INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

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

TO: Interested Parties / Applicant

DATE: March 17, 2006

RE: Alcoa, Inc. / 173-21948-00007

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

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 enclosed matter. Pursuant to IC 13-17-3-4 and 326 IAC 2, this permit modification is effective immediately, unless a petition for stay of effectiveness is filed and granted, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3-7 and IC 13-15-7-3 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 Environmental Adjudication, 100 North Senate Avenue, Government Center North, Room 1049, Indianapolis, IN 46204, **within eighteen (18) 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.

Pursuant to 326 IAC 2-7-18(d), any person may petition the U.S. EPA to object to the issuance of a Title V operating permit or modification within sixty (60) days of the end of the forty-five (45) day EPA review period. Such an objection must be based only on issues that were raised with reasonable specificity during the public comment period, unless the petitioner demonstrates that it was impractible to raise such issues, or if the grounds for such objection arose after the comment period.

To petition the U.S. EPA to object to the issuance of a Title V operating permit, contact:

U.S. Environmental Protection Agency
401 M Street
Washington, D.C. 20406

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.

Enclosures
FNTV-PMOD.doc 1/10/05

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(800) 451-6027
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Mr. Samuel H. Bruntz
Alcoa, Inc. - Warrick Operations
Building 860E, P. O. Box 10
Newburgh, Indiana 47630

March 17, 2006

Re: Permit Modification No: 173-21948-00007
of SSM 173-17780-00007

Dear Mr. Bruntz:

Alcoa, Inc. - Warrick Operations applied for a permit modification of the Significant Source Modification 173-17780-00007, issued on July 21, 2004. The permit modification is for an alternative monitoring plan (AMP) for daily visible emissions observations for the two baghouses of the pitch fume treatment system and each of the seven exhaust stacks of the anode baking ring furnace A446 pollution control system, as specified by 40 CFR 63.848 (g). This AMP is to operate the bag leak detection systems installed pursuant to Significant Source Modification No. 173-17780-00007 instead of performing daily visible emissions observations at the above stacks. There is no new construction or change in emissions of any pollutants involved in this proposed modification.

Pursuant to the provisions of 326 IAC 2-7-12(d) and IC 13-15-7-1, a permit modification is hereby approved as described in the attached Technical Support Document (TSD).

Other than the changes detailed in the TSD for this approval, all other conditions of the permit shall remain unchanged and in effect. Please find enclosed the entire modified permit document for final issuance.

The Significant Permit Modification approval will be incorporated into the pending Part 70 permit application pursuant to 326 IAC 2-7-10.5(l)(3).

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 matte, please contact Dr. Tripurari Sinha at the Indiana Department Environmental Management, Office of Air Quality, 100 North Senate Avenue, Indianapolis, Indiana 46204-2251 or by telephone at (317) 233-3031 or toll free at 1-800-451-6027 extension 3-3031 or by e-mail at tsinha @idem.IN.gov.

Sincerely,

Original Signed By:
Paul Dubenetzky
Assistant Commissioner
Office of Air Quality

Attachments - Modified Permit, and TSD
cc: File - Warrick County
U.S. EPA, Region V
Warrick County Health Department
Southwest Regional Office
Air Compliance Section Inspector - Richard Sekula
Compliance Branch
Administrative and Development
Technical Support and Modeling

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www.IN.gov/idem

SIGNIFICANT MODIFICATION TO A PART 70 SIGNIFICANT SOURCE MODIFICATION

OFFICE OF AIR QUALITY

Alcoa, Inc. - Warrick Operations
Jct. IN Hwys. 66 & 61
Newburgh, Indiana 47629-0010

(herein known as the Permittee) is hereby authorized to construct and operate subject to the conditions contained herein, the emission units described in Section A (Source Summary) of this approval.

This approval 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.

Significant Source Modification 173-17780-00007	
Original Signed by: Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: July 21, 2004
First Significant Permit Modification 173-21948-00007	Pages Affected: 4, 7, 10, 11, 22, 23, 24, and 25
Issued by: Original Signed By: Paul Dubenetzky Assistant Commissioner Office of Air Quality	Issuance Date: March 17, 2006

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SECTION A SOURCE SUMMARY

This approval is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the emission units 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 approval 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(15)]

The Permittee owns and operates a primary aluminum reduction source.

Responsible Official:	Vice President & General Manager
Source Address:	Junction IN Highways 66 and 61, Newburgh, Indiana 47629
Mailing Address:	Bldg. 860 E, P.O. Box 10, Newburgh, Indiana 47630-0010
General Source Phone Number:	812-853-1519
SIC Code:	3334 and 3352
County Location:	Warrick
Source Location Status:	Nonattainment for ozone under the 8-hour standard Attainment for ozone under the 1-hour standard Attainment for all other criteria pollutants
Source Status:	Part 70 Permit Program Major 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(15)]

This stationary source is approved to operate the following emission units and pollution control devices:

(a) One (1) above-ground, natural gas-fired, green anode baking ring furnace, known as Bldg. 295 Anode Baking Ring Furnace, equipped with an A-446 pollution control system consisting of three (3) reactor sections with a baghouse for PM and PM_{10} control and dry alumina scrubber for TF and SO_2 control which operate at a minimum of two (2) reactor sections at any one (1) time, exhausting through Stacks 265D.1, 265D.2, 265D.3, 265D.4, 265D.5, 265D.6, 265D.8, and 265J.1 (which is the diesel-fired emergency bypass engine stack used for venting ring furnace exhaust gases during emergency periods of unexpected loss of power to the A-446 dry scrubber fans), capacity: 21.42 tons of green anodes per hour.

(b) One (1) diesel-fired emergency bypass engine, consisting of an emergency bypass stack with a bypass duct and emergency bypass fan, heat output capacity: 200 horsepower.

(c) One (1) dross cooling operation, equipped with two (2) small baghouses, identified as Baghouses #1 and #2, and two (2) large baghouses, identified as Baghouses #3 and #4 for PM, PM_{10}, and lead control, capacity: 66.0 tons per hour.

(d) One (1) pitch fume treatment system (formerly green anode forming operations), equipped with a pollution control system, consisting of two (2) dry coke scrubbers and two (2) baghouses for PM, PM_{10}, and VOC control, capacity: 52.5 tons of green anodes per hour.

(e) One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, equipped with one (1) baghouse for PM and PM_{10} control, exhausting to Stack 132.9,

capacity: 242,000 pounds of steel per hour.

A.3 Specifically Regulated Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source modification does not include any insignificant activities as defined in 326 IAC 2-7-1(21).

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).

The remainder of the page is left blank intentionally.

SECTION B GENERAL CONSTRUCTION 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, any applicable definitions found in the statutes or regulations (IC 13-11, 326 IAC 1-2 and 326 IAC 2-7) shall prevail.

B.2 Effective Date of the Permit [IC13-15-5-3]

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

B.3 Revocation of Permits [326 IAC 2-1.1-9(5)] [326 IAC 2-7-10.5(i)]

Pursuant to 326 IAC 2-1.1-9(5)(Revocation of Permits), 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.

B.4 Significant Source Modification [326 IAC 2-7-10.5(h)]

This document shall also become the approval to operate pursuant to 326 IAC 2-7-10.5(h) as follows:

In the event that the Part 70 application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

(a) If the Part 70 draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Part 70 draft.

(b) If the Part 70 permit has gone through final EPA proposal and would be issued ahead of the Significant Source Modification, the Significant Source Modification will go through a concurrent 45 day EPA review. Then the Significant Source Modification will be incorporated into the final Part 70 permit at the time of issuance.

(c) If the Part 70 permit has gone through public notice, but has not gone through final EPA review and would be issued after the Significant Source Modification is issued, then the Modification would be added to the proposed Part 70 permit, and the Title V permit will be issued after EPA review.

The remainder of the page is left blank intentionally.

SECTION C GENERAL OPERATION CONDITIONS

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

(a) Where specifically designated by this permit or required by an applicable requirement, any application form, report, or compliance certification submitted shall contain certification by a responsible official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

(b) One (1) certification shall be included, using the attached Certification Form, with each submittal requiring certification.

(c) A responsible official is defined at 326 IAC 2-7-1(34).

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) The Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs) within ninety (90) days after issuance of this permit for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

(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.

(b) A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes or is the primary contributor to an exceedance of any limitation on emissions or potential to emit. The PMPs does not require the certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

(c) 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.

The requirements of this condition shall supersede the requirements of Condition C.2 of SSM 173-17780-00007, issued on July 21, 2004.

C.3 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
Permits Branch, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

Any such application should be certified by the “responsible official” as defined by 326 IAC

2-7-1(34).

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

C.4 Opacity [326 IAC 5-1]

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

(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.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).

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

The Permittee shall comply with the applicable provisions of 326 IAC 1-7 (Stack Height Provisions), for all exhaust stacks through which a potential (before controls) of twenty-five (25) tons per year or more of particulate matter or sulfur dioxide is emitted by using ambient air quality modeling pursuant to 326 IAC 1-7-4.

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

C.7 Performance Testing [326 IAC 3-6] [326 IAC 2-1.1-11]

(a) Compliance testing on new emission units shall be conducted within 60 days after achieving maximum production rate, but no later than 180 days after initial start-up, if specified in Section D of this approval. All testing shall be performed according to the provisions of 326 IAC 3-6 (Source Sampling Procedures), except as provided elsewhere in this approval, utilizing any applicable procedures and analysis methods specified in 40 CFR 51, 40 CFR 60, 40 CFR 61, 40 CFR 63, 40 CFR 75, or other procedures approved by IDEM, OAQ.

A test protocol, except as provided elsewhere in this approval, shall be submitted to:

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
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 certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) The Permittee shall notify IDEM, OAQ of the actual test date at least fourteen (14) days prior to the actual test date. The notification submitted by the Permittee does not require certification by the “responsible official” as defined by 326 IAC 2-7-1(34).

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

Compliance Requirements [326 IAC 2-1.1-11]

C.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. 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)]

If required by Section D, all monitoring and record keeping requirements shall be implemented when operation begins. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment.

C.10 Monitoring Methods [326 IAC 3] [40 CFR 60] [40 CFR 63]

Any monitoring or testing required by Section D of this permit shall be performed according to the provisions of 326 IAC 3, 40 CFR 60, Appendix A, 40 CFR 60 Appendix B, 40 CFR 63, or other approved methods as specified in this permit.

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

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

(b) The Permittee may request that the IDEM, OAQ approve the use 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.

The requirements of this condition shall supersede the requirements of Condition C.12 of SSM 173-17780-00007, issued on July 21, 2004.

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

C.12 Response to Excursions or Exceedances [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary response steps 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). Response steps may include, but are not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(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;

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) response steps taken.

The requirements of this condition shall supersede the requirements of Condition C.13 of SSM 173-17780-00007, issued on July 21, 2004.

C.13 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, and the Southwest Regional Office within four (4) daytime business hours after the beginning of the emergency, or after the emergency was discovered or reasonably should have been discovered

Telephone Number: 1-800-451-6027 (ask for Office of Air Quality, Compliance Section), or

Telephone Number: 317-233-5674 (ask for Compliance Section)

Facsimile Number: 317-233-5967

Southwest Regional Office: 812-380-2305, facsimile 812-380-2304

(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 Branch, Office of Air Quality
100 North Senate Avenue
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) Response steps taken.

The notification which shall be submitted by the Permittee does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

(e) The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However, IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(10) 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.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance

Monitoring Report.

The requirements of this condition shall supersede the requirements of Condition C.14 of SSM 173-17780-00007, issued on July 21, 2004.

C.14 Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5] [326 IAC 2-7-6]

(a) When the results of a stack test performed in conformance with Section C - Performance Testing, of this permit exceed the level specified in any condition of this permit, the Permittee shall take appropriate response actions. The Permittee shall submit a description of these response actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize excess emissions from the affected facility while the response actions are being implemented.

(b) A retest to demonstrate compliance shall be performed within one hundred twenty (120) days of receipt of the original test results. Should the Permittee demonstrate to IDEM, OAQ that retesting in one-hundred and twenty (120) days is not practicable, IDEM, OAQ may extend the retesting deadline.

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

The documents submitted pursuant to this condition do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

(b) Unless otherwise specified in this permit, all record Keeping requirements not already legally required shall be implemented within ninety (90) days of permit issuance.

C.16 General Reporting Requirements [326 IAC 2-7-5(3)(C)]

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

Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue
Indianapolis, Indiana 46204-2251

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

(c) Unless otherwise specified in this permit, all reports required in Section D of this permit shall be submitted within thirty (30) days of the end of the reporting period. All reports do require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(d) The first report shall cover the period commencing on the date of issuance of this permit and ending on the last day of the reporting period. Reporting periods are based on calendar years.

The remainder of the page is left blank intentionally.

SECTION D.1 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]: Green anode baking ring furnace, emergency bypass engine, dross cooling operation, pitch fume treatment system, and anode butt blast machine

(a) One (1) above-ground, natural gas-fired, green anode baking ring furnace, known as Bldg. 295 Anode Baking Ring Furnace, equipped with an A-446 pollution control system consisting of three (3) reactor sections with a baghouse for PM and PM_{10} control and dry alumina scrubber for TF and SO_2 control which operate at a minimum of two (2) reactor sections at any one (1) time, exhausting through Stacks 265D.1, 265D.2, 265D.3, 265D.4, 265D.5, 265D.6, 265D.8, and 265J.1 (which is the diesel-fired emergency bypass engine stack used for venting ring furnace exhaust gases during emergency periods of unexpected loss of power to the A-446 dry scrubber fans), capacity: 21.42 tons of green anodes per hour.

(b) One (1) diesel-fired emergency bypass engine, consisting of an emergency bypass stack with a bypass duct and emergency bypass fan, heat output capacity: 200 horsepower.

(c) One (1) dross cooling operation, equipped with two (2) small baghouses, identified as Baghouses #1 and #2, and two (2) large baghouses, identified as Baghouses #3 and #4 for PM, PM_{10}, and lead control, capacity: 66.0 tons per hour.

(d) One (1) pitch fume treatment system (formerly green anode forming operations), equipped with a pollution control system, consisting of two (2) dry coke scrubbers and two (2) baghouses for PM, PM_{10}, and VOC control, capacity: 52.5 tons of green anodes per hour.

(e) One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, equipped with one (1) baghouse for PM and PM_{10} control, exhausting to Stack 132.9, capacity: 242,000 pounds of steel per hour.

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

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

The provisions of 40 CFR 63 Subpart A - General Provisions, which are incorporated as 326 IAC 20-1-1, apply to the one (1) green anode baking ring furnace described in this section except when otherwise specified in 40 CFR 63 Subpart LL.

D.1.2 Existing Anode Baking Furnace Emission Limits [326 IAC 20-24-1] [40 CFR Part 63.843(c), Subpart LL]

Pursuant to 40 CFR 63.843(c), the Permittee shall not discharge or cause to be discharged into the atmosphere any emissions of total fluorides (TF) or polycyclic organic matter (POM) in excess of the following limits:

(a) Emissions of TF shall not exceed 0.20 pounds per ton of green anode; and

(b) Emissions of POM shall not exceed 0.18 pounds per ton of green anode.

Pursuant to 40 CFR 60.190(c), the emission limits also satisfy the requirements of 40 CFR 60 Subpart S.

D.1.3 Prevention of Significant Deterioration [326 IAC 2-2]

(a) The following limits shall apply to the green anode baking ring furnace:

(1) The input of green anodes to the green anode baking ring furnace shall be limited to 187,645 tons per twelve (12) consecutive month period with compliance deter-

mined at the end of each month.

(2) The emission rate of PM shall not exceed 0.676 pounds of PM per ton of green anode;

(3) The emission rate of PM_{10} shall not exceed 3.92 pounds of PM_{10} per ton of green anode;

(4) The emission rate of SO_2 shall not exceed 1.11 pounds of SO_2 per ton of green anode; and

(5) The emission rate of CO shall not exceed 3.57 pounds of CO per ton of green anode.

(6) Any change or modification that increases net lead emissions of this modification to greater than PSD Significant levels, shall require prior IDEM, OAQ, approval.

(b) The following limits shall apply to the dross cooling operation:

(1) The throughput of dross through the dross cooling operation shall be limited to 38,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(2) The emission rate of PM shall not exceed 0.440 pounds of PM per ton of dross throughput; and

(3) The emission rate of PM_{10} shall not exceed 0.454 pounds per ton of dross throughput.

(c) The following limits shall apply to the pitch fume treatment system:

(1) The emission rate of PM shall not exceed 0.070 pounds of PM per ton of green anode;

(2) The emission rate of PM_{10} shall not exceed 0.050 pounds PM_{10} per ton of green anode; and

(3) The emission rate of VOC shall not exceed 0.030 pounds of VOC per ton of green anode.

(d) The following limits shall apply to the anode butt blast machine:

(1) The PM emission rate shall not exceed 1.029 pounds per hour, equivalent to 0.01 grains per dry standard cubic foot at a flow rate of 12,000 actual cubic feet per minute.

(2) The PM_{10} emission rate shall not exceed 0.857 pounds per hour, equivalent to 0.0083 grains per dry standard cubic foot at a flow rate of 12,000 actual cubic feet per minute.

The throughput limits in Conditions D.1.3(a)(1) and (b)(1) in combination with the emission limits specified by Conditions D.1.3(a)(2) through (5), (b)(2) and (3), as well as (c) and (d), render the requirements of 326 IAC 2-2 not applicable to the green anode baking ring furnace.

The requirements of this condition shall supersede the requirements of Condition D.1.2 of SSM 173-14145-00007, issued on July 7, 2001 and Condition D.1.3 of SSM 173-15661-00007, issued

on August 23, 2002.

D.1.4 Additional Emergency Provisions

Pursuant to Operation Condition 4 of PC (87) 1840, issued on February 26, 1990:

(a) The Permittee shall only operate the emergency bypass engine during emergency periods of unexpected loss of power to the A-446 dry scrubber fans or for short periods during readiness testing.

(b) The emergency bypass engine shall be limited to 300 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.5 Particulate Matter (PM) [326 IAC 6-3-2]

(a) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable PM emission rate for the one (1) green anode baking ring furnace shall not exceed 31.95 pounds per hour, total when operating at a process weight rate of 21.42 tons per hour. The allowable PM emission rate was calculated with the following equation.

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

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

(b) Pursuant to 326 IAC 6-3-2 (Particulate Emission Limitations for Manufacturing Processes), the allowable PM emission rate from:

(1) The one (1) dross cooling operations shall not exceed 47.2 pounds per hour when operating at a process weight rate of 66.0 tons per hour.

(2) The one (1) pitch fume treatment system shall not exceed 45.0 pounds per hour when operating at a process weight rate of 52.5 tons of green anodes per hour.

(3) The one (1) anode butt blast machine shall not exceed 54.9 pounds per hour when operating at a process weight rate of 142.42 tons (121 tons of steel and 21.42 tons of green anodes) per hour.

These allowable PM emission rates were calculated with the following equation.

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

$E = 55.0\ P^{0.11} - 40$ where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

The requirements of this condition shall supersede the requirements of Condition D.1.1 of SSM 173-14145-00007, issued on July 7, 2001 and Condition D.1.5 of SSM 173-15661-00007, issued on August 23, 2002.

D.1.6 Control Technology Review; Requirements [326 IAC 2-2-3]

Pursuant to 326 IAC 2-2-3 (BACT) and Conditions 9 and 10 of 87-08-91-0111, issued November 4, 1989:

(a) Sulfur dioxide emissions from the A446 dry alumina scrubber shall be limited to 1.13 tons per day, and 35 tons per month, and 412 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

(b) ALCOA shall use the lowest sulfur content coal tar pitch commercially available. This shall be limited to a maximum, of 0.80% sulfur.

(1) Should pitch with a sulfur content of 0.80% become unavailable and the monthly average pitch sulfur content exceed this limit, then ALCOA shall have thirty (30) days from the end of the month in violation to provide to the OAQ documentation that lower sulfur pitch is not available and documentation for a new proposed pitch sulfur content BACT limit. The BACT limit in (a) above shall remain in effect until such time as the Commissioner approves a revised pitch sulfur content BACT limit. However, enforcement action will not be taken until such time as ALCOA has been given the opportunity to support, request and obtain approval for a revised BACT limit as described above. Testing to establish a new A446 inlet SO_2 emission rate, similar to that described below, will be required as part of any revised BACT limit approval.

(2) If the monthly average sulfur content of the pitch used in the anodes exceeds 0.75% for any calendar month, then ALCOA shall report this to OAQ within thirty (30) days. This notification shall include a discussion of the reason the pitch sulfur content has increased and whether ALCOA has been able, or will be able, to obtain pitch with sulfur content below 0.75%. If pitch with a sulfur content of less than 0.75% is not available, then ALCOA shall submit documentation of this and, within ninety (90) days of the notification, conduct an A446 dry scrubber SO_2 inlet (ring furnace outlet) test to reestablish the SO_2 inlet emission rate pursuant to 326 IAC 7-4-10(a)(4)(H), previously established in Condition No. 8 of 87-08-91-0111, issued November 4, 1989. This test shall be conducted pursuant to 326 IAC 3-2 at the current maximum achievable anode production rate and the result will be used to determine compliance.

D.1.7 Warrick County Sulfur Dioxide Emission Limitations [326 IAC 7-4-10]

Pursuant to 326 IAC 7-4-10(a)(4)(H), the sulfur dioxide emissions from the green anode baking ring furnace shall not exceed 94.1 pounds per hour and 412 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

D.1.8 Natural Gas Usage Limitation

Pursuant to Condition 17 of 87-08-91-0111, issued November 4, 1989, natural gas throughput to the green anode baking ring furnace shall be limited to 75 million cubic feet per month and 600 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

Compliance Determination Requirements

D.1.9 TF and POM Testing Requirements [326 IAC 20-24-1] [40 CFR Part 63, Subpart LL]

(a) Pursuant to 40 CFR 63.847(d)(4), the Permittee shall conduct an initial performance test for the green anode baking ring furnace within 180 days after initial startup and all subsequent performance tests for the green anode baking ring furnace in accordance with the requirements of the general provisions in 40 CFR 63 Subpart A of this part, the approved test plan, and the procedures in Condition D.1.9(b).

(b) Pursuant to 40 CFR 63.849(a), the Permittee shall use the following reference methods to determine compliance with the applicable emission limits for TF and POM emissions:

(1) Method 13A or Method 13B in Appendix A to Part 60 of 40 CFR or an approved alternative, for the concentration of TF where stack or duct emissions are sampled.

(2) Method 315 in Appendix A to Part 63 of 40 CFR or an approved alternative, for the concentration of POM where stack or duct emissions are sampled.

(c) In order to demonstrate compliance with Condition D.1.2, the Permittee shall measure and record the emission rate of TF and POM from the green anode baking ring furnace exiting the exhaust stacks of the A-446 pollution control system.

The requirements of this condition shall supersede the requirements of Condition D.1.10 of SSM 173-17780-00007, issued on July 21, 2004.

D.1.10 Anode Bake Furnace Compliance Determination [326 IAC 20-24-1] [40 CFR Part 63, Subpart LL]

The Permittee shall determine compliance with the applicable TF and POM emission limits using the following equations and procedures:

(a) Compute the emission rate (Eb) of TF from the anode bake furnace the following equation,

$$E_b = \frac{(C_s \times Q_{sd})}{(P_b \times K)} \qquad (Equation\ 2)$$

Eb = emission rate of TF, kg/Mg (lb/ton) of green anodes produced
Cs = concentration of TF, Mg/dscm (Mg/dscf)
Qsd = volumetric flow rate of effluent gas (dscf/hr)
Pb = quantity of green anode material placed in furnace, Mg/hr (ton/hr); and
K = conversion factor, 10^6 Mg/kg (453,600)

(b) Compute the emission rate of POM from the anode bake furnace using the equation above,

Where:

Eb = emission rate of POM, kg/Mg (lb/ton) of green anodes produced and
Cs = concentration of POM, Mg/dscm (Mg/dscf)

D.1.11 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11]

(a) Within 180 days after startup of the green anode baking ring furnace, in order to demonstrate compliance with Conditions D.1.3(a)(2) and (3) the Permittee shall perform PM and PM_{10} testing for the green anode baking ring furnace, utilizing methods as approved by the Commissioner. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C- Performance Testing. During the stack test, the Permittee shall determine the sensitivity of the bag leak detection system and calibrate the particulate concentration readings of the electrodynamic bag leak detector in order to provide an output relative to outlet grain loading levels.

(b) Within 180 days after startup of the green anode baking ring furnace, in order to demonstrate compliance with Condition D.1.3(a)(4) the Permittee shall perform SO_2 testing for the green anode baking ring furnace, utilizing methods as approved by the Commissioner. Testing shall be conducted in accordance with Section C- Performance Testing.

(c) Within 180 days after startup of the green anode baking ring furnace, in order to demonstrate compliance with Condition D.1.3(b)(3) the Permittee shall perform PM_{10} testing for the dross cooling operation while operating with one (1) large baghouse and one (1) small baghouse, utilizing methods as approved by the Commissioner. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C-

Performance Testing. During the stack test, the Permittee shall determine the sensitivity of the bag leak detection system and calibrate the particulate concentration readings of the electrodynamic bag leak detector in order to provide an output relative to outlet grain loading levels.

(d) Within 180 days after startup of the green anode baking ring furnace, in order to demonstrate compliance with Conditions D.1.3(c)(2) and (d)(2), the Permittee shall perform PM_{10} testing for the pitch fume treatment system and the anode butt blast machine, utilizing methods as approved by the Commissioner. These tests shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM_{10} includes filterable and condensable PM_{10}. Testing shall be conducted in accordance with Section C- Performance Testing. During the stack test, the Permittee shall determine the sensitivity of the bag leak detection system and calibrate the particulate concentration readings of the electrodynamic bag leak detector in order to provide an output relative to outlet grain loading levels.

The requirements of this condition shall supersede the requirements of Condition D.1.12 of SSM 173-15661-00007, issued on August 23, 2002.

D.1.12 Particulate Matter (PM) and Particulate Matter Less than Ten Microns (PM_{10})

(a) In order to comply with Conditions D.1.3(a)(2) and (3) as well as Condition D.1.5(a), at least (2) reactor sections of the A-446 pollution control system shall be in operation at all times when the green anode baking ring furnace is in operation.

(b) In order to comply with Conditions D.1.3(c)(1) and (2), (d)(1) and (2), as well as Conditions D.1.5(b)(2) and (b)(3), the baghouses for PM and PM_{10} control shall be in operation at all times when the pitch fume treatment system and the anode butt blast machine is are in operation.

(c) In order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), at least two baghouse***s*** controlling PM and PM_{10} shall be in operation at all times when the dross cooling process is in operation.

(1) When the dross cooling process is only operating one (1) small baghouse and one (1) large baghouse, in order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), all roll-up doors in the dross cooling building shall be closed, except when vehicles are entering or exiting the building.

(2) When the dross cooling process is operating and neither large baghouse is operating, in order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), all roll-up doors in the dross cooling building shall be closed, except when vehicles are entering or exiting the building. While both large baghouses are not operating, dross loadout operations shall be suspended.

The requirements of this condition shall supersede the requirements of Condition D.1.13 of SSM 173-15661-00007, issued on August 23, 2002 and Condition D.1.13(c) of SSM 173-17780-00007, issued on July 21, 2004.

D.1.13 TF and SO_2

In order to comply with Conditions D.1.2(a), D.1.3(a)(4), and D.1.6, at least two (2) of the three (3) A-446 pollution control system reactor sections for TF and SO_2 control shall be in operation at all times when the green anode baking ring furnace is in operation.

The requirements of this condition shall supersede the requirements of Condition D.1.14 of SSM 173-15661-00007, issued on August 23, 2002.

D.1.14 Sulfur Dioxide [326 IAC 2-2-3] [326 IAC 7-4-10(a)(4)]

In order to comply with Conditions D.1.6 and D.1.7, the Permittee shall utilize the following methods and/or calculations:

(a) Compliance with the pounds per hour limitations specified in 326 IAC 7-4-10(a)(4) shall be based on a stack test pursuant to 326 IAC 7-2-1(b).

(b) Compliance with the tons per year limitations specified in 326 IAC 7-4-10(a)(4) shall be based on a rolling twelve (12) consecutive month emission total. Monthly sulfur dioxide emissions shall be determined from calendar month material balances using actual average sulfur content and material throughput.

(c) Pursuant to Condition 11 of 87-08-91-0111, issued November 4, 1989, compliance shall be determined from the tested SO_2 evolution (A446 inlet) emission factor of 3.69 pounds of SO_2 per ton of baked carbon and the estimated A446 dry alumina scrubber SO_2 removal efficiency based on the A446 feed.

(1) Daily records shall be used to calculate the average tons per hour baked carbon production rate and the average pounds per hour per reactor alumina feed rate for each day.

(2) The daily average pounds per reactor alumina feed rate shall be used to determine the daily average percent SO_2 removal.

(3) The daily percent removal shall be used, with the SO_2 evolution emission factor and the average production rate, to calculate the pounds per hour and pounds per ton of baked carbon daily average SO_2 emission rates.

(d) Pursuant to Condition 12 of 87-08-91-0111, issued November 4, 1989, compliance shall be determined based on the daily SO_2 emission rates.

(1) The daily SO_2 emission rates shall be calculated by multiplying the daily average pounds of SO_2 per ton of baked carbon (as determined by Condition D.1.14(c)) times the daily baked carbon production to calculate the pounds per day SO_2 emission rates.

(2) The daily SO_2 emission rates shall then be summed to calculate the tons per month and the tons per twelve (12) consecutive month period SO_2 emission rates.

D.1.15 Emergency Bypass Engine Operation

In order to document compliance with Condition D.1.4, the following requirements shall apply to operation of the emergency bypass engine:

(a) Pursuant to Operation Condition 3 of PC (87) 1840, issued on February 26, 1990, the emergency bypass engine shall be operated in accordance with manufacturer's specifications.

(b) Pursuant to Operation Condition 4 of PC (87) 1840, issued on February 26, 1990, the A-446 dry alumina scrubbers shall only be bypassed and untreated ring furnace flue gas vented through the emergency bypass stack during emergency periods and not during weekly readiness testing periods.

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

D.1.16 Emissions Monitoring Requirements [326 IAC 20-24-1] [40 CFR Part 63.848, Subpart LL]

The following applies to the A-446 pollution control system operating in the one (1) green anode baking ring furnace:

(a) Pursuant to 40 CFR 63.848(c), using the procedures in Sec. 63.847 and in the approved test plan, the Permittee shall monitor TF and POM emissions from the anode bake furnace on an annual basis. The Permittee shall compute and record the annual average of TF and POM emissions from at least three (3) runs to determine compliance with the applicable emission limits. The Permittee must include all valid runs in the annual average.

(b) Pursuant to 40 CFR 63.848(f), the Permittee shall install, operate, calibrate, and maintain a continuous parameter monitoring system for the A-446 pollution control system. The Permittee shall install monitoring devices for the measurement of alumina flow and air flow for the dry alumina scrubber.

(c) Pursuant to 40 CFR 63.848(f), Alcoa, Inc. - Warrick Operations submitted their compliance monitoring plan on April 23, 1999 and amended their compliance monitoring plan on December 5, 2003.

(d) Pursuant to 40 CFR 63.848(g) and 40 CFR 63.8(f), the Permittee shall operate the bag leak detection systems installed on each stack of the A-446 pollution control system and each baghouse of the pitch fume treatment system pursuant to Condition D.1.17. The Permittee shall visually inspect the exhaust stacks of the A-446 pollution control system and the exhaust stack of the pitch fume treatment system on a daily basis for evidence of any visible emissions indicating abnormal operation whenever the bag leak detection systems are not operational.

(e) Pursuant to 40 CFR 63.848(f), if a monitoring device for the A-446 pollution control system measures an operating parameter outside the limits established pursuant to Sec. 63.847(h), if the alarm on any of the bag leak detection systems activates, the Permittee shall initiate the corrective action procedures identified in the startup, shutdown, and malfunction plan within one (1) hour. Failure to initiate the corrective action procedures within one (1) hour or to take the necessary corrective actions to remedy the problem is a violation.

(f) Pursuant to 40 CFR 63.848(j), the Permittee of an existing anode bake furnace shall install, operate, and maintain a monitoring device to determine the daily weight of aluminum produced and the weight of green anode material placed in the anode bake furnace. The weight of green anode material may be determined by monitoring the weight of all anodes or by monitoring the number of anodes placed in the furnace and determining an average weight from measurements of a representative sample of anodes.

(g) Pursuant to 40 CFR 60.848(k), the Permittee shall submit recommended accuracy requirements to IDEM, OAQ, for review and approval. All monitoring devices required by this section must be certified by the Permittee to meet the accuracy requirements and must be calibrated in accordance with the manufacturer's instructions.

(h) Pursuant to 40 CFR 60.848(l), the Permittee may monitor alternative A-446 pollution control system operating parameters subject to prior written approval by IDEM, OAQ.

The requirements of this condition shall supersede the requirements of Condition D.1.16 of SSM 173-15661-00007, issued on August 23, 2002 and Condition D.1.17 (d) of SSM 173-17780-00007, issued on July 21, 2004.

D.1.17 Bag Leak Detection System

The Permittee shall install and operate a continuous bag leak detection system for each baghouse of the A-446 pollution control system for the green anode baking ring furnace, the dross cooling room, the pitch fume treatment system, and the anode butt blast machine. The bag leak detection system shall meet the following requirements:

(a) Each electrodynamic bag leak detection system shall be installed, calibrated, operated, and maintained according to the "Fabric Filter Bag Leak Detection Guidance," (September 1997).

(b) The bag leak detection system shall be certified by the manufacturer to be capable of detecting PM emissions at concentrations of ten (10) milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(c) The bag leak detection system sensor shall provide output of relative or absolute PM loadings.

(d) The bag leak detection system shall be equipped with a device to continuously record the output signal from the sensor.

(e) The bag leak detection system shall be equipped with an alarm system that will sound automatically when an increase in relative PM emissions over a preset level is detected. The alarm shall be located where it is easily heard by plant operating personnel.

(f) For negative pressure or induced air fabric filters, the bag leak detector shall be installed downstream of the fabric filter.

(g) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(h) The baseline output shall be established by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(i) Following initial adjustment of the system, the Permittee shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time except as detailed in the Compliance Response Plan. In no case may the sensitivity be increased by more than one hundred (100%) percent or decreased more than fifty (50%) percent over a 365-day period unless such adjustment follows a complete fabric filter inspection which demonstrates that the fabric filter is in good operating condition.

(j) In the event that a bag leak detection system should malfunction, fail or otherwise need repair, the Permittee shall perform visible emissions notations of the stack exhausts associated with that bag leak detection system as follows:

(1) Visible emission notations of the stack exhausts shall be performed once per day during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.

(2) 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.

(3) 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.

(4) 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.

(5) If abnormal emissions are observed from the green anode baking ring furnace or the pitch fume treatment system, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(6) If abnormal emissions are observed from the anode butt blast machine and the dross cooling operation, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The requirements of this condition shall supersede the requirements of Conditions D.1.5, D.1.6, and D.1.7, of SSM 173-14145-00007, issued on July 7, 2001, Condition D.1.17 of SSM 173-15661-00007, issued on August 23, 2002, and Condition D.1.18 (j) (5) and (6) of SSM 173-17780-00007, issued on July 21, 2004.

D.1.18 Bag Leak Detection Alarm Activation

In the event that a bag leak detection system alarm is activated for any reason, the same response steps specified in the SSM and Parametric Monitoring Plan for use during periods of startup, shutdown, and malfunction, shall be followed to correct the cause for the alarm. Regardless of whether the alarm is caused by a malfunction as defined, the Permittee shall take the following response steps:

(a) For the anode ring furnace A-446 pollution control system and the pitch fume treatment pollution control system, which are multi-reactor units, response steps shall be initiated within one (1) hour. For any failure, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

(1) If operations continue at the green anode baking ring furnace after bag failure is observed and two (2) of the three (3) reactor sections of the A-446 pollution control system have been in operation, the failure shall be addressed by shutting down the reactor section that the failure has occurred at and starting up the reactor section that is not in operation. If it will be ten (10) days or more after the failure, is observed before the failed reactor section will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date that the failed reactor section 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 steps taken up to the time of notification.

(2) If operations continue at the baghouse portion of the pitch fume treatment system after bag failure is observed, the failure shall be addressed by conducting visible emissions notations once per day or by calculating daily particulate concentrations. If it will be 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 steps taken up to the time of notification.

(b) For the four (4) dross cooling operation baghouses which are single compartment baghouses, when more than two (2) of the four (4) baghouses fail the feed to the dross cooling operation shall be shut down until the failed units have been repaired or replaced. The emissions units shall be shut down no later than the completion of the processing of the material in the emissions unit. In the event that both large baghouses are not operating, dross loadout operations shall be suspended until at least one large baghouse becomes operational. 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 C - 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 electrodynamic broken bag detector data logger output.

(c) For the anode butt blast machine baghouse which is a single compartment baghouse, the feed to the anode butt blast machine shall be shut down 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 C - 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 electrodynamic broken bag detector data logger output .

The requirements of this condition shall supersede the requirements of Conditions D.1.8 and D.1.9 of SSM 173-14145-00007, issued on July 7, 2001**,** Condition D.1.**18** of SSM 173-15661-00007, issued on August 23, 2002, **and Condition D.1.19 of SSM 173-17780-00007, issued on July 21, 2004**.

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

D.1.19 Anode Baking Furnace Record Keeping and Reporting Requirements [326 IAC 20-24-1] [40 CFR Part 63, Subpart LL]

Pursuant to 40 CFR 63.850(e), the Permittee shall maintain files of all information (including all reports and notifications) required by Sec. 63.10(b) and by 40 CFR 63 Subpart LL.
In addition to the general records required by Sec. 63.10(b), the Permittee shall maintain records of the following information:

(a) Daily production rate of green anode material placed in the anode bake furnace;

(b) A copy of the startup, shutdown, and malfunction plan;

(c) Records, such as a checklist or the equivalent, of the results of each inspection of the anode butt blast machine baghouse stack exhaust or dross cooling baghouse stack exhaust once per day when the applicable bag leak detection system malfunctions, fails or otherwise needs repair.

(d) Records documenting the corrective actions taken when the limits for an operating parameter established under Sec. 63.847(h) were exceeded, when visible emissions indicating abnormal operation were observed from the A-446 pollution control system stacks or pitch fume treatment system stack during a daily inspection, when the applicable bag leak detection system malfunctions, fails or otherwise needs repair.

The requirements of this condition shall supersede the requirements of Condition D.1.20 of SSM 173-17780-00007, issued on July 21, 2004.

D.1.20 Record Keeping Requirements

(a) To document compliance with Condition D.1.3(a)(1), the Permittee shall maintain monthly records of the throughput of green anodes to the green anode baking ring furnace.

(b) To document compliance with Condition D.1.3(b)(1), the Permittee shall maintain monthly records of the throughput of the dross cooling operation.

(c) To document compliance with Condition D.1.4, the Permittee shall maintain the following:

(1) A log of all periods of operation of the emergency bypass fan diesel engine. This log shall include the following:

(A) The date,

(B) The times for start and end of operation,

(C) The reason for the operation (i.e., readiness testing or description of emergency situation), and

(D) Whether the untreated ring furnace flue gas was being vented thru the emergency bypass stack.

(2) The log shall also show the total hours of operation for each calendar month and for the most recent twelve (12) month period. This record shall be maintained for at least the most recent twenty-four (24) month period.

(3) Any time that the emergency bypass engine and fan are operating and venting untreated ring furnace flue gas for more than one (1) hour, this shall be reported in accordance with Section C - Emergency Provisions.

(d) To document compliance with Conditions D.1.6 and D.1.14:

(1) Records of the A446 outlet SO_2 emission rates and of the dry alumina scrubber operations shall be maintained for the most recent twenty-four (24) month period and made available to the OAQ upon request.

Records of the dry alumina scrubber operations shall include the following:

(A) An estimate of the daily average alumina feed rates in pounds per hour per reactor; and

(B) The time periods when any of the reactors are out of service and summary of all maintenance (routine, preventative or malfunction related) performed on the A446 system.

(2) Records of pitch sulfur content based on vendor analysis shall be maintained for the most recent twenty-four (24) month period and made available to the OAQ upon request.

(e) To document compliance with Condition D.1.7, the Permittee shall maintain calendar month material balances using actual average sulfur content and material throughput.

(f) To document compliance with Condition D.1.8, records of the monthly ring furnace natural gas throughput shall be maintained for the most recent twenty-four (24) month period and made available to the OAQ upon request.

(g) To document compliance with Condition D.1.17(j), the Permittee shall maintain records of visible emission notations of the green anode baking ring furnace, dross cooling operation, pitch fume treatment system, and anode butt blast machine baghouse stack exhausts once per day when the applicable bag leak detection system malfunctions, fails or otherwise needs repair.

(h) To document compliance with Condition D.1.18, the Permittee shall maintain records of the occurrences of all bag leak detection alarms and the response steps.

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

D.1.21 Reporting Requirements

(a) A quarterly summary of the information to document compliance with Conditions D.1.3(a)(1) and (b)(1), D.1.4(b), D.1.6 through D.1.8 and D.1.13 shall be submitted to the addresses listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(b) Pursuant to 40 CFR Part 63.10(e)(3), the Permittee shall submit a report, or summary report, if measured emissions are in excess of the applicable standard. The report shall contain the information specified in 40 CFR Part 63.10(e)(3)(v) and be submitted semiannually unless quarterly reports are required as a result of excess emissions. The report shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the semi-annual or if necessary after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR QUALITY

PART 70 SOURCE MODIFICATION CERTIFICATION

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007

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

Please check what document is being certified:

☐ 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:

Date:

The remainder of the page is left blank intentionally.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Green anode baking ring furnace
Parameter: Throughput of green anodes
Limit: 187,645 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Green anodes (tons)	Green anodes (tons)	Green anodes (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Green anode baking ring furnace dry scrubber
Parameter: Sulfur Dioxide Emissions
Limit: 35 tons per month and 412 tons per twelve (12) consecutive month period with compliance determined at the end of each month. Monthly sulfur dioxide emissions shall be determined from calendar month material balances using actual average sulfur content and material throughput.

YEAR:

Month	Sulfur Dioxide Emissions (tons)	Sulfur Dioxide Emissions (tons)	Sulfur Dioxide Emissions (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Dross cooling operation
Parameter: Throughput
Limit: 38,000 tons per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Dross Throughput (tons)	Dross Throughput (tons)	Dross Throughput (tons)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Ring Furnace Emergency Bypass Engine
Parameter: Hours of Operation
Limit: 300 hours per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Hours of Operation	Hours of Operation	Hours of Operation
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Green anode baking ring furnace
Parameter: Natural gas throughput
Limit: 75 million cubic feet per month and 600 million cubic feet per twelve (12) consecutive month period with compliance determined at the end of each month.

YEAR:

Month	Natural Gas Usage (million cubic feet)	Natural Gas Usage (million cubic feet)	Natural Gas Usage (million cubic feet)
	This Month	Previous 11 Months	12 Month Total

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.
Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Green anode baking ring furnace dry scrubber
Parameter: Maximum monthly calculated pounds of SO_2 per ton of baked carbon and the monthly average percentage sulfur of pitch used in anodes
Limit: 3.69 pounds of SO_2 per ton of baked carbon and 0.80% Sulfur

YEAR:

Month	Maximum calculated pounds of SO_2 per ton of baked Carbon	Average % S of pitch used in anodes

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

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

Part 70 Source Modification Quarterly Report

Source Name: Alcoa, Inc. - Warrick Operations
Source Address: Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address: Bldg. 860E, P.O. Box 10, Newburgh, Indiana 47630
Source Modification No.: SSM 173-17780-00007
Facility: Green anode baking ring furnace dry scrubber
Parameter: Maximum calculated daily average pounds of SO_2 per hour, lowest and highest daily average alumina feed rate and the maximum average baked carbon production and associated aluminum feed rate.

Year: _____

Parameter	First month of the quarter	Second month of the quarter	Third month of the quarter
Maximum calculated daily average lbs SO_2 per hour(lbs/hr)			
Lowest daily average alumina feed rate (lbs/hr/reactor)			
Highest daily average alumina feed rate (lbs/hr/reactor)			
Maximum daily average baked carbon production rate (tons/hr)			
Daily average alumina feed rate on the day when the maximum daily average carbon production rate was attained(lbs/hr/reactor)			

☐ No deviation occurred in this month.

☐ Deviation/s occurred in this month.

Deviation has been reported on: _____

Submitted by: _____

Title/Position: _____

Signature: _____

Date: _____

Phone: _____

Attach a signed certification to complete this report.

Indiana Department of Environmental Management
Office of Air Quality

Technical Support Document (TSD) for
a Part 70 Significant Permit Modification

Source Description and Location

Source Name:	Alcoa, Inc. - Warrick Operations
Source Location:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629
County:	Warrick
SIC Code:	3334 and 3352
Operation Permit No.:	T173-6627-00007
Operation Permit Issuance Date:	Yet to be issued
Significant Permit Modification No.:	173-21948-00007
Permit Reviewer:	Dr. Trip Sinha

Existing Approvals

The source submitted an application for a Part 70 Operating Permit on September 19, 1996. At this time, this application is still under review. The source is operating under the following approvals:

(a) Minor Source Modification 173-20390-00007, issued on December 12, 2004;

(b) Significant Permit Modification 173-18905-00007, issued on September 24, 2004;

(c) Significant Source Modification 173-17780-00007, issued on July 21, 2004;

(d) Significant Source Modification 173-18465-00007, issued on March 16, 2004;

(e) Significant Source Modification 173-16034-00007, issued on March 28, 2003;

(f) Administrative Amendment 173-16991-00007, issued on January 30, 2003;

(g) Administrative Amendment 173-16685-00007, issued on December 27, 2002;

(h) Significant Source Modification 173-15661-00007, issued on August 23, 2002;

(i) Minor Source Modification 173-15352-00007, issued on April 23, 2002;

(j) Minor Source Modification 173-14944-00007, issued on December 5, 2001;

(k) Significant Source Modification 173-14145-00007, issued on July 7, 2001;

(l) Minor Source Modification 173-12886-00007, issued on February 1, 2001;

(m) Minor Permit Modification 173-12588-00007, issued on October 10, 2000;

(n) Minor Source Modification 173-12676-00007, issued on October 2, 2000;

(o) Minor Permit Modification 173-11419-00007, issued on June 9, 2000;

(p) Significant Source Modification 173-11342-00007, issued on May 23, 2000;

(q) Significant Source Modification 173-11598-00007, issued on February 3, 2000;

(r) Administrative Amendment 173-11403-00007, issued on January 28, 2000;

(s) CP 173-11414-00007, issued on December 15, 1999;

(t) CP 10913-00007, issued on October 1, 1999;

(u) Exemption 173-10598-00007, issued on September 20, 1999;

(v) Minor Source Modification 173-10959-00007, issued on July 15, 1999;

(w) Exemption 173-10142-00007, issued on October 28, 1998;

(x) Registration 173-9960-00007, issued on August 6, 1998;

(y) Registration 173-9574-00007, issued on August 6, 1998;

(z) Exemption 173-9620-00007, issued on June 17, 1998;

(aa) Exemption 173-9644-00007, issued on May 5, 1998;

(bb) Administrative Amendment 173-8566-00007, issued on May 29, 1997;

(cc) Registration 173-8161-00007, issued on May 19, 1997;

(dd) Registration 173-8193-00007, issued on May 13, 1997;

(ee) Administrative Amendment 173-6196-00007, issued on September 27, 1996;

(ff) Registration 173-6325-00007, issued on August 28, 1996;

(gg) Administrative Amendment 173-5524-00007, issued on May 6, 1996;

(hh) Registration 173-5449-00007, issued on April 11, 1996;

(ii) Administrative Amendment 173-4611-00007, issued on November 30, 1995; and

(jj) P173-4501-00007, issued on June 16, 1995.

Description of Proposed Modification

The Office of Air Quality (OAQ) has reviewed a modification application requesting an approval of an alternative monitoring plan (AMP) for daily visible emissions observations for the two baghouses of the pitch fume treatment system and each of the seven exhaust stacks of the anode baking ring furnace A446 pollution control system, as specified by 40 CFR 63.848 (g). This AMP is to operate the bag leak detection systems installed pursuant to Significant Source Modification No. 173-17780-00007 instead of performing daily visible emissions observations at the above stacks.

IDEM, OAQ has determined that the AMP plan submitted by Alcoa, Inc. – Warrick Operations, in lieu of daily visible emissions observations, meets the requirements of AMP, 40 CFR 63.8 (f) (4) (i) and (ii). This determination is based on the following:

(a) 40 CFR 63, Subpart LLL requires the following monitoring parameter for the baghouses:

(1) Visible emissions.

The owner or operator shall visually inspect the exhaust stacks of each control device on a daily basis for evidence of any visible emissions indicating abnormal operation.

(b) The Permittee's application contained a description of the proposed alternative monitoring system which addresses the four elements contained in the definition of monitoring in 40 CFR 63.2 and a performance evaluation test plan as specified in paragraph 40 CFR 63.8 (e) (3).

The four elements of the monitoring are given below:

(1) Indicator of performance
Alcoa has elected to install PCME DT990 bag leak detection systems. The PCME detectors provide a stack concentration record that indicates baghouse performance trends over time. The PCME detector has a data logger that compares its output to a pre-programmed alarm level and provides an alarm if the level is exceeded.

(2) Measurement techniques
The detector measures continuously a baghouse leak. It can be labeled as a continuous parametric monitoring system.

A description of the measurement technique employed by the PCME DT990 bag leak detection systems provided by the manufacturer is included in the permit application. Installation specifications provided by the manufacturer, are also included in the permit application. Location, inspection, and quality assurance and quality control procedures are as follows:

<u>Anode Bake Ring Furnace A-446 Pollution Control System</u>

The PCME data logger is situated in the control room for the A-446. The only inspection requirement is periodic cleaning of the detector probe. The data logger generates an alarm message that states the probe requires cleaning.

Quality control/quality assurance procedures consist of annual performance of a PM test on six of the seven exhaust stacks. Three tests are performed, using Method 201A/Method 202, Method 17, or Method 5 on each of the stacks. During the same time period as the test runs, the output from the detectors is recorded. Calibration of the detector is then performed. The PCME bag leak detection system output for the seventh stack is calibrated concurrent with the annual Method 315 tests for Polycyclic Organic Material, since the method provides for the concurrent measurement of PM. The calibration frequency is annual.

<u>Pitch Fume Treatment System</u>

The PCME data logger is situated in the motor control room for the pitch fume treatment system (PFTS). The only inspection requirement is periodic cleaning of the detector probe. The data logger generates an alarm message that states the probe requires cleaning.

Quality control/quality assurance procedures consist of annual performance of a PM test on the exhaust duct of each of the two baghouses together with a simultaneous test of the common exhaust stack through which both baghouses exhaust to atmosphere. There is a test platform for accessing the common stack test ports. Each of the round baghouse exhaust ducts has a single test port (There is inadequate space on the test platform to accommodate a second test

port at 90^0). The sum of the test runs at each baghouse exhaust has been higher than those measured at the common stack. The emissions measured from each baghouse duct are added, and compared to the results obtained at the common stack. The results of the baghouse exhaust duct tests are factored upwards by the ratio of the sum of the test runs at each baghouse exhaust to the test run at the common stack, followed by adjustment of the alarm level, if needed. Calibration of each baghouse detector output is then performed. Method 5 or 17 is the test method used for each baghouse exhaust duct, because the test ports are in a location of high negative pressure thereby precluding the use of Method 201A/Method 202. The common stack is tested using Method 201A/Method 202, Method 17, or Method 5. The calibration frequency is annual.

(3) Monitoring frequency - The number of times to obtain and record monitoring data over a specified time interval. The monitoring frequencies should include at least four points equally spaced for each hour for continuous emissions for parametric monitoring systems.

Each of the A-446 and PFTS bag leak detection system records stack concentration data at least once per minute.

(4) Averaging time - The period over which to average and use data to verify proper operation of the pollution control approach or compliance with the emissions limitation or standard.

The averaging time programmed into each PCME DT990 detector before it triggers an alarm notification has been set to coincide with the time required to perform 3 test runs at the A-446 or the PFTS.

PM emissions are measured from reactor #3 of the A-446 (which has a single exhaust stack) as specified by U. S. EPA Method 315. As specified by the site specific test plan, each Method 315 run is performed over a 144 minute time period.

Not including the changeover time required between test runs, it thus requires 7.2 hours to perform three test runs. The averaging period for an alarm to be triggered for the A-446 has thus been set at 8 hours.

PM emissions are measured from the common stack of the PFTS, as specified by U. S. EPA Methods 201A/Method 202. Concurrently, each baghouse exhaust duct (two total) is sampled for PM as specified by U. S. EPA Method 5 or 17. The time necessary to perform a single test run at the common exhaust stack is 80 minute, in order to meet the combined isokinetic sampling requirements specified by Method 5 and 201A. The sample times at each baghouse exhaust duct are set to coincide with the test times at the common stack. Thus, there are a total of 4 hours of actual sampling time required to perform 3 test runs at the common stack. The averaging period for an alarm to be triggered for the PFTS has thus been set at 4 hours.

The Permittee has stated that it will meet the requirements of 40 CFR 63.8 (e) (3) (v) (B), which is given below:

If the owner or operator intends to demonstrate compliance by using an alternative to a monitoring method specified in the relevant standard, the owner or operator shall refrain from conducting the performance evaluation until the Administrator approves the use of the alternative method. If the Administrator does not approve the use of the alternative method within 30 days before the performance evaluation is scheduled to begin, the performance evaluation deadlines specified in paragraph 40 CFR 63.8 (e)(4) of this

section may be extended such that the owner or operator shall conduct the performance evaluation within 60 calendar days after the Administrator approves the use of the alternative method.

(c) In addition, the application must include information justifying the owner or operator's request for an alternative monitoring method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

Alcoa Inc – Warrick has provided the following justification:

Due to the re-build of its anode baking ring furnace, Alcoa, Inc. - Warrick Operations received a permit with PM and PM_{10} limits. As part of that permit review, it elected to use the reductions in PM and PM_{10} obtained through addition of the pitch fume treatment system as a contemporaneous PM and PM_{10} emissions reduction credit in the re – built anode ring baking furnace review.

The visible emission observation requirement specified by 40 CFR 63.848 (g) is adequate for compliance assurance with respect to the pollutants regulated by 40 CFR, Subpart LL, but is not adequate to assure compliance with the lower PM and PM_{10} limits applicable at the anode baking ring furnace and paste production plant air pollution control device (PFTS). Alcoa, Inc. – Warrick Operations thus elected to install PCME bag leak detection systems on these pollution control system stacks.

These detectors will alarm at particular concentrations lower than those at which PM emissions are visible. Thus use of the PCME bag leak detection systems as alternative monitoring for anode baking ring furnace and PFTS daily visible emissions observations will trigger corrective actions faster than would be the visible emissions observations.

Alcoa Inc., Warrick Operations will perform the daily visible emissions observations specified by 40 CFR 63, Subpart LL, should the PMCE detectors become inoperable.

(d) This change is a modification to federally required monitoring that:

(1) Does not decrease the stringency of the compliance and enforcement measures for the relevant standard;

(2) Has no national significance (*e.g.,* does not affect implementation of the applicable regulation for other affected sources, does not set a national precedent, and individually does not result in a revision to the monitoring requirements);

(3) Is site-specific, made to reflect or accommodate the operational characteristics, or physical constraints; and

(4) Results in increased monitoring frequency.

Therefore, pursuant to 40 CFR 63.90(a) IDEM, OAQ has determined this change to monitoring to be a minor change.

Enforcement Issues

There are no pending enforcement actions.

Emission Calculations

This modification does not involve any change in the emissions.

Permit Level Determination – Part 70

The change in monitoring method is determined as a significant change. Therefore, this permit modification is subject to significant permit modification, 326 IAC 2-7-12 (d).

Additionally, this modification will be incorporated into the Part 70 Operating Permit.

Permit Level Determination – PSD or Emission Offset

This modification does not involve any change to the emissions or evaluation of BACT or LAER.

Federal Rule Applicability Determination

There are no new rules applicable to this modification.

State Rule Applicability Determination

There are no new rules applicable to this modification.

Proposed Changes

The changes listed below have been made to SSM 173-17780-00007. Deleted language appears as ~~strikethroughs~~ and new language appears in **bold**:

Change No.1 The following changes have been made to Condition D.1.17 (Now Condition D.1.16) to incorporate the proposed alternative monitoring system in lieu of the visible emissions monitoring for the A-446 pollution control system and each baghouse of the pitch fume treatment system. The dross cooling baghuoses and the anode butt baghouse are not subject to 40 CFR 63.848(g).

D.1.16 (d) Pursuant to 40 CFR 63.848(g) **and 40 CFR 63.8(f),** the Permittee **shall operate the bag leak detection systems installed on each stack of the A-446 pollution control system and each baghouse of the pitch fume treatment system pursuant to Condition D.1.17. The Permittee shall** visually inspect the exhaust stacks of the A-446 pollution control system **and the exhaust stack of the pitch fume treatment system** on a daily basis for evidence of any visible emissions indicating abnormal operation **whenever the bag leak detection systems are not operational.**

D.1.16 (e) Pursuant to 40 CFR 63.848(f), if a monitoring device for the A-446 pollution control system measures an operating parameter outside the limits established pursuant to Sec. 63.847(h), if ~~visible emissions indicating abnormal operation are observed from the exhaust stacks of the A-446 pollution control system during a daily inspection~~ **the alarm on any of the bag leak detection systems activates**, the Permittee shall

initiate the corrective action procedures identified in the startup, shutdown, and malfunction plan within one (1) hour. Failure to initiate the corrective action procedures within one (1) hour or to take the necessary corrective actions to remedy the problem is a violation.

The requirements of this condition shall supersede the requirements of Condition D.1.16 of SSM 173-15661-00007, issued on August 23, 2002 **and Condition D.1.17 (d) of SSM 173-17780-00007, issued on July 21, 2004.**

Change No. 2 The following changes in Condition D.1.18 (Now Condition D.1.17) have been made to incorporate the proposed alternative monitoring system in lieu of the visible emissions monitoring.

D.1.17 (j) (5) ~~The Parametric Monitoring and Start-up Shutdown Malfunction Plan for the green anode baking ring furnace and the pitch fume treatment system as well as the Compliance Response Plan for the anode butt blast machine and the dross cooling operation shall contain troubleshooting contingency and response steps for when If an~~ abnormal emission**s** ~~is~~ **are** observed **from the green anode baking ring furnace or the pitch fume treatment system, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances.** Failure to take response steps in accordance with Section C - ~~Compliance Response Plan - Preparation, Implementation, Records, and Reports,~~ **Response to Excursions or Exceedances,** shall be considered a deviation from this permit.

(6) If abnormal emissions are observed from the anode butt blast machine or the dross cooling operation, the Permittee shall take reasonable response steps in accordance with Section C – Response to Excursions or Exceedances. Failure to take response steps in accordance with Section C - Response to Excursions or Exceedances, shall be considered a deviation from this permit.

The requirements of this condition shall supersede the requirements of Conditions D.1.5, D.1.6, and D.1.7, of SSM 173-14145-00007, issued on July 7, 2001**,** ~~and~~ Condition D.1.17 of SSM 173-15661-00007, issued on August 23, 2002, **and Condition D.1.18 (j) (5) and (6) of SSM 173-17780-00007, issued on July 21, 2004** .

Change No. 3 The changes in Condition D.1.19 (Now Condition D.1.18) have been made to incorporate the proposed alternative monitoring system in lieu of the visible emissions monitoring. In December, 2004, the compliance tests were performed on the dross cooling process demonstrating that the emission limits specified by Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1) could be met with both large baghouses down, provided dross loadout operations were suspended. The word “immediately” in Condition D.1.19 (c) has been deleted as it conflicts with the preferable language of “shall be shut down no later than the completion of the processing of the material in the emissions unit.”

D.1.18 Bag Leak Detection Alarm Activation

In the event that a bag leak detection system alarm is activated for any reason, the same ~~corrective actions~~ **response steps** specified in the ~~CRP~~ **SSM and Parametric Monitoring Plan** for use during periods of startup, shutdown, and malfunction, shall be followed to correct the cause for the alarm. Regardless of whether the alarm is caused by a malfunction as defined, the Permittee shall take the following response steps:

(a) For the anode ring furnace A-446 pollution control system and the pitch fume treatment pollution control system, which are multi-reactor units,

~~corrective actions~~ **response steps** shall be initiated ~~in accordance with the CRP (SSM and Parametric Monitoring) plan~~ within one (1) hour. For any failure**,** ~~with corresponding response steps and timetable not described in the Compliance Response Plan,~~ response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - ~~Compliance Monitoring Plan - Failure to Take Response Steps~~ **Response to Excursions or Exceedances**, shall be considered a ~~violation of~~ **deviation from** this permit.

(1) If operations continue at the green anode baking ring furnace after bag failure is observed and two (2) of the three (3) reactor sections of the A-446 pollution control system have been in operation, the failure shall be addressed by shutting down the reactor section that the failure has occurred at and starting up the reactor section that is not in operation. If it will be ten (10) days or more after the failure, is observed before the failed reactor section will be repaired or replaced, the Permittee shall promptly notify the IDEM, OAQ of the expected date that the failed reactor section 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~~ **steps** taken up to the time of notification.

(2) If operations continue at the baghouse portion of the pitch fume treatment system after bag failure is observed, the failure shall be addressed by conducting visible emissions notations once per day or by calculating daily particulate concentrations. If it will be 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~~ **steps** taken up to the time of notification.

(b) For the four (4) dross cooling operation baghouses which are single compartment baghouses, when more ~~than one (1) large baghouse fails or when more~~ than two (2) of the four (4) baghouses fail, ~~if failure is indicated by an opacity violation or a bag leak detection alarm activation that is not a false alarm, or if bag failure is determined by other means, such as daily checks of the particulate concentration readings from electrodynamic bag leak detectors or visible emissions notations, then~~ **the feed to** the ~~associated process~~ **dross cooling operation shall** ~~will~~ be shut down ~~immediately~~ until **the failed units have been repaired or replaced.** ~~a sufficient number of failed units have been brought back on-line to meet the minimum operating criteria specified by the Compliance Response Plan~~. **The emissions units shall be shut down no later than the completion of the processing of the material in the emissions unit. In the event that both large baghouses are not operating, dross loadout operations shall be suspended until at least one large baghouse becomes operational.** 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 C - 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 electrodynamic broken bag detector data logger output.

(c) For the anode butt blast machine baghouse which is a single compartment baghouse, ~~if failure is indicated by an opacity violation or a bag leak detection alarm activation that is not a false alarm, or if bag failure is determined by other means, such as daily checks of the particulate concentration readings from electrodynamic bag leak detectors or visible emissions notations, then~~ **the feed to the anode butt blast machine** ~~associated process will~~ **shall** be shut down ~~immediately~~ until the failed unit~~s have~~ **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 C - 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 electrodynamic broken bag detector data logger output .

The requirements of this condition shall supersede the requirements of Conditions D.1.8 and D.1.9 of SSM 173-14145-00007, issued on July 7, 2001**,** ~~and~~ Condition D.1.~~19~~ **18** of SSM 173-15661-00007, issued on August 23, 2002, **and Condition D.1.19 of SSM 173-17780-00007, issued on July 21, 2004**.

Change No. 4 The following changes in Condition D.1.20 (Now Condition D.1.19) have been made to incorporate the proposed alternative monitoring system in lieu of the visible emissions monitoring.

D.1.19 Anode Baking Furnace Record Keeping and Reporting Requirements [326 IAC 20-24-1] [40 CFR Part 63, Subpart LL]

Pursuant to 40 CFR 63.850(e), the Permittee shall maintain files of all information (including all reports and notifications) required by Sec. 63.10(b) and by 40 CFR 63 Subpart LL. In addition to the general records required by Sec. 63.10(b), the Permittee shall maintain records of the following information:

(a) Daily production rate of green anode material placed in the anode bake furnace;

(b) A copy of the startup, shutdown, and malfunction plan;

(c) Records, such as a checklist or the equivalent, ~~demonstrating that the daily visual inspection of the exhaust stacks of the A-446 pollution control system has been performed as required in Sec. 63.848(g), including~~ **of** the results of each inspection **of the** anode butt blast machine baghouse stack **exhaust or dross cooling baghouse stack** exhaust once per day when the applicable bag leak detection system malfunctions, fails or otherwise needs repair.

(d) Records documenting the corrective actions taken when the limits for an operating parameter established under Sec. 63.847(h) were exceeded, when visible emissions indicating abnormal operation were observed

from the A-446 pollution control system stacks **or pitch fume treatment system stack** during a daily inspection**, when the applicable bag leak detection system malfunctions, fails or otherwise needs repair.** ~~required under Sec. 63.848(g).~~

The requirements of this condition shall supersede the requirements of Condition D.1.20 of SSM 173-17780-00007, issued on July 21, 2004.

Change No. 5 Upon further review, IDEM has determined that it is not necessary to include a condition requiring a preventive maintenance plan in each individual Section D of the permit. Rather, a general condition will be placed in Section B of the permit, which will apply to the entire source. D.1.9 has been removed from the permit, and (a) in Section C.2 has been revised. Additionally, IDEM has determined that the Permittee is not required to keep records of all preventive maintenance. However, where the Permittee seeks to demonstrate that an emergency has occurred, the Permittee must provide, upon request, records of preventive maintenance in order to establish that the lack of proper maintenance did not cause or contribute to the deviation. Therefore, IDEM has deleted paragraph (b) of Section C – Preventive Maintenance, and has amended the Section C – Emergency Provisions condition as follows:

C.2 Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)] [326 IAC 1-6-3]

(a) If required by specific condition(s) in Section D of this permit, tThe Permittee shall prepare and maintain Preventive Maintenance Plans (PMPs), when operation begins, including the following information on each facility: within ninety (90) days after issuance of this permit for the source as described in 326 IAC 1-6-3. At a minimum, the PMPs shall include:

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

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

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

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

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

~~The PMP and the PMP extension notification do not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).~~

(b) ~~The Permittee shall implement the PMPs as necessary to ensure that failure to implement a PMP does not cause or contribute to a violation of any limitation on emissions or potential to emit.~~

~~(c)~~ A copy of the PMPs shall be submitted to IDEM, OAQ, upon request and within a reasonable time, and shall be subject to review and approval by

IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its PMPs whenever lack of proper maintenance causes ~~or contributes to any violation~~ **or is the primary contributor to an exceedance of any limitation on emissions or potential to emit.** The PMP**s** does not require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

(c) 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.

~~(d) Records of preventive maintenance shall be retained for a period of at least five (5) years. These records shall be kept at the source location for a minimum of three (3) years. The records may be stored elsewhere for the remaining two (2) years as long as they are available upon request. If the Commissioner makes a request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.~~

The requirements of this condition shall supersede the requirements of Condition C.2 of SSM 173-17780-00007, issued on July 21, 2004.

~~D.1.9 Preventive Maintenance Plan [326 IAC 2-7-5(13)]~~
~~A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for these facilities and any control devices.~~

Old Condition C.14, now Condition C.13

C.13 Emergency Provisions [326 IAC 2-7-16]

(b)(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 Branch, Office of Air Quality
100 North Senate Avenue, ~~P. O. Box 6015~~
Indianapolis, Indiana 4620**4**~~6 6015~~ -**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 the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).

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

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

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

(e) **The Permittee seeking to establish the occurrence of an emergency shall make records available upon request to ensure that failure to implement a PMP did not cause or contribute to an exceedance of any limitations on emissions. However,** IDEM, OAQ, may require that the Preventive Maintenance Plans required under 326 IAC 2-7-4(c)(~~9~~ **10**) 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.

(h) The Permittee shall include all emergencies in the Quarterly Deviation and Compliance Monitoring Report.

The requirements of this condition shall supersede the requirements of Condition C.14 of SSM 173-17780-00007, issued on July 21, 2004.

Change No. 6 Many companies are concerned about double jeopardy, and do not want the same requirement listed in two locations of the permit. Therefore, IDEM has decided that it is best to have the operation of equipment requirement only under compliance determination in the specific D conditions, and remove C.6. The subsequent C conditions have been renumbered.

~~C.6 Operation of Equipment [326 IAC 2-7-6(6)]~~

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

Change No. 7 IDEM realizes that instruments specifications can only be practically applied to analog units, and has therefore clarified the condition to state that the condition only applies to analog units. Upon further review, IDEM has also determined that the accuracy of the instruments is not nearly as important as whether the instrument has a range that is appropriate for the normal expected reading of the parameter. Therefore, the accuracy requirements have been removed from the condition.

Old Condition C.12, now Condition C.11

C.11 ~~Pressure Gauge and Other~~ Instrument Specifications [326 IAC 2-1.1-11] [326 IAC 2-7-5(3)][326 IAC 2-7-6(1)]

(a) ~~Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed~~ **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 ~~normal~~ **maximum** reading **for the normal range** shall be no less than twenty percent (20%) of full scale ~~and be accurate within plus or minus two percent (2%) of full scale reading~~.

~~(b) Whenever a condition in this permit requires the measurement of a flow rate, the instrument employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent (±2%) of full scale reading.~~

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

The requirements of this condition shall supersede the requirements of Condition C.12 of SSM 173-17780-00007, issued on July 21, 2004.

Change No. 8 IDEM has reconsidered the requirement to develop and follow a Compliance Response Plan. The Permittee will still be required to take reasonable response steps when a compliance monitoring parameter is determined to be out of range or abnormal. Replacing the requirement to develop and follow a Compliance Response Plan with a requirement to take reasonable response steps will ensure that the control equipment is returned to proper operation as soon as practicable, while still allowing the Permittee the flexibility to respond to situations that were not anticipated. The Section D conditions that refer to this condition have been revised to reflect the new condition title, and the following changes have been made to the Section C condition:

Old Condition C.13, now Condition C.12

C.12 ~~Compliance Response Plan - Preparation, Implementation, Records, and Reports [326 IAC 2-7-5] [326 IAC 2-7-6]~~

~~(a) The Permittee is required to prepare a Compliance Response Plan (CRP) for each compliance monitoring condition of this permit. If a Permittee is required to have a Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan) under 40 CFR 60/63, such plans shall be deemed to satisfy the requirements for a CRP for those compliance monitoring conditions. A CRP shall be submitted to IDEM, OAQ upon request. The CRP shall be prepared within ninety (90) days after issuance of this permit by the Permittee, supplemented from time to time by the Permittee, maintained on site, and comprised of:~~

~~(1) Reasonable response steps that may be implemented in the event that a response step is needed pursuant to the requirements of Section D of this permit; and an expected timeframe for taking~~

reasonable response steps.

(2) If, at any time, the Permittee takes reasonable response steps that are not set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan and the Permittee documents such response in accordance with subsection (e) below, the Permittee shall amend its Compliance Response Plan to include such response steps taken.

The Parametric Monitoring and SSM Plan shall be submitted within the time frames specified by the applicable 40 CFR 60/63 requirement.

(b) For each compliance monitoring condition of this permit, reasonable response steps shall be taken when indicated by the provisions of that compliance monitoring condition as follows:

(1) Reasonable response steps shall be taken as set forth in the Permittee's current Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan; or

(2) If none of the reasonable response steps listed in the Compliance Response Plan or Parametric Monitoring Plan and Start-up, Shutdown, and Malfunction (SSM) Plan is applicable or responsive to the excursion, the Permittee shall devise and implement additional response steps as expeditiously as practical. Taking such additional response steps shall not be considered a deviation from this permit so long as the Permittee documents such response steps in accordance with this condition.

(3) If the Permittee determines that additional response steps would necessitate that the emissions unit or control device be shut down, and it will be ten (10) days or more until the unit or device will be shut down, then the Permittee shall promptly notify IDEM, OAQ of the expected date of the shut down, the status of the applicable compliance monitoring parameter with respect to normal, and the results of the actions taken up to the time of notification.

(4) Failure to take reasonable response steps shall constitute a violation of the permit.

(c) The Permittee is not required to take any further response steps for any of the following reasons:

(1) A false reading occurs due to the malfunction of the monitoring equipment and prompt action was taken to correct the monitoring equipment.

(2) The Permittee has determined that the compliance monitoring parameters established in the permit conditions are technically inappropriate, has previously submitted a request for a minor permit modification to the permit, and such request has not been denied.

(3) An automatic measurement was taken when the process was not operating.

(4) The process has already returned or is returning to operating within

~~"normal" parameters and no response steps are required.~~

~~(d) When implementing reasonable steps in response to a compliance monitoring condition, if the Permittee determines that an exceedance of an emission limitation has occurred, the Permittee shall report such deviations pursuant to Section B – Deviations from Permit Requirements and Conditions.~~

~~(e) The Permittee shall record all instances when response steps are taken. In the event of an emergency, the provisions of 326 IAC 2-7-16 (Emergency Provisions) requiring prompt corrective action to mitigate emissions shall prevail.~~

~~(f) Except as otherwise provided by a rule or provided specifically in Section D, all monitoring as required in Section D shall be performed when the emission unit is operating, except for time necessary to perform quality assurance and maintenance activities~~

(a) Upon detecting an excursion or exceedance, the Permittee shall 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 emissions.

(b) The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Corrective actions may include, but are not limited to, the following:

(1) initial inspection and evaluation;

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

(3) any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

(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;

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

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

(e) The Permittee shall maintain the following records:

(1) monitoring data;

(2) monitor performance data, if applicable; and

(3) corrective actions taken.

The requirements of this condition shall supersede the requirements of Condition C.13 of SSM 173-17780-00007, issued on July 21, 2004.

Change No. 9 Method 13A or 13B does not measure POM. Therefore, Condition D.1.10 (Now Condition D.1.9) has been revised as follows:

D.1.9 TF and POM Testing Requirements [326 IAC 20-24-1]
[40 CFR Part 63, Subpart LL]

(b) Pursuant to 40 CFR 63.849(a), the Permittee shall use the following reference methods to determine compliance with the applicable emission limits for TF and POM emissions:

(1) Method 13A or Method 13B in Appendix A to Part 60 of 40 CFR or an approved alternative, for the concentration of TF where stack or duct emissions are sampled.

(2) Method 315 in Appendix A to Part 63 of 40 CFR or an approved alternative, for the concentration of POM where stack or duct emissions are sampled.

The requirements of this condition shall supersede the requirements of Condition D.1.10 of SSM 173-17780-00007, issued on July 21, 2004.

Change No. 10 In December, 2004, the compliance tests were performed on the dross cooling process demonstrating that the emission limits specified by Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1) could be met with both large baghouses down, provided dross loadout operations were suspended. Therefore, Condition D.1.13 (Now condition D.1.12) has been revised as follows:

D.1.12 Particulate Matter (PM) and Particulate Matter Less than Ten Microns (PM10)

(c) In order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), at least two baghouse**s** controlling PM and PM_{10} shall be in operation at all times when the dross cooling process is in operation.

(1) When the dross cooling process is only operating one (1) small baghouse and one (1) large baghouse, in order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), all roll-up doors in the dross cooling building shall be closed, except when vehicles are entering or exiting the building.

(2) When the dross cooling process is operating and neither large baghouse is operating, in order to comply with Conditions D.1.3(b)(2) and (3) as well as Condition D.1.5(b)(1), all roll-up doors in the dross cooling building shall be closed, except when vehicles are entering or exiting

the building. While both large baghouses are not operating, dross loadout operations shall be suspended.

The requirements of this condition shall supersede the requirements of Condition D.1.13 of SSM 173-15661-00007, issued on August 23, 2002 **and Condition D.1.13(c) of SSM 173-17780-00007, issued on July 21, 2004.**

Change No. 11 The section A.1 has been revised to reflect the current status of the source and the county

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

The Permittee owns and operates a primary aluminum reduction source.

Responsible Official:	Vice President & General Manager
Source Address:	Jct. IN Hwys. 66 & 61, Newburgh, Indiana 47629-0010
Mailing Address:	Bldg. 860 E, P.O. Box 10, Newburgh, Indiana 47630
General Source Phone Number:	812 - 853 - 1519
SIC Code:	3334 **and 3352**
County Location:	Warrick
Source Location Status:	**Nonattainment for ozone under the 8-hour standard** **Attainment for ozone under the 1-hour standard** Attainment for all **other** criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD **and Emission Offset** Rules; Major Source, Section 112 of the Clean Air Act 1 of 28 Source Categories

Change No. 12 IDEM address has been revised to reflect the current address.

Conclusion and Recommendation

The proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Permit Modification No. 173-21948-00007. The staff recommends to the Commissioner that this Part 70 Significant Permit Modification be approved.