INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We Protect Hoosiers and Our Environment.
100 N. Senate Avenue • Indianapolis, IN 46204
(800) 451-6027 • (317) 232-8603 • www.idem.IN.gov

Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

To:	Interested Parties
Date:	September 9, 2014
From:	Matthew Stuckey, Chief Permits Branch Office of Air Quality
Source Name:	Aluminum Recovery Technologies, Inc.
Permit Level:	Title V – Significant Source Modification
Permit Number:	113-34739-00071
Source Location:	2170 Production Road, Kendallville, Indiana
Type of Action Taken:	Permit Renewal Modification at an existing source

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the matter referenced above.

The final decision is available on the IDEM website at: http://www.in.gov/apps/idem/caats/
To view the document, select Search option 3, then enter permit 34739.

If you would like to request a paper copy of the permit document, please contact IDEM's central file room:

Indiana Government Center North, Room 1201
100 North Senate Avenue, MC 50-07
Indianapolis, IN 46204
Phone: 1-800-451-6027 (ext. 4-0965)
Fax (317) 232-8659

Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

(continues on next page)

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, 100 North Senate Avenue, Government Center North, Suite N 501E, Indianapolis, IN 46204, **within eighteen (18) calendar days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

(1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
(2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
(3) The date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

(1) the name and address of the person making the request;
(2) the interest of the person making the request;
(3) identification of any persons represented by the person making the request;
(4) the reasons, with particularity, for the request;
(5) the issues, with particularity, proposed for considerations at any hearing; and
(6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

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Jack C. Hampton Jr.
Aluminum Recovery Technologies, Inc.
2170 Production Road
Kendallville, IN 46755

September 9, 2014

Re: 113-34739-00071
Significant Source Modification

Dear Mr. Hampton:

Aluminum Recovery Technologies, Inc. was issued Part 70 Operating Permit Renewal No. T113-26706-00071 on September 11, 2009 for a stationary secondary aluminum production source located at 2170 Production Road, Kendallville, Indiana 46755. An application to modify the source was received on July 18, 2014. Pursuant to the provisions of 326 IAC 2-7-10.5, a Significant Source Modification is hereby approved as described in the attached Technical Support Document.

Pursuant to 326 IAC 2-7-10.5, the following emission units are approved for construction at the source:

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, approved in 2014 for modification, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1;

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, approved in 2014 for modification, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2;

(d) One (1) saltcake cooling operation, constructed in 2000 and modified in 2004, approved in 2014 for modification, cooling up to 42,059 pounds of furnace saltcake per hour, which depends on the combined maximum capacities of RF #1 and RF #2, with emissions exhausting into the building.

(e) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, approved in 2014 for modification, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

The following construction conditions are applicable to the proposed modification:

General Construction Conditions

1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).

2. This approval 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.

Effective Date of the Permit

3. Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.

Commenced Construction

4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(j), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.

5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.

Approval to Construct

6. Pursuant to 326 IAC 2-7-10.5(h)(2), this Significant Source Modification authorizes the construction of the new emission unit(s), when the Significant Source Modification has been issued.

   Pursuant to 326 IAC 2-7-10.5(m), the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

   Pursuant to 326 IAC 2-7-12, operation of the new emission unit(s) is not approved until the Significant Permit Modification has been issued. Operating conditions shall be incorporated into the Part 70 Operating Permit as a Significant Permit Modification in accordance with 326 IAC 2-7-10.5(m)(2) and 326 IAC 2-7-12 (Permit Modification).

   For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

A copy of the permit is available on the Internet at: http://www.in.gov/ai/appfiles/idem-caats/. For additional information about air permits and how the public and interested parties can participate, refer to the IDEM Permit Guide on the Internet at: http://www.in.gov/idem/5881.htm; and the Citizens' Guide to IDEM on the Internet at: http://www.in.gov/idem/6900.htm.

This decision is subject to the Indiana Administrative Orders and Procedures Act - IC 4-21.5-3-5.

If you have any questions on this matter, please contact Sarah Street of my staff, OAQ, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana, 46204-2251, or call at (800) 451-6027, and ask for Sarah Street or extension 2-8427 or dial (317) 232-8427.

Sincerely,

Iryn Calilung, Section Chief
Permits Branch
Office of Air Quality

Attachments: Significant Source Modification and Technical Support Document

cc: File - Noble County
Noble County Health Department
U.S. EPA, Region V
Compliance and Enforcement Branch
IDEM Northern Regional Office

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Significant Source Modification to a Part 70 Source

OFFICE OF AIR QUALITY

Aluminum Recovery Technologies, Inc.
2170 Production Road
Kendallville, Indiana 46755

(herein known as the Permittee) is hereby authorized to construct 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 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17. This permit also addresses certain new source review requirements for existing equipment and is intended to fulfill the new source review procedures pursuant to 326 IAC 2-7-10.5, applicable to those conditions.

Significant Source Modification No.: 113-34739-00071	
Issued by: Iryn Calilung, Section Chief Permits Branch Office of Air Quality	Issuance Date: September 9, 2014

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SECTION A SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

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

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

Source Address:	2170 Production Road, Kendallville, Indiana 46755
General Source Phone Number:	(219) 349-1590
SIC Code:	3341 (Secondary Nonferrous Metals)
County Location:	Noble
Source Location Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Operating Permit Program Minor Source, under PSD and Emission Offset Rules Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

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

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

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, approved in 2014 for modification, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, approved in 2014 for modification, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(c) One (1) natural gas-fired thermal chip dryer, identified as Chip Dryer #1, which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 4.0 MMBtu/hr, with a maximum capacity of processing 7,035 pounds of aluminum per hour, with emissions controlled by one (1) baghouse, identified as Baghouse 3, and one (1) natural gas-fired afterburner with a maximum heat input capacity of 6.0 MMBtu/hr, identified as Afterburner, exhausting through one (1) stack, identified as Vent #3;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "thermal chip dryer".

(d) One (1) saltcake cooling operation, constructed in 2000 and modified in 2004, approved in 2014 for modification, cooling up to 42,059 pounds of furnace saltcake per hour, with emissions exhausting into the building.

(e) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, approved in 2014 for modification, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(f) One (1) natural gas-fired holding furnace, identified as HF #1 (furnace #3), constructed in 2010, with a maximum heat input capacity of 0.25 MMBtu/hr, no control with emissions exhausting into the building.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 2 Furnace".

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

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

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(b) Conveyors as follows:

Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. This includes Baghouse 1, Baghouse 3, and Baghouse 2 lime injection screw conveyors, each conveying up to 100 pounds per hour of lime to the respective baghouse.

(c) Aluminum scrap handling operations and scrap holding area.

(d) One (1) shredder, identified as BB#1, used as bale breaker to physically separate baled scrap metal, with uncontrolled particulate emissions less than 5 pounds per hour, constructed in 2008.

(e) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including two (2) space heaters and six (6) torches which are estimated to have a combined maximum heat input of 10 MMBtu/hr.

(f) Combustion source flame safety purging on startup.

(g) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(h) The following VOC and HAP storage containers:

(A) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(B) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(i) Refractory storage not requiring air pollution control equipment.

(j) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(k) Machining where an aqueous cutting coolant continuously floods the machining interface.

(l) Cleaners and solvents characterized as follows:

(A) Having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100F) or;

(B) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20C (68F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(n) Process vessel degassing and cleaning to prepare for internal repairs.

(o) Paved and unpaved roads and parking lots with public access.

(p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from these activities would not be associated with any production process.

(q) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate, ammonia; and sulfur trioxide.

(r) Purge double block and bleed valves.

(s) Filter or coalescer media changeout.

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

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

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

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

SECTION B GENERAL CONDITIONS

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

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

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

(a) This permit, T113-33985-00071, is issued for a fixed term of five (5) years from the issuance date of this permit, as determined in accordance with IC 4-21.5-3-5(f) and IC 13-15-5-3. Subsequent revisions, modifications, or amendments of this permit do not affect the expiration date of this permit.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

and

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

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

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

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

(2) The compliance status;

(3) Whether compliance was continuous or intermittent;

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

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

The Permittee shall implement the PMPs.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(A) A description of the emergency;

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

(C) Corrective actions taken.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(a) All terms and conditions of permits established prior to T113-33985-00071 and issued pursuant to permitting programs approved into the state implementation plan have been either:

(1) incorporated as originally stated,

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

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

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

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

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

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

(a) This permit may be modified, reopened, revoked and reissued, or terminated for cause. The filing of a request by the Permittee for a Part 70 Operating Permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any condition of this permit.

[326 IAC 2-7-5(6)(C)] The notification by the Permittee does require a certification that meets the requirements of 326 IAC 2-7-6(1) by a "responsible official" as defined by 326 IAC 2-7-1(35).

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

(1) That this permit contains a material mistake.

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

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

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

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

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

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

Request for renewal shall be submitted to:

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

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

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

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

(c) If the Permittee submits a timely and complete application for renewal of this permit, the source's failure to have a permit is not a violation of 326 IAC 2-7 until IDEM, OAQ takes final action on the renewal application, except that this protection shall cease to apply if,

subsequent to the completeness determination, the Permittee fails to submit by the deadline specified, pursuant to 326 IAC 2-7-4(a)(2)(D), in writing by IDEM, OAQ any additional information identified as being needed to process the application.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(4) The Permittee notifies the:

Indiana Department of Environmental Management

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

and

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

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

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

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

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

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

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

(3) Any change in emissions; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SECTION C SOURCE OPERATION CONDITIONS

Entire Source

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

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

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

C.2 Opacity [326 IAC 5-1]

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

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

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

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

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

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

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

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

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

C.6 Asbestos Abatement Projects [326 IAC 14-10] [326 IAC 18] [40 CFR 61, Subpart M]

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

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

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

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

(A) Asbestos removal or demolition start date;

(B) Removal or demolition contractor; or

(C) Waste disposal site.

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

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

All required notifications shall be submitted to:

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

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

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

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

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

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

C.7 Performance Testing [326 IAC 3-6]

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

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

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

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

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

Compliance Requirements [326 IAC 2-1.1-11]

C.8 Compliance Requirements [326 IAC 2-1.1-11]

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

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

C.9 Compliance Monitoring [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)][40 CFR 64][326 IAC 3-8]

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

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

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

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

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

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

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

C.10 Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)] [326 IAC 2-7-6(1)]

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

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

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

C.11 Risk Management Plan [326 IAC 2-7-5(12)] [40 CFR 68]

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

C.12 Response to Excursions or Exceedances [40 CFR 64][326 IAC 3-8][326 IAC 2-7-5] [326 IAC 2-7-6]

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

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

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

(1) initial inspection and evaluation;

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

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

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

(1) monitoring results;

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

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

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

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

(II)

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

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

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

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

frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

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

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

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

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

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

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

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

(h) *CAM recordkeeping requirements.*

(1) The Permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to paragraph (II)(a)(2) of this condition and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under this condition (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions). Section C - General Record Keeping Requirements of this permit contains the Permittee's obligations with regard to the records required by this condition.

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

C.13 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5][326 IAC 2-7-6]

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

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

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

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

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

C.14 Emission Statement [326 IAC 2-7-5(3)(C)(iii)][326 IAC 2-7-5(7)][326 IAC 2-7-19(c)][326 IAC 2-6]

In accordance with the compliance schedule specified in 326 IAC 2-6-3(b)(1), starting in 2004 and every three (3) years thereafter, the Permittee shall submit by July 1 an emission statement covering the previous calendar year. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4(c) and shall meet the following requirements:

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

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

The statement must be submitted to:

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

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

C.15 General Record Keeping Requirements [326 IAC 2-7-5(3)] [326 IAC 2-7-6]

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

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

(FF) The operating conditions as existing at the time of sampling or measurement.

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

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

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)] [326 IAC 2-1.1-11] [40 CFR 64][326 IAC 3-8]

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

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

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

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

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

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

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

(b) The address for report submittal is:

Indiana Department of Environmental Management
Compliance and Enforcement Branch, Office of Air Quality

100 North Senate Avenue
MC 61-53 IGCN 1003
Indianapolis, Indiana 46204-2251

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

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

Stratospheric Ozone Protection

C.17 Compliance with 40 CFR 82 and 326 IAC 22-1

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

SECTION D.1 EMISSIONS UNIT OPERATION CONDITIONS

Emissions Unit Description: [326 IAC 2-7-5(15)]:

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, approved in 2014 for modification, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, approved in 2014 for modification, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(c) One (1) natural gas-fired thermal chip dryer, identified as Chip Dryer #1, which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 4.0 MMBtu/hr, with a maximum capacity of processing 7,035 pounds of aluminum per hour, with emissions controlled by one (1) baghouse, identified as Baghouse 3, and one (1) natural gas-fired afterburner with a maximum heat input capacity of 6.0 MMBtu/hr, identified as Afterburner, exhausting through one (1) stack, identified as Vent #3;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "thermal chip dryer".

(d) One (1) saltcake cooling operation, constructed in 2000 and modified in 2004, approved in 2014 for modification, cooling up to 42,059 pounds of furnace saltcake per hour, with emissions exhausting into the building.

(e) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, approved in 2014 for modification, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(f) One (1) natural gas-fired holding furnace, identified as HF #1 (furnace #3), constructed in 2010, with a maximum heat input capacity of 0.25 MMBtu/hr, no control with emissions exhausting into the building.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 2 Furnace".

Insignificant Activities:

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(b) Conveyors as follows:

Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. This includes Baghouse 1, Baghouse 3, and Baghouse 2 lime injection screw conveyors, each conveying up to 100 pounds per hour of lime to the respective baghouse.

(c) Aluminum scrap handling operations and scrap holding area.

(d) One (1) shredder, identified as BB#1, used as bale breaker to physically separate baled scrap metal, with uncontrolled particulate emissions less than 5 pounds per hour, constructed in 2008.

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

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

D.1.1 PSD Minor Limits [326 IAC 2-2]

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM, PM10 and PM2.5 emissions from the following operations shall not exceed the limits as shows in the table below:

Emission Unit	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
Rotary Furnace RF#1 (furnace #1)	4.00	4.00	4.00
Rotary Furnace RF#2 (furnace #2)	4.00	4.00	4.00
Chip Dryer #1	4.00	4.00	4.00
Reverberatory Furnace RV#1 (furnace #4)	4.00	4.00	4.00

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10, and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

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

(a) Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emissions from the following emission units shall not exceed the following pound per hour limits listed in the table below:

Emission Unit(s)	Process Weight Rate (tons per hour)	PM Emission Limit (pounds per hour)
Chip Dryer #1	3.52	9.53
Saltcake Cooling Operation (Dross Cooling)	21.03	31.56
Shredder BB#1	3.52	9.53

These limits were calculated using the following equations:

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

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

(b) Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emissions from the insignificant activities including brazing equipment, cutting torches, soldering equipment, welding equipment, and the covered conveyors for limestone conveying shall not exceed 0.551 pounds per hour, each.

D.1.3 Preventive Maintenance Plan [326 IAC 2-7-5(12)]

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

Compliance Determination Requirements

D.1.4 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Rotary Furnace RF#1 (furnace #1)
In order to determine compliance with Condition D.1.1, within five (5) years of the most recent valid compliance demonstration for Rotary Furnace RF#1 (furnace #1), the Permittee shall perform PM, PM10, and PM2.5 testing on Baghouse 1, controlling Rotary Furnace RF#1 (furnace #1), utilizing methods as approved by the Commissioner.

PM10 and PM2.5 includes filterable and condensable PM.

(b) Rotary Furnace RF#2 (furnace #2)
In order to determine compliance with Condition D.1.1, within five (5) years of the most recent valid compliance demonstration for Rotary Furnace RF#2 (furnace #2), the Permittee shall perform PM, PM10, and PM2.5 testing on Baghouse 2, controlling Rotary Furnace RF#2 (furnace #2), utilizing methods as approved by the Commissioner.

PM10 and PM2.5 includes filterable and condensable PM.

(c) Chip Dryer #1
In order to determine compliance with Conditions D.1.1 and D.1.2(a), within five (5) years of the most recent valid compliance demonstration for Chip Dryer #1, the Permittee shall perform PM, PM10, and PM2.5 testing on Baghouse 3, controlling Chip Dryer #1, utilizing methods as approved by the Commissioner.

PM10 and PM2.5 includes filterable and condensable PM.

(d) Reverberatory Furnace RV#1 (furnace #4)
In order to determine compliance with Condition D.1.1, within five (5) years of the most recent valid compliance demonstration for Reverberatory Furnace RV#1 (furnace #4), the Permittee shall perform PM, PM10, and PM2.5 testing on Baghouse 4, controlling Reverberatory Furnace RV#1 (furnace #4), utilizing methods as approved by the Commissioner.

PM10 and PM2.5 includes filterable and condensable PM.

(e) These tests shall be repeated at least once every five (5) years from the date of the most

recent valid compliance demonstration.

(f) Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C - Performance Testing contains the Permittee's obligations with regard to the performance testing required by this condition.

D.1.5 Particulate Matter Control

(a) In order to comply with Conditions D.1.1 and D.1.2, Baghouses 1, 2, 3, and 4 for particulate control shall be in operation at all times whenever the Rotary Furnace RF#1 (furnace #1), controlled by Baghouse 1, the Rotary Furnace RF#2 (furnace #2), controlled by Baghouse 2, the Chip Dryer #1, controlled by Baghouse 3, or the Reverberatory Furnace RV#1 (furnace #4), controlled by Baghouse 4, are in operation.

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

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

D.1.6 Bag Leak Detection System (BLDS) [40 CFR 63] [40 CFR 64]

Pursuant to 40 CFR 64, Baghouses 1, 2, and 4 controlling particulate matter emissions from the Rotary Furnace RF#1 (furnace #1), controlled by Baghouse 1, the Rotary Furnace RF#2 (furnace #2), controlled by Baghouse 2, and the Reverberatory Furnace RV#1 (furnace #4), controlled by Baghouse 4, shall each be equipped with a bag leak detection system for each exhaust stack of a fabric filter and shall comply with the requirements as designated in Section E.1.2 (40 CFR 63 Subpart RRR).

D.1.7 Visible Emissions Notations [40 CFR 64]

(a) Daily visible emission notations of the Baghouse 3 stack exhaust (Vent #3), controlling the Chip Dryer #1, shall be performed during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(b) Pursuant to 40 CFR 64, whenever the Bag Leak Detection System (BLDS) is malfunctioning or down for repairs or adjustments, visible emission notations of the stack exhaust from:

(1) Baghouse 1, controlling emissions from Rotary Furnace RF#1 (furnace #1),

(2) Baghouse 2, controlling emissions from Rotary Furnace RF#2 (furnace #2), and

(3) Baghouse 4, controlling emissions from Reverberatory Furnace RV#1 (furnace #4),

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.

(c) 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.

(d) 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.

(e) 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.

(f) If abnormal emissions are observed, the Permittee shall take reasonable response steps. Section C – Response to Excursions and Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. Failure to take response steps shall be considered a deviation from this permit.

D.1.8 Parametric Monitoring [40 CFR 64]

(a) The Permittee shall record the pressure drop across Baghouse 3, used in conjunction with Chip Dryer #1, at least once per day when Chip Dryer #1 is in operation. When for any one reading, the pressure drop across the dust collector is outside the normal range, the Permittee shall take reasonable response steps. The normal range for this unit is a pressure drop between 3 and 6 inches of water unless a different upper-bound or lower-bound value for this range is determined during the latest stack test.

(b) Pursuant to 40 CFR 64, whenever the Bag Leak Detection System (BLDS) is malfunctioning or down for repairs or adjustments, The Permittee shall record the pressure drop across the following Baghouses, at least once per shift when the processes controlled by these Baghouses are in operation:

(1) Baghouse 1, controlling emissions from Rotary Furnace RF#1 (furnace #1),

(2) Baghouse 2, controlling emissions from Rotary Furnace RF#2 (furnace #2), and

(3) Baghouse 4, controlling emissions from Reverberatory Furnace RV#1 (furnace #4),

When for any one reading, the pressure drop across each baghouse is outside the normal range of 3 and 6 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response.

(c) Section C - Response to Excursions or Exceedances contains the Permittee's obligation with regard to the reasonable response steps required by this condition. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps shall be considered a deviation from this permit.

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

D.1.9 Broken or Failed Bag Detection [40 CFR 64]

Pursuant to 40 CFR 64, in the event that bag failure has been observed:

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

(b) For a single compartment baghouse controlling emissions from a batch process, the feed

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

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

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

D.1.10 Record Keeping Requirements

(a) To document the compliance status with Condition D.1.7(a), the Permittee shall maintain once per day visible emissions notations for Baghouse 3. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day).

(b) To document the compliance status with Condition D.1.7(b), whenever the Bag Leak Detection System (BLDS) is malfunctioning or down for repairs or adjustments, the Permittee shall maintain once per shift visible emissions notations for Baghouses 1, 2, and 4. The Permittee shall include in its daily record when a visible emission notation is not taken and the reason for the lack of a visible emission notation, (e.g. the process did not operate that day).

(c) To document the compliance status with Condition D.1.8(a), the Permittee shall maintain once per day records of the total static pressure drop for Baghouse 3 during normal operation. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

(d) To document the compliance status with Conditions D.1.8(b), whenever the Bag Leak Detection System (BLDS) is malfunctioning or down for repairs or adjustments, the Permittee shall maintain once per shift records of the total static pressure drop for Baghouses 1, 2, and 4. The Permittee shall include in its daily record when a pressure drop reading is not taken and the reason for the lack of a pressure drop reading, (e.g. the process did not operate that day).

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

SECTION E.1 40 CFR Part 63, Subpart RRR

Facility Description [326 IAC 2-7-5(15)]:

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, approved in 2014 for modification, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, approved in 2014 for modification, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(c) One (1) natural gas-fired thermal chip dryer, identified as Chip Dryer #1, which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 4.0 MMBtu/hr, with a maximum capacity of processing 7,035 pounds of aluminum per hour, with emissions controlled by one (1) baghouse, identified as Baghouse 3, and one (1) natural gas-fired afterburner with a maximum heat input capacity of 6.0 MMBtu/hr, identified as Afterburner, exhausting through one (1) stack, identified as Vent #3;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "thermal chip dryer".

(e) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, approved in 2014 for modification, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(f) One (1) natural gas-fired holding furnace, identified as HF #1 (furnace #3), constructed in 2010, with a maximum heat input capacity of 0.25 MMBtu/hr, no control with emissions exhausting into the building.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 2 Furnace".

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

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

E.1.1 General Provisions Relating to National Emission Standards for Hazardous Air Pollutants under 40 CFR Part 63 [326 IAC 20-1] [40 CFR Part 63, Subpart A]

(a) Pursuant to 40 CFR 63. 1518, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart A – General Provisions, which are incorporated by reference as 326 IAC 20-1-1, for the above listed emissions units, as specified in 40 CFR Part 63, Subpart RRR, in accordance with the schedule in 40 CFR Part 63, Subpart RRR.

(b) Pursuant to 40 CFR 63.10, the Permittee shall submit all required notifications and reports to:

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

and

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

E.1.2 Secondary Aluminum Production NESHAP [40 CFR Part 63, Subpart RRR] [326 IAC 20-70]

Pursuant to 40 CFR Part 63, Subpart RRR, the Permittee shall comply with the provisions of 40 CFR Part 63, Subpart RRR, which are incorporated by reference as 326 IAC 20-70 (included as Attachment A to this permit), for the above listed emissions units, as specified as follows:

(a) Rotary Furnace RF#1 (furnace #1), Rotary Furnace RF#2 (furnace #2), and Reverberatory Furnace RV#1 (furnace #4), each defined as "Group 1 Furnace/SAPU":

(1) 63.1500(a) and (b)(8)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1505(a), (i)(2-6), (j), (j)(1-2), (j)(4-5), (k)(1-4), and (k)(6)
(7) 63.1506(a)(1), (a)(4), (b)(1-2), (c-d), (k), (k)(1), (k)(3-4), (m), (m)(1), (m)(3-5), and (p)
(8) 63.1507
(9) 63.1508
(10) 63.1509
(11) 63.1510(a), (b) (except (b)(8)), (c-f), (h-i), and (s-w)
(12) 63.1511 (except (h-i))
(13) 63.1512(d), (h), (j-k), and (n-s)
(14) 63.1513
(15) 63.1514
(16) 63.1515 (except (a)(1))
(17) 63.1516(a), (b)(1)(i), (b)(1)(iv-vii), and (b)(2)(vi)
(18) 63.1517 (except (b)(1)(ii-iii), (b)(2), (b)(6), (b)(8-12))
(19) 63.1518
(20) 63.1519

(21) Table 1
(22) Table 2
(23) Table 3
(24) Appendix A

(b) For Chip Dryer #1, defined as "thermal chip dryer":

(1) 63.1500(a) and (b)(2)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1505(a) and (c)
(7) 63.1506(a)(1), (4), (b-d), (f), and (p)
(8) 63.1507
(9) 63.1508
(10) 63.1509
(11) 63.1510(a), (b) (except (b)(8)), (f)(3), (k), and (w)
(12) 63.1511 (except (h-i))
(13) 63.1512(b), (k), (m-n), (r), and (s)
(14) 63.1513 (except (e))
(15) 63.1514
(16) 63.1515 except (a)(1))
(17) 63.1516(a), (b)(1)(iv-vi), and (b)(2)(i))
(18) 63.1517 (except (b)(1)(ii-iii), (b)(4-6), (b)(8), (b)(1012), (b)(16)(iii), and (b)(17))
(19) 63.1518
(20) 63.1519
(21) Table 1
(22) Table 2
(23) Table 3
(24) Appendix A

(c) For Holding Furnace HF #1 (furnace #3), defined as "Group 2 Furnace":

(1) 63.1500(a) and (b)(4)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1506(a)(1), (a)(4), (b)(1-2), and (o-p)
(7) 63.1507
(8) 63.1508
(9) 63.1509
(10) 63.1510(a), (b)(1-7), (c), and (r)
(11) 63.1512(r)
(12) 63.1514
(13) 63.1515 (except (a)(1))
(14) 63.1516(a), (b)(1)(iv-vi), and (b)(2)(v)
(15) 63.1517(a), (b)(12-13), and (b)(16)(ii)
(16) 63.1518
(17) 63.1519
(18) Table 1
(19) Table 2
(20) Table 3
(21) Appendix A

E.1.3 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

The Permittee shall perform the stack testing as required under NESHAP 40 CFR 63, Subpart RRR, utilizing methods as approved by the Commissioner to document compliance with Condition E.1.2. These tests shall be repeated at least every five (5) years from the date of the last valid compliance demonstration. Testing shall be conducted in accordance with the provisions of 326 IAC 3-6 (Source Sampling Procedures). Section C – Performance Testing contains the Permittee's obligation with regard to the performance testing required by this condition.

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

Source Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Part 70 Permit No.: T113-33985-00071

This certification shall be included when submitting monitoring, testing reports/results or other documents as required by this permit.

Please check what document is being certified:

□ Annual Compliance Certification Letter

□ Test Result (specify)

□ Report (specify)

□ Notification (specify)

□ Affidavit (specify)

□ Other (specify)

I certify that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Signature:
Printed Name:
Title/Position:
Phone:
Date:

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

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

PART 70 OPERATING PERMIT
EMERGENCY OCCURRENCE REPORT

Source Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Part 70 Permit No.: T113-33985-00071

This form consists of 2 pages **Page 1 of 2**

□ This is an emergency as defined in 326 IAC 2-7-1(12)

- The Permittee must notify the Office of Air Quality (OAQ), within four (**4**) business hours (1-800-451-6027 or 317-233-0178, ask for Compliance Section); and
- The Permittee must submit notice in writing or by facsimile within two (**2**) working days (Facsimile Number: 317-233-6865), and follow the other requirements of 326 IAC 2-7-16.

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

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

If any of the following are not applicable, mark N/A **Page 2 of 2**

Date/Time Emergency started:
Date/Time Emergency was corrected:
Was the facility being properly operated at the time of the emergency? Y N
Type of Pollutants Emitted: TSP, PM-10, SO_2, VOC, NO_X, CO, Pb, other:
Estimated amount of pollutant(s) emitted during emergency:
Describe the steps taken to mitigate the problem:
Describe the corrective actions/response steps taken:
Describe the measures taken to minimize emissions:
If applicable, describe the reasons why continued operation of the facilities are necessary to prevent imminent injury to persons, severe damage to equipment, substantial loss of capital investment, or loss of product or raw materials of substantial economic value:

Form Completed by:_____

Title / Position: _____

Date:_____

Phone: _____

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

Source Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Part 70 Permit No.: T113-33985-00071

Months: _____ to _____ Year: _____

Page 1 of 2

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

□ NO DEVIATIONS OCCURRED THIS REPORTING PERIOD.

□ THE FOLLOWING DEVIATIONS OCCURRED THIS REPORTING PERIOD

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

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

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

Form Completed by: _____

Title / Position: _____

Date: _____

Phone: _____

Attachment A

Part 70 Operating Permit Renewal No: 113-33985-00071

[Downloaded from the eCFR on June 2, 2014]

Electronic Code of Federal Regulations

Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

Subpart RRR—Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes

SOURCE: 58 FR 45962, Aug. 31, 1993, unless otherwise noted.

§60.700 Applicability and designation of affected facility.

(a) The provisions of this subpart apply to each affected facility designated in paragraph (b) of this section that is part of a process unit that produces any of the chemicals listed in §60.707 as a product, co-product, by-product, or intermediate, except as provided in paragraph (c) of this section.

(b) The affected facility is any of the following for which construction, modification, or reconstruction commenced after June 29, 1990:

(1) Each reactor process not discharging its vent stream into a recovery system.

(2) Each combination of a reactor process and the recovery system into which its vent stream is discharged.

(3) Each combination of two or more reactor processes and the common recovery system into which their vent streams are discharged.

(c) Exemptions from the provisions of paragraph (a) of this section are as follows:

(1) Any reactor process that is designed and operated as a batch operation is not an affected facility.

(2) Each affected facility that has a total resource effectiveness (TRE) index value greater than 8.0 is exempt from all provisions of this subpart except for §§60.702(c); 60.704 (d), (e), and (f); and 60.705 (g), (l)(1), (l)(6), and (t).

(3) Each affected facility in a process unit with a total design capacity for all chemicals produced within that unit of less than 1 gigagram per year (1,100 tons per year) is exempt from all provisions of this subpart except for the recordkeeping and reporting requirements in §60.705 (i), (l)(5), and (n).

(4) Each affected facility operated with a vent stream flow rate less than 0.011 scm/min is exempt from all provisions of this subpart except for the test method and procedure and the recordkeeping and reporting requirements in §60.704(g) and §70.705 (h), (l)(4), and (o).

(5) If the vent stream from an affected facility is routed to a distillation unit subject to subpart NNN and has no other releases to the air except for a pressure relief valve, the facility is exempt from all provisions of this subpart except for §60.705(r).

(6) Any reactor process operating as part of a process unit which produces beverage alcohols, or which uses, contains, and produces no VOC is not an affected facility.

(7) Any reactor process that is subject to the provisions of subpart DDD is not an affected facility.

(8) Each affected facility operated with a concentration of total organic compounds (TOC) (less methane and ethane) in the vent stream less than 300 ppmv as measured by Method 18 or a concentration of TOC in the vent stream less than 150 ppmv as measured by Method 25A is exempt from all provisions of this subpart except for the test method and procedure and the reporting and recordkeeping requirements in §60.704(h) and paragraphs (j), (l)(8), and (p) of §60.705.

(d) *Alternative means of compliance*—(1) *Option to comply with part 65.* Owners or operators of process vents that are subject to this subpart may choose to comply with the provisions of 40 CFR part 65, subpart D, to satisfy the requirements of §§60.702 through 60.705 and 60.708. The provisions of 40 CFR part 65 also satisfy the criteria of paragraphs (c)(2), (4), and (8) of this section. Other provisions applying to an owner or operator who chooses to comply with 40 CFR part 65 are provided in 40 CFR 65.1.

(2) *Part 60, subpart A.* Owners or operators who choose to comply with 40 CFR part 65, subpart D, must also comply with §§60.1, 60.2, 60.5, 60.6, 60.7(a)(1) and (4), 60.14, 60.15, and 60.16 for those process vents. All sections and paragraphs of subpart A of this part that are not mentioned in this paragraph (d)(2) do not apply to owners or operators of process vents complying with 40 CFR part 65, subpart D, except that provisions required to be met prior to implementing 40 CFR part 65 still apply. Owners and operators who choose to comply with 40 CFR part 65, subpart D, must comply with 40 CFR part 65, subpart A.

(3) *Compliance date.* Owners or operators who choose to comply with 40 CFR part 65, subpart D at initial startup shall comply with paragraphs (d)(1) and (2) of this section for each vent stream on and after the date on which the initial performance test is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial startup, whichever date comes first.

(4) *Initial startup notification.* Each owner or operator subject to the provisions of this subpart that chooses to comply with 40 CFR part 65, subpart D, at initial startup shall notify the Administrator of the specific provisions of 40 CFR 65.63(a)(1), (2), or (3), with which the owner or operator has elected to comply. Notification shall be submitted with the notifications of initial startup required by 40 CFR 65.5(b).

(NOTE: The intent of these standards is to minimize emissions of VOC through the application of best demonstrated technology (BDT). The numerical emission limits in these standards are expressed in terms of TOC, measured as TOC less methane and ethane. This emission limit reflects the performance of BDT.)

[58 FR 45962, Aug. 31, 1993, as amended at 60 FR 58238, Nov. 27, 1995; 65 FR 78279, Dec. 14, 2000]

§60.701 Definitions.

As used in this subpart, all terms not defined here shall have the meaning given them in the Act and in subpart A of part 60, and the following terms shall have the specific meanings given them.

Batch operation means any noncontinuous reactor process that is not characterized by steady-state conditions and in which reactants are not added and products are not removed simultaneously.

Boiler means any enclosed combustion device that extracts useful energy in the form of steam and is not an incinerator.

By compound means by individual stream components, not carbon equivalents.

Car-seal means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

Combustion device means an individual unit of equipment, such as an incinerator, flare, boiler, or process heater, used for combustion of a vent stream discharged from the process vent.

Continuous recorder means a data recording device recording an instantaneous data value at least once every 15 minutes.

Flame zone means the portion of the combustion chamber in a boiler occupied by the flame envelope.

Flow indicator means a device which indicates whether gas flow is present in a line.

Halogenated vent stream means any vent stream determined to have a total concentration (by volume) of compounds containing halogens of 20 ppmv (by compound) or greater.

Incinerator means an enclosed combustion device that is used for destroying organic compounds. If there is energy recovery, the energy recovery section and the combustion chambers are not of integral design. That is, the energy recovery section and the combustion section are not physically formed into one manufactured or assembled unit but are joined by ducts or connections carrying flue gas.

Primary fuel means the fuel fired through a burner or a number of similar burners. The primary fuel provides the principal heat input to the device, and the amount of fuel is sufficient to sustain operation without the addition of other fuels.

Process heater means a device that transfers heat liberated by burning fuel directly to process streams or to heat transfer liquids other than water.

Process unit means equipment assembled and connected by pipes or ducts to produce, as intermediates or final products, one or more of the chemicals in §60.707. A process unit can operate independently if supplied with sufficient feed or raw materials and sufficient product storage facilities.

Product means any compound or chemical listed in §60.707 which is produced for sale as a final product as that chemical, or for use in the production of other chemicals or compounds. By-products, co-products, and intermediates are considered to be products.

Reactor processes are unit operations in which one or more chemicals, or reactants other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed.

Recovery device means an individual unit of equipment, such as an absorber, carbon adsorber, or condenser, capable of and used for the purpose of recovering chemicals for use, reuse, or sale.

Recovery system means an individual recovery device or series of such devices applied to the same vent stream.

Relief valve means a valve used only to release an unplanned, nonroutine discharge. A relief valve discharge results from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause that requires immediate venting of gas from process equipment in order to avoid safety hazards or equipment damage.

Secondary fuel means a fuel fired through a burner other than a primary fuel burner. The secondary fuel may provide supplementary heat in addition to the heat provided by the primary fuel.

Total organic compounds or TOC means those compounds measured according to the procedures in §60.704(b)(4). For the purposes of measuring molar composition as required in §60.704(d)(2)(i) and §60.704(d)(2)(ii), hourly emission rate as required in §60.704(d)(5) and §60.704(e), and TOC concentration as required in §60.705(b)(4) and §60.705(f)(4), those compounds which the Administrator has determined do not contribute appreciably to the formation of ozone are to be excluded.

Total resource effectiveness or TRE index value means a measure of the supplemental total resource requirement per unit reduction of TOC associated with a vent stream from an affected reactor process facility, based on vent stream flow rate, emission rate of TOC, net heating value, and corrosion properties (whether or not the vent stream contains halogenated compounds), as quantified by the equation given under §60.704(e).

Vent stream means any gas stream discharged directly from a reactor process to the atmosphere or indirectly to the atmosphere after diversion through other process equipment. The vent stream excludes relief valve discharges and equipment leaks.

§60.702 Standards.

Each owner or operator of any affected facility shall comply with paragraph (a), (b), or (c) of this section for each vent stream on and after the date on which the initial performance test required by §60.8 and §60.704 is completed, but not later than 60 days after achieving the maximum production rate at which the affected facility will be operated, or 180 days after the initial start-up, whichever date comes first. Each owner or operator shall either:

(a) Reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater; or

(b) Combust the emissions in a flare that meets the requirements of §60.18; or

(c) Maintain a TRE index value greater than 1.0 without use of a VOC emission control device.

§60.703 Monitoring of emissions and operations.

(a) The owner or operator of an affected facility that uses an incinerator to seek to comply with the TOC emission limit specified under §60.702(a) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

(1) A temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater.

(i) Where an incinerator other than a catalytic incinerator is used, a temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange is encountered.

(ii) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) A flow indicator that provides a record of vent stream flow diverted from being routed to the incinerator at least once every 15 minutes for each affected facility, except as provided in paragraph (a)(2)(ii) of this section.

(i) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream from being routed to the incinerator, resulting in its emission to the atmosphere.

(ii) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(b) The owner or operator of an affected facility that uses a flare to seek to comply with §60.702(b) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment:

(1) A heat sensing device, such as an ultraviolet beam sensor or thermocouple, at the pilot light to indicate the continuous presence of a flame.

(2) A flow indicator that provides a record of vent stream flow diverted from being routed to the flare at least once every 15 minutes for each affected facility, except as provided in paragraph (b)(2)(ii) of this section.

(i) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream from being routed to the flare, resulting in its emission to the atmosphere.

(ii) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(c) The owner or operator of an affected facility that uses a boiler or process heater to seek to comply with §60.702(a) shall install, calibrate, maintain and operate according to the manufacturer's specifications the following equipment:

(1) A flow indicator that provides a record of vent stream flow diverted from being routed to the boiler or process heater at least once every 15 minutes for each affected facility, except as provided in paragraph (c)(1)(ii) of this section.

(i) The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream from being routed to the boiler or process heater, resulting in its emission to the atmosphere.

(ii) Where the bypass line valve is secured in the closed position with a car-seal or a lock-and-key type configuration, a flow indicator is not required. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(2) A temperature monitoring device in the firebox equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater, for boilers or process heaters of less than 44 MW (150 million Btu/hr) design heat input capacity. Any vent stream introduced with primary fuel into a boiler or process heater is exempt from this requirement.

(d) The owner or operator of an affected facility that seeks to demonstrate compliance with the TRE index value limit specified under §60.702(c) shall install, calibrate, maintain, and operate according to manufacturer's specifications the following equipment, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator:

(1) Where an absorber is the final recovery device in the recovery system:

(i) A scrubbing liquid temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater, and a specific gravity monitoring device having an accuracy of ±0.02 specific gravity units, each equipped with a continuous recorder; or

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(2) Where a condenser is the final recovery device in the recovery system:

(i) A condenser exit (product side) temperature monitoring device equipped with a continuous recorder and having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater; or

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(3) Where a carbon adsorber is the final recovery device unit in the recovery system:

(i) An integrating steam flow monitoring device having an accuracy of ±10 percent, and a carbon bed temperature monitoring device having an accuracy of ±1 percent of the temperature being monitored expressed in degrees Celsius or ±0.5 °C, whichever is greater, both equipped with a continuous recorder; or

(ii) An organic monitoring device used to indicate the concentration level of organic compounds exiting the recovery device based on a detection principle such as infra-red, photoionization, or thermal conductivity, each equipped with a continuous recorder.

(e) An owner or operator of an affected facility seeking to demonstrate compliance with the standards specified under §60.702 with a control device other than an incinerator, boiler, process heater, or flare; or a recovery device other than an absorber, condenser, or carbon adsorber, shall provide to the Administrator information describing the operation of the control device or recovery device and the process parameter(s) which would indicate proper operation and maintenance of the device. The Administrator may request further information and will specify appropriate monitoring procedures or requirements.

§60.704 Test methods and procedures.

(a) For the purpose of demonstrating compliance with §60.702, all affected facilities shall be run at full operating conditions and flow rates during any performance test.

(b) The following methods in appendix A to this part, except as provided under §60.8(b), shall be used as reference methods to determine compliance with the emission limit or percent reduction efficiency specified under §60.702(a).

(1) Method 1 or 1A, as appropriate, for selection of the sampling sites. The control device inlet sampling site for determination of vent stream molar composition or TOC (less methane and ethane) reduction efficiency shall be prior to the inlet of the control device and after the recovery system.

(2) Method 2, 2A, 2C, or 2D, as appropriate, for determination of the gas volumetric flow rates.

(3) The emission rate correction factor, integrated sampling and analysis procedure of Method 3B shall be used to determine the oxygen concentration ($\%O_{2d}$) for the purposes of determining compliance with the 20 ppmv limit. The sampling site shall be the same as that of the TOC samples, and the samples shall be taken during the same time that the TOC samples are taken. The TOC concentration corrected to 3 percent O_2 (Cc) shall be computed using the following equation:

$$C_c = C_{TOC}\frac{17.9}{20.9 - \%O_{2d}}$$

where:

C_c = Concentration of TOC corrected to 3 percent O_2, dry basis, ppm by volume.

C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

$\%O_{2d}$ = Concentration of O_2, dry basis, percent by volume.

(4) Method 18 to determine the concentration of TOC in the control device outlet and the concentration of TOC in the inlet when the reduction efficiency of the control device is to be determined.

(i) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately 15-minute intervals.

(ii) The emission reduction (R) of TOC (minus methane and ethane) shall be determined using the following equation:

$$R = \frac{E_i - E_o}{E_i} \times 100$$

where:

R=Emission reduction, percent by weight.

E_i = Mass rate of TOC entering the control device, kg TOC/hr.

E_o = Mass rate of TOC discharged to the atmosphere, kg TOC/hr.

(iii) The mass rates of TOC (E_i, E_o) shall be computed using the following equations:

$$E_i = K_2 \sum_{j=1}^{n} C_{ij} M_{ij} Q_i$$

$$E_i = K_2 \sum_{j=1}^{n} C_{oj} M_{ij} Q_o$$

where:

C_{ij}, C_{oj} = Concentration of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppm by volume.

M_{ij}, M_{oj} = Molecular weight of sample component "j" of the gas stream at the inlet and outlet of the control device, respectively, g/g-mole (lb/lb-mole).

Q_i, Q_o = Flow rate of gas stream at the inlet and outlet of the control device, respectively, dscm/min (dscf/hr).

K_2 = Constant, 2.494×10^{-6} (l/ppm) (g-mole/scm) (kg/g) (min/hr), where standard temperature for (g-mole/scm) is 20 °C.

(iv) The TOC concentration (C_{TOC}) is the sum of the individual components and shall be computed for each run using the following equation:

$$C_{TOC} = \sum_{j=1}^{n} C_j$$

where:

C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, ppm by volume.

C_j = Concentration of sample components "j", dry basis, ppm by volume.

n=Number of components in the sample.

(5) The requirement for an initial performance test is waived, in accordance with §60.8(b), for the following:

(i) When a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used to seek compliance with §60.702(a).

(ii) When a vent stream is introduced into a boiler or process heater with the primary fuel.

(iii) The Administrator reserves the option to require testing at such other times as may be required, as provided for in section 114 of the Act.

(6) For purposes of complying with the 98 weight-percent reduction in §60.702(a), if the vent stream entering a boiler or process heater with a design capacity less than 44 MW (150 million Btu/hour) is introduced with the combustion air or as secondary fuel, the weight-percent reduction of TOC (minus methane and ethane) across the combustion device shall be determined by comparing the TOC (minus methane and ethane) in all combusted vent streams, primary fuels, and secondary fuels with the TOC (minus methane and ethane) exiting the combustion device.

(c) When a flare is used to seek to comply with §60.702(b), the flare shall comply with the requirements of §60.18.

(d) The following test methods in appendix A to this part, except as provided under §60.8(b), shall be used for determining the net heating value of the gas combusted to determine compliance under §60.702(b) and for determining the process vent stream TRE index value to determine compliance under §60.700(c)(2) and §60.702(c).

(1)(i) Method 1 or 1A, as appropriate, for selection of the sampling site. The sampling site for the vent stream flow rate and molar composition determination prescribed in §60.704 (d)(2) and (d)(3) shall be, except for the situations outlined in paragraph (d)(1)(ii) of this section, prior to the inlet of any control device, prior to any postreactor dilution of the stream with air, and prior to any postreactor introduction of halogenated compounds into the process vent stream. No traverse site selection method is needed for vents smaller than 4 inches in diameter.

(ii) If any gas stream other than the reactor vent stream is normally conducted through the final recovery device:

(A) The sampling site for vent stream flow rate and molar composition shall be prior to the final recovery device and prior to the point at which any nonreactor stream or stream from a nonaffected reactor process is introduced.

(B) The efficiency of the final recovery device is determined by measuring the TOC concentration using Method 18 at the inlet to the final recovery device after the introduction of any vent stream and at the outlet of the final recovery device.

(C) This efficiency of the final recovery device shall be applied to the TOC concentration measured prior to the final recovery device and prior to the introduction of any nonreactor stream or stream from a nonaffected reactor process to determine the concentration of TOC in the reactor process vent stream from the final recovery device. This concentration of TOC is then used to perform the calculations outlined in §60.704(d) (4) and (5).

(2) The molar composition of the process vent stream shall be determined as follows:

(i) Method 18 to measure the concentration of TOC including those containing halogens.

(ii) ASTM D1946-77 or 90 (Reapproved 1994) (incorporation by reference as specified in §60.17 of this part) to measure the concentration of carbon monoxide and hydrogen.

(iii) Method 4 to measure the content of water vapor.

(3) The volumetric flow rate shall be determined using Method 2, 2A, 2C, or 2D, as appropriate.

(4) The net heating value of the vent stream shall be calculated using the following equation:

$$H_T = K_1 \sum_{j=1}^{n} C_j H_j \quad 1 - B_{ws}$$

where:

H_T = Net heating value of the sample, MJ/scm, where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C, as in the definition of Q_s (vent stream flow rate).

K_1 = Constant, 1.740×10^{-7} (l/ppm) (g-mole/scm) (MJ/kcal), where standard temperature for (g-mole/scm) is 20 °C.

C_j = Concentration on a dry basis of compound j in ppm, as measured for organics by Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994) (incorporation by reference as specified in §60.17 of this part) as indicated in §60.704(d)(2).

H_j = Net heat of combustion of compound j, kcal/g-mole, based on combustion at 25 °C and 760 mm Hg. The heats of combustion of vent stream components would be required to be determined using ASTM D2382-76 or 88 or D4809-95 (incorporation by reference as specified in §60.17 of this part) if published values are not available or cannot be calculated.

B_{ws} = Water vapor content of the vent stream, proportion by volume.

(5) The emission rate of TOC in the vent stream shall be calculated using the following equation:

$$E_{TOC} = K_2 \sum_{j=1}^{n} C_j M_j Q_s$$

where:

E_{TOC} = Emission rate of TOC in the sample, kg/hr.

K_2 = Constant, 2.494×10^{-6} (l/ppm) (g-mole/scm) (kg/g) (min/hr), where standard temperature for (g-mole/scm) is 20 °C.

C_j = Concentration on a dry basis of compound j in ppm as measured by Method 18 as indicated in §60.704(d)(2).

M_j = Molecular weight of sample j, g/g-mole.

Q_s = Vent stream flow rate (dscm/min) at a temperature of 20 °C.

(6) The total vent stream concentration (by volume) of compounds containing halogens (ppmv, by compound) shall be summed from the individual concentrations of compounds containing halogens which were measured by Method 18.

(e) For purposes of complying with §60.700(c)(2) and §60.702(c), the owner or operator of a facility affected by this subpart shall calculate the TRE index value of the vent stream using the equation for incineration in paragraph (e)(1) of this section for halogenated vent streams. The owner or operator of an affected facility with a nonhalogenated vent stream shall determine the TRE index value by calculating values using both the incinerator equation in (e)(1) of this section and the flare equation in (e)(2) of this section and selecting the lower of the two values.

(1) The equation for calculating the TRE index value of a vent stream controlled by an incinerator is as follows:

$$TRE = \frac{1}{E_{TOC}} \left[a + b(Q_s)^{0.88} + c(Q_s) + d(Q_s)(H_T) + e(Q_s)^{0.88}(H_T)^{0.88} + f(Y_s)^{0.5} \right]$$

(i) Where for a vent stream flow rate (scm/min) at a standard temperature of 20 °C that is greater than or equal to 14.2 scm/min:

TRE=TRE index value.

Q_s = Vent stream flow rate (scm/min) at a standard temperature of 20 °C.

H_T = Vent stream net heating value (MJ/scm), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C as in the definition of Q_s.

$Y_s = Q_s$ for all vent stream categories listed in table 1 except for Category E vent streams where $Y_s = (Q_s)(H_T)/3.6$.

E_{TOC} = Hourly emissions of TOC reported in kg/hr.

a, b, c, d, e, and f are coefficients. The set of coefficients that apply to a vent stream can be obtained from table 1.

Table 1—Total Resource Effectiveness Coefficients for Vent Streams Controlled by an Incinerator Subject to the New Source Performance Standards for Reactor Processes

	a	b	c	d	e	f
DESIGN CATEGORY A1. FOR HALOGENATED PROCESS VENT STREAMS, IF 0≤NET HEATING VALUE (MJ/scm)≤3.5: Q_s = *Vent Stream Flow Rate (scm/min)*						
14.2≤Q_s≤18.8	19.18370	0.27580	0.75762	−0.13064	0	0.01025
18.8<Q_s≤699	20.00563	0.27580	0.30387	−0.13064	0	0.01025
699<Q_s≤1,400	39.87022	0.29973	0.30387	−0.13064	0	0.01449
1,400<Q_s≤2,100	59.73481	0.31467	0.30387	−0.13064	0	0.01775
2,100<Q_s≤2,800	79.59941	0.32572	0.30387	−0.13064	0	0.02049
2,800<Q_s≤3,500	99.46400	0.33456	0.30387	−0.13064	0	0.02291
DESIGN CATEGORY A2. FOR HALOGENATED PROCESS VENT STREAMS, IF NET HEATING VALUE (MJ/scm)>3.5: Q_s = *Vent Stream Flow Rate (scm/min)*						
14.2<Q_s≤18.8	18.84466	0.26742	−0.20044	0	0	0.01025
18.8<Q_s≤699	19.66658	0.26742	−0.25332	0	0	0.01025
699<Q_s≤1,400	39.19213	0.29062	−0.25332	0	0	0.01449
1,400<Q_s≤2,100	58.71768	0.30511	−0.25332	0	0	0.01775
2,100<Q_s≤2,800	78.24323	0.31582	−0 25332	0	0	0.02049
2,800<Q_s≤3,500	97.76879	0.32439	−0.25332	0	0	0.02291
DESIGN CATEGORY B. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 0≤NET HEATING VALUE (MJ/scm)≤0.48: Q_s = *Vent Stream Flow Rate (scm/min)*						
14.2≤Q_s≤1,340	8.54245	0.10555	0.09030	−0.17109	0	0.01025
1,340<Q_s≤2,690	16.94386	0.11470	0.09030	−0.17109	0	0.01449
2,690<Q_s≤4,040	25.34528	0.12042	0.09030	−0.17109	0	0.01775
DESIGN CATEGORY C. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 0.48<NET HEATING VALUE (MJ/scm)≤1.9: Q_s = *Vent Stream Flow Rate (scm/min)*						
14.2≤Q_s≤1,340	9.25233	0.06105	0.31937	−0.16181	0	0.01025
1,340<Q_s≤2,690	18.36363	0.06635	0.31937	−0.16181	0	0.01449
2,690<Q_s≤4,040	27.47492	0.06965	0.31937	−0.16181	0	0.01775
DESIGN CATEGORY D. FOR NONHALOGENATED PROCESS VENT STREAMS, IF 1.9<NET HEATING VALUE (MJ/scm)≤3.6: Q_s = *Vent Stream Flow Rate (scm/min)*						
14.2≤Q_s≤1,180	6.67868	0.06943	0.02582	0	0	0.01025
1,180<Q_s≤2,370	13.21633	0.07546	0.02582	0	0	0.01449
2,370<Q_s≤3,550	19.75398	0.07922	0.02582	0	0	0.01755

DESIGN CATEGORY E. FOR NONHALOGENATED PROCESS VENT STREAMS, IF NET HEATING VALUE (MJ/scm)>3.6: Y_s = *Dilution Flow Rate (scm/min)=*(Q_s) (H_T)/3.6						
14.2≤Y_s≤1,180	6.67868	0	0	−0.00707	0.02220	0.01025
1,180<Y_s≤2,370	13.21633	0	0	−0.00707	0.02412	0.01449
2,370<Y_s≤3,550	19.75398	0	0	−0.00707	0.02533	0.01755

(ii) For a vent stream flow rate (scm/min) at a standard temperature of 20 °C that is less than 14.2 scm/min:

TRE=TRE index value.

Q_s = 14.2 scm/min.

H_T = (FLOW)(HVAL)/14.2

where the following inputs are used:

FLOW=Vent stream flow rate (scm/min), at a standard temperature of 20 °C.

HVAL=Vent stream net heating value (MJ/scm), where the net enthalpy per mole of vent stream is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C as in definition of Q_s.

Y_s = 14.2 scm/min for all vent streams except for Category E vent streams, where Y_s = (14.2)(H_T)/3.6.

E_{TOC} = Hourly emissions of TOC reported in kg/hr.

a, b, c, d, e, and f are coefficients. The set of coefficients that apply to a vent stream can be obtained from table 1.

(2) The equation for calculating the TRE index value of a vent stream controlled by a flare is as follows:

$$TRE = \frac{1}{E_{TOC}}\left[a(Q_s) + b(Q_s)^{0.8} + c(Q_s)(H_T) + d(E_{TOC}) + e\right]$$

where:

TRE=TRE index value.

E_{TOC} = Hourly emission rate of TOC reported in kg/hr.

Q_s = Vent stream flow rate (scm/min) at a standard temperature of 20 °C.

H_T = Vent stream net heating value (MJ/scm) where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C as in the definition of Q_s.

a, b, c, d, and e are coefficients. The set of coefficients that apply to a vent stream can be obtained from table 2.

Table 2—Total Resource Effectiveness Coefficients for Vent Streams Controlled by a Flare Subject to the New Source Performance Standards for Reactor Processes

	a	b	c	d	e

H_T<11.2 MJ/scm	2.25	0.288	−0.193	−0.0051	2.08
H_T≥11.2 MJ/scm	0.309	0.0619	−0.0043	−0.0034	2.08

(f) Each owner or operator of an affected facility seeking to comply with §60.700(c)(2) or §60.702(c) shall recalculate the TRE index value for that affected facility whenever process changes are made. Examples of process changes include changes in production capacity, feedstock type, or catalyst type, or whenever there is replacement, removal, or addition of recovery equipment. The TRE index value shall be recalculated based on test data, or on best engineering estimates of the effects of the change on the recovery system.

(1) Where the recalculated TRE index value is less than or equal to 1.0, the owner or operator shall notify the Administrator within 1 week of the recalculation and shall conduct a performance test according to the methods and procedures required by §60.704 in order to determine compliance with §60.702 (a) or (b). Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

(2) Where the recalculated TRE index value is less than or equal to 8.0 but greater than 1.0, the owner or operator shall conduct a performance test in accordance with §60.8 and §60.704 and shall comply with §60.703, §60.704 and §60.705. Performance tests must be conducted as soon as possible after the process change but no later than 180 days from the time of the process change.

(g) Any owner or operator subject to the provisions of this subpart seeking to demonstrate compliance with §60.700(c)(4) shall use Method 2, 2A, 2C, or 2D of appendix A to 40 CFR part 60, as appropriate, for determination of volumetric flow rate.

(h) Each owner or operator seeking to demonstrate that a reactor process vent stream has a TOC concentration for compliance with the low concentration exemption in §60.700(c)(8) shall conduct an initial test to measure TOC concentration.

(1) The sampling site shall be selected as specified in paragraph (d)(1)(i) of this section.

(2) Method 18 or Method 25A of part 60, appendix A shall be used to measure concentration.

(3) Where Method 18 is used to qualify for the low concentration exclusion in §60.700(c)(8), the procedures in §60.704(b)(4) (i) and (iv) shall be used to measure TOC concentration, and the procedures of §60.704(b)(3) shall be used to correct the TOC concentration to 3 percent oxygen. To qualify for the exclusion, the results must demonstrate that the concentration of TOC, corrected to 3 percent oxygen, is below 300 ppm by volume.

(4) Where Method 25A is used, the following procedures shall be used to calculate ppm by volume TOC concentration, corrected to 3 percent oxygen:

(i) Method 25A shall be used only if a single organic compound is greater than 50 percent of total TOC, by volume, in the reactor process vent stream. This compound shall be the principal organic compound.

(ii) The principal organic compound may be determined by either process knowledge or test data collected using an appropriate EPA Reference Method. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current reactor process vent stream conditions.

(iii) The principal organic compound shall be used as the calibration gas for Method 25A.

(iv) The span value for Method 25A shall be 300 ppmv.

(v) Use of Method 25A is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(vi) The owner or operator shall demonstrate that the concentration of TOC including methane and ethane measured by Method 25A, corrected to 3 percent oxygen, is below 150 ppm by volume to qualify for the low concentration exclusion in §60.700(c)(8).

(vii) The concentration of TOC shall be corrected to 3 percent oxygen using the procedures and equation in paragraph (b)(3) of this section.

[58 FR 45962, Aug. 31, 1993, as amended at 60 FR 58238, Nov. 27, 1995; 65 FR 61778, Oct. 17, 2000]

§60.705 Reporting and recordkeeping requirements.

(a) Each owner or operator subject to §60.702 shall notify the Administrator of the specific provisions of §60.702 (§60.702 (a), (b), or (c)) with which the owner or operator has elected to comply. Notification shall be submitted with the notification of initial start-up required by §60.7(a)(3). If an owner or operator elects at a later date to use an alternative provision of §60.702 with which he or she will comply, then the Administrator shall be notified by the owner or operator 90 days before implementing a change and, upon implementing the change, a performance test shall be performed as specified by §60.704 no later than 180 days from initial start-up.

(b) Each owner or operator subject to the provisions of this subpart shall keep an up-to-date, readily accessible record of the following data measured during each performance test, and also include the following data in the report of the initial performance test required under §60.8. Where a boiler or process heater with a design heat input capacity of 44 MW (150 million Btu/hour) or greater is used or where the reactor process vent stream is introduced as the primary fuel to any size boiler or process heater to comply with §60.702(a), a report containing performance test data need not be submitted, but a report containing the information in §60.705(b)(2)(i) is required. The same data specified in this section shall be submitted in the reports of all subsequently required performance tests where either the emission control efficiency of a combustion device, outlet concentration of TOC, or the TRE index value of a vent stream from a recovery system is determined.

(1) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.702(a) through use of either a thermal or catalytic incinerator:

(i) The average firebox temperature of the incinerator (or the average temperature upstream and downstream of the catalyst bed for a catalytic incinerator), measured at least every 15 minutes and averaged over the same time period of the performance testing, and

(ii) The percent reduction of TOC determined as specified in §60.704(b) achieved by the incinerator, or the concentration of TOC (ppmv, by compound) determined as specified in §60.704(b) at the outlet of the control device on a dry basis corrected to 3 percent oxygen.

(2) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.702(a) through use of a boiler or process heater:

(i) A description of the location at which the vent stream is introduced into the boiler or process heater, and

(ii) The average combustion temperature of the boiler or process heater with a design heat input capacity of less than 44 MW (150 million Btu/hr) measured at least every 15 minutes and averaged over the same time period of the performance testing.

(3) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.702(b) through use of a smokeless flare, flare design (i.e., steam-assisted, air-assisted or nonassisted), all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the performance test, continuous records of the flare pilot flame monitoring, and records of all periods of operations during which the pilot flame is absent.

(4) Where an owner or operator subject to the provisions of this subpart seeks to demonstrate compliance with §60.702(c):

(i) Where an absorber is the final recovery device in the recovery system, the exit specific gravity (or alternative parameter which is a measure of the degree of absorbing liquid saturation, if approved by the Administrator), and average exit temperature, of the absorbing liquid measured at least every 15 minutes and averaged over the same time period of the performance testing (both measured while the vent stream is normally routed and constituted); or

(ii) Where a condenser is the final recovery device in the recovery system, the average exit (product side) temperature measured at least every 15 minutes and averaged over the same time period of the performance testing while the vent stream is routed and constituted normally; or

(iii) Where a carbon adsorber is the final recovery device in the recovery system, the total steam mass flow measured at least every 15 minutes and averaged over the same time period of the performance test (full carbon bed cycle), temperature of the carbon bed after regeneration [and within 15 minutes of completion of any cooling cycle(s)], and duration of the carbon bed steaming cycle (all measured while the vent stream is routed and constituted normally); or

(iv) As an alternative to §60.705(b)(4) (i), (ii) or (iii), the concentration level or reading indicated by the organics monitoring device at the outlet of the absorber, condenser, or carbon adsorber, measured at least every 15 minutes and averaged over the same time period of the performance testing while the vent stream is normally routed and constituted.

(v) All measurements and calculations performed to determine the TRE index value of the vent stream.

(c) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §60.703 (a) and (c) as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Where a combustion device is used to comply with §60.702(a), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:

(1) For thermal incinerators, all 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance with §60.702(a) was determined.

(2) For catalytic incinerators, all 3-hour periods of operation during which the average temperature of the vent stream immediately before the catalyst bed is more than 28 °C (50 °F) below the average temperature of the vent stream during the most recent performance test at which compliance with §60.702(a) was determined. The owner or operator also shall record all 3-hour periods of operation during which the average temperature difference across the catalyst bed is less than 80 percent of the average temperature difference of the bed during the most recent performance test at which compliance with §60.702(a) was determined.

(3) All 3-hour periods of operation during which the average combustion temperature was more than 28 °C (50 °F) below the average combustion temperature during the most recent performance test at which compliance with §60.702(a) was determined for boilers or process heaters with a design heat input capacity of less than 44 MW (150 million Btu/hr) where the vent stream is introduced with the combustion air or as a secondary fuel.

(4) For boilers or process heaters, whenever there is a change in the location at which the vent stream is introduced into the flame zone as required under §60.702(a).

(d) Each owner or operator subject to the provisions of this subpart shall keep records of the following:

(1) Up-to-date, readily accessible continuous records of the flow indication specified under §60.703(a)(2)(i), §60.703(b)(2)(i) and §60.703(c)(1)(i), as well as up-to-date, readily accessible records of all periods and the duration when the vent stream is diverted from the control device.

(2) Where a seal mechanism is used to comply with §60.703(a)(2)(ii), §60.703(b)(2)(ii), and §60.703(c)(1)(ii), a record of continuous flow is not required. In such cases, the owner or operator shall keep up-to-date, readily accessible records of all monthly visual inspections of the seals as well as readily accessible records of all periods and the

duration when the seal mechanism is broken, the bypass line valve position has changed, the serial number of the broken car-seal has changed, or when the key for a lock-and-key type configuration has been checked out.

(e) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the flare pilot flame monitoring specified under §60.703(b), as well as up-to-date, readily accessible records of all periods of operations in which the pilot flame is absent.

(f) Each owner or operator subject to the provisions of this subpart shall keep up-to-date, readily accessible continuous records of the equipment operating parameters specified to be monitored under §60.703(d), as well as up-to-date, readily accessible records of periods of operation during which the parameter boundaries established during the most recent performance test are exceeded. The Administrator may at any time require a report of these data. Where an owner or operator seeks to comply with §60.702(c), periods of operation during which the parameter boundaries established during the most recent performance tests are exceeded are defined as follows:

(1) Where an absorber is the final recovery device in a recovery system, and where an organic compound monitoring device is not used:

(i) All 3-hour periods of operation during which the average absorbing liquid temperature was more than 11 °C (20 °F) above the average absorbing liquid temperature during the most recent performance test, or

(ii) All 3-hour periods of operation during which the average absorbing liquid specific gravity was more than 0.1 unit above, or more than 0.1 unit below, the average absorbing liquid specific gravity during the most recent performance test (unless monitoring of an alternative parameter, which is a measure of the degree of absorbing liquid saturation, is approved by the Administrator, in which case he will define appropriate parameter boundaries and periods of operation during which they are exceeded).

(2) Where a condenser is the final recovery device in a system, and where an organic compound monitoring device is not used, all 3-hour periods of operation during which the average exit (product side) condenser operating temperature was more than 6 °C (11 °F) above the average exit (product side) operating temperature during the most recent performance test.

(3) Where a carbon adsorber is the final recovery device in a system, and where an organic compound monitoring device is not used:

(i) All carbon bed regeneration cycles during which the total mass steam flow was more than 10 percent below the total mass steam flow during the most recent performance test, or

(ii) All carbon bed regeneration cycles during which the temperature of the carbon bed after regeneration (and after completion of any cooling cycle(s)) was more than 10 percent or 5 °C greater, whichever is less stringent, than the carbon bed temperature (in degrees Celsius) during the most recent performance test.

(4) Where an absorber, condenser, or carbon adsorber is the final recovery device in the recovery system and where an organic compound monitoring device is used, all 3-hour periods of operation during which the average organic compound concentration level or reading of organic compounds in the exhaust gases is more than 20 percent greater than the exhaust gas organic compound concentration level or reading measured by the monitoring device during the most recent performance test.

(g) Each owner or operator of an affected facility subject to the provisions of this subpart and seeking to demonstrate compliance with §60.702(c) shall keep up-to-date, readily accessible records of:

(1) Any changes in production capacity, feedstock type, or catalyst type, or of any replacement, removal or addition of recovery equipment or reactors;

(2) Any recalculation of the TRE index value performed pursuant to §60.704(f); and

(3) The results of any performance test performed pursuant to the methods and procedures required by §60.704(d).

(h) Each owner or operator of an affected facility that seeks to comply with the requirements of this subpart by complying with the flow rate cutoff in §60.700(c)(4) shall keep up-to-date, readily accessible records to indicate that the vent stream flow rate is less than 0.011 scm/min and of any change in equipment or process operation that increases the operating vent stream flow rate, including a measurement of the new vent stream flow rate.

(i) Each owner or operator of an affected facility that seeks to comply with the requirements of this subpart by complying with the design production capacity provision in §60.700(c)(3) shall keep up-to-date, readily accessible records of any change in equipment or process operation that increases the design production capacity of the process unit in which the affected facility is located.

(j) Each owner or operator of an affected facility that seeks to comply with the requirements of this subpart by complying with the low concentration exemption in §60.700(c)(8) shall keep up-to-date, readily accessible records of any change in equipment or process operation that increases the concentration of the vent stream of the affected facility.

(k) Each owner or operator subject to the provisions of this subpart is exempt from the quarterly reporting requirements contained in §60.7(c) of the General Provisions.

(l) Each owner or operator that seeks to comply with the requirements of this subpart by complying with the requirements of §60.700 (c)(2), (c)(3), or (c)(4) or §60.702 shall submit to the Administrator semiannual reports of the following recorded information. The initial report shall be submitted within 6 months after the initial start-up date.

(1) Exceedances of monitored parameters recorded under §60.705 (c), (f), and (g).

(2) All periods and duration recorded under §60.705(d) when the vent stream is diverted from the control device to the atmosphere.

(3) All periods recorded under §60.705(f) in which the pilot flame of the flare was absent.

(4) Any change in equipment or process operation that increases the operating vent stream flow rate above the low flow exemption level in §60.700(c)(4), including a measurement of the new vent stream flow rate, as recorded under §60.705(i). These must be reported as soon as possible after the change and no later than 180 days after the change. These reports may be submitted either in conjunction with semiannual reports or as a single separate report. A performance test must be completed within the same time period to verify the recalculated flow value and to obtain the vent stream characteristics of heating value and $E_{TOC.}$ The performance test is subject to the requirements of §60.8 of the General Provisions. Unless the facility qualifies for an exemption under any of the exemption provisions listed in §60.700(c), except for the total resource effectiveness index greater than 8.0 exemption in §60.700(c)(2), the facility must begin compliance with the requirements set forth in §60.702.

(5) Any change in equipment or process operation, as recorded under paragraph (i) of this section, that increases the design production capacity above the low capacity exemption level in §60.700(c)(3) and the new capacity resulting from the change for the reactor process unit containing the affected facility. These must be reported as soon as possible after the change and no later than 180 days after the change. These reports may be submitted either in conjunction with semiannual reports or as a single separate report. A performance test must be completed within the same time period to obtain the vent stream flow rate, heating value, and $E_{TOC.}$ The performance test is subject to the requirements of §60.8. The facility must begin compliance with the requirements set forth in §60.702 or §60.700(d). If the facility chooses to comply with §60.702, the facility may qualify for an exemption under §60.700(c)(2), (4), or (8).

(6) Any recalculation of the TRE index value, as recorded under §60.705(g).

(7) All periods recorded under §60.705(d) in which the seal mechanism is broken or the by-pass line valve position has changed. A record of the serial number of the car-seal or a record to show that the key to unlock the bypass line valve was checked out must be maintained to demonstrate the period, the duration, and frequency in which the bypass line was operated.

(8) Any change in equipment or process operation that increases the vent stream concentration above the low concentration exemption level in §60.700(c)(8), including a measurement of the new vent stream concentration, as recorded under §60.705(j). These must be reported as soon as possible after the change and no later than 180 days

after the change. These reports may be submitted either in conjunction with semiannual reports or as a single separate report. If the vent stream concentration is above 300 ppmv as measured using Method 18 or above 150 ppmv as measured using Method 25A, a performance test must be completed within the same time period to obtain the vent stream flow rate, heating value, and $E_{TOC.}$ The performance test is subject to the requirements of §60.8 of the General Provisions. Unless the facility qualifies for an exemption under any of the exemption provisions listed in §60.700(c), except for the TRE index greater than 8.0 exemption in §60.700(c)(2), the facility must begin compliance with the requirements set forth in §60.702.

(m) The requirements of §60.705(l) remain in force until and unless EPA, in delegating enforcement authority to a State under section 111(c) of the Act, approves reporting requirements or an alternative means of compliance surveillance adopted by such State. In that event, affected sources within the State will be relieved of the obligation to comply with §60.705(l), provided that they comply with the requirements established by the State.

(n) Each owner or operator that seeks to demonstrate compliance with §60.700(c)(3) must submit to the Administrator an initial report detailing the design production capacity of the process unit.

(o) Each owner or operator that seeks to demonstrate compliance with §60.700(c)(4) must submit to the Administrator an initial report including a flow rate measurement using the test methods specified in §60.704.

(p) Each owner or operator that seeks to demonstrate compliance with §60.700(c)(8) must submit to the Administrator an initial report including a concentration measurement using the test method specified in §60.704.

(q) The Administrator will specify appropriate reporting and recordkeeping requirements where the owner or operator of an affected facility complies with the standards specified under §60.702 other than as provided under §60.703 (a), (b), (c), and (d).

(r) Each owner or operator whose reactor process vent stream is routed to a distillation unit subject to subpart NNN and who seeks to demonstrate compliance with §60.700(c)(5) shall submit to the Administrator a process design description as part of the initial report. This process design description must be retained for the life of the process. No other records or reports would be required unless process changes are made.

(s) Each owner or operator who seeks to demonstrate compliance with §60.702 (a) or (b) using a control device must maintain on file a schematic diagram of the affected vent streams, collection system(s), fuel systems, control devices, and bypass systems as part of the initial report. This schematic diagram must be retained for the life of the system.

(t) Each owner or operator that seeks to demonstrate compliance with §60.700(c)(2) must maintain a record of the initial test for determining the total resource effectiveness index and the results of the initial total resource effectiveness index calculation.

[58 FR 45962, Aug. 31, 1993, as amended at 60 FR 58238, Nov. 27, 1995; 65 FR 78279, Dec. 14, 2000]

§60.706 Reconstruction.

(a) For purposes of this subpart “fixed capital cost of the new components,” as used in §60.15, includes the fixed capital cost of all depreciable components which are or will be replaced pursuant to all continuous programs of component replacement which are commenced within any 2-year period following June 29, 1990. For purposes of this paragraph, “commenced” means that an owner or operator has undertaken a continuous program of component replacement or that an owner or operator has entered into a contractual obligation to undertake and complete, within a reasonable time, a continuous program of component replacement.

(b) [Reserved]

§60.707 Chemicals affected by subpart RRR.

Chemical	CAS No.[1]
Acetaldehyde	75-07-0

Chemical	CAS No.[1]
Acetic acid	64-19-7
Acetic anhydride	108-24-7
Acetone	67-64-1
Acetone cyanohydrin	75-86-5
Acetylene	74-86-2
Acrylic acid	79-10-7
Acrylonitrile	107-13-1
Adipic acid	124-04-9
Adiponitrile	111-69-3
Alcohols, C-11 or lower, mixtures	
Alcohols, C-12 or higher, mixtures	
Alcohols, C-12 or higher, unmixed	
Allyl chloride	107-05-1
Amylene	513-35-9
Amylenes, mixed	
Aniline	62-53-3
Benzene	71-43-2
Benzenesulfonic acid	98-11-3
Benzenesulfonic acid C_{10-16}-alkyl derivatives, sodium salts	68081-81-2
Benzyl chloride	100-44-7
Bisphenol A	80-05-7
Brometone	76-08-4
1,3-Butadiene	106-99-0
Butadiene and butene fractions	
n-Butane	106-97-8
1,4-Butanediol	110-63-4
Butanes, mixed	
1-Butene	106-98-9
2-Butene	25167-67-3
Butenes, mixed	
n-Butyl acetate	123-86-4
Butyl acrylate	141-32-2
n-Butyl alcohol	71-36-3
sec-Butyl alcohol	78-92-2
tert-Butyl alcohol	75-65-0
Butylbenzyl phthalate	85-68-7
tert-Butyl hydroperoxide	75-91-2
2-Butyne-1,4-diol	110-65-6
Butyraldehyde	123-72-8
Butyric anhydride	106-31-0
Caprolactam	105-60-2
Carbon disulfide	75-15-0
Carbon tetrachloride	56-23-5
Chloroacetic acid	79-11-8

Chemical	CAS No.[1]
Chlorobenzene	108-90-7
Chlorodifluoromethane	75-45-6
Chloroform	67-66-3
p-Chloronitrobenzene	100-00-5
Citric acid	77-92-9
Cumene	98-82-8
Cumene hydroperoxide	80-15-9
Cyanuric chloride	108-77-0
Cyclohexane	110-82-7
Cyclohexane, oxidized	68512-15-2
Cyclohexanol	108-93-0
Cyclohexanone	108-94-1
Cyclohexanone oxime	100-64-1
Cyclohexene	110-83-8
Cyclopropane	75-19-4
Diacetone alcohol	123-42-2
1,4-Dichlorobutene	110-57-6
3,4-Dichloro-1-butene	64037-54-3
Dichlorodifluoromethane	75-71-8
Dichlorodimethylsilane	75-78-5
Dichlorofluoromethane	75-43-4
Diethanolamine	111-42-2
Diethylbenzene	25340-17-4
Diethylene glycol	111-46-6
Di-isodecyl phthalate	26761-40-0
Dimethyl terephthalate	120-61-6
2,4-(and 2,6)-dinitrotoluene	121-14-2
	606-20-2
Dioctyl phthalate	117-81-7
Dodecene	25378-22-7
Dodecylbenzene, nonlinear	
Dodecylbenzenesulfonic acid	27176-87-0
Dodecylbenzenesulfonic acid, sodium salt	25155-30-0
Epichlorohydrin	106-89-8
Ethanol	64-17-5
Ethanolamine	141-43-5
Ethyl acetate	141-78-6
Ethyl acrylate	140-88-5
Ethylbenzene	100-41-4
Ethyl chloride	75-00-3
Ethylene	74-85-1
Ethylene dibromide	106-93-4
Ethylene dichloride	107-06-2
Ethylene glycol	107-21-1

Chemical	CAS No.[1]
Ethylene glycol monobutyl ether	111-76-2
Ethylene glycol monoethyl ether acetate	111-15-9
Ethylene glycol monomethyl ether	109-86-4
Ethylene oxide	75-21-8
2-Ethylhexyl alcohol	104-76-7
(2-Ethylhexyl) amine	104-75-6
6-Ethyl-1,2,3,4-tetrahydro 9,10-anthracenedione	15547-17-8
Formaldehyde	50-00-0
Glycerol	56-81-5
n-Heptane	142-82-5
Heptenes (mixed)	
Hexamethylene diamine	124-09-4
Hexamethylene diamine adipate	3323-53-3
Hexamethylenetetramine	100-97-0
Hexane	110-54-3
Isobutane	75-28-5
Isobutanol	78-83-1
Isobutylene	115-11-7
Isobutyraldehyde	78-84-2
Isopentane	78-78-4
Isoprene	78-79-5
Isopropanol	67-63-0
Ketene	463-51-4
Linear alcohols, ethoxylated, mixed	
Linear alcohols, ethoxylated, and sulfated, sodium salt, mixed	
Linear alcohols, sulfated, sodium salt, mixed	
Linear alkylbenzene	123-01-3
Maleic anhydride	108-31-6
Mesityl oxide	141-79-7
Methanol	67-56-1
Methylamine	74-39-5
ar-Methylbenzenediamine	25376-45-8
Methyl chloride	74-87-3
Methylene chloride	75-09-2
Methyl ethyl ketone	78-93-3
Methyl isobutyl ketone	108-10-1
Methyl methacrylate	80-62-6
1-Methyl-2-pyrrolidone	872-50-4
Methyl tert-butyl ether	
Naphthalene	91-20-3
Nitrobenzene	98-95-3
1-Nonene	27215-95-8
Nonyl alcohol	143-08-8
Nonylphenol	25154-52-3

Chemical	CAS No.[1]
Nonylphenol, ethoxylated	9016-45-9
Octene	25377-83-7
Oil-soluble petroleum sulfonate, calcium salt	
Pentaerythritol	115-77-5
3-Pentenenitrile	4635-87-4
Pentenes, mixed	109-67-1
Perchloroethylene	127-18-4
Phenol	108-95-2
1-Phenylethyl hydroperoxide	3071-32-7
Phenylpropane	103-65-1
Phosgene	75-44-5
Phthalic anhydride	85-44-9
Propane	74-98-6
Propionaldehyde	123-38-6
Propyl alcohol	71-23-8
Propylene	115-07-1
Propylene glycol	57-55-6
Propylene oxide	75-56-9
Sorbitol	50-70-4
Styrene	100-42-5
Terephthalic acid	100-21-0
Tetraethyl lead	78-00-2
Tetrahydrofuran	109-99-9
Tetra (methyl-ethyl) lead	
Tetramethyl lead	75-74-1
Toluene	108-88-3
Toluene-2,4-diamine	95-80-7
Toluene-2,4-(and, 2,6)-diisocyanate (80/20 mixture)	26471-62-5
1,1,1-Trichloroethane	71-55-6
1,1,2-Trichloroethane	79-00-5
Trichloroethylene	79-01-6
Trichlorofluoromethane	75-69-4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1
Triethanolamine	102-71-6
Triethylene glycol	112-27-6
Vinyl acetate	108-05-4
Vinyl chloride	75-01-4
Vinylidene chloride	75-35-4
m-Xylene	108-38-3
o-Xylene	95-47-6
p-Xylene	106-42-3
Xylenes (mixed)	1330-20-7

[1]CAS numbers refer to the Chemical Abstracts Registry numbers assigned to specific chemicals, isomers, or mixtures of chemicals. Some isomers or mixtures that are covered by the standards do not have CAS numbers

assigned to them. The standards apply to all of the chemicals listed, whether CAS numbers have been assigned or not.

[58 FR 45962, Aug. 31, 1993, as amended at 60 FR 58238, Nov. 27, 1995]

§60.708 Delegation of authority.

(a) In delegating implementation and enforcement authority to a State under section 111(c) of the Act, the authorities contained in paragraph (b) of this section shall be retained by the Administrator and not transferred to a State.

(b) Authorities which will not be delegated to States: §60.703(e).

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for a Significant Source Modification and Part 70 Operating Permit Renewal

Source Background and Description

Source Name:	**Aluminum Recovery Technologies, Inc.**
Source Location:	**2170 Production Road, Kendallville, Indiana 46755**
County:	**Noble**
SIC Code:	**3341 (Secondary Nonferrous Metals)**
Significant Source Modification No.:	**113-34739-00071**
Permit Renewal No.:	**T113-33985-00071**
Permit Reviewer:	**Sarah Street**

The Office of Air Quality (OAQ) has reviewed the operating permit renewal application from Aluminum Recovery Technologies, Inc. relating to the operation of a stationary secondary aluminum production source. On December 11, 2013, Aluminum Recovery Technologies, Inc. submitted an application to the OAQ requesting to renew its operating permit. Aluminum Recovery Technologies, Inc. was issued its first Part 70 Operating Permit Renewal T113-26706-00071 on September 11, 2009.

On July 18, 2013, the source submitted an application to the OAQ requesting to correct the throughput capacities to several furnaces and the saltcake cooling operation. This application is being processed through Significant Source Modification No. 113-34739-00071.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units:

(a) One (1) natural gas-fired thermal chip dryer, identified as Chip Dryer #1, which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 4.0 MMBtu/hr, with a maximum capacity of processing 7,035 pounds of aluminum per hour, with emissions controlled by one (1) baghouse, identified as Baghouse 3, and one (1) natural gas-fired afterburner with a maximum heat input capacity of 6.0 MMBtu/hr, identified as Afterburner, exhausting through one (1) stack, identified as Vent #3;

(b) One (1) natural gas-fired holding furnace, identified as HF #1 (furnace #3), constructed in 2010, with a maximum heat input capacity of 0.25 MMBtu/hr, no control with emissions exhausting into the building.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 2 Furnace".

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application, submitted Aluminum Recovery Technologies, Inc. on July 18, 2013, relating to the increase in throughput to several emission units which were originally permitted at a lower capacity.

The following is a list of the modified emission unit(s) and pollution control device(s):

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, approved in 2014 for modification, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of

20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

Note: The source has indicated that the maximum capacity of this unit has increased from 13,374 pounds of dross and aluminum scrap per hour and 2,126 pounds of solid reactive flux per hour to 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour. No physical modification has been made to the furnace. The maximum capacity of this unit should have always been the higher throughput value. This is based on 2011 stack test data presented by the source.

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, approved in 2014 for modification, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

Note: The source has indicated that the maximum capacity of this unit has increased from 11,837 pounds of dross and aluminum scrap per hour and 1,834 pounds of solid reactive flux per hour to 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour. No physical modification has been made to the furnace. The maximum capacity of this unit should have always been the higher throughput value. This is based on 2011 stack test data presented by the source.

(c) One (1) saltcake cooling operation, constructed in 2000 and modified in 2004, approved in 2014 for modification, cooling up to 42,059 pounds of furnace saltcake per hour, with emissions exhausting into the building.

Note: The source has indicated that the maximum capacity of this unit has increased from 27,530 pounds of furnace saltcake per hour to 42,059 pounds of furnace saltcake per hour. No physical modification has been made to this operation. The maximum capacity of this unit should have always been the higher throughput value. The source has indicated that the throughput capacity of the Saltcake Cooling Operation should be based on the RF#1 + RF#2 throughput capacities, which are based on 2011 stack test data presented by the source.

(d) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, approved in 2014 for modification, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

Note: The source has indicated that the maximum capacity of this unit has increased from 7,500 pounds of dross and aluminum scrap per hour and 900 pounds of solid reactive flux per hour to 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour. No physical modification has been made to the furnace. The

maximum capacity of this unit should have always been the higher throughput value. This is based on 2011 stack test data presented by the source.

The table below summarizes the changes to throughput capacities of each unit listed above:

Emission Units	Year of Construction	**Current Permit, based on SSM No. 113-29510-00071 (January 4, 2011) and SPM No. 113-29514-00071 (February 21, 2011)**		**Correct Throughput with this Significant Source Modification (based on 2011 Stack Test data)**	
		Dross and Aluminum Scrap feed (lbs/hr):	**Solid Reactive Flux (lbs/hr):**	**Dross and Aluminum Scrap feed (lbs/hr):**	**Solid Reactive Flux (lbs/hr):**
Rotary Furnace RF#1 (furnace #1) [(a)]	prior to February 11, 1999	13,374	2,126	20,171	3,207
Rotary Furnace RF#2 (furnace #2) [(b)]	September 2001	11,837	1,834	16,118	2,563
Reverberatory Furnace RV#1 (furnace #4) [(c)]	2010	7,500	900	8,404	1,336
		Permitted Dross Throughput (lbs/hr):		**Correct Throughput (lbs/hr), based on RF#1 + RF#2**	
Saltcake Cooling Operation	Permitted in 2004	27,530		42,059	

Notes:

(a) With Initial Part 70 Permit No. T113-12126-00071, issued on April 7, 2004, Rotary Furnace RF#1 (furnace #1) was permitted for 13,362 lb/hr Dross and Aluminum Scrap feed and 2,168 lb/hr Solid Reactive Flux. With Permit Renewal No. T113-26706-00071, issued on September 11, 2009, IDEM corrected the throughput for RF#1 to 13,374 lb/hr Dross and Aluminum Scrap feed and 2,126 lb/hr Solid Reactive Flux, based on 2005 stack test data provided by the source. No Source Modification was issued at that time.

(b) With Initial Part 70 Permit No. T113-12126-00071, issued on April 7, 2004, Rotary Furnace RF#2 (furnace #2) was permitted for 8,735 lb/hr Dross and Aluminum Scrap feed and 1,674 lb/hr Solid Reactive Flux. With Significant Source Modification No. 013-18712-00071, issued on July 20, 2004, the source received approval to increase the capacity to 10,340 lb/hr Dross and Aluminum Scrap feed and 1,660 lb/hr Solid Reactive Flux. With Permit Renewal No. T113-26706-00071, issued on September 11, 2009, IDEM corrected the throughput for RF#2 to 11,837lb/hr Dross and Aluminum Scrap feed and 1,834lb/hr Solid Reactive Flux, based on 2005 stack test data provided by the source. No Source Modification was issued at that time.

(c) With Significant Source Modification No. 113-29510-00071, issued on January 4, 2011, Reverberatory Furnace RV#1 (furnace #4) was permitted for 7,500 lb/hr Dross and Aluminum Scrap feed and 900 lb/hr Solid Reactive Flux.

(d) The source has indicated that the throughput capacity of the Saltcake Cooling Operation should be based on the RF#1 + RF#2 throughput capacities. With Initial Part 70 Permit No. T113-12126-00071, issued on April 7, 2004, the Saltcake Cooling Operation was permitted for 15,530 lb/hr Dross throughput. With Significant Source Modification No. 013-18712-00071, issued on July 20, 2004, the source received approval to increase the capacity to 27,530 lb/hr.

New Emission Units and Pollution Control Equipment

There are no new emissions units with this Renewal.

Emission Units and Pollution Control Equipment Removed From the Source

The source has not removed any emission units with this Renewal.

Insignificant Activities

The source also consists of the following insignificant activities:

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(b) Conveyors as follows:

Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. This includes Baghouse 1, Baghouse 3, and Baghouse 2 lime injection screw conveyors, each conveying up to 100 pounds per hour of lime to the respective baghouse.

(c) Aluminum scrap handling operations and scrap holding area.

Note: This operation is being identified in the permit with this Renewal. From the holding area, bundles of scrap are move to the bale breaker (BB#1) where the large pieces of scrap metal are physically separated for ease of handling in the recycling process. Because the scrap handling operations include only the movement of large pieces of metal and not finely divided material that would generate dust when handled, only negligible amounts of particulate matter are generated from this process.

(d) One (1) shredder, identified as BB#1, used as bale breaker to physically separate baled scrap metal, with uncontrolled particulate emissions less than 5 pounds per hour, constructed in 2008.

Note: BB#1 is used not as a metal shredder, but is simply used to physically separate baled scrap metal. It is used as a bale breaker and therefore, it does not meet the definition of aluminum scrap shredder under 40 CFR 63.1503 (NESHAP Subpart RRR). This determination is consistent with Part 70 Operating Renewal T113-26706-00071, issued on September 11, 2009.

(e) Natural gas-fired combustion sources with heat input equal to or less than ten million (10,000,000) Btu per hour, including two (2) space heaters and six (6) torches which are estimated to have a combined maximum heat input of 10 MMBtu/hr.

(f) Combustion source flame safety purging on startup.

(g) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.

(h) The following VOC and HAP storage containers:

(A) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.

(B) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.

(i) Refractory storage not requiring air pollution control equipment.

(j) Application of oils, greases, lubricants or other nonvolatile materials applied as temporary protective coatings.

(k) Machining where an aqueous cutting coolant continuously floods the machining interface.

(l) Cleaners and solvents characterized as follows:

(A) Having a vapor pressure equal to or less than 2 kPa; 15mm Hg; or 0.3 psi measured at 38 degrees C (100F) or;

(B) Having a vapor pressure equal to or less than 0.7 kPa; 5mm Hg; or 0.1 psi measured at 20C (68F); the use of which for all cleaners and solvents combined does not exceed 145 gallons per 12 months.

(m) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.

(n) Process vessel degassing and cleaning to prepare for internal repairs.

(o) Paved and unpaved roads and parking lots with public access.

(p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from these activities would not be associated with any production process.

(q) Flue gas conditioning systems and associated chemicals such as the following: sodium sulfate, ammonia; and sulfur trioxide.

(r) Purge double block and bleed valves.

(s) Filter or coalescer media changeout.

Existing Approvals

Since the issuance of the Part 70 Operating Renewal T113-26706-00071 on September 11, 2009, the source has constructed or has been operating under the following additional approvals:

(a) Significant Source Modification No. T113-29510-00071 issued on January 4, 2011;

(b) Significant Permit Modification No. T113-29514-00071 issued on January 25, 2011; and

(c) Administrative Amendment No. T113-30177-00071 issued on February 21, 2011;

All terms and conditions of previous permits issued pursuant to permitting programs approved into the State Implementation Plan have been either incorporated as originally stated, revised, or deleted by this permit. All previous registrations and permits are superseded by this permit.

Enforcement Issues

IDEM is aware that equipment has been constructed and operated prior to receipt of the proper permit. IDEM is reviewing this matter and will take the appropriate action. This proposed approval is intended to satisfy the requirements of the construction permit rules.

Emission Calculations

See Appendix A of this document for detailed emission calculations.

County Attainment Status

The source is located Noble County.

Pollutant	Designation
SO_2	Better than national standards.
CO	Unclassifiable or attainment effective November 15, 1990.
O_3	Unclassifiable or attainment effective July 20, 2012, for the 2008 8-hour ozone standard.[1]
$PM_{2.5}$	Unclassifiable or attainment effective April 5, 2005, for the annual $PM_{2.5}$ standard.
$PM_{2.5}$	Unclassifiable or attainment effective December 13, 2009, for the 24-hour $PM_{2.5}$ standard.
PM_{10}	Unclassifiable effective November 15, 1990.
NO_2	Cannot be classified or better than national standards.
Pb	Unclassifiable or attainment effective December 31, 2011.
[1]Unclassifiable or attainment effective October 18, 2000, for the 1-hour ozone standard which was revoked effective June 15, 2005. Unclassifiable or attainment effective April 5, 2005, for PM2.5.	

(a) Ozone Standards
Volatile organic compounds (VOC) and Nitrogen Oxides (NO_x) are regulated under the Clean Air Act (CAA) for the purposes of attaining and maintaining the National Ambient Air Quality Standards (NAAQS) for ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to ozone. Noble County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NO_x emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(b) $PM_{2.5}$
Noble County has been classified as attainment for $PM_{2.5}$. Therefore, direct $PM_{2.5}$, SO_2, and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

(c) Other Criteria Pollutants
Noble County has been classified as attainment or unclassifiable in Indiana for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2.

Fugitive Emissions

Since this source is classified as a secondary metal production plant, it is considered one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2, 326 IAC 2-3, or 326 IAC 2-7. Therefore, fugitive emissions are counted toward the determination of PSD, Emission Offset, and Part 70 Permit applicability.

Unrestricted Potential Emissions

This table reflects the unrestricted potential emissions of the source.

Unrestricted Potential Emissions	
Pollutant	Tons/year
PM	Greater than 100
PM_{10}	Greater than 100
$PM_{2.5}$	Greater than 100
SO_2	Less than 100
NO_x	Less than 100
VOC	Less than 100
CO	Less than 100
GHGs as CO_2e	Less than 100,000
Single HAP	Greater than 10
Total HAP	Greater than 25

Appendix A of this TSD reflects the unrestricted potential emissions of the source.

(a) The potential to emit (as defined in 326 IAC 2-7-1(29)) of PM10 and PM2.5 is equal to or greater than 100 tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is equal to or greater than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination of HAPs is equal to or greater than twenty-five (25) tons per year. Therefore, the source is subject to the provisions of 326 IAC 2-7 and will be issued a Part 70 Operating Permit Renewal.

Part 70 Permit Conditions

This source is subject to the requirements of 326 IAC 2-7, because the source met the following:

(a) Emission limitations and standards, including those operational requirements and limitations that assure compliance with all applicable requirements at the time of issuance of Part 70 permits.

(b) Monitoring and related record keeping requirements which assume that all reasonable information is provided to evaluate continuous compliance with the applicable requirements.

Source Status - Existing Source

The table below summarizes the potential to emit of the entire source, prior to the proposed modification, after consideration of all enforceable limits established in the effective permits:

Pollutant	Tons/year
PM	Less than 100
PM_{10}	Less than 100
$PM_{2.5}$	Less than 100
SO_2	Less than 100
NO_x	Less than 100
VOC	Less than 100
CO	Less than 100
GHGs as CO_2e	Less than 100,000
Single HAP	Greater than 10
Total HAP	Greater than 25

(a) This existing source is not a major stationary source, under PSD (326 IAC 2-2), because no PSD regulated pollutant, excluding GHGs, is emitted at a rate of one hundred (100) tons per year or more and it is one of the twenty-eight (28) listed source categories, as specified in 326 IAC 2-2-1(ff)(1).

(b) The source wide GHG emissions are less than one hundred thousand (<100,000) tons of CO_2 equivalent (CO_2e) emissions per year. GHG emissions do not affect the source PSD status.

(c) These emissions are based upon Technical Support Document to Significant Source Modification No. 113-29510-00071, issued on January 4, 2011, and SPM No. 113-29514-00071, issued on February 21, 2011.

Permit Level Determination – Part 70 Modification to an Existing Source

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

The following table is used to determine the appropriate permit level under 326 IAC 2-7-10.5. This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit. If the control equipment has been determined to be integral, the table reflects the PTE after consideration of the integral control device.

PTE Change of the Modified Process *			
Pollutant	**PTE Before Modification** (ton/yr)	**PTE After Modification** (ton/yr)	**Increase from Modification** (ton/yr)
PM	360.17	497.37	**137.20**
PM_{10}	224.14	309.96	**85.82**
$PM_{2.5}$	224.14	309.96	**85.82**
SO_2	1.73	2.36	**0.62**
NO_X	15.42	15.73	**0.31**
VOC	12.32	16.68	**4.36**
CO	12.26	12.26	**0.00**
GHGs as CO_2e	17,627	17,627	**0**
HAPs (total)	11,251.96	16,451.60	**5,199.64**
HAPs (single)	11,250.07 (HCl)	16,449.18 (HCl)	**5,199.11 (HCl)**

* Includes PTE of Rotary Furnace RF#1 (furnace #1), Rotary Furnace RF#2 (furnace #2), the Saltcake Cooling Operation, and Reverberatory Furnace RV#1 (furnace #4).

Appendix A of this TSD reflects the unrestricted potential emissions of the modification.

(a) Significant Source Modification – approval to construct

This source modification is considered a significant source modification pursuant to 326 IAC 2-7-10.5(g)(4), because the modification has a PTE of PM, PM10, and PM2.5 greater than twenty-five (25) tons per year, each. In addition, this source modification is considered a significant source modification pursuant to 326 IAC 2-7-10.5(g)(6), because the modification has a PTE greater than ten (10) tons per year of a single HAP as defined under Section 112(b) of the Clean Air Act and greater than twenty-five (25) tons per year of any combination of HAPs.

(b) Significant Permit Modification – approval to operate

This permit modification is considered a significant permit modification, pursuant to 326 IAC 2-7-12(d)(1), because this modification does not qualify as a minor permit modification or administrative amendment, and includes significant changes in existing monitoring Part 70 permit terms and conditions as well as significant changes to reporting or record keeping permit terms and conditions. Further, this modification requires a case-by-case determination of an emission limitation or other standard (e.g. PSD Minor limit).

For the purposes of this permitting action, the Significant Permit Modification has been combined with the current Part 70 Operating Permit Renewal. Therefore, operation is not approved until the Part 70 Operating Permit Renewal has been issued.

Permit Level Determination – PSD

The table below summarizes the potential to emit, reflecting all limits, of the emission units. Any control equipment is considered federally enforceable only after issuance of this Part 70 source modification and Part 70 permit modification (combined with the Part 70 Operating Permit Renewal), and only to the extent that the effect of the control equipment is made practically enforceable in the permit.

Process/ Emission Unit		Potential To Emit of the Entire Source After Issuance of Modification and Renewal (tons/year)									
		PM	PM_{10}*	$PM_{2.5}$**	SO_2	NO_x	VOC	CO	GHGs	Total HAPs	Worst Single HAP***
Rotary Furnace RF#1 (furnace #1)	Metal Production	17.52	17.52	17.52	1.02	0.51	7.17	0.00	0	20.64	20.48 (HCl)
	Natural Gas Combustion				0.03	5.15	0.28	4.33	6,221		
Rotary Furnace RF#2 (furnace #2)	Metal Production	17.52	17.52	17.52	0.82	0.41	5.73	0.00	0	16.52	16.36 (HCl)
	Natural Gas Combustion				0.03	5.15	0.28	4.33	6,221		
Chip Dryer #1	Metal Production	17.52	17.52	17.52	6.32	13.87	18.80	0.00	0	0.00	0.00
	Natural Gas Combustion	0.03	0.13	0.13	0.01	1.72	0.09	1.44	2,074	0.03	0.03 (Hexane)
	Afterburner	0.05	0.20	0.20	0.02	2.58	0.14	2.16	3,111	0.05	0.05 (Hexane)
Saltcake Cooling Operation	Dross Cooling	9.30	13.91	13.91	0.00	0.00	0.00	0.00	0	0.00	0.00
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	17.52	17.52	17.52	0.43	0.21	2.99	0.00	0	9.27	8.53 (HCl)
	Natural Gas Combustion	0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08 (Hexane)
Holding Furnace HF #1 (furnace #3)	Natural Gas Combustion	0.00	0.01	0.01	0.00	0.11	0.01	0.09	130	0.00	0.00
Insignificant Activities	Natural Gas Combustion	0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08 (Hexane)
	Shredder BB#1	1.54	1.54	1.54	0.00	0.00	0.00	0.00	0	0.00	0.00
	Scrap Handling	negl.	negl.	negl.	0.00	0.00	0.00	0.00	0	0.00	0.00
Fugitives: Paved & Unpaved Roads		0.07	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0	0.00
Total PTE of Entire Source		**81.24 ******	**86.53 ******	**86.52 ******	**8.73**	**38.30**	**35.96**	**19.57**	**28,125**	**46.67**	**45.38 (HCl)**
Title V Major Source Thresholds		NA	100	100	100	100	100	100	100,000 CO_2e	25	10
PSD Major Source Thresholds		100	100	100	100	100	100	100	100,000 CO_2e	NA	NA

negl. = negligible
* Under the Part 70 Permit program (40 CFR 70), PM10 and PM2.5, not particulate matter (PM), are each considered as a regulated air pollutant".
**$PM_{2.5}$ listed is direct $PM_{2.5}$.
***HCl limited pursuant to 40 CFR 63.1505(i)(4) for Group 1 Furnaces
**** Limits to render 326 IAC 2-2 not applicable.

PSD Minor Source

This modification to an existing minor PSD stationary source is not major because:

(a) The emissions increase of each PSD regulated pollutant, excluding GHGs, are less than the PSD major source thresholds; and

(b) The emissions increase of GHGs from this modification to an existing minor PSD source are less than one hundred thousand (100,000) tons of CO_2 equivalent (CO_2e) emissions per year

Therefore, pursuant to 326 IAC 2-2, the GHG emissions are not subject to regulation and the PSD requirements do not apply.

The existing source is a PSD minor source. With the proposed modification, the source will maintain its PSD minor source status.

In order to render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable, the PM, PM10, and PM2.5 emissions from the following operations shall not exceed the limits as shows in the table below:

Note: PM2.5 limits are being added in with this Renewal.

Emission Unit	PM Limit (lb/hr)	PM10 Limit (lb/hr)	PM2.5 Limit (lb/hr)
Rotary Furnace RF#1 (furnace #1)	4.00	4.00	4.00
Rotary Furnace RF#2 (furnace #2)	4.00	4.00	4.00
Chip Dryer #1	4.00	4.00	4.00
Reverberatory Furnace RV#1 (furnace #4)	4.00	4.00	4.00

Compliance with these limits, combined with the potential to emit PM, PM10, and PM2.5 from all other emission units at this source, shall limit the source-wide total potential to emit of PM, PM10, and PM2.5 to less than 100 tons per 12 consecutive month period, each, and shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration (PSD)) not applicable.

Note 1: 4.00 lbs/hr is equivalent to 17.52 tons/yr.

Note 2: The emission limitations for PM and PM10 and the throughput limit for the Saltcake Cooling Operation are being removed with this Renewal, because the lb/ton limits specified were greater than the uncontrolled lb/ton emission factors that have been validated by testing. Further, the throughput limit was greater than the specified maximum throughput to this operation. This operation does not need to be limited for the entire source to remain Minor for PSD. This change is a Title I change.

Federal Rule Applicability

Compliance Assurance Monitoring (CAM)

(a) Pursuant to 40 CFR 64.2, Compliance Assurance Monitoring (CAM) is applicable to each existing pollutant-specific emission unit that meets the following criteria:

(1) has a potential to emit before controls equal to or greater than the major source threshold for the pollutant involved;

(2) is subject to an emission limitation or standard for that pollutant; and

(3) uses a control device, as defined in 40 CFR 64.1, to comply with that emission limitation or standard.

The following table is used to identify the applicability of each of the criteria, under 40 CFR 64.1, to each existing emission unit and specified pollutant subject to CAM:

Emission Unit	Pollutant	Control Device Used	Emission Limitation (Y/N)	Uncontrolled PTE (tons/year)	Controlled PTE (tons/year)	Major Source Threshold (tons/year)	CAM Applicable (Y/N)	Large Unit (Y/N)
Rotary Furnace RF#1 (furnace #1)	PM	Y - Lime injected baghouse (Baghouse 1)	Y - PSD Minor	>100	<100	100	Y	N
	PM10		Y - PSD Minor	<100	CAM is not applicable because the uncontrolled PTE is less than 100 tons/yr			
	SO2	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	NOx							
	VOC							
	CO							
	HAPs	Y - Lime injected baghouse (Baghouse 1)	Y - NESHAP Subpart RRR	CAM is not applicable, pursuant to 40 CFR 64.2(b)(1)(i), because this emission unit is regulated by a NESHAP.				
Rotary Furnace RF#2 (furnace #2)	PM	Lime injected baghouse (Baghouse 2)	Y - PSD Minor	>100	<100	100	Y	N
	PM10		Y - PSD Minor	<100	CAM is not applicable because the uncontrolled PTE is less than 100 tons/yr			
	SO2	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	NOx							
	VOC							
	CO							
	HAPs	Lime injected baghouse (Baghouse 2)	Y - NESHAP Subpart RRR	CAM is not applicable, pursuant to 40 CFR 64.2(b)(1)(i), because this emission unit is regulated by a NESHAP.				
Chip Dryer #1	PM	Baghouse 3 and Afterburner	Y - PSD Minor	<100	CAM is not applicable because the uncontrolled PTE is less than 100 tons/yr			
	PM10		Y - PSD Minor	<100				
	SO2		CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	NOx							
	VOC							
	CO							
	HAPs							
Saltcake Cooling Operation	PM	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	PM10							
Reverberatory Furnace RV#1 (furnace #4)	PM	Lime injected baghouse (Baghouse 4)	Y - PSD Minor	<100	CAM is not applicable because the uncontrolled PTE is less than 100 tons/yr			
	PM10		Y - PSD Minor	<100				
	SO2	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	NOx							
	VOC							
	CO							
	HAPs	Lime injected baghouse (Baghouse 4)	Y - NESHAP Subpart RRR	CAM is not applicable, pursuant to 40 CFR 64.2(b)(1)(i), because this emission unit is regulated by a NESHAP.				
Holding Furnace HF #1 (furnace #3)	PM	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	PM10							
	SO2							
	NOx							
	VOC							
	CO							
	HAPs							
Shredder BB#1	PM	No control	CAM is not applicable because there is no control device used for these pollutants and the uncontrolled PTE is less than the Major Source Threshold					
	PM10							

Based on this evaluation, the requirements of 40 CFR Part 64, CAM are applicable to the following:

(1) Rotary Furnace RF#1 (furnace #1) for PM, and
(2) Rotary Furnace RF#2 (furnace #2) for PM.

Even though 40 CFR 63, Subpart RRR is a post 1980 NESHAP, CAM still applies because the applicable PM limit under 40 CFR 63, Subpart RRR for furnace #1 and furnace #2 are for filterable PM only. Since these emission units are also subject to PM limits (both filterable and condensable) to render PSD (326 IAC 2-2) not applicable, CAM is still applicable to these emission units for PM.

A CAM plan has been submitted and the Compliance Determination and Monitoring Requirements section includes a detailed description of the CAM requirements.

New Source Performance Standards (NSPS)

(b) New Source Performance Standards (NSPS) for Primary Aluminum Reduction Plants (40 CFR Part 60, Subpart S)
This NSPS applies to primary aluminum reduction plants, which, pursuant to 40 CFR 60.191, are any facilities manufacturing aluminum by electrolytic reduction. Aluminum Recovery Technologies, Inc. does not produce aluminum by electrolytic reduction and is therefore not subject to this NSPS.

(c) The petroleum fuel dispensing facility and VOC storage containers at this source are not subject to the following New Source Performance Standards (NSPS):

(1) NSPS for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978 (40 CFR Part 60, Subpart K).

(2) NSPS for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984 (40 CFR Part 60, Subpart Ka).

(3) NSPS for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984 (40 CFR Part 60 - Subpart Kb).

The petroleum fuel dispensing facility and VOC storage containers at this source are not subject to the above NSPS because the storage capacity of each of these facilities is less than the minimum storage capacity applicable threshold of these NSPS.

(d) This source is not subject to the New Source Performance Standards for Calciners and Dryers in Mineral Industries (40 CFR 60, Subpart UUU), for the thermal chip dryer because this source does not meet the definition of a "mineral processing plant" pursuant to 40 CFR 60.731.

(e) There are still no New Source Performance Standards (NSPS) (326 IAC 12 and 40 CFR Part 60) included in the permit for this source.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

(f) National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production (40 CFR 63, Subpart RRR)

This source is still subject to this NESHAP because it is a major source of HAPs and one or more of the following processes are performed at this source using clean charge, aluminum scrap, or dross from aluminum production, as the raw material: scrap shredding, scrap drying, thermal chip drying, furnace operations (i.e., melting, holding, sweating, refining, fluxing, or alloying), recovery of aluminum from dross, in-line fluxing, or dross cooling.

Note 1: BB#1 is exempt from this NESHAP because it is used as a bale breaker, and, therefore, it does not meet the definition of aluminum scrap shredder under 40 CFR 63.1503.

Note 2: The saltcake cooling operation (dross cooling) is exempt from this NESHAP because it is not a water-cooled rotary barrel device which accelerates cooling of dross, and, therefore, it does not meet the definition of rotary dross cooler under 40 CFR 63.1503.

The specific facilities subject to this NESHAP include the following:

(a) One (1) natural gas-fired rotary furnace, identified as RF #1 (furnace #1), which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 12.0 million British thermal units (MMBtu) per hour, with a maximum capacity of 20,171 pounds of dross and aluminum scrap per hour and 3,207 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 1, exhausting through one (1) stack, identified as Vent #1;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(b) One (1) natural gas-fired rotary furnace, identified as RF #2 (furnace #2), constructed in September 2001, with a maximum heat input capacity of 12.0 MMBtu/hr, with a maximum capacity of 16,118 pounds of dross and aluminum scrap per hour and 2,563 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 2, exhausting through one (1) stack, identified as Vent #2;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(c) One (1) natural gas-fired thermal chip dryer, identified as Chip Dryer #1, which commenced construction prior to February 11, 1999, with a maximum heat input capacity of 4.0 MMBtu/hr, with a maximum capacity of processing 7,035 pounds of aluminum per hour, with emissions controlled by one (1) baghouse, identified as Baghouse 3, and one (1) natural gas-fired afterburner with a maximum heat input capacity of 6.0 MMBtu/hr, identified as Afterburner, exhausting through one (1) stack, identified as Vent #3;

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "thermal chip dryer".

(d) One (1) natural gas-fired reverberatory furnace, identified as RV #1 (furnace #4), permitted in 2010, with a maximum heat input capacity of 10.0 MMBtu/hr, with a maximum capacity of 8,404 pounds of dross and aluminum scrap per hour and 1,336 pounds of solid reactive flux per hour, with emissions controlled by one (1) lime injected baghouse, identified as Baghouse 4, exhausting through one (1) stack, identified as Vent #4.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 1 Furnace/SAPU".

(f) One (1) natural gas-fired holding furnace, identified as HF #1 (furnace #3), permitted in 2010, with a maximum heat input capacity of 0.25 MMBtu/hr, with emissions exhausting into the building.

Under NESHAP Subpart RRR, this is an existing affected facility, defined as "Group 2 Furnace".

Nonapplicable portions of the NESHAP will not be included in the permit. The source is subject to the following portions of 40 CFR 63, Subpart RRR:

(a) Rotary Furnace RF#1 (furnace #1), Rotary Furnace RF#2 (furnace #2), and Reverberatory Furnace RV#1 (furnace #4), each defined as "Group 1 Furnace/SAPU":

(1) 63.1500(a) and (b)(8)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1505(a), (i)(2-6), (j), (j)(1-2), (j)(4-5), (k)(1-4), and (k)(6)
(7) 63.1506(a)(1), (a)(4), (b)(1-2), (c-d), (k), (k)(1), (k)(3-4), (m), (m)(1), (m)(3-5), and (p)
(8) 63.1507
(9) 63.1508
(10) 63.1509
(11) 63.1510(a), (b) (except (b)(8)), (c-f), (h-i), and (s-w)
(12) 63.1511 (except (h-i))
(13) 63.1512(d), (h), (j-k), and (n-s)
(14) 63.1513
(15) 63.1514
(16) 63.1515 (except (a)(1))
(17) 63.1516(a), (b)(1)(i), (b)(1)(iv-vii), and (b)(2)(vi)
(18) 63.1517 (except (b)(1)(ii-iii), (b)(2), (b)(6), (b)(8-12))
(19) 63.1518
(20) 63.1519
(21) Table 1
(22) Table 2
(23) Table 3
(24) Appendix A

(b) For Chip Dryer #1, defined as "thermal chip dryer":

(1) 63.1500(a) and (b)(2)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1505(a) and (c)
(7) 63.1506(a)(1), (4), (b-d), (f), and (p)
(8) 63.1507
(9) 63.1508
(10) 63.1509
(11) 63.1510(a), (b) (except (b)(8)), (f)(3), (k), and (w)
(12) 63.1511 (except (h-i))
(13) 63.1512(b), (k), (m-n), (r), and (s)
(14) 63.1513 (except (e))
(15) 63.1514

(16) 63.1515 except (a)(1))
(17) 63.1516(a), (b)(1)(iv-vi), and (b)(2)(i))
(18) 63.1517 (except (b)(1)(ii-iii), (b)(4-6), (b)(8), (b)(1012), (b)(16)(iii), and (b)(17))
(19) 63.1518
(20) 63.1519
(21) Table 1
(22) Table 2
(23) Table 3
(24) Appendix A

(c) For Holding Furnace HF #1 (furnace #3), defined as "Group 2 Furnace":

(1) 63.1500(a) and (b)(4)
(2) 63.1501
(3) 63.1502
(4) 63.1503
(5) 63.1504
(6) 63.1506(a)(1), (a)(4), (b)(1-2), and (o-p)
(7) 63.1507
(8) 63.1508
(9) 63.1509
(10) 63.1510(a), (b)(1-7), (c), and (r)
(11) 63.1512(r)
(12) 63.1514
(13) 63.1515 (except (a)(1))
(14) 63.1516(a), (b)(1)(iv-vi), and (b)(2)(v)
(15) 63.1517(a), (b)(12-13), and (b)(16)(ii)
(16) 63.1518
(17) 63.1519
(18) Table 1
(19) Table 2
(20) Table 3
(21) Appendix A

Performance testing must be completed by the applicable compliance date, and follow-up tests for major sources will be required every five years.

(g) There are no other National Emission Standards for Hazardous Air Pollutants (NESHAPs) (326 IAC 14, 326 IAC 20 and 40 CFR Part 63) included in the permit.

State Rule Applicability - Entire Source

(a) 326 IAC 2-2 (PSD)
PSD applicability is discussed under the Potential to Emit After Issuance section above.

(b) 326 IAC 2-6 (Emission Reporting)
This source, not located in Lake, Porter, or LaPorte County, is subject to 326 IAC 2-6 (Emission Reporting) because it is required to have an operating permit pursuant to 326 IAC 2-7 (Part 70). The potential to emit of VOC and PM10 is less than 250 tons per year; and the potential to emit of CO, NOx, and SO2 is less than 2,500 tons per year. Therefore, pursuant to 326 IAC 2-6-3(a)(2), triennial reporting is required. An emission statement shall be submitted in accordance with the compliance schedule in 326 IAC 2-6-3 by July 1, 2004, and every three (3) years thereafter. The emission statement shall contain, at a minimum, the information specified in 326 IAC 2-6-4.

The next emission statement is due by July 1, 2016.

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

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

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

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

(e) 326 IAC 6-5 (Fugitive Particulate Matter Emission Limitations)
The source is not subject to the requirements of 326 IAC 6-5, because the source has have potential fugitive particulate emissions less than 25 tons per year.

State Rule Applicability – Individual Facilities

(a) 326 IAC 2-4.1-1 (New Source Toxics Control)
Rotary Furnace RF#1 (furnace #1), Rotary Furnace RF#2 (furnace #2), and Reverberatory Furnace RV#1 (furnace #4) each will emit greater than ten (10) tons per year for a single HAP and/or greater than twenty-five (25) tons per year for a combination of HAPs); however pursuant to 326 IAC 2-4.1-1(b)(2), because each of these units is specifically regulated by NESHAP 40 CFR 63, Subpart RRR, which was issued pursuant to Section 112(d) of the CAA, each of these facilities is exempt from the requirements of 326 IAC 2-4.1.

(b) 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes)
(1) Pursuant to 326 IAC 6-3-1(c)(6), this rule shall not apply if a particulate matter limitation established in 326 IAC 20, concerning national emission standards for hazardous air pollutants, is more stringent than the particulate limitation established in this rule.

Rotary Furnace RF#1 (furnace #1), Rotary Furnace RF#2 (furnace #2), and Reverberatory Furnace RV#1 (furnace #4) are each subject to particulate matter limitations in 40 CFR 63, Subpart RRR, which is incorporated by reference in 326 IAC 20-70. The table below demonstrates that the PM limits established under NESHAP Subpart RRR for these units are more stringent than the particulate limits established under 326 IAC 6-3-2 for these units:

Emission Unit(s)	NESHAP Subpart RRR PM limit (pounds per ton)	Process Weight Rate (tons per hour)	NESHAP Subpart RRR PM limit equivalent (pounds per hour)	326 IAC 6-3-2 PM Emission Limit (pounds per hour)
Rotary Furnace RF#1 (furnace #1)	0.80	11.69	6.20	21.29
Rotary Furnace RF#2 (furnace #2)	0.80	9.34	5.47	18.32
Reverberatory Furnace RV#1 (furnace #4)	0.80	4.87	3.36	11.84

Methodology:
NESHAP Subpart RRR PM limit equivalent (pounds per hour)
= NESHAP Subpart RRR PM limit (pounds per ton) * Process Weight Rate (tons per hour)

Note: Chip Dryer #1 is also subject to NESHAP Subpart RRR; however, there is not a PM emission limitation established in the NESHAP for this type of facility. Therefore, Chip Dryer #1 is subject to 326 IAC 6-3-2.

(2) Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emissions from the following emission units shall not exceed the following pound per hour limits listed in the table below:

Emission Unit(s)	Process Weight Rate (tons per hour)	PM Emission Limit (pounds per hour)	Uncontrolled PM Emissions (pounds per hour)	Able to Comply?
Chip Dryer #1	3.52	9.53	9.52	Y*
Saltcake Cooling Operation (Dross Cooling)	21.03	31.56	1.47	Y
Shredder BB#1	3.52	9.53	0.35	Y

These limits were calculated using the following equations:

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

$E = 4.10\ P^{0.67}$

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

*Baghouse 3 (exhausting to Vent #3) shall be in operation at all times that Chip Dryer #1 is in operation in order to comply with the 326 IAC 6-3-2 limit for the Chip Dryer #1.

(3) Pursuant to 326 IAC 6-3-2(e)(2), when the process weight rate is less than one hundred (100) pounds per hour, the allowable rate of emission is five hundred fifty-one thousandths (0.551) pound per hour.

Pursuant to 326 IAC 6-3-2, the allowable particulate matter (PM) emissions from the following emission units shall not exceed 0.551 pounds per hour:

(a) The following equipment related to manufacturing activities not resulting in the emission of HAPs: brazing equipment, cutting torches, soldering equipment, welding equipment.

(b) Conveyors as follows:

Covered conveyors for limestone conveying of less than or equal to 7,200 tons per day for sources other than mineral processing plants constructed after August 31, 1983. This includes Baghouse 1, Baghouse 3, and Baghouse 2 lime injection screw conveyors, each conveying up to 100 pounds per hour of lime to the respective baghouse.

(4) The combustion units are exempt from the requirements of 326 IAC 6-3, because, pursuant to 326 IAC 1-2-59, liquid and gaseous fuels and combustion air are not considered as part of the process weight rate.

(5) Pursuant to 326 IAC 6-3-1(b)(14), manufacturing processes with potential emissions less than five hundred fifty-one thousandths (0.551) pound per hour are exempt from the requirements of this rule. Therefore, the aluminum scrap handling operations are exempt from the requirements of 326 IAC 6-3 because the PM emissions are negligible.

(c) 326 IAC 8-1-6 (New Facilities; General Reduction Requirements)
Each of the facilities at the source has potential VOC emissions less than 25 tons per year; therefore, 326 IAC 8-1-6 is not applicable to any of the facilities at the source.

(d) 326 IAC 8-4-3 (Petroleum Liquid Storage Facilities)
The insignificant activities identified as “a petroleum fuel, other than gasoline, dispensing facility with storage capacity less than or equal to 10,500 gallons” and VOC and HAP storage containers with capacities less than or equal to 1,000 gallons, are not subject to the requirements of 326 IAC 8-4-3 since each of the storage tanks has storage capacity less than 39,000 gallon.

Compliance Determination and Monitoring Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with all applicable state and federal rules on a continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a continuous demonstration. When this occurs, IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, Compliance Determination Requirements are included in the permit. The Compliance Determination Requirements in Section D of the permit are those conditions that are found directly within state and federal rules and the violation of which serves as grounds for enforcement action.

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

(a) The compliance monitoring requirements applicable to this source are as follows

Emission Unit	Control Device	Parameter	Frequency	Range	Excursions and Exceedances
Rotary Furnace RF#1 (furnace #1)*	Lime injected baghouse (Baghouse 1) (Vent #1)	Bag Leak Detection System (BLDS)**	Continuous	Normal-Abnormal	Response Steps
		Water Pressure Drop	Once Per Shift when BLDS is down***	3 to 6 inches	
		Visible Emissions		Normal-Abnormal	
Rotary Furnace RF#2 (furnace #2)*	Lime injected baghouse (Baghouse 2) (Vent #2)	Bag Leak Detection System (BLDS)**	Continuous	Normal-Abnormal	Response Steps
		Water Pressure Drop	Once Per Shift when BLDS is down***	3 to 6 inches	
		Visible Emissions		Normal-Abnormal	
Chip Dryer #1	Baghouse 3 and Afterburner (Vent #3)	Water Pressure Drop	Daily	3 to 6 inches	Response Steps
		Visible Emissions		Normal-Abnormal	
Reverberatory Furnace RV#1 (furnace #4)	Lime injected baghouse (Baghouse 4) (Vent #4)	Bag Leak Detection System (BLDS)**	Continuous	Normal-Abnormal	Response Steps
		Water Pressure Drop	Once Per Shift when BLDS is down***	3 to 6 inches	
		Visible Emissions		Normal-Abnormal	

Notes:
* This requirement is also required under 40 CFR 64 (CAM).
** Required under 40 CFR 63, Subpart RRR.
*** Whenever the Bag Leak Detection System (BLDS) is malfunctioning or down for repairs or adjustments.

These monitoring conditions are necessary because the control devices must operate properly to ensure compliance with 326 IAC 2-7 (Part 70) and the PSD Minor limits to render 326 IAC 2-2 (PSD) not applicable.

(b) The testing requirements applicable to this source are as follows:

Emission Unit(s)	Control Device(s)	Timeframe for Testing	Pollutants	Frequency of Testing
Rotary Furnace RF#1 (furnace #1)	Lime injected baghouse (Baghouse 1) (Vent #1)	Within five (5) years of most recent valid compliance demonstration (last tested January 2011)	PM, PM10, PM2.5	Repeat every (5) years
Rotary Furnace RF#2 (furnace #2)	Lime injected baghouse (Baghouse 2) (Vent #2)	Within five (5) years of most recent valid compliance demonstration (last tested January 2011)	PM, PM10, PM2.5	Repeat every (5) years
Chip Dryer #1	Baghouse 3 (Vent #3)	Within five (5) years of most recent valid compliance demonstration (last tested December 2010)	PM, PM10, PM2.5	Repeat every (5) years
Reverberatory Furnace RV#1 (furnace #4)	Lime injected baghouse (Baghouse 4) (Vent #4)	Within five (5) years of most recent valid compliance demonstration (last tested August 2011)	PM, PM10, PM2.5	Repeat every (5) years

In addition, the source must comply with applicable testing requirements pursuant to 40 CFR 63, Subpart RRR. These tests shall be repeated every five (5) years.

(a) PM2.5 testing for RF#1 and RF#2
Since PM2.5 limits are added for RF#1 and RF#2 in this renewal, testing requirement was also added for this pollutant. The PM2.5 testing will made in the same cycle as the PM and PM10 testing.

(b) VOC testing for Chip Dryer #1
Testing was conducted in 2003 to develop an uncontrolled emission factor for VOC emissions from Chip Dryer #1. The test was conducted after the use of the afterburner control device, and then an uncontrolled emission factor of 1.22 lb/ton was developed using the control efficiency of the afterburner. NESHAP Subpart RRR requires testing to demonstrate compliance with the 0.8 lb VOC/ton limit, which is sufficient to demonstrate compliance. No repeat testing is required at this time to validate the use of the 1.22 lb VOC/ton emission factor for the Chip Dryer #1.

(c) Particulate testing for saltcake cooling operation
As described in the TSD for Operation Permit No. T113-12126-00071, testing for particulate emissions from the saltcake cooling operation was conducted on September 25, 2003. The final test report was submitted to, and approved by, IDEM. The IDEM verified test results for the dross cooling process were determined to be 0.101 lb PM per ton dross/saltcake cooled and 0.151 lb PM10 per ton dross/saltcake cooled. Since this operation has uncontrolled particulate emissions, these emission factors are acceptable and no repeat testing is required at this time.

(d) Particulate testing for Shredder BB#1
A source-specific emission factor for the Shredder BB#1 unit has been used to estimate emissions; however, no testing is required at this time for Shredder BB#1, because the emissions are uncontrolled and the unlimited particulate emissions are small and only a small portion of the source-wide particulate emissions. Prior permit approvals designated the unlimited emissions from this unit as negligible. However, with this Renewal the emissions calculations have been updated to provide a conservative estimate. These calculations assume a conservative emission factor of 0.1 pounds of PM per ton of metal bales processed (equivalent to 1.54 tons per year). See Appendix A for detailed calculations.

Proposed Changes

The changes listed below have been made to Part 70 Operating Permit:

(1) Section A - Emission Units and Pollution Control Equipment Summary has been updated with the equipment changes identified in this modification.

(2) Standard model changes to the Part 70 Operating Permit have been incorporated in to Part 70 Operating Permit Renewal No. T113-33985-00071.

Recommendation

The staff recommends to the Commissioner that the Part 70 Operating Permit Renewal be approved. This recommendation is based on the following facts and conditions:

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

An application for the purposes of this review was received on December 11, 2013. Additional information was received on March 19, 2014.

Conclusion

The operation of this stationary secondary aluminum production source shall be subject to the conditions of the attached Part 70 Operating Permit Renewal No. 113-33985-00071.

IDEM Contact

(a) Questions regarding this proposed permit can be directed to Sarah Street at the Indiana Department Environmental Management, Office of Air Quality, Permits Branch, 100 North Senate Avenue, MC 61-53 IGCN 1003, Indianapolis, Indiana 46204-2251 or by telephone at (317) 232-8427 or toll free at 1-800-451-6027 extension 2-8427.

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

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

Appendix A: Emissions Calculations
Summary

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Unlimited Potential to Emit (tons/year)

Emission Unit/Process		Year of Construction	Control (Stack ID)	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
				PM	PM10	PM2.5	SO_2	NOx	VOC	CO	CO2e	Total HAPs	Worst Single HAP	
Rotary Furnace RF#1 (furnace #1)	Metal Production	Prior to 2/11/1999	Lime injected baghouse (Baghouse 1) (Vent #1)	220.15	133.11	133.11	1.02	0.51	7.17	0.00	0	7,424.44	7,423.66	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Rotary Furnace RF#2 (furnace #2)	Metal Production	September 2001	Lime injected baghouse (Baghouse 2) (Vent #2)	175.92	106.37	106.37	0.82	0.41	5.73	0.00	0	5,933.53	5,932.91	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Chip Dryer #1	Metal Production	Prior to 2/11/1999	Baghouse 3 and Afterburner (Vent #3)	41.71	41.71	41.71	6.32	13.87	18.80	0.00	0	0.00	0.00	
	Natural Gas Combustion			0.03	0.13	0.13	0.01	1.72	0.09	1.44	2,074	0.03	0.03	Hexane
	Afterburner		n/a	0.05	0.20	0.20	0.02	2.58	0.14	2.16	3,111	0.05	0.05	Hexane
Saltcake Cooling Operation	Dross Cooling	Permitted in 2004	No Control (Indoors)	9.30	13.91	13.91	0.00	0.00	0.00	0.00	0	0.00	0.00	
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	Permitted in 2010	Lime injected baghouse (Baghouse 4) (Vent #4)	91.72	55.46	55.46	0.43	0.21	2.99	0.00	0	3,093.35	3,092.61	HCl
	Natural Gas Combustion			0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
Holding Furnace HF #1 (furnace	Natural Gas Combustion	Permitted in 2010	No Control (Indoors)	0.00	0.01	0.01	0.00	0.11	0.01	0.09	130	2.03E-03	2.10E-03	Hexane
Insignificant Activities	Natural Gas Combustion	n/a	No Control (Indoors)	0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
	Shredder BB#1	2008	No Control (Indoors)	1.54	1.54	1.54	0.00	0.00	0.00	0.00	0	0.00	0.00	
	Scrap Handling	n/a	No Control (Indoors)	negl.	negl.	negl.	0.00	0.00	0.00	0.00	0	0.00	0.00	
Fugitives: Paved & Unpaved Roads		n/a	n/a	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	
			Total	**540.85**	**353.88**	**353.87**	**8.73**	**38.30**	**35.96**	**19.57**	**28,125**	**16,451.76**	**16,449.18**	**HCl**

***** No process emissions from the Holding Furnace HF #1 (furnace #3).

Limited Potential to Emit (tons/year)

Emission Unit/Process		Year of Construction	Control (Stack ID)	Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
				PM	PM10	PM2.5	SO_2	NOx	VOC	CO	CO2e	Total HAPs	Worst Single HAP	
Rotary Furnace RF#1 (furnace #1)	Metal Production	Prior to 2/11/1999	Lime injected baghouse (Baghouse 1) (Vent #1)	17.52	17.52	17.52	1.02	0.51	7.17	0.00	0	20.64	20.48	HCl(1)
	Natural Gas Combustion						0.03	5.15	0.28	4.33	6,221			
Rotary Furnace RF#2 (furnace #2)	Metal Production	September 2001	Lime injected baghouse (Baghouse 2) (Vent #2)	17.52	17.52	17.52	0.82	0.41	5.73	0.00	0	16.52	16.36	HCl(1)
	Natural Gas Combustion						0.03	5.15	0.28	4.33	6,221			
Chip Dryer #1	Metal Production	Prior to 2/11/1999	Baghouse 3 and Afterburner (Vent #3)	17.52	17.52	17.52	6.32	13.87	18.80	0.00	0	0.00	0.00	
	Natural Gas Combustion			0.03	0.13	0.13	0.01	1.72	0.09	1.44	2,074	0.03	0.03	Hexane
	Afterburner		n/a	0.05	0.20	0.20	0.02	2.58	0.14	2.16	3,111	0.05	0.05	Hexane
Saltcake Cooling Operation	Dross Cooling	Permitted in 2004	No Control (Indoors)	9.30	13.91	13.91	0.00	0.00	0.00	0.00	0	0.00	0.00	
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	Permitted in 2010	Lime injected baghouse (Baghouse 4) (Vent #4)	17.52	17.52	17.52	0.43	0.21	2.99	0.00	0	9.27	8.53	HCl(1)
	Natural Gas Combustion			0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
Holding Furnace HF #1 (furnace #3)	Natural Gas Combustion	Permitted in 2010	No Control (Indoors)	0.00	0.01	0.01	0.00	0.11	0.01	0.09	130	0.00	0.00	Hexane
Insignificant Activities	Natural Gas Combustion	n/a	No Control (Indoors)	0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
	Shredder BB#1	2008	No Control (Indoors)	1.54	1.54	1.54	0.00	0.00	0.00	0.00	0	0.00	0.00	
	Scrap Handling	n/a	No Control (Indoors)	negl.	negl.	negl.	0.00	0.00	0.00	0.00	0	0.00	0.00	
Fugitives: Paved & Unpaved Roads		n/a	n/a	0.07	0.01	0.00	0.00	0.00	0.00	0.00	0	0.00	0.00	
			Total	**81.24**	**86.53**	**86.52**	**8.73**	**38.30**	**35.96**	**19.57**	**28,125**	**46.67**	**45.38**	**HCl**
			PSD Threshold	100	100	100	100	100	100	100	100,000			

Notes
(1) HCl Limited through NESHAP Subpart RRR; there is no PSD Major Source threshold for HAPs
HCl emissions serve as a surrogate measure of the total hydrogen chloride, hydrogen flouride and chlorine HAPs

PSD Minor Limits

	PM		PM10		PM2.5	
	lb/hr	ton/yr (equivalent)	lb/hr	ton/yr (equivalent)	lb/hr	ton/yr (equivalent)
Rotary Furnace RF#1 (furnace #1)	4.00	17.52	4.00	17.52	4.00	17.52
Rotary Furnace RF#2 (furnace #2)	4.00	17.52	4.00	17.52	4.00	17.52
Chip Dryer #1	4.00	17.52	4.00	17.52	4.00	17.52
Reverberatory Furnace RV#1 (furnace #4)	4.00	17.52	4.00	17.52	4.00	17.52

Appendix A: Emissions Calculations
Summary of the Modification
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Prior to Modification

Emission Unit/Process		Year of Construction	Control (Stack ID)	Unlimited Potential to Emit Prior to Modification (tons/year)										
				Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
				PM	PM10	PM2.5	SO_2	NOx	VOC	CO	CO2e	Total HAPs	Worst Single HAP	
Rotary Furnace RF#1 (furnace #1)	Metal Production	Prior to 2/11/1999	Lime injected baghouse (Baghouse 1)	145.96	88.26	88.26	0.68	0.34	4.75	0.00	0	4,921.85	4,921.33	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Total for RF#1				**146.06**	**88.65**	**88.65**	**0.71**	**5.49**	**5.04**	**4.33**	**6,221**	**4,921.94**	**4,921.33**	**HCl**
Rotary Furnace RF#2 (furnace #2)	Metal Production	September 2001	Lime injected baghouse (Baghouse 2)	128.74	77.84	77.84	0.60	0.30	4.19	0.00	0	4,245.85	4,245.40	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Total for RF#2				**128.84**	**78.23**	**78.23**	**0.63**	**5.45**	**4.47**	**4.33**	**6,221**	**4,245.95**	**4,245.40**	**HCl**
Saltcake Cooling Operation	Dross Cooling	Permitted in 2004	No Control (Indoors)	6.09	9.10	9.10	0.00	0.00	0.00	0.00	0	0.00	0.00	
Total for Saltcake Cooling				**6.09**	**9.10**	**9.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	Permitted in 2010	Lime injected baghouse (Baghouse 4)	79.10	47.83	47.83	0.37	0.18	2.58	0.00	0	2,083.98	2,083.35	HCl
	Natural Gas Combustion			0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
Total for RF#4				**79.18**	**48.16**	**48.16**	**0.39**	**4.48**	**2.81**	**3.61**	**5,184**	**2,084.06**	**2,083.35**	**HCl**
Total PTE				**360.17**	**224.14**	**224.14**	**1.73**	**15.42**	**12.32**	**12.26**	**17,627**	**11,251.96**	**11,250.07**	**HCl**

After Modification

Emission Unit/Process		Year of Construction	Control (Stack ID)	Unlimited Potential to Emit After Modification (tons/year)										
				Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
				PM	PM10	PM2.5	SO_2	NOx	VOC	CO	CO2e	Total HAPs	Worst Single HAP	
Rotary Furnace RF#1 (furnace #1)	Metal Production	Prior to 2/11/1999	Lime injected baghouse (Baghouse 1)	220.15	133.11	133.11	1.02	0.51	7.17	0.00	0	7,424.44	7,423.66	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Total for RF#1				**220.25**	**133.51**	**133.51**	**1.05**	**5.66**	**7.45**	**4.33**	**6,221**	**7,424.54**	**7,423.66**	**HCl**
Rotary Furnace RF#2 (furnace #2)	Metal Production	September 2001	Lime injected baghouse (Baghouse 2)	175.92	106.37	106.37	0.82	0.41	5.73	0.00	0	5,933.53	5,932.91	HCl
	Natural Gas Combustion			0.10	0.39	0.39	0.03	5.15	0.28	4.33	6,221	0.10	0.09	Hexane
Total for RF#2				**176.02**	**106.76**	**106.76**	**0.85**	**5.56**	**6.01**	**4.33**	**6,221**	**5,933.63**	**5,932.91**	**HCl**
Saltcake Cooling Operation	Dross Cooling	Permitted in 2004	No Control (Indoors)	9.30	13.91	13.91	0.00	0.00	0.00	0.00	0	0.00	0.00	
Total for Saltcake Cooling				**9.30**	**13.91**	**13.91**	**0.00**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	Permitted in 2010	Lime injected baghouse (Baghouse 4)	91.72	55.46	55.46	0.43	0.21	2.99	0.00	0	3,093.35	3,092.61	HCl
	Natural Gas Combustion			0.08	0.33	0.33	0.03	4.29	0.24	3.61	5,184	0.08	0.08	Hexane
Total for RF#4				**91.80**	**55.79**	**55.79**	**0.45**	**4.51**	**3.22**	**3.61**	**5,184**	**3,093.43**	**3,092.61**	**HCl**
Total PTE				**497.37**	**309.96**	**309.96**	**2.36**	**15.73**	**16.68**	**12.26**	**17,627**	**16,451.60**	**16,449.18**	**HCl**

PTE of Modification

Emission Unit/Process		Year of Construction	Control (Stack ID)	Unlimited Potential to Emit Of Modification (tons/year)										
				Criteria Pollutants							Greenhouse Gas Pollutants	Hazardous Air Pollutants		
				PM	PM10	PM2.5	SO_2	NOx	VOC	CO	CO2e	Total HAPs	Worst Single HAP	
Rotary Furnace RF#1 (furnace #1)	Metal Production	Prior to 2/11/1999	Lime injected baghouse (Baghouse 1)	74.19	44.86	44.86	0.35	0.17	2.42	0.00	0.00	2,502.59	2,502.33	HCl
	Natural Gas Combustion			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Hexane
Total for RF#1				**74.19**	**44.86**	**44.86**	**0.35**	**0.17**	**2.42**	**0.00**	**0**	**2,502.59**	**2,502.33**	**HCl**
Rotary Furnace RF#2 (furnace #2)	Metal Production	September 2001	Lime injected baghouse (Baghouse 2)	47.18	28.53	28.53	0.22	0.11	1.54	0.00	0.00	1,687.68	1,687.51	HCl
	Natural Gas Combustion			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Hexane
Total for RF#2				**47.18**	**28.53**	**28.53**	**0.22**	**0.11**	**1.54**	**0.00**	**0**	**1,687.68**	**1,687.51**	**HCl**
Saltcake Cooling Operation	Dross Cooling	Permitted in 2004	No Control (Indoors)	3.21	4.80	4.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Total for Saltcake Cooling				**3.21**	**4.80**	**4.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0**	**0.00**	**0.00**	
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	Permitted in 2010	Lime injected baghouse (Baghouse 4)	12.62	7.63	7.63	0.06	0.03	0.41	0.00	0.00	1,009.37	1,009.27	HCl
	Natural Gas Combustion			0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Hexane
Total for RF#4				**12.62**	**7.63**	**7.63**	**0.06**	**0.03**	**0.41**	**0.00**	**0**	**1,009.37**	**1,009.27**	**HCl**
Total PTE				**137.20**	**85.82**	**85.82**	**0.62**	**0.31**	**4.36**	**0.00**	**0**	**5,199.64**	**5,199.11**	**HCl**

Appendix A: Emissions Calculations
Metal Production
Rotary Furnace RF#1

Company Name: **Aluminum Recovery Technologies, Inc.**
Source Address: **2170 Production Road, Kendallville, Indiana 46755**
Significant Source Modification No.: **113-34739-00071**
Part 70 Renewal No. : **T113-33985-00071**
Reviewer: **Sarah Street**

Dross and Aluminum Scrap feed (lbs/hr):	20,171
Solid Reactive Flux (lbs/hr):	3,207
Maximum Throughput (lbs charge/hr):	23,378
Maximum Throughput (tons charge/hr):	11.69

Unlimited PTE

Emission Unit	Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors*								
			PM	PM10	PM2.5	SO_2	NOx	VOC	CO***	GHGs as CO2e	HCl**
Rotary Furnace RF#1 (furnace #1)	RF1	11.69	4.30 lb/ton	2.60 lb/ton	2.60 lb/ton	0.02 lb/ton	0.01 lb/ton	0.14 lb/ton	0.00 lb/ton	0.00 lb/ton	0.5285 lb/lb of Solid Reactive Flux

Emission Unit/Process		Uncontrolled Potential to Emit (tons/yr)								
		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Rotary Furnace RF#1 (furnace #1)	Metal Production	220.15	133.11	133.11	1.02	0.51	7.17	0.00	0.00	7,423.66

Notes
* Uncontrolled Emission Factors from FIRE v.6.23: SCC 3-04-001-03 (charging/melting) for PM/PM10 & SCC 3-04-001-14 (pouring/casting) for SO2, NOx and VOC.
** Uncontrolled Emission factor for HCl has been calculated as follows:
Solid reactive flux consists of 51.4% chloride (Cl). Emission factor assumes 100% conversion to HCl.
51.4% * (36.5(mw HCl)/35.5(mw Cl)) = 0.5285 lb/lb flux
***CO emissions are from natural gas combustion. See next page for emissions estimations from combustion for the furnace.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Potential Emissions for HCl (tons/yr) = Uncontrolled Emission factor (lb/lb of Solid Reactive Flux) x Solid Reactive Flux (lb of Solid Reactive Flux/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Miscellaneous HAP Metal Calculations

Mass fraction of PM HAPs =	0.46	
Uncontrolled PM emission rates=	220.25	tons/yr
Limited PM Potential to Emit =	17.52	tons/yr

	Potential to Emit (PTE) HAPs from RF #1		
Pollutant	Emission Factor percent (%)	Potential Emissions (tons/year)	Limited Potential to Emit (tons/year)
Antimony	0.002637	0.581	0.0462
Arsenic	0.000046	0.010	0.0008
Cadmium	0.000042	0.009	0.0007
Chromium	0.000148	0.033	0.0026
Lead	0.000375	0.083	0.0066
Manganese	0.000060	0.013	0.0011
Nickel	0.000162	0.036	0.0028
Selenium	0.000074	0.016	0.0013
Total		**0.78**	**0.06**

Emission factors from SPECIATE v.3.2 for profile #20102 (secondary aluminum, dross recovery furnace).
Potential Emissions (tons/yr) = Emission Factor (%) X uncontrolled and controlled PM emission rates (tons/yr)
Limited Potential to Emit (tons/yr) = Emission Factor (%) X Limited PM Potential to Emit (tons/yr)

Limited PTE

PSD Minor Limits

	Emission Limits (lb/hr)		
Emission Unit	PM	PM10	PM2.5
Rotary Furnace	4.00	4.00	4.00

NESHAP, RRR Limit (lb/tons Charge)	
HCl*	D/F**
0.40	3.00E-08

*Limit, pursuant to 40 CFR 63.1505(i)(4) for Group 1 Furnace
**Limit, pursuant to 40 CFR 63.1505(i)(3) for Group 1 Furnace = 2.1E-04 gr/ton
2.1E-04 gr/ton * 1.43E-04 lb/gr = 3.00E-08 lb/ton

Summary of Emissions (Limited)

	Limited Potential to Emit (tons/yr)					
Emission Unit	PM	PM10	PM2.5	Total HAPs	Worst Single HAP (HCl)	D/F
Rotary Furnace RF#1 (furnace #1)	17.52	17.52	17.52	20.54	20.48	1.54E-06

Methodology
Limited PTE (tons/yr) = Limited Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Limited Potential to Emit (tons/yr) for HCl are calculated as follows: NESHAP, RRR Limit (lb/tons Charge) x Maximum Capacity (tons charge/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Rotary Furnace RF#1
MM BTU/HR <100

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
12.0	1020	103.1

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.10	0.39	0.39	0.03	5.15	0.28	4.33

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.082E-04	6.184E-05	3.865E-03	9.275E-02	1.752E-04	**9.696E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.576E-05	5.668E-05	7.214E-05	1.958E-05	1.082E-04	**2.824E-04**
					Total HAPs	**9.725E-02**
					Worst HAP	**9.275E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	6,184	0.1	0.1
Summed Potential Emissions in tons/yr	6,184		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	6,220		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	6,221		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Metal Production
Rotary Furnace RF#2

Company Name: **Aluminum Recovery Technologies, Inc.**
Source Address: **2170 Production Road, Kendallville, Indiana 46755**
Significant Source Modification No.: **113-34739-00071**
Part 70 Renewal No. : **T113-33985-00071**
Reviewer: **Sarah Street**

Dross and Aluminum Scrap feed (lbs/hr):	16,118
Solid Reactive Flux (lbs/hr):	2,563
Maximum Throughput (lbs charge/hr):	18,681
Maximum Throughput (tons charge/hr):	9.34

Unlimited PTE

Emission Unit	Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors*								
			PM	PM10	PM2.5	SO_2	NOx	VOC	CO***	GHGs as CO2e	HCl**
Rotary Furnace RF#2 (furnace #2)	RF2	9.34	4.30 lb/ton	2.60 lb/ton	2.60 lb/ton	0.02 lb/ton	0.01 lb/ton	0.14 lb/ton	0.00 lb/ton	0.00 lb/ton	0.5285 lb/lb of Solid Reactive Flux

		Uncontrolled Potential to Emit (tons/yr)								
Emission Unit/Process		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Rotary Furnace RF#2 (furnace #2)	Metal Production	175.92	106.37	106.37	0.82	0.41	5.73	0.00	0.00	5,932.91

Notes
* Uncontrolled Emission Factors from FIRE v.6.23: SCC 3-04-001-03 (charging/melting) for PM/PM10 & SCC 3-04-001-14 (pouring/casting) for SO2, NOx and VOC.
** Uncontrolled Emission factor for HCl has been calculated as follows:
Solid reactive flux consists of 51.4% chloride (Cl). Emission factor assumes 100% conversion to HCl.
51.4% * (36.5(mw HCl)/35.5(mw Cl)) = 0.5285 lb/lb flux
***CO emissions are from natural gas combustion. See next page for emissions estimations from combustion for the furnace.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Potential Emissions for HCl (tons/yr) = Uncontrolled Emission factor (lb/lb of Solid Reactive Flux) x Solid Reactive Flux (lb of Solid Reactive Flux/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Miscellaneous HAP Metal Calculations

Mass fraction of PM HAPs =	0.46	
Uncontrolled PM emission rates=	176.02	tons/yr
Limited PM Potential to Emit =	17.52	tons/yr

	Potential to Emit (PTE) HAPs from RF2		
Pollutant	Emission Factor percent (%)	Potential Emissions (tons/year)	Limited Potential to Emit (tons/year)
Antimony	0.002637	0.464	0.0462
Arsenic	0.000046	0.008	0.0008
Cadmium	0.000042	0.007	0.0007
Chromium	0.000148	0.026	0.0026
Lead	0.000375	0.066	0.0066
Manganese	0.000060	0.011	0.0011
Nickel	0.000162	0.029	0.0028
Selenium	0.000074	0.013	0.0013
Total		**0.62**	**0.06**

Emission factors from SPECIATE v.3.2 for profile #20102 (secondary aluminum, dross recovery furnace).
Potential Emissions (tons/yr) = Emission Factor (%) X uncontrolled and controlled PM emission rates (tons/yr)
Limited Potential to Emit (tons/yr) = Emission Factor (%) X Limited PM Potential to Emit (tons/yr)

Limited PTE

PSD Minor Limits

	Emission Limits (lb/hr)		
Emission Unit	PM	PM10	PM2.5
Rotary Furnace	4.00	4.00	4.00

NESHAP, RRR Limit (lb/tons Charge)	
HCl*	D/F**
0.40	3.00E-08

*Limit, pursuant to 40 CFR 63.1505(i)(4) for Group 1 Furnace
**Limit, pursuant to 40 CFR 63.1505(i)(3) for Group 1 Furnace = 2.1E-04 gr/ton
2.1E-04 gr/ton * 1.43E-04 lb/gr = 3.00E-08 lb/ton

Summary of Emissions (Limited)

	Limited Potential to Emit (tons/yr)					
Emission Unit	PM	PM10	PM2.5	Total HAPs	Worst Single HAP (HCl)	D/F
Rotary Furnace RF#2 (furnace #2)	17.52	17.52	17.52	16.43	16.36	1.23E-06

Methodology
Limited PTE (tons/yr) = Limited Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Limited Potential to Emit (tons/yr) for HCl are calculated as follows: NESHAP, RRR Limit (lb/tons Charge) x Maximum Capacity (tons charge/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Rotary Furnace RF#2
MM BTU/HR <100

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
12.0	1020	103.1

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.10	0.39	0.39	0.03	5.15	0.28	4.33

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	1.082E-04	6.184E-05	3.865E-03	9.275E-02	1.752E-04	**9.696E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.576E-05	5.668E-05	7.214E-05	1.958E-05	1.082E-04	**2.824E-04**
					Total HAPs	**9.725E-02**
					Worst HAP	**9.275E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	6,184	0.1	0.1
Summed Potential Emissions in tons/yr	6,184		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	6,220		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	6,221		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Metal Production
Chip Dryer #1
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Dross and Aluminum Scrap feed (lbs/hr): 7,035
Maximum Throughput (lbs charge/hr): 7,035
Maximum Throughput (tons charge/hr): 3.52

Unlimited PTE

Emission Unit	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)								
		PM	PM10	PM2.5	SO_2	NOx	VOC	CO***	GHGs as CO2e***	HCl****
Chip Dryer #1	3.52	2.707	2.707	2.707	0.41	0.90	1.22	0.00	0.00	0.000

		Uncontrolled Potential to Emit (tons/yr)								
Emission Unit/Process		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Chip Dryer #1	Metal Production	41.71	41.71	41.71	6.32	13.87	18.80	0.00	0.00	0.00

Notes
Uncontrolled PM, PM10, and PM2.5 emission factors are from Part 70 Operating Permit T113-12126-00071 issued on April 7, 2004.
Uncontrolled Emission Factor for SO2 reflects 4/03 compliance stack test results; for NOx from FIRE v.6.23, SCC #3-04-001-09.
Uncontrolled Emission Factor for VOC is calculated as follows: Controlled VOC emission rate from IDEM approved stack testing performed in 2003 (lb THC as propane/ton aluminum) / (1-after burner efficiency (95%)).
***CO and GHG emissions are from natural gas combustion. See next page for emissions estimations from combustion for the chip dryer.
****A thermal chip dryer is a device that uses heat to evaporate water, oil or oil/water mixtures from unpainted/uncoated aluminum chips. Since the aluminum chips are unpainted/uncoated, there are no HCl emissions from this process.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Limited PTE

PSD Minor Limits

	Emission Limits (lb/hr)		
Emission Unit	PM	PM10	PM2.5
Chip Dryer #1	4.00	4.00	4.00

NESHAP, RRR Limit (lb/tons Charge)
D/F**
5.00E-09

**Limit, pursuant to 40 CFR 63.1505(c)(2) for Thermal Chip Dryer = 3.5E-05 gr/ton
3.5E-05 gr/ton * 1.43E-04 lb/gr = 5.00E-09 lb/ton

According to the U.S. EPA Background rulemaking for NESHAP Subpart RRR, this NESHAP limits total hydrocarbon (THC) emissions from new and existing thermal chip dryers at secondary aluminum production facilities that are major sources. The THC represents emissions of HAP organics. There is no limit for HCl emissions from thermal chip dryers.

Summary of Emissions (Limited)

	Limited Potential to Emit (tons/yr)			
Emission Unit	PM	PM10	PM2.5	D/F
Chip Dryer #1	17.52	17.52	17.52	7.70E-08

Methodology
Limited PTE (tons/yr) = Limited Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Chip Dryer #1
MM BTU/HR <100

Company Name: **Aluminum Recovery Technologies, Inc.**
Source Address: **2170 Production Road, Kendallville, Indiana 46755**
Significant Source Modification No.: **113-34739-00071**
Part 70 Renewal No. : **T113-33985-00071**
Reviewer: **Sarah Street**

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
4.0	1020	34.4

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.03	0.13	0.13	0.01	1.72	0.09	1.44

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	3.607E-05	2.061E-05	1.288E-03	3.092E-02	5.840E-05	**3.232E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	8.588E-06	1.889E-05	2.405E-05	6.527E-06	3.607E-05	**9.413E-05**
					Total HAPs	**3.242E-02**
					Worst HAP	**3.092E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	2,061	0.0	0.0
Summed Potential Emissions in tons/yr	2,061		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	2,073		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	2,074		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Chip Dryer #1 - Afterburner
MM BTU/HR <100

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
6.0	1020	51.5

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.05	0.20	0.20	0.02	2.58	0.14	2.16

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	5.411E-05	3.092E-05	1.932E-03	4.638E-02	8.760E-05	**4.848E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	1.288E-05	2.834E-05	3.607E-05	9.791E-06	5.411E-05	**1.412E-04**
					Total HAPs	**4.862E-02**
					Worst HAP	**4.638E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	3,092	0.1	0.1
Summed Potential Emissions in tons/yr	3,092		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	3,110		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	3,111		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Metal Production
Dross Cooling

Company Name: **Aluminum Recovery Technologies, Inc.**
Source Address: **2170 Production Road, Kendallville, Indiana 46755**
Significant Source Modification No.: **113-34739-00071**
Part 70 Renewal No. : **T113-33985-00071**
Reviewer: **Sarah Street**

Maximum Capacity (lbs dross/hr): 42,059
Maximum Capacity (tons/hr): 21.030
Maximum Capacity (tons/yr): 184,218

The maximum capacity of the saltcake cooling is the combined maximum capacities of RF #1 and RF #2.

Unlimited PTE

Emission Unit	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors								
		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Saltcake Cooling Operation	21.030	0.101	0.151	0.151	0.00	0.00	0.00	0.00	0.00	0.0000

	Uncontrolled Potential to Emit (tons/yr)								
Emission Unit/Process	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Saltcake Cooling Operation	9.30	13.91	13.91	0.00	0.00	0.00	0.00	0.00	0.00

Notes
Testing was conducted on the saltcake cooling operation as part of the initial Part 70 Operating Permit issuance in 2004. As described in the TSD for Operation Permit No. T113-12126-00071, testing for particulate emissions from the saltcake cooling operation was conducted on September 25, 2003. The final test report was submitted to, and approved by, IDEM. The IDEM verified test results for the dross cooling process were determined to be 0.101 lb PM per ton dross/saltcake cooled and 0.151 lb PM10 per ton dross/saltcake cooled.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Appendix A: Emissions Calculations
Metal Production
Reverberatory Furnace RV#1 (furnace #4)
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Dross and Aluminum Scrap feed (lbs/hr):	8,404
Solid Reactive Flux (lbs/hr):	1,336
Maximum Throughput (lbs charge/hr):	9,740
Maximum Throughput (tons charge/hr):	4.87

Unlimited PTE

Emission Unit	Emission Unit ID(s)	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors*								
			PM	PM10	PM2.5	SO_2	NOx	VOC	CO***	GHGs as CO2e	HCl**
Reverberatory Furnace RV#1 (furnace #4)	RV1	4.87	4.30 lb/ton	2.60 lb/ton	2.60 lb/ton	0.02 lb/ton	0.01 lb/ton	0.14 lb/ton	0.00 lb/ton	0.00 lb/ton	0.5285 lb/lb of Solid Reactive Flux

Emission Unit/Process		Uncontrolled Potential to Emit (tons/yr)								
		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Reverberatory Furnace RV#1 (furnace #4)	Metal Production	91.72	55.46	55.46	0.43	0.21	2.99	0.00	0.00	3,092.61

Notes
* Uncontrolled Emission Factors from FIRE v.6.23: SCC 3-04-001-03 (charging/melting) for PM/PM10 & SCC 3-04-001-14 (pouring/casting) for SO2, NOx and VOC.
** Uncontrolled Emission factor for HCl has been calculated as follows:
Solid reactive flux consists of 51.4% chloride (Cl). Emission factor assumes 100% conversion to HCl.
51.4% * (36.5(mw HCl)/35.5(mw Cl)) = 0.5285 lb/lb flux
***CO emissions are from natural gas combustion. See next page for emissions estimations from combustion for the furnace.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Potential Emissions for HCl (tons/yr) = Uncontrolled Emission factor (lb/lb of Solid Reactive Flux) x Solid Reactive Flux (lb of Solid Reactive Flux/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Miscellaneous HAP Metal Calculations

Mass fraction of PM HAPs = 0.1%

	Potential to Emit (PTE) HAPs from RV1		
Pollutant	Emission Factor (lb/ton)	Potential Emissions (tons/year)	Limited Potential to Emit (tons/year)
Antimony	0.004300	0.092	0.092
Arsenic	0.004300	0.092	0.092
Cadmium	0.004300	0.092	0.092
Chromium	0.004300	0.092	0.092
Lead	0.004300	0.092	0.092
Manganese	0.004300	0.092	0.092
Nickel	0.004300	0.092	0.092
Selenium	0.004300	0.092	0.092
Total		**0.73**	**0.73**

Emission factors from SPECIATE v.3.2 for profile #20102 (secondary aluminum, dross recovery furnace).
Potential Emissions (tons/yr) = Emission Factor (lb/ton) X Throughput (ton/hr) *8,760 hr/yr * 1 ton/2,000 lb
Limited Potential to Emit (tons/yr) = Unlimited Potential to Emit (tons/yr)

Limited PTE

PSD Minor Limits

	Emission Limits (lb/hr)		
Emission Unit	PM	PM10	PM2.5
Reverbatory Furnace (RV #1)	4.00	4.00	4.00

NESHAP, RRR Limit (lb/tons Charge)	
HCl*	D/F**
0.40	3.00E-08

*Limit, pursuant to 40 CFR 63.1505(i)(4) for Group 1 Furnace
**Limit, pursuant to 40 CFR 63.1505(i)(3) for Group 1 Furnace = 2.1E-04 gr/ton
2.1E-04 gr/ton * 1.43E-04 lb/gr = 3.00E-08 lb/ton

Summary of Emissions (Limited)

	Limited Potential to Emit (tons/yr)					
Emission Unit	PM	PM10	PM2.5	Total HAPs	Worst Single HAP (HCl)	D/F
Reverbatory Furnace (RV #1)	17.52	17.52	17.52	9.27	8.53	6.40E-07

Methodology
Limited PTE (tons/yr) = Limited Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs
Limited Potential to Emit (tons/yr) for HCl are calculated as follows: NESHAP, RRR Limit (lb/tons Charge) x Maximum Capacity (tons charge/hr) x 8760 (hrs/yr) / 2000 (lbs/ton)

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Reverberatory Furnace RV#1 (furnace #4)
MM BTU/HR <100
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
10.0	1020	85.9

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.08	0.33	0.33	0.03	4.29	0.24	3.61

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	9.018E-05	5.153E-05	3.221E-03	7.729E-02	1.460E-04	**8.080E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.147E-05	4.724E-05	6.012E-05	1.632E-05	9.018E-05	**2.353E-04**
					Total HAPs	**8.104E-02**
					Worst HAP	**7.729E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	5,153	0.1	0.1
Summed Potential Emissions in tons/yr	5,153		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	5,184		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	5,184		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Holding Furnace HF #1 (furnace #3)
MM BTU/HR <100

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
0.3	1020	2.1

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.00	0.01	0.01	0.00	0.11	0.01	0.09

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	2.254E-06	1.288E-06	8.051E-05	1.932E-03	3.650E-06	**2.020E-03**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	5.368E-07	1.181E-06	1.503E-06	4.079E-07	2.254E-06	**5.883E-06**
					Total HAPs	**2.026E-03**
					Worst HAP	**2.100E-03**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	129	0.0	0.0
Summed Potential Emissions in tons/yr	129		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	130		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	130		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Natural Gas Combustion Only
Insignificant Combustion
MM BTU/HR <100

Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Heat Input Capacity MMBtu/hr	HHV mmBtu/mmscf	Potential Throughput MMCF/yr
10.0	1020	85.9

	Pollutant						
	PM*	PM10*	direct PM2.5*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	7.6	0.6	100 **see below	5.5	84
Potential Emission in tons/yr	0.08	0.33	0.33	0.03	4.29	0.24	3.61

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
PM2.5 emission factor is filterable and condensable PM2.5 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03
Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,020 MMBtu
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

HAPS Calculations

	HAPs - Organics					
	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene	**Total - Organics**
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03	
Potential Emission in tons/yr	9.018E-05	5.153E-05	3.221E-03	7.729E-02	1.460E-04	**8.080E-02**

	HAPs - Metals					
	Lead	Cadmium	Chromium	Manganese	Nickel	**Total - Metals**
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03	
Potential Emission in tons/yr	2.147E-05	4.724E-05	6.012E-05	1.632E-05	9.018E-05	**2.353E-04**
					Total HAPs	**8.104E-02**
					Worst HAP	**7.729E-02**

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.

Greenhouse Gas Calculations

	Greenhouse Gas		
	CO2	CH4	N2O
Emission Factor in lb/MMcf	120,000	2.3	2.2
Potential Emission in tons/yr	5,153	0.1	0.1
Summed Potential Emissions in tons/yr	5,153		
CO2e Total in tons/yr based on 11/29/2013 federal GWPs	5,184		
CO2e Total in tons/yr based on 10/30/2009 federal GWPs	5,184		

Methodology
The N2O Emission Factor for uncontrolled is 2.2. The N2O Emission Factor for low Nox burner is 0.64.
Emission Factors are from AP 42, Table 1.4-2 SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03.
Global Warming Potentials (GWP) from Table A-1 of 40 CFR Part 98 Subpart A.
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton
CO2e (tons/yr) based on 11/29/2013 federal GWPs= CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (25) + N2O Potential Emission ton/yr x N2O GWP (298).
CO2e (tons/yr) based on 10/30/2009 federal GWPs = CO2 Potential Emission ton/yr x CO2 GWP (1) + CH4 Potential Emission ton/yr x CH4 GWP (21) + N2O Potential Emission ton/yr x N2O GWP (310).

Appendix A: Emissions Calculations
Metal Production
Shredder BB#1
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Maximum Capacity (tons of metal bales/hr): 3.517

Unlimited PTE

Emission Unit	Maximum Throughput (tons/hr)	Uncontrolled Emission Factors (lb/ton)								
		PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Shredder BB#1	3.517	0.10	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.000

	Uncontrolled Potential to Emit (tons/yr)								
Emission Unit/Process	PM	PM10	PM2.5	SO_2	NOx	VOC	CO	GHGs as CO2e	HCl
Shredder BB#1	1.54	1.54	1.54	0.00	0.00	0.00	0.00	0.00	0.00

Notes
Since the unit operates only to separate metal pieces and not to shred the metal, particulate matter emissions will be negligible. These calculations assume a conservative emission factor of 0.1 pounds of PM per ton of metal bales processed.

Methodology
Uncontrolled PTE (tons/yr) = Maximum Throughput (tons/hr) * Emission Factor (lb/ton) * 8,760 hr/yr * 1 ton/2,000 lbs

Appendix A: Emission Calculations
Fugitive Dust Emissions - Paved Roads
Company Name: Aluminum Recovery Technologies, Inc.
Source Address: 2170 Production Road, Kendallville, Indiana 46755
Significant Source Modification No.: 113-34739-00071
Part 70 Renewal No. : T113-33985-00071
Reviewer: Sarah Street

Paved Roads at Industrial Site
The following calculations determine the amount of emissions created by paved roads, based on 8,760 hours of use and AP-42, Ch 13.2.1 (1/2011).

Vehicle Informtation (provided by source)

Type	Maximum number of vehicles per day	Number of one-way trips per day per vehicle	Maximum trips per day (trip/day)	Maximum Weight Loaded (tons/trip)	Total Weight driven per day (ton/day)	Maximum one-way distance (feet/trip)	Maximum one-way distance (mi/trip)	Maximum one-way miles (miles/day)	Maximum one-way miles (miles/yr)
Vehicle (entering plant) (one-way trip)	8.0	1.0	8.0	9.0	72.0	150	0.028	0.2	83.0
Vehicle (leaving plant) (one-way trip)	8.0	1.0	8.0	9.0	72.0	150	0.028	0.2	83.0
		Totals	**16.0**	**Uncontrolled**	**144.0**			**0.5**	**165.9**

Average Vehicle Weight Per Trip = 9.0 tons/trip
Average Miles Per Trip = 0.03 miles/trip

Unmitigated Emission Factor, Ef = [k * (sL)^0.91 * (W)^1.02] (Equation 1 from AP-42 13.2.1)

	PM	PM10	PM2.5	
where k =	0.011	0.0022	0.00054	lb/VMT = particle size multiplier (AP-42 Table 13.2.1-1)
W =	9.0	9.0	9.0	tons = average vehicle weight (provided by source)
sL =	9.7	9.7	9.7	

Taking natural mitigation due to precipitation into consideration, Mitigated Emission Factor, Eext = E * [1 - (p/4N)] (Equation 2 from AP-42 13.2.1)

Mitigated Emission Factor, Eext = Ef * [1 - (p/4N)]
where p = 125 days of rain greater than or equal to 0.01 inches (see Fig. 13.2.1-2)
N = 365 days per year

	PM	PM10	PM2.5	
Unmitigated Emission Factor, Ef =	0.818	0.164	0.0401	lb/mile
Mitigated Emission Factor, Eext =	0.748	0.150	0.0367	lb/mile
Dust Control Efficiency =	50%	50%	50%	

Process	Unmitigated PTE of PM (tons/yr)	Unmitigated PTE of PM10 (tons/yr)	Unmitigated PTE of PM2.5 (tons/yr)	Mitigated PTE of PM (tons/yr)	Mitigated PTE of PM10 (tons/yr)	Mitigated PTE of PM2.5 (tons/yr)	Controlled PTE of PM (tons/yr)	Controlled PTE of PM10 (tons/yr)	Controlled PTE of PM2.5 (tons/yr)
Vehicle (entering plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	0.00	0.02	0.00	0.00
Vehicle (leaving plant) (one-way trip)	0.03	0.01	0.00	0.03	0.01	0.00	0.02	0.00	0.00
Totals	**0.07**	**0.01**	**0.00**	**0.06**	**0.01**	**0.00**	**0.03**	**0.01**	**0.00**

Methodology
Total Weight driven per day (ton/day) = [Maximum Weight Loaded (tons/trip)] * [Maximum trips per day (trip/day)]
Maximum one-way distance (mi/trip) = [Maximum one-way distance (feet/trip) / [5280 ft/mile]
Maximum one-way miles (miles/day) = [Maximum trips per year (trip/day)] * [Maximum one-way distance (mi/trip)]
Average Vehicle Weight Per Trip (ton/trip) = SUM[Total Weight driven per day (ton/day)] / SUM[Maximum trips per day (trip/day)]
Average Miles Per Trip (miles/trip) = SUM[Maximum one-way miles (miles/day)] / SUM[Maximum trips per year (trip/day)]
Unmitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Unmitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Mitigated PTE (tons/yr) = [Maximum one-way miles (miles/yr)] * [Mitigated Emission Factor (lb/mile)] * (ton/2000 lbs)
Controlled PTE (tons/yr) = [Mitigated PTE (tons/yr)] * [1 - Dust Control Efficiency]

Abbreviations
PM = Particulate Matter
PM10 = Particulate Matter (<10 um)
PM2.5 = Particle Matter (<2.5 um)
PTE = Potential to Emit

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: Jack Hampton Jr.
Aluminum Recovery Technologies, Inc.
2170 Production Road
Kendalville, Indiana 46755

DATE: September 9, 2014

FROM: Matt Stuckey, Branch Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V – Significant Source Modification
113-34739-00071

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Farrell Norman, General Manager / Aluminum Recovery Technologies, Inc.
Jason Morrison / SevenGen HSE
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

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Michael R. Pence
Governor

Thomas W. Easterly
Commissioner

September 9, 2014

TO: Kendallville Public Library

From: Matthew Stuckey, Branch Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Determination**

Applicant Name: Aluminum Recovery Technologies, Inc.
Permit Number: 113-34739-00071

You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 6/13/2013

Mail Code 61-53

IDEM Staff	AWELLS 9/9/2014 Aluminum Recovery Technologies, Inc. (ART) 113-34739-00071 Final		AFFIX STAMP HERE IF USED AS CERTIFICATE OF MAILING
Name and address of Sender		Type of Mail: **CERTIFICATE OF MAILING ONLY**	

Indiana Department of Environmental Management
Office of Air Quality – Permits Branch
100 N. Senate
Indianapolis, IN 46204

Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Jack C Hampton Jr Aluminum Recovery Technologies, Inc. (ART) 2170 Production Road Kendallville IN 46755 (Source CAATS) confirmed delivery									
2		Farrell Norman General Manager Aluminum Recovery Technologies, Inc. (ART) 2170 Production Road Kendalville IN 46755 *(RO CAATS)*									
3		Noble County Board of Commissioners 101 North Orange Street Albion IN 46701 *(Local Official)*									
4		Noble County Health Department 2090 N. State Rd 9, Suite C Albion IN 46701-9566 *(Health Department)*									
5		Mr. Steve Christman NISWMD 2320 W 800 S, P.O. Box 370 Ashley IN 46705 *(Affected Party)*									
6		Kendallville Public Library 221 S Park Avenue Kendallville IN 46755-1740 *(Library)*									
7		Frederick & Iva Moore 6019 W 650 N Ligonier IN 46767 *(Affected Party)*									
8		Kendallville City Council and Mayors Office 234 S. Main Street Kendallville IN 46755 *(Local Official)*									
9		Emily Andrews P.O. Box 256 South Milford IN 46786 *(Affected Party)*									
10		Mr. Jason Morrison SevenGen HSE 10339 Dawsons Creek Blvd suite 7E Fort Wayne IN 46825 *(Consultant)*									
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