ lb/ton} / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

0.00 tons/yr

where sc = 0 ,000 tons storage capacity

**** unpaved roads ****

The following calculations determine the amount of PM-10 emissions created by paved roads, based on 8760 hours of use and AP-42, Ch 11.2.1.

$$\begin{aligned}
 & 0 \text{ trip/hr} \times \\
 & 0 \text{ mile/trip} \times \\
 & 2 \text{ (round trip) } \times \\
 & 8760 \text{ hr/yr} = \qquad \qquad \qquad 0 \text{ miles per year}
 \end{aligned}$$

$$\begin{aligned}
 E_f &= k \cdot 5.9 \cdot (s/12)^2 \cdot (S/30)^2 \cdot (W/3)^{0.7} \cdot (w/4)^{0.5} \cdot ((365-p)/365) \\
 &= 5.19 \text{ lb/mile} \\
 \text{where } k &= 0.8 \text{ (particle size multiplier)} \\
 s &= 4.8 \text{ \% silt content of unpaved roads} \\
 p &= 125 \text{ days of rain greater than or equal to 0.01 inches} \\
 S &= 10 \text{ miles/hr vehicle speed} \\
 W &= 38 \text{ tons average vehicle weight} \\
 w &= 18 \text{ wheels}
 \end{aligned}$$

5.19	lb/mi x	miles per year	mi/yr =	0	
	2000	lb/ton			tons/yr

**** aggregate handling ****

The following calculations determine the amount of PM-10 emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$\begin{aligned}
 E_f &= k \cdot (0.0032) \cdot (U/5)^{1.3} \cdot (M/2)^{1.4} \\
 &= 0.0016 \text{ lb/ton} \\
 \text{where } k &= 0.74 \text{ (particle size multiplier)} \\
 U &= 10 \text{ mile/hr mean wind speed} \\
 M &= 5 \text{ \% material moisture content}
 \end{aligned}$$

PM-10 emissions before control

Storage						0.000 tons/yr	
Transporting (paved roads)						0.501 tons/yr	AP-42 Ch.11.2.1
Loading & Unloading	12	ton/hr x	0.0016	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.085 tons/yr
Crushing (primary)	12	ton/hr x	0.00033	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.017 tons/yr
Crushing (secondary)	12	ton/hr x	0.00033	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.017 tons/yr
Crushing (tertiary)	0	ton/hr x	0.0024	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.000 tons/yr
Screening	12	ton/hr x	0.015	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.788 tons/yr
Conveyor Transfer	12	ton/hr x	0.0014	lb/ton	/ 2000 lb/ton x	8760 hr/yr =	0.074 tons/yr
Total PM-10 emissions before controls:						1.483 tons/yr	

**** PM-10 emissions after controls ****

Storage	0.00	tons/yr x		10% emitted after controls =	0.000	tons/yr
Transporting (paved roads)	0.50	tons/yr x		50% emitted after controls =	0.251	tons/yr
Loading & Unloading	0.08	tons/yr x		100% emitted after controls =	0.085	tons/yr
Crushing (primary)	0.02	tons/yr x		0.1% emitted after controls =	0.000	tons/yr
Crushing (secondary)	0.02	tons/yr x		0.1% emitted after controls =	0.000	tons/yr
Crushing (tertiary)	0.00	tons/yr x		0.1% emitted after controls =	0.000	tons/yr
Screening	0.79	tons/yr x		0.1% emitted after controls =	0.001	tons/yr
Conveying	0.07	tons/yr x		0.1% emitted after controls =	0.000	tons/yr
Total PM-10 emissions after controls:						0.336 tons/yr

**** PM-10 fugitive vs. nonfugitive ****

Storage	0.00 tons/yr x	10% emitted after controls =	0.00 tons/yr
Transporting (paved roads)	0.50 tons/yr x	50% emitted after controls =	0.25 tons/yr
Loading / Unloading	0.08 tons/yr x	100% emitted after controls =	0.085 tons/yr
Total PM-10 fugitive emissions:			0.336 tons/yr
Crushing (primary)	0.02 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (secondary)	0.02 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (tertiary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Screening	0.79 tons/yr x	0.1% emitted after controls =	0.0008 tons/yr
Conveying:	0.07 tons/yr x	0.1% emitted after controls =	0.0001 tons/yr
Total PM-10 nonfugitive emissions:			0.001 tons/yr

Storage PM-10 emissions, which result from wind erosion, are determined by the following calculations:

**** storage ****

$$E_f = 1.7 \cdot (s/1.5)^{0.365-p} / 235 \cdot (f/15)$$

= 0.00 lb/acre/day

where s = 1.6 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 0.00 % of wind greater than or equal to 12 mph

$$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

= 0.00 tons/yr

where sc = 0.000 tons storage capacity

**** paved roads ****

The following calculations determine the amount of PM (< 30 um) and PM-10 (<10 um) emissions created by paved roads, based on 8760 hours of use and AP-42, Ch 13.2.1 October 2002.

0.84	trip/hr x				
0.119	mile/trip x				
2	(round trip) x				
8760	hr/yr =	1751.2992	miles per year		
$E_f = k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot (1-P/(4N))$					
	PM	PM-10			
EF =	2.93	0.572	lb/mile		
where k =	0.082	0.016	(particle size multiplier)		
sL =	3	3	road surface silt loading (g/m ²)		
P =	125	125	mean number of days of rain greater than or equal to 0.01 inches		
W =	29.00	29.00	average vehicle weight (tons)		
N =	365	365	number of days in averaging period		
PM =	2.933	lb/mi x	1751.2992 mi/yr =	2.57	tons/yr
		2000	lb/ton		
PM-10 =	0.572	lb/mi x	1751.2992 mi/yr =	0.501	tons/yr
		2000	lb/ton		

**** aggregate handling ****

The following calculations determine the amount of PM-10 emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 11.2.3.

$$E_f = k \cdot (0.0032) \cdot (U/5)^{1.3} \cdot (M/2)^{1.4}$$

= 0.0016 lb/ton

where k = 0.74 (particle size multiplier)

U = 10 mile/hr mean wind speed

M = 5 % material moisture content

Sizing Line
HAPs Emissions

Baghouse Control Eff 99.9%

HAP	Concentration of HAP in Furnace Baghouse Dust (mg/kg)	Relative Conc. (%)	Indexed to Tumbler Dust TCLP Lead Value x 20 (mg/kg)	Potential PM Before Controls (TPY)	Potential PM Before Controls (kg/yr)	Potential HAP Before Controls (mg/yr)	With 150% Safety Factor Potential HAP Before Controls (TPY)	With 150% Safety Factor Potential HAP After Controls (TPY)
Lead	2740.0	63.31%	10.0000	4.99	4530	45298	0.0000749	0.00000007
Antimony	462.0	10.67%	1.6861	4.99	4530	7638	0.0000126	0.00000001
Arsenic	13.7	0.32%	0.0500	4.99	4530	226	0.0000004	0.00000000
Beryllium	2.0	0.05%	0.0073	4.99	4530	33	0.0000001	0.00000000
Cadmium	143.0	3.30%	0.5219	4.99	4530	2364	0.0000039	0.00000000
Chromium	174.0	4.02%	0.6350	4.99	4530	2877	0.0000048	0.00000000
Cobalt	3.5	0.08%	0.0128	4.99	4530	58	0.0000001	0.00000000
Manganese	692.0	15.99%	2.5255	4.99	4530	11440	0.0000189	0.00000002
Mercury	3.3	0.08%	0.0120	4.99	4530	55	0.0000001	0.00000000
Nickel	82.9	1.92%	0.3026	4.99	4530	1371	0.0000023	0.00000000
Selenium	11.5	0.27%	0.0420	4.99	4530	190	0.0000003	0.00000000
Total	4327.9	100.00%					0.0001183	0.00000012

Methodology

Concentration of HAPs in Furnace Baghouse Dust Measured at Alumitech of Wabash, Inc.

Relative Concentration in percent in the percent of total HAPs

The Indexed to Tumbler Dust Most Recent Tumbler RCRA Waste Determination Analysis (TCLP) of Lead x 20 (measured leachable and back calculated solids for lead)

For the other HAPs it is the Lead Value (10) Times the Ratio of the Concentration of the HAP to the Concentration of Lead

Conversion of TPY to kg/yr, multiply by 907.1847

Potential HAPs Before Controls (mg/yr) = HAP Indexed to Tumbler Dust (mg/kg) times PM PTE (kg/yr)

Potential HAPs Before Controls (TPY) with 150% Safety Factor = 1.5 times Potential HAPs Before Controls (mg/yr) times 907184700 mg/ton

Company Name:	Alumitech of Wabash, Inc.
Plant Location:	305 Dimension Avenue, Wabash, Indiana 46992
County:	Wabash
Date Received:	December 14, 2001
FESOP:	F 169-15363
Plt ID:	169-00035
Permit Reviewer:	Frank P. Castelli

Proposed New Screening Line

** PM emissions before controls **

Storage						0.000 tons/yr	AP-42 Ch.11.2.3
Transporting (paved roads)						0.612 tons/yr	AP-42 Ch.11.2.1
Loading & Unloading	39 ton/hr x	0.0016 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		0.276 tons/yr	AP-42 Ch.11.2.3
Crushing (primary)	0 ton/hr x	0.00504 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		0.000 tons/yr	AP-42 Ch.11.19.2
Crushing (secondary)	0 ton/hr x	0.00504 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		0.000 tons/yr	AP-42 Ch.11.19.2
Crushing (tertiary)	0 ton/hr x	0.00504 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		0.000 tons/yr	AP-42 Ch.11.19.2
Screening	39 ton/hr x	0.0315 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		5.381 tons/yr	AP-42 Ch.11.19.2
Conveyor Transfer	39 ton/hr x	0.00294 lb/ton	/ 2000 lb/ton x	8760 hr/yr =		0.502 tons/yr	AP-42 Ch.11.19.2
Total PM emissions before controls:						6.771 tons/yr	(5th ed. 1/95)

** PM emissions after controls **

Storage	0.000 tons/yr x	10% emitted after controls =	0.000 tons/yr
Transporting (paved roads)	0.612 tons/yr x	50% emitted after controls =	0.306 tons/yr
Loading & Unloading	0.276 tons/yr x	100% emitted after controls =	0.276 tons/yr
Crushing (primary)	0.000 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Crushing (secondary)	0.000 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Crushing (tertiary)	0.000 tons/yr x	0.1% emitted after controls =	0.000 tons/yr
Screening	5.381 tons/yr x	0.1% emitted after controls =	0.005 tons/yr
Conveying	0.502 tons/yr x	0.1% emitted after controls =	0.001 tons/yr
Total PM emissions after controls:			0.588 tons/yr

Process	Allowable PM Emission Rate
Weight Rate (tons/hr)	(lbs/hr)
39	42.3

Pursuant to 326 IAC 6-3-2

Methodology: Allowable PM emission rate (lbs/hr) = 55 (Process Weight Rate (tons/hr) ^0.11 - 40

** PM fugitive vs. nonfugitive **

Storage	0.00 tons/yr x	10% emitted after controls =	0.00 tons/yr
Transporting (paved roads)	0.61 tons/yr x	50% emitted after controls =	0.31 tons/yr
Loading / Unloading	0.28 tons/yr x	100% emitted after controls =	0.28 tons/yr
Total PM fugitive emissions:			0.582 tons/yr
Crushing (primary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (secondary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (tertiary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Screening	5.38 tons/yr x	0.1% emitted after controls =	0.0054 tons/yr
Conveying:	0.50 tons/yr x	0.1% emitted after controls =	0.0005 tons/yr
Total PM nonfugitive emissions:			0.0059 tons/yr

** storage **

Storage PM emissions, which result from wind erosion, are determined by the following calculations:

$$E_f = 1.7 \cdot (s/1.5)^3 \cdot (365-p) / 235 \cdot (f/15)$$

= 1.85 lb/acre/day

where s = 1.6 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 15 % of wind greater than or equal to 12 mph

$$E_p (\text{storage}) = \text{lb/ton} / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

0.00 tons/yr

where sc = 0 ,000 tons storage capacity

** PM-10 fugitive vs. nonfugitive **

Storage	0.00 tons/yr x	10% emitted after controls =	0.00 tons/yr
Transporting (paved roads)	0.12 tons/yr x	50% emitted after controls =	0.06 tons/yr
Loading / Unloading	0.28 tons/yr x	100% emitted after controls =	0.276 tons/yr
Total PM-10 fugitive emissions:			0.336 tons/yr
Crushing (primary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (secondary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Crushing (tertiary)	0.00 tons/yr x	0.1% emitted after controls =	0.0000 tons/yr
Screening	2.56 tons/yr x	0.1% emitted after controls =	0.0026 tons/yr
Conveying:	0.24 tons/yr x	0.1% emitted after controls =	0.0002 tons/yr
Total PM-10 nonfugitive emissions:			0.003 tons/yr

Storage PM-10 emissions, which result from wind erosion, are determined by the following calculations:

** storage **

$$E_f = 1.7 \cdot (s/1.5)^{0.65} \cdot (365-p)/235 \cdot (f/15)$$

= 0.00 lb/acre/day

where s = 1.6 % silt content of material

p = 125 days of rain greater than or equal to 0.01 inches

f = 0.00 % of wind greater than or equal to 12 mph

$$E_p(\text{storage}) = E_f \cdot sc \cdot (40 \text{ cuft/ton}) / (2000 \text{ lb/ton}) / (43560 \text{ sqft/acre}) / (25 \text{ ft}) \cdot (365 \text{ day/yr})$$

= 0.00 tons/yr

where sc = 0,000 tons storage capacity

The following calculations determine the amount of PM (< 30 um) and PM-10 (<10 um) emissions created by paved roads, based on 8760 hours of use and AP-42, Ch 13.2.1 October 2002.

** paved roads **

0.20	trip/hr x			
0.119	mile/trip x			
2	(round trip) x			
8760	hr/yr =	416.976	miles per year	
		$E_f = k \cdot (sL/2)^{0.65} \cdot (W/3)^{1.5} \cdot (1-P)/(4N)$		
	PM	PM-10		
EF =	2.93	0.572	lb/mile	
where k =	0.082	0.016	(particle size multiplier)	
sL =	3	3	road surface silt loading (g/m ²)	
P =	125	125	mean number of days of rain greater than or equal to 0.01 inches	
W =	29.00	29.00	average vehicle weight (tons)	
N =	365	365	number of days in averaging period	
PM =	2.933	lb/mi x	416.976 mi/yr =	0.612 tons/yr
		2000	lb/ton	
PM-10 =	0.572	lb/mi x	416.976 mi/yr =	0.119 tons/yr
		2000	lb/ton	

The following calculations determine the amount of PM-10 emissions created by truck loading and unloading of aggregate, based on 8760 hours of use and AP-42, Ch 11.2.3.

** aggregate handling **

$$E_f = k \cdot (0.0032) \cdot (U/5)^{1.3} \cdot (M/2)^{1.4}$$

= 0.0016 lb/ton

where k = 0.74 (particle size multiplier)

U = 10 mile/hr mean wind speed

M = 5 % material moisture content

Proposed Screening Line HAPs Emissions

Baghouse Control Eff **MB2**
99.9%

HAP	Concentration of HAP in Furnace Baghouse Dust (mg/kg)	Relative Conc. (%)	Indexed to Tumbler Dust TCLP Lead Value x 20 (mg/kg)	Potential PM Before Controls (TPY)	Potential PM Before Controls (kg/yr)	Potential HAP Before Controls (mg/yr)	With 150% Safety Factor Potential HAP Before Controls (TPY)	With 150% Safety Factor Potential HAP After Controls (TPY)
Lead	2740.0	63.31%	10.0000	6.77	6142	61423	0.0001016	0.00000010
Antimony	462.0	10.67%	1.6861	6.77	6142	10357	0.0000171	0.00000002
Arsenic	13.7	0.32%	0.0500	6.77	6142	307	0.0000005	0.00000000
Beryllium	2.0	0.05%	0.0073	6.77	6142	45	0.0000001	0.00000000
Cadmium	143.0	3.30%	0.5219	6.77	6142	3206	0.0000053	0.00000001
Chromium	174.0	4.02%	0.6350	6.77	6142	3901	0.0000064	0.00000001
Colbalt	3.5	0.08%	0.0128	6.77	6142	78	0.0000001	0.00000000
Manganese	692.0	15.99%	2.5255	6.77	6142	15513	0.0000256	0.00000003
Mercury	3.3	0.08%	0.0120	6.77	6142	74	0.0000001	0.00000000
Nickel	82.9	1.92%	0.3026	6.77	6142	1858	0.0000031	0.00000000
Selenium	11.5	0.27%	0.0420	6.77	6142	258	0.0000004	0.00000000
Total	4327.9	100.00%					0.0001604	0.00000016

Methodology

Concentration of HAPs in Furnace Baghouse Dust Measured at Alumitech of Wabash, Inc.
Relative Concentration in percent in the percent of total HAPs
The Indexed to Tumbler Dust Most Recent Tumbler RCRA Waste Determination Analysis (TCLP) of Lead x 20 (measured leachable and back calculated solids for lead)
For the other HAPs it is the Lead Value (10) Times the Ratio of the Concentration of the HAP to the Concentration of Lead
Conversion of TPY to kg/yr, multiply by 907.1847
Potential HAPs Before Controls (mg/yr) = HAP Indexed to Tumbler Dust (mg/kg) times PM PTE (kg/yr)
Potential HAPs Before Controls (TPY) with 150% Safety Factor = 1.5 times Potential HAPs Before Controls (mg/yr) times 907184700 mg/ton

SUMMARY

		PM	PM-10	SO2	NOx	VOC	CO	HAPs (D/F) & HCL
Process -	Two (2) Oxy Furnaces	512	512	0.000	0.000	0.000	0.000	67.400
Combustion -	Two (2) Oxy Furnaces	0.100	0.399	0.032	0.023	0.289	4.42	0.000
	Tumbler	65174	1787	0.000	0.000	0.000	0.000	0.000
	Sizing Line	4.99	1.48	0.000	0.000	0.000	0.000	0.000
	Proposed Screening Line	6.77	3.20	0.000	0.000	0.000	0.000	0.000
Estimated	Insignificant Activities	1	1	0.5	0.5	2	0.5	0.5
	Total	65699	2305	0.532	0.523	2.289	4.92	67.9

See below for Metals & Combustion HAPs

SUMMARY

		PM	PM-10	SO2	NOx	VOC	CO	HAPs (D/F) & HCL
Process -	Two (2) Oxy Furnaces	0.512	0.512	0.000	0.000	0.000	0.000	6.140
Combustion -	Two (2) Oxy Furnaces	0.0001	0.0004	0.032	0.023	0.289	4.42	0.000
	Tumbler	65.174	1.787	0.000	0.000	0.000	0.000	0.000
	Sizing Line	1.37	0.336	0.000	0.000	0.000	0.000	0.000
	Proposed Screening Line	0.588	0.339	0.000	0.000	0.000	0.000	0.000
Estimated	Insignificant Activities	1	1	0.5	0.5	2	0.5	0.5
	Total	68.6	3.97	0.532	0.523	2.289	4.92	6.64

See below for Metals & Combustion HAPs

Combustion and Metal HAPs

SUMMARY Potential HAPs Emissions (TPY)

HAP	Before Controls Two (2) Oxy Furnaces Process Only	Before Controls Tumbler	Before Controls Sizing Line	Before Controls Oxy Furnaces Combustion	Before Controls Proposed Screening Line	Total Process & Combustion Before Controls	After Controls Two (2) Oxy Furnaces	After Controls Tumbler	After Controls Sizing Line	After Controls Combustion Oxy Furnaces	After Controls Screening Line	Total Process & Combustion After Controls
Lead	1.403	0.9776	0.000074899	0.0000	0.000101560	2.3808064594	0.0014000	0.000978	0.000000075	0.0000	0.000000102	0.0024081766
Antimony	0.237	0.1648	0.000012629	0.0000	0.000017124	0.4018297534	0.0002400	0.000165	0.000000013	0.0000	0.000000017	0.0004050301
Arsenic	0.007	0.0049	0.000000374	0.0000	0.000000508	0.0119008818	0.0000100	0.000005	0.000000000	0.0000	0.000000001	0.0000150005
Beryllium	0.001	0.0007	0.000000055	0.0000	0.000000074	0.0017001291	0.0000000	0.000001	0.000000000	0.0000	0.000000000	0.0000010001
Cadmium	0.073	0.051	0.000003909	0.0001	0.000005300	0.1240692094	0.0000700	0.000051	0.000000004	0.0001	0.000000005	0.0001810093
Chromium	0.089	0.0621	0.000004756	0.0001	0.000006449	0.1511812055	0.0000900	0.000062	0.000000005	0.0001	0.000000006	0.0002220114
Colbalt	0.002	0.0012	0.000000098	0.0000	0.000000130	0.0032002257	0.0000000	0.000001	0.000000000	0.0000	0.000000000	0.0000010001
Manganese	0.354	0.2469	0.000018916	0.0000	0.000025650	0.6009645656	0.0003500	0.000247	0.000000019	0.0000	0.000000026	0.0006170446
Mercury	0.002	0.0012	0.000000090	0.0000	0.000000122	0.0032002123	0.0000000	0.000001	0.000000000	0.0000	0.000000000	0.0000010001
Nickel	0.042	0.0296	0.000002266	0.0001	0.000003073	0.0717153388	0.0000400	0.000030	0.000000002	0.0001	0.000000003	0.0001800051
Selenium	0.006	0.0041	0.000000314	0.0000	0.000000426	0.0101007403	0.0000100	0.000004	0.000000000	0.0000	0.000000000	0.0000140004
Benzene	0.000	0.0000	0.000000000	0.0001	0.000160417	0.0002604172	0.0000000	0.000000	0.000000000	0.0001	0.000000160	0.0001001604
Dichlorobezene	0.000	0.0000	0.000000000	0.0010	0.000000000	0.0010000000	0.0000000	0.000000	0.000000000	0.0010	0.000000000	0.0010000000
Formaldehyde	0.000	0.0000	0.000000000	0.0039	0.000000000	0.0039000000	0.0000000	0.000000	0.000000000	0.0039	0.000000000	0.0039000000
Hexane	0.000	0.0000	0.000000000	0.0946	0.000000000	0.0946000000	0.0000000	0.000000	0.000000000	0.0946	0.000000000	0.0946000000
Toluene	0.000	0.0000	0.000000000	0.0002	0.000000000	0.0002000000	0.0000000	0.000000	0.000000000	0.0002	0.000000000	0.0002000000
Total	2.22	1.5442	0.000118304	0.0990	0.000160417	3.8634787212	0.0020000	0.001544	0.000000118	0.0990	0.000000160	0.1025442784