

**NOTICE OF 30-DAY PERIOD
FOR PUBLIC COMMENT**

Preliminary Findings Regarding a Part 70 Permit
Significant Source Modification

for **Alcoa, Inc., Warrick Operations**
in **Warrick County**

Part 70 No.: T173-6627-00007
Significant Source Modification No.: 173-14145-00007

Notice is hereby given that the above-mentioned company, located at JCT. Ind. Hwys 66 and 61, Newburgh, Indiana, 47629, has made application to the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) for a Significant Source Modification to a Part 70 source for the construction and operation of a mechanical blasting operation.

Notice is hereby given that there will be a period of thirty (30) days from the date of publication of this notice during which any interested person may comment on why this proposed source modification should or should not be issued. Appropriate comments should be related to any air quality issues, interpretation of the state and federal rules, calculations made, technical issues, or the effect that the operation of this source would have on any aggrieved individuals. IDEM, OAQ does not have jurisdiction in specifying and implementing requirements for zoning, odor or noise. For such issues, please contact your local officials.

A copy of the application and draft source modification is available for examination at the Ohio Township Public Library, 23 West Jennings Street, Newburgh, Indiana, 46730. A copy of the draft source modification is also available for examination at www.state.in.us/idem/oam/index.html. All statements, along with supporting documentation, should be submitted in writing to the IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana 46206-6015. If adverse comments concerning the **air pollution impact** of this draft source are received, together with a request for a public hearing, such a hearing may be held to give further consideration to this application.

Persons not wishing to comment at this time, but wishing to receive notice of future proceedings conducted related to this action, must submit a written request to the OAQ, at the above address. All interested parties of record will receive a notice of the decision on this matter and will then have fifteen (15) days after receipt of the Notice of Decision to file a petition for administrative review. Procedures for filing such a petition will be enclosed with the Notice.

Alcoa, Inc., Warrick Operations
Newburgh, Indiana

Page 2 of 2
Significant Source Modification 173-14145-
00007

Permit Reviewer: NH/EVP

Questions should be directed to Nishat Hydari, c/o OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, call (800) 451-6027, press 0 and ask for extension (3-6878), or dial (973) 575-2555, extension 3216.

Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

NH/EVP

PART 70 SIGNIFICANT SOURCE MODIFICATION OFFICE OF AIR QUALITY

**Alcoa, Inc., Warrick Operations
JCT. Ind. Hwys 66 and 61
Newburgh, Indiana 47629**

(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.

Source Modification No.: 173-14145-00007

Issued by:
Paul Dubenetzky, Branch Chief
Office of Air Quality

Issuance Date:

TABLE OF CONTENTS

A	SOURCE SUMMARY	3
A.1	General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]	
A.2	Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]	
A.3	Part 70 Permit Applicability [326 IAC 2-7-2]	
B	GENERAL CONSTRUCTION CONDITIONS	4
B.1	Permit No Defense [IC 13]	
B.2	Definitions [326 IAC 2-7-1]	
B.3	Effective Date of the Permit [IC13-15-5-3]	
B.4	Revocation of Permits [326 IAC 2-1.1-9(5)][326 IAC 2-7-10.5(i)]	
B.5	Significant Source Modification [326 IAC 2-7-10.5(h)]	
C	GENERAL OPERATION CONDITIONS	6
C.1	Certification [326 IAC 2-7-4(f)] [326 IAC 2-7-6(1)][326 IAC 2-7-5(3)(C)]	
C.2	Preventive Maintenance Plan [326 IAC 2-7-5(1),(3) and (13)] [326 IAC 2-7-6(1) and (6)]	
C.3	Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]	
C.4	Opacity [326 IAC 5-1]	
C.5	Operation of Equipment [326 IAC 2-7-6(6)]	
C.6	Stack Height [326 IAC 1-7]	
C.7	Performance Testing [326 IAC 3-6][326 IAC 2-1.1-11]	
C.8	Compliance Monitoring [326 IAC 2-1.1-11]	
C.9	Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]	
C.10	Pressure Gauge Specifications	
C.11	Compliance Monitoring Plan - Failure to Take Response Steps	
C.12	Actions Related to Noncompliance Demonstrated by a Stack Test [326 IAC 2-7-5]	
C.13	Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]	
C.14	General Record Keeping Requirements [326 IAC 2-7-5(3)]	
C.15	General Reporting Requirements [326 IAC 2-7-5(3)(C)]	
D.1	FACILITY OPERATION CONDITIONS - Mechanical Blasting Operation	13
	Certification	17

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.2 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 an aluminum manufacturing plant.

Responsible Official: Melvin W. Lager, Operations Manager, Warrick Operations
Source Address: JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
Mailing Address: P.O. Box 10, Newburgh, IN 47629
Phone Number: (812) 853-6111
SIC Code: 3334
County Location: Warrick
County Status: Attainment for all criteria pollutants
Source Status: Part 70 Permit Program
Major Source under PSD
Major Source, Section 112 of the Clean Air Act

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 construct and operate the following emission units and pollution control devices:

One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, with a maximum capacity of 242,000 pounds of steel per hour, utilizing one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as S / V 132.9.

A.3 Part 70 Permit Applicability [326 IAC 2-7-2]

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

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION B GENERAL CONSTRUCTION CONDITIONS

B.1 Permit No Defense [IC 13]

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

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

Terms in this approval 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 IC 13-11, 326 IAC 1-2 and 326 IAC 2-7 shall prevail.

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

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

B.4 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.5 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) when, prior to start of operation, the following requirements are met:

- (a) The attached affidavit of construction shall be submitted to the Office of Air Quality (OAQ), Permit Administration & Development Section, verifying that the emission units were constructed as proposed in the application. The emissions units covered in the Significant Source Modification approval may begin operating on the date the affidavit of construction is postmarked or hand delivered to IDEM if constructed as proposed.
- (b) If actual construction of the emissions units differs from the construction proposed in the application, the source may not begin operation until the source modification has been revised pursuant to 326 IAC 2-7-11 or 326 IAC 2-7-12 and an Operation Permit Validation Letter is issued.
- (c) If construction is completed in phases; i.e., the entire construction is not done continuously, a separate affidavit must be submitted for each phase of construction. Any permit conditions associated with operation start up dates such as stack testing for New Source Performance Standards (NSPS) shall be applicable to each individual phase.
- (d) The Permittee shall receive an Operation Permit Validation Letter from the Chief of the Permit Administration & Development Section and attach it to this document.

However, in the event that the Title V application is being processed at the same time as this application, the following additional procedures shall be followed for obtaining the right to operate:

- (1) If the Title V draft permit has not gone on public notice, then the change/addition covered by the Significant Source Modification will be included in the Title V draft.
- (2) If the Title V 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 Title V permit at the time of issuance.

- (3) If the Title V permit 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 Title V permit, and the Title V permit will be issued after EPA review.

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 approval or required by an applicable requirement, any application form, report, or compliance certification submitted under this approval 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, on the attached Certification Form, with each submittal.
- (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) If required by specific condition(s) in Section D of this approval, the Permittee shall prepare and maintain Preventive Maintenance Plans (PMP) within ninety (90) days after issuance of this approval, including the following information on each facility:
 - (1) Identification of the individual(s) responsible for inspecting, maintaining, and repairing emission control devices;
 - (2) A description of the items or conditions that will be inspected and the inspection schedule for said items or conditions;
 - (3) Identification and quantification of the replacement parts that will be maintained in inventory for quick replacement.

If due to circumstances beyond its control, the PMP 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

- (b) The Permittee shall implement the Preventive Maintenance Plans as necessary to ensure that failure to implement the Preventive Maintenance Plan does not cause or contribute to a violation of any limitation on emissions or potential to emit.
- (c) PMP's shall be submitted to IDEM, OAQ, upon request and shall be subject to review and approval by IDEM, OAQ. IDEM, OAQ, may require the Permittee to revise its Preventive Maintenance Plan whenever lack of proper maintenance causes or contributes to any violation.

C.3 Permit Amendment or Modification [326 IAC 2-7-11] [326 IAC 2-7-12]

- (a) The Permittee must comply with the requirements of 326 IAC 2-7-11 or 326 IAC 2-7-12 whenever the Permittee seeks to amend or modify this approval.
- (b) Any application requesting an amendment or modification of this approval shall be

submitted to:

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

Any such application should be certified by the "responsible official" as defined by 326 IAC 2-7-1(34) only if a certification is required by the terms of the applicable rule

- (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 Exemptions), 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 Operation of Equipment [326 IAC 2-7-6(6)]

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

C.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 good engineering practices (GEP) pursuant to 326 IAC 1-7-3.

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, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. The permittee shall provide notice of the actual test date at least 14 days prior to the test date.

- (b) All test reports must be received by IDEM, OAQ within 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 within five (5) days prior to the end of the initial forty-five (45) day period.

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

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

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

Compliance with applicable requirements shall be documented as required by this permit. The Permittee shall be responsible for installing any necessary equipment and initiating any required monitoring related to that equipment. All monitoring and record keeping requirements not already legally required shall be implemented when operation begins.

C.9 Maintenance of Monitoring Equipment [326 IAC 2-7-5(3)(A)(iii)]

- (a) In the event that a breakdown of the monitoring equipment occurs, a record shall be made of the times and reasons of the breakdown and efforts made to correct the problem. To the extent practicable, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less frequent than required in Section D of this approval until such time as the monitoring equipment is back in operation. In the case of continuous monitoring, supplemental or intermittent monitoring of the parameter should be implemented at intervals no less than one (1) hour until such time as the continuous monitor is back in operation.
- (b) The Permittee shall install, calibrate, quality assure, maintain, and operate all necessary monitors and related equipment. In addition, prompt corrective action shall be initiated whenever indicated.

C.10 Pressure Gauge Specifications

Whenever a condition in this permit requires the measurement of pressure drop across any part of the unit or its control device, the gauge employed shall have a scale such that the expected normal reading shall be no less than twenty percent (20%) of full scale and be accurate within plus or minus two percent ($\pm 2\%$) of full scale reading.

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

C.11 Compliance Monitoring Plan - Failure to Take Response Steps [326 IAC 2-7-5][326 IAC 2-7-6] [326 IAC 1-6]

- (a) The Permittee is required to implement a compliance monitoring plan to ensure that reasonable information is available to evaluate its continuous compliance with applicable requirements. This compliance monitoring plan is comprised of:
- (1) This condition;

- (2) The Compliance Determination Requirements in Section D of this approval;
 - (3) The Compliance Monitoring Requirements in Section D of this approval;
 - (4) The Record Keeping and Reporting Requirements in Section C (Monitoring Data Availability, General Record Keeping Requirements, and General Reporting Requirements) and in Section D of this approval; and
 - (5) A Compliance Response Plan (CRP) for each compliance monitoring condition of this approval. CRP's shall be submitted to IDEM, OAQ upon request and shall be subject to review and approval by IDEM, OAQ. The CRP shall be prepared within ninety (90) days after issuance of this approval by the Permittee and maintained on site, and is comprised of :
 - (A) Response steps that will be implemented in the event that compliance related information indicates that a response step is needed pursuant to the requirements of Section D of this approval; and
 - (B) A time schedule for taking such response steps including a schedule for devising additional response steps for situations that may not have been predicted.
- (b) For each compliance monitoring condition of this approval, appropriate response steps shall be taken when indicated by the provisions of that compliance monitoring condition. Failure to perform the actions detailed in the compliance monitoring conditions or failure to take the response steps within the time prescribed in the Compliance Response Plan, shall constitute a violation of the approval unless taking the response steps set forth in the Compliance Response Plan would be unreasonable.
- (c) After investigating the reason for the excursion, the Permittee is excused from taking further response steps for any of the following reasons:
- (1) The monitoring equipment malfunctioned, giving a false reading. This shall be an excuse from taking further response steps providing that prompt action was taken to correct the monitoring equipment.
 - (2) The Permittee has determined that the compliance monitoring parameters established in the approval conditions are technically inappropriate, has previously submitted a request for an administrative amendment to the approval, and such request has not been denied or;
 - (3) An automatic measurement was taken when the process was not operating; or
 - (4) The process has already returned to operating within "normal" parameters and no response steps are required.
- (d) Records shall be kept of all instances in which the compliance related information was not met and of all response steps 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.

C.12 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 approval exceed the level specified in any condition of this approval, the Permittee shall take appropriate corrective actions. The Permittee shall submit a description of these corrective actions to IDEM, OAQ, within thirty (30) days of receipt of the test results. The Permittee shall take appropriate action to minimize emissions from the affected facility while the corrective actions are being implemented. IDEM, OAQ shall notify the Permittee within thirty (30) days, if the corrective actions taken are deficient. The Permittee shall submit a description of additional corrective actions taken to IDEM, OAQ within thirty (30) days of receipt of the notice of deficiency. IDEM, OAQ reserves the authority to use enforcement activities to resolve noncompliant stack tests.
- (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. Failure of the second test to demonstrate compliance with the appropriate approval conditions may be grounds for immediate revocation of the approval to operate the affected facility.

The documents submitted pursuant to this condition do not 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.13 Monitoring Data Availability [326 IAC 2-7-6(1)] [326 IAC 2-7-5(3)]

- (a) With the exception of performance tests conducted in accordance with Section C- Performance Testing, all observations, sampling, maintenance procedures, and record keeping, required as a condition of this approval shall be performed at all times the equipment is operating at normal representative conditions.
- (b) As an alternative to the observations, sampling, maintenance procedures, and record keeping of subsection (a) above, when the equipment listed in Section D of this approval is not operating, the Permittee shall either record the fact that the equipment is shut down or perform the observations, sampling, maintenance procedures, and record keeping that would otherwise be required by this approval.
- (c) If the equipment is operating but abnormal conditions prevail, additional observations and sampling should be taken with a record made of the nature of the abnormality.
- (d) If for reasons beyond its control, the operator fails to make required observations, sampling, maintenance procedures, or record keeping, reasons for this must be recorded.
- (e) At its discretion, IDEM may excuse such failure providing adequate justification is documented and such failures do not exceed five percent (5%) of the operating time in any

quarter.

- (f) Temporary, unscheduled unavailability of staff qualified to perform the required observations, sampling, maintenance procedures, or record keeping shall be considered a valid reason for failure to perform the requirements stated in (a) above.

C.14 General Record Keeping Requirements [326 IAC 2-7-5(3)][326 IAC 2-7-6]

- (a) Records of all required monitoring data 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 and available upon the request of an IDEM, OAQ, representative. 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 written request for records to the Permittee, the Permittee shall furnish the records to the Commissioner within a reasonable time.
- (b) Records of required monitoring information shall include, where applicable:
 - (1) The date, place, and time of sampling or measurements;
 - (2) The dates analyses were performed;
 - (3) The company or entity performing the analyses;
 - (4) The analytic techniques or methods used;
 - (5) The results of such analyses; and
 - (6) The operating conditions existing at the time of sampling or measurement.
- (c) Support information shall include, where applicable:
 - (1) Copies of all reports required by this approval;
 - (2) All original strip chart recordings for continuous monitoring instrumentation;
 - (3) All calibration and maintenance records;
 - (4) Records of preventive maintenance shall be sufficient to demonstrate that failure to implement the Preventive Maintenance Plan did not cause or contribute to a violation of any limitation on emissions or potential to emit. To be relied upon subsequent to any such violation, these records may include, but are not limited to: work orders, parts inventories, and operator's standard operating procedures. Records of response steps taken shall indicate whether the response steps were performed in accordance with the Compliance Response Plan required by Section C - Compliance Monitoring Plan - Failure to take Response Steps, of this approval, and whether a deviation from an approval condition was reported. All records shall briefly describe what maintenance and response steps were taken and indicate who performed the tasks.
- (d) All record keeping requirements not already legally required shall be implemented within

ninety (90) days of approval issuance.

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

- (a) The reports required by conditions in Section D of this approval shall be submitted to:
- Indiana Department of Environmental Management
Compliance Data Section, Office of Air Quality
100 North Senate Avenue, P. O. Box 6015
Indianapolis, Indiana 46206-6015
- (b) Unless otherwise specified in this approval, any notice, report, or other submission required by this approval 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 approval, any quarterly report shall be submitted within thirty (30) days of the end of the reporting period. The report does not 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 approval and ending on the last day of the reporting period.

SECTION D.1 FACILITY OPERATION CONDITIONS

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

One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, with a maximum capacity of 242,000 pounds of steel per hour, utilizing one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as S / V 132.9.

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

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

D.1.1 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2, the PM from the mechanical blasting operation (Anode Butt Blast Machine #1) shall not exceed the pound per hour emission rate established as E in the following formula:

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

$$E = 4.10 P^{0.67} \quad \text{where} \quad E = \text{rate of emission in pounds per hour; and} \\ P = \text{process weight rate in tons per hour} = 720,000 \text{ lbs/hr}$$

$$E = 4.10 (360)^{0.67} = 211.60 \text{ lbs PM/hour}$$

D.1.2 PSD Limit [326 IAC 2-2] [40 CFR 52.21]

PM and PM-10 emissions from the mechanical blasting operation (Anode Butt Blast Machine #1) shall be limited to 5.71 and 3.42 pounds per hour, respectively. Compliance with these limits shall render the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

D.1.3 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 mechanical blasting operations (Anode Butt Blast Machine #1) and its control device.

Compliance Determination Requirements

D.1.4 Particulate Matter (PM)

In order to comply with Condition D.1.2, the baghouse for PM control shall be in operation at all times when the mechanical blasting operation (Anode Butt Blast Machine #1) is in operation.

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

D.1.5 Bag Leak Detection

The facility shall install and operate a bag leak detection system. Upon installation of a triboelectric bag leak detection system, the Permittee must operate the detection system pursuant to U.S. EPA Guidance entitled Fabric Filter Bag Leak Detection Guidance (dated 1997 September). This document is available from the USEPA, Office of Air Quality Planning and Standards, Monitoring and Analysis Division, Emissions Measurements Center (MD-18), Research Triangle Park, NC 27711. Other bag leak detection systems must be installed, operated, calibrated, and maintained in accordance with the manufacturers written specifications.

If the bag leak detection system is inoperable, the facility shall substitute Conditions D.1.6 to D.1.9 to show compliance, until the bag leak system is operable.

D.1.6 Visible Emissions Notations

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

D.1.7 Monitoring

The Permittee shall record the total static pressure drop across the baghouse controlling the mechanical blasting operation, identified as Anode Butt Blast Machine #1, at least once per shift when the mechanical blasting operation, identified as Anode Butt Blast Machine #1 is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 10.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

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

D.1.8 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the mechanical blasting operation, identified as Anode Butt Blast Machine #1 when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.9 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

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

D.1.10 Record Keeping Requirements

To document compliance when the bag leak detection system is operable, the Permittee shall keep records of the following:

- (a) To document compliance with Condition D.1.5, the Permittee shall maintain records of the bag leak detection system output, or, as appropriate, of the daily visible emission notations of the baghouse outlet stack exhaust.
- (b) To document compliance with Condition D.1.5, the Permittee shall maintain the following:
 - (1) Documentation of all response steps implemented per event, and
 - (2) Operator standard operating procedures (SOP).
- (c) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

To document compliance when the bag leak detection system is inoperable, the Permittee shall keep records of the following:

- (a) To document compliance with Condition D.1.6, the Permittee shall maintain records of daily visible emission notations of the one (1) mechanical blasting operation (identified as Anode Butt Blast Machine #1) stack exhaust.
- (b) To document compliance with Condition D.1.7, the Permittee shall maintain the following:
 - (1) Weekly records of the following operational parameters during normal operation

when venting to the atmosphere:

- (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle operation.
- (2) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.8, the Permittee shall maintain records of the results of the inspections required under Condition D.1.8 and the dates the vents are redirected.
 - (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

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

**PART 70 SOURCE MODIFICATION
CERTIFICATION**

Source Name: Alcoa, Inc., Warrick Operations
Source Address: JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
Mailing Address: P.O. Box 10, Newburgh, IN 47629
Source Modification No.: 173-14145-00007

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:

- 9 Test Result (specify) _____
- 9 Report (specify) _____
- 9 Notification (specify) _____
- 9 Other (specify) _____

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

Signature:

Printed Name:

Title/Position:

Date:

Alcoa, Inc., Warrick Operations
Newburgh, Indiana
Permit Reviewer: NH/EVP

Page 18 of 18
Source Modification No. 173-14145-00007

Indiana Department of Environmental Management Office of Air Quality

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

Source Background and Description

Source Name:	Alcoa, Inc. Warrick Operations
Source Location:	JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
County:	Warrick
SIC Code:	3334
Operation Permit No.:	T173-6627-00007
Operation Permit Issuance Date:	Still Pending
Significant Source Modification No.:	173-14145-00007
Permit Reviewer:	NH/EVP

The Office of Air Quality (OAQ) has reviewed a significant source modification application from Alcoa Inc., Warrick Operations, relating to the construction and operation of the following emission units and pollution control devices:

One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, with a maximum capacity of 242,000 pounds of steel per hour, utilizing one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as S / V 132.9 .

History

On March 21, 2001, Alcoa, Inc., Warrick Operations submitted a modification application to the OAQ requesting to replace the existing Anode Butt Shot Blaster with a new Anode Butt Shot Blaster. The replacement is being done because the new Anode Butt Shot Blaster is a more efficient unit. Alcoa, Inc., Warrick Operations applied for a Part 70 permit on September 19, 1996.

New Emission Units and Pollution Control Equipment Receiving Prior Approval

The application includes information relating to the prior approval for the construction and operation of the following equipment pursuant to 326 IAC 2-7-5(16):

One (1) mechanical blasting operation, identified as Anode Butt Blast Machine #1, with a maximum capacity of 242,000 pounds of steel per hour, utilizing one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as S / V 132.9 .

Existing Approvals

The source applied for a Part 70 Operating Permit on September 19, 1996. The source has been operating under previous approvals including, but not limited to, the following:

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

- (b) Minor Permit Modification 173-12588-00007, issued on October 10, 2000;
- (c) Minor Source Modification 173-12676-00007, issued on October 2, 2000;

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

- (e) Significant Source Modification 173-11342-00007, issued on May 22, 2000;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- (y) CP173-4501-00007, issued on June 16, 1995.

Enforcement Issue

There are no enforcement actions pending.

Stack Summary

Stack ID	Operation	Height (feet)	Diameter (feet)	Flow Rate (acfm)	Temperature (°F)
S / V 132.9	Anode Butt Blast Machine #1	40	0.83	12,500	Ambient

Recommendation

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

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

An application for the purposes of this review was received on March 21, 2001.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (Appendix A, page 1).

Potential To Emit Before Controls (Modification)

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

Pollutant	Potential To Emit (tons/year)
PM	1874.82
PM-10	1874.82
SO ₂	0.00
VOC	0.00
CO	0.00
NO _x	0.00

Justification for Modification

The potential to emit of PM and PM10 is greater than 25 tons per year, thus the Title V permit is being modified through a Significant Source Modification. This modification is being performed pursuant to 326 IAC 2-7-10.5(f)(4). This Significant Source Modification will give the source approval to construct and operate the new emission unit.

County Attainment Status

The source is located in Warrick County.

Pollutant	Status
PM-10	attainment
SO ₂	attainment

NO ₂	attainment
Ozone	attainment
CO	attainment
Lead	attainment

- (a) Volatile organic compounds (VOC) and oxides of nitrogen (NO_x) are precursors for the formation of ozone. Therefore, VOC and NO_x emissions are considered when evaluating the rule applicability relating to the ozone standards. Warrick County has been designated as attainment or unclassifiable for ozone.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	Greater than 250
PM-10	Greater than 250
SO ₂	Greater than 250
VOC	Greater than 250
CO	Greater than 250
NO _x	Greater than 250

This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not one of the 28 listed source categories.

These emissions are based upon Alcoa Inc., Warrick Operations Annual Source Emission Statement.

Potential to Emit After Controls for the Modification

The table below summarizes the total potential to emit, reflecting all limits, of the significant emission units for the modification.

Process/facility	Potential to Emit (tons/year)						
	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
Anode Butt Blast Machine #1 *	9.37	9.37	--	--	--	--	--
PSD Thresholds	25	15	N/A	N/A	N/A	N/A	N/A

This modification to an existing major stationary source is not major because the emissions increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2 and 40 CFR

52.21, the PSD requirements do not apply.

* The existing Anode Butt Shot Blaster was not taken into consideration in this review because the controlled emissions from the new Anode Butt Shot Blaster are below the PSD thresholds.

Federal Rule Applicability

- (a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this blaster.
- (b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this blaster.

State Rule Applicability - Entire Source

326 IAC 2-6 (Emission Reporting)

This source is subject to 326 IAC 2-6 (Emission Reporting), because it has the potential to emit more than one hundred (100) tons per year of PM and PM10. Pursuant to this rule, the owner/operator of the source must annually submit an emission statement for the source. The annual statement must be received by July 1 of each year and contain the minimum requirement as specified in 326 IAC 2-6-4. The submittal should cover the period defined in 326 IAC 2-6-2(8)(Emission Statement Operating Year).

326 IAC 5-1 (Visible Emissions Limitations)

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

- (a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.
- (b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 2-2 (Prevention of Significant Deterioration)

This proposed modification is not considered a major modification because it has limited potential to emit less than applicable PSD significant emission levels for any regulated pollutant which makes the requirements of 326 IAC 2-2 (Prevention of Significant Deterioration) and 40 CFR 52.21 not applicable.

326 IAC 6-3-2 (Process Operations)

The particulate matter (PM) from the mechanical blasting operation, identified as Anode Butt Blast Machine #1 shall be limited by the following:

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

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

$$E = 4.10 (360)^{0.67} = 211.60 \text{ lbs PM/hr}$$

Based on the above equation, particulate matter emissions from the mechanical blasting operation, identified as Anode Butt Blast Machine #1 shall be limited to 211.60 pounds per hour for a maximum process rate of 630 pounds per hour.

Compliance calculation:

$$(1874.82 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 428.04 \text{ lbs PM/hr}$$

Controlled Compliance calculation:

$$(9.37 \text{ tons PM/yr}) * (\text{yr}/8,760 \text{ hrs}) * (2,000 \text{ lbs/ton}) = 2.14 \text{ lbs PM/hr}$$

The baghouse shall be in operation at all times the mechanical blasting operation, identified as Anode Butt Blast Machine #1 is in operation, in order to comply with this limit.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

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

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

1. The mechanical blasting operation, identified as Anode Butt Blast Machine #1 has applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the mechanical blasting operation, identified as Anode Butt Blast Machine #1 shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when an abnormal emission is observed.

- (b) The Permittee shall record the total static pressure drop across the baghouse controlling the mechanical blasting operation, identified as Anode Butt Blast Machine #1, at least once per shift when the mechanical blasting operation, identified as Anode Butt Blast Machine #1 is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 10.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.
- (c) An inspection shall be performed each calendar quarter of all bags controlling the mechanical blasting operation, identified as Anode Butt Blast Machine #1 when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.
- (d) For multi-compartment units, the affected compartments will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if there are no visible emissions or if the event qualifies as an emergency and the Permittee satisfies the emergency provisions of this permit (Section B- Emergency Provisions). Within eight (8) business hours of the determination of failure, response steps according to the timetable described in the Compliance Response Plan shall be initiated. For any failure with corresponding response steps and timetable not described in the Compliance Response Plan, response steps shall be devised within eight (8) business hours of discovery of the failure and shall include a timetable for completion. Failure to take response steps in accordance with Section C - Compliance Monitoring Plan - Failure to Take Response Steps, shall be considered a violation of this permit.
- (e) For single compartment baghouses, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions).

These monitoring conditions are necessary because the baghouse for the mechanical blasting operation, identified as Anode Butt Blast Machine #1 must operate properly to ensure compliance with 326 IAC 6-3 (Process Operations) and 326 IAC 2-7 (Part 70).

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Quality (OAQ) Part 70 Application Form GSD-08.

None of the listed air toxics will be emitted from this source.

Conclusion

The construction and operation of this mechanical blasting operation, identified as Anode Butt Blast

Alcoa, Inc., Warrick Operations
Newburgh, Indiana
00007
Permit Reviewer: NH/EVP

Page 8 of 7
Significant Source Modification 173-14145-

Machine #1 shall be subject to the conditions of the attached proposed **Significant Source Modification No. 173-14145-00007**.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Significant Source Modification to a Part 70 Operating Permit

Source Name: Alcoa, Inc. Warrick Operations
 Source Location: JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
 County: Warrick
 SIC Code: 3334
 Operation Permit No.: 173-14145-00007
 Permit Reviewer: NH/EVP

On May 3, 2001, the Office of Air Quality (OAQ) had a notice published in the Boonville Standard, Boonville, Indiana, stating that Alcoa, Inc. Warrick Operations had applied for a Significant Source Modification requesting to replace the existing Anode Butt Shot Blaster with a new Anode Butt Shot Blaster at its aluminum manufacturing plant. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

On May 23, 2001, Samuel H. Bruntz, Senior Environmental Engineer at Alcoa, Inc. submitted comments on the proposed Significant Source Modification. The summary of the comments and corresponding responses is as follows (bolded language has been added and language with a line through it has been deleted):

Comment 1

Condition A.1: The Responsible Official is Melvin W. Lager, Operations Manager, Warrick Operations.

Response 1

The responsible official has been changed in Condition A.1.

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

The Permittee owns and operates an aluminum manufacturing plant.

Responsible Official: ~~Samuel H. Bruntz, Sr. Environmental Engineer~~ **Melvin W. Lager, Operations Manager, Warrick Operations**
 Source Address: JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
 Mailing Address: P.O. Box 10, Newburgh, IN 47629
 Phone Number: (812) 853-6111
 SIC Code: 3334
 County Location: Warrick
 County Status: Attainment for all criteria pollutants
 Source Status: Part 70 Permit Program
 Major Source under PSD
 Major Source, Section 112 of the Clean Air Act

Permit Reviewer: NH/EVP

Comment 2

Condition B.5. Pursuant to 326 IAC 2-7-10.5(d)(4)(A), modifications that have the potential to emit within the range of 5-25 tons per year for either particulate matter (PM) or particulate matter less than 10 microns in size (PM10) shall be processed in accordance with 326 IAC 2-7-10.5(e).

It appears that the construction permit application for the new anode butt blast machine is being treated as a Part 70 significant source modification, based on the calculation listed on page 3 of the Technical Support Document that lists uncontrolled emissions of PM and PM10 at a level of 1874.82 tons/yr.

The Technical Support Document refers to the potential to emit definition listed in 326 IAC 2-1.1-1(16), which states:

“Potential to emit means the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity...to emit an air pollutant, *including air pollution control equipment* (emphasis added)...shall be treated as part of the design if the limitation is enforceable by U.S. EPA.”

Maximum emissions of both PM and PM10 will be 9.39 tons/yr. The emission limitation for these pollutants, as specified by Condition D.1.2, require baghouse operation, and qualify as U.S. EPA enforceable, because this condition is listed in a Part 70 modification permit. Thus, the baghouse becomes included in the operational design and its impact included in the potential to emit determination.

Based on the above Alcoa, Inc. requests that this modification be processed as a Part 70 minor source modification, pursuant to 326 IAC 2-7-10.5(e).

Accordingly, the permit fee for this modification should only be \$500, pursuant to 326 IAC 2-1.1-7(2)(c).

Response 2

For permitting purposes the baghouse is not considered federally enforceable until the significant source modification is issued. The potential PM and PM10 emissions before the baghouse are greater than twenty-five (25) tons per year. Therefore this modification is being processed as a significant source modification. No changes have been made to the permit as a result of this comment.

Comment 3

Conditions C.2 and D.1.3. Alcoa, Inc. questions the requirement to prepare a preventive maintenance plan for this modification. Pursuant to 326 IAC 2-7-5(13)(A), the source must maintain on-site a preventive maintenance plan required under 326 IAC 4(c)(10).

326 IAC 4(c)(10) requires that the source maintain a preventive maintenance plan as described in 326 IAC 1-6-3 (emphasis added).

Pursuant to 326 IAC 1-6-3(a), “Any person responsible for operating any facility specified in 326 IAC 1-6-1 shall prepare and maintain a preventive maintenance plan...” 326 IAC 1-6-1 indicates that the rule applies to...a facility required to obtain a permit under 326 IAC 2-5.1 or 326 IAC 2-6.1.

Permit Reviewer: NH/EVP

326 IAC 2-5.1-3(a) states that "...a new source must obtain a construction permit prior to beginning construction of an emission unit under either of conditions 1 or 2." Condition 2 is not applicable. Condition 1 requires that the potential to emit for particulate matter (PM) or particulate matter less than 10 microns (PM10) must be equal to or greater than 25 tons/yr. As pointed out under item 2, the potential to emit for this modification will be less than 25 tons/yr, so 326 IAC 2-5.1 does not apply.

326 IAC 2-6.1 does not apply, because of the exemption listed in (1)(A).

In addition to the above, 326 IAC 2-7-16(d) states: "This emergency provision supersedes 326 IAC 1-6 for sources subject to this rule..."

Alcoa, Inc. thus requests that these conditions be removed from the final permit.

Response 3

A preventive maintenance plan is required for the anode butt blast machine because it has a control device (baghouse) and allowable emissions exceed ten (10) pounds per hour. No changes have been made to the permit as a result of this comment.

Comment 4

Condition C.6. It appears to Alcoa, Inc. that 326 IAC 1-7 has been erroneously interpreted to apply. 326 IAC 1-7-1(a) states that the rule applies to all sources having exhaust gas stacks through which a potential to emit of 25 tons/yr, or more of particulate matter are emitted. No mention is made of "before controls" in the applicability definition in this rule.

As previously pointed out in item 2, the potential to emit is less than 25 tons/yr of particulate matter. Alcoa, Inc. thus requests that this condition be removed from the final permit.

Response 4

326 IAC 1-7(a) states that the rule "shall apply to all sources having exhaust gas stacks through which a potential of twenty-five (25) tons per year or more of particulate matter are emitted.

The Anode Butt Blast Machine #1 has potential PM emissions of 1874.82 tons per year. Thus 326 IAC 1-7 will apply to the Anode Butt Blast Machine #1. However, 326 IAC 1-7-5(a), states "all sources having less than twenty-five (25) tons per year of actual emissions (after controls) shall be exempt from the requirements specified in 326 IAC 1-7-3(a)." This source has an Anode Butt Blast Machine which uses a baghouse as a control device. Thus its actual emissions will be less than 25 tons/year. As a result the source is exempt from 326 IAC 1-7-3(a). No changes have been made to the permit as a result of this comment.

Comment 5

Condition C.7(a). 326 IAC 3-6(b) makes no mention of requiring that a written notice of the actual test date be submitted 2 weeks prior to the test date. It does not require that "the source operator shall...notify the department not later than 14 days prior to the actual test date..." Alcoa, Inc. thus requests that this condition be amended, with respect to test date notification, as follows:

Permit Reviewer: NH/EVP

"The permittee shall provide notice of the actual test date at least 14 days prior to the test date."

Response 5

The following changes have been made to Condition C.7.

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, P. O. Box 6015
Indianapolis, Indiana 46206-6015

no later than thirty-five (35) days prior to the intended test date. ~~The Permittee shall submit a notice of the actual test date to the above address so that it is received at least two weeks prior to the test date.~~ **The permittee shall provide notice of the actual test date at least 14 days prior to the test date.**

- (b) All test reports must be received by IDEM, OAQ within 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 within five (5) days prior to the end of the initial forty-five (45) day period.

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

Comment 6

Replacement of Conditions C.10, D.1.5, D.1.6, D.1.7 and D.1.8 with conditions based on installation and operation of a broken bag detector. Alcoa, Inc. - Warrick Operations understands the concerns of the Department that the baghouse control system be properly maintained and operated. However, the above proposed conditions will require the procurement of data that will be of questionable usefulness, and could result in reduced filter media life and unwarranted process downtime. Explanation of the concerns of Alcoa, Inc. with these conditions is provided below.

Condition C.10 would require the installation of a pressure gauge that may not be commercially available. If the baghouse operates at a 10 inch water pressure drop, which proposed condition D.1.6 would allow, the gauge would have to have a range of 1-50 inches. Pressure drop gauges in the range 1-50 inches water typically have an accuracy that is no better than +/- 5%.

Condition D.1.5 would require that visible emissions notations be made 3 times per day. The proposed bag

Permit Reviewer: NH/EVP

leak detection system will provide more accurate and useful data. A properly operating bag leak detection system will provide indication of failing filter media before emissions become visible. At best, in cases where a bag leak detection system is feasible, visible emissions notations should only be specified as a back-up to the detection system, if it is down. If the bag leak detection system is down, visible emissions notations performed at a frequency of once per shift should be sufficient.

Condition D.1.6 would require that pressure drop readings be taken 3 times per day, and that the baghouse be maintained in the pressure drop range of 1-10 inches water. The best use of pressure drop is the setting of the baghouse cleaning cycle. Pressure drop normally does not vary significantly, unless there is a major process upset or sudden filter media failure. A properly operating bag leak detection system will provide warning of a filter media failure well in advance of any warning indicated by the pressure drop parameter. Thus, with a properly operating bag leak detection system, Alcoa, Inc. questions the need for this condition.

Condition D.1.7 would potentially require that all bags in the baghouse be physically removed and inspected. Removing bags for inspecting then re-inserting them could damage them enough to result in less efficient operation of the baghouse than before the bags were inspected. Replacement of otherwise properly operating filter media necessitated by a quarterly inspection would be a needless creation of waste and process downtime. Should the bag leak detection system indicate that there is a need for filter media replacement, Alcoa, Inc. would initiate corrective action in accord with the Compliance Response plan required by proposed condition C.11.

Condition D.1.8(b) would apply, because the baghouse is a single compartment unit. Taken literally, one filter element could qualify as a failed unit, thus forcing a shutdown of the baghouse and process. If the baghouse is capable of meeting the specified emission limits with minor bag failures, it should not be immediately required to shutdown. Should the bag leak detection system indicate that there is a need for filter media replacement, Alcoa, Inc. would initiate corrective action in accord with the Compliance Response plan required by proposed condition C.11. Thus, this condition is unnecessary.

Alcoa, Inc. proposes that all of the referenced conditions be removed from the final permit, and that a new D.1.5 be included in the final permit, as follows:

D.1.5 Bag Leak Detection

The facility must install and operate a bag leak detection system. Upon installation of a triboelectric bag leak detection system, the Permittee must operate the detection system pursuant to U.S. EPA Guidance entitled Fabric Filter Bag Leak Detection Guidance (dated 1997 September). This document is available from the USEPA, Office of Air Quality Planning and Standards, Monitoring and Analysis Division, Emissions Measurements Center (MD-18), Research Triangle Park, NC 27711. Other bag leak detection systems must be installed, operated, calibrated, and maintained in accordance with the manufacture written specifications.

If the bag leak detection system is inoperable, the facility shall conduct visible emissions notations according to the following procedures, until the bag leak system is operable:

- (a) Daily visible emission notations of the baghouse exhaust stack shall be performed during normal daylight hours when exhausting to the atmosphere. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, 80% of the time the process is in operation, not counting startup or shutdown time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.

Permit Reviewer: NH/EVP

(d) At startup of the process, an employee shall be considered trained if he has received instruction on the operation of the source and the control equipment. After one month of operation of the process, an employee shall be considered a trained employee if the employee has worked at the plant at least one month, and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

Response 6

IDEM, OAQ agrees that the bag leak detection system can be used in place of Visible Emissions, Monitoring, Baghouse Inspections and Broken or Failed Bag Detection. However, when the bag leak detection system is inoperable the source has to perform Visible Emissions, Monitoring, Baghouse Inspections and Broken or Failed Bag Detection. Thus these conditions will not be deleted from the permit. A new Condition D.1.5 has been added to the permit. The rest of Section D has been re-numbered accordingly.

D.1.5 Bag Leak Detection

The facility shall install and operate a bag leak detection system. Upon installation of a triboelectric bag leak detection system, the Permittee must operate the detection system pursuant to U.S. EPA Guidance entitled Fabric Filter Bag Leak Detection Guidance (dated 1997 September). This document is available from the USEPA, Office of Air Quality Planning and Standards, Monitoring and Analysis Division, Emissions Measurements Center (MD-18), Research Triangle Park, NC 27711. Other bag leak detection systems must be installed, operated, calibrated, and maintained in accordance with the manufacturers written specifications.

If the bag leak detection system is inoperable, the facility shall substitute Conditions D.1.6 to D.1.9 to show compliance, until the bag leak system is operable.

D.1.56 Visible Emissions Notations

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

D.1.67 Monitoring

The Permittee shall record the total static pressure drop across the baghouse controlling the

Permit Reviewer: NH/EVP

mechanical blasting operation, identified as Anode Butt Blast Machine #1, at least once per shift when the mechanical blasting operation, identified as Anode Butt Blast Machine #1 is in operation. Unless operated under conditions for which the Preventive Maintenance Plan specifies otherwise, the pressure drop across the baghouse shall be maintained within the range of 1.0 to 10.0 inches of water or a range established during the latest stack test. The Preventive Maintenance Plan for this unit shall contain troubleshooting contingency and corrective actions for when the pressure reading is outside of the above mentioned range for any one reading.

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

D.1.78 Baghouse Inspections

An inspection shall be performed each calendar quarter of all bags controlling the mechanical blasting operation, identified as Anode Butt Blast Machine #1 when venting to the atmosphere. A baghouse inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors. All defective bags shall be replaced.

D.1.89 Broken or Failed Bag Detection

In the event that bag failure has been observed:

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

Comment 7

Condition D.1.9(a), (b), and (c). Alcoa, Inc., requests that the condition be replaced in a manner that reflects installation of a bag leak detection system. The following replacement condition is proposed:

“(a) To document compliance with (Alcoa, Inc. proposed condition D.1.5), the Permittee shall maintain records of the bag leak detection system output, or, as appropriate, of the daily visible emission notations of the baghouse outlet stack exhaust.

(b) To document compliance with (Alcoa, Inc. proposed condition D.1.5), the Permittee shall

Permit Reviewer: NH/EVP

maintain the following:

- (1) Documentation of all response steps implemented per event, and
- (2) Operator standard operating procedures (SOP)

Response 7

Condition D.1.9 (now re-numbered D.1.10) has been revised.

D.1.910 Record Keeping Requirements

To document compliance when the bag leak detection system is operable, the Permittee shall keep records of the following:

- (a) **To document compliance with Condition D.1.5, the Permittee shall maintain records of the bag leak detection system output, or, as appropriate, of the daily visible emission notations of the baghouse outlet stack exhaust.**
- (b) **To document compliance with Condition D.1.5, the Permittee shall maintain the following:**
 - (1) **Documentation of all response steps implemented per event, and**
 - (2) **Operator standard operating procedures (SOP).**
- (c) **All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.**

To document compliance when the bag leak detection system is inoperable, the Permittee shall keep records of the following:

- (a) To document compliance with Condition D.1.56, the Permittee shall maintain records of daily visible emission notations of the one (1) mechanical blasting operation (identified as Anode Butt Blast Machine #1) stack exhaust.
- (b) To document compliance with Condition D.1.67, the Permittee shall maintain the following:
 - (1) Weekly records of the following operational parameters during normal operation when venting to the atmosphere:
 - (A) Inlet and outlet differential static pressure; and
 - (B) Cleaning cycle operation.
 - (2) Documentation of the dates vents are redirected.
- (c) To document compliance with Condition D.1.78, the Permittee shall maintain records of the results of the inspections required under Condition D.1.78 and the dates the vents are redirected.
- (d) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

Alcoa Inc., Warrick Operations
Newburgh, Indiana

Page 10 of 10
Significant Source Modification 173-14146-
00007

Permit Reviewer: NH/EVP

Appendix A: Process Particulate Emissions

Company Name: Alcoa, Inc., Warrick Operations
Address City IN Zip: JCT. Ind. Hwys 66 and 61, Newburgh, IN 47629
Title V Significant Source Modification: 173-14145
Plt ID: 173-00007
Reviewer: NH/EVP

State Potential Emissions (tons/year)						
A. Baghouses						
Process	No. of Units	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft ²)	Total Filter Area (ft ²)	Control Efficiency	Total (tons/yr)
	1	0.02000	2.9	4,305	99.50%	1874.82
Total Emissions Based on Rated Capacity at 8,760 Hours/Year						1874.82
Federal Potential Emissions (tons/year)						
A. Baghouses						
Process	No. of Units	Grain Loading per Actual Cubic Foot of Outlet Air	Air to Cloth Ratio Air Flow (acfm/ft ²)	Total Filter Area (ft ²)	Control Efficiency	Total (tons/yr)
	1	0.02000	2.9	4,305	99.50%	9.37
Total Emissions Based on Rated Capacity at 8,760 Hours/Year and source controls						9.37

Methodology:**State Potential (uncontrolled):**

Baghouse (tons/yr) = No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)

Federal Potential (controlled):

Baghouse (tons/yr) = No. Units * Loading (grains/acf) * Air/Cloth Ratio (acfm/ft²) * Filter Area (ft²) * 1 lb/7,000 grains * 60 min/hr * 8760 hr/yr * 1 ton/2,000 lbs * 1/(1-Control Efficiency)