STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 042013-011 Project Number: 2012-12-035
Installation Number: 143-0008

Parent Company: Noranda Aluminum Holding Corporation
Parent Company Address: 801 Crescent Center Drive, Suite 600, Franklin, TN 37067
Installation Name: Noranda Aluminum, Inc.
Installation Address: 391 St. Jude Industrial Park, P.O. Box 70, New Madrid, MO 63869
Location Information: New Madrid County, S32, T22N, R14E

Application for Authority to Construct was made for:
Construction of two (2) 220,000 pound rectangular tilting holding furnaces to supply molten aluminum for a new continuous cast rod mill. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.

☐ Standard Conditions (on reverse) are applicable to this permit.
☒ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

APR 23 2013

EFFECTIVE DATE

DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES
STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department’s Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources’ personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.
SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority.”

Noranda Aluminum, Inc.
New Madrid County, S32, T22N, R14E

1. Natural Gas Usage Requirements
   A. Noranda Aluminum, Inc. shall install natural gas meters on the following equipment to determine usage:
      1) Rod Mill 3 Holding Furnace #8
      2) Rod Mill 3 Holding Furnace #9

   B. Noranda Aluminum, Inc. shall monitor and record on a monthly basis the natural gas usage for Holding Furnace #8 and Holding Furnace #9 in Rod Mill 3. Natural gas usage in Holding Furnace #8 and Holding Furnace #9 shall not be included in the compliance demonstration for the installation-wide natural gas fuel usage limit (i.e. the installation-wide limit of 832 million cubic feet (MMCF) per rolling 12-month consecutive period) in Special Condition 11 of Permit Number 082010-003 and subsequent amendments.

   C. Noranda Aluminum, Inc. shall combust propane only during times of natural gas curtailment.

   D. A report must be submitted to the Air Pollution Control Program within 15 days of the use of propane. The report shall include at a minimum:
      1) Reasons for the natural gas curtailment,
      2) Duration of propane usage,
      3) Amount of propane used, and
      4) Emissions calculations associated with the combustion of the propane

2. Particulate Emission Limitations
   Noranda Aluminum, Inc. shall emit from Holding Furnace #8 and Holding Furnace #9 in Rod Mill 3 less than the following:
   1) Total PM: 0.3834 pounds per ton of feed
   2) PM$_{10}$ (total): 0.2299 pounds per ton of feed
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

3) PM$_{2.5}$ (total): 0.1512 pounds per ton of feed

3. Performance Testing
   A. Noranda Aluminum, Inc. shall conduct tests to demonstrate compliance with the limits in Special Condition 2.

   B. These tests shall be performed within 60 days after achieving the maximum production rate of Rod Mill 3, but not later than 180 days after initial start-up for commercial operation and shall be conducted in accordance with the Stack Test Procedures outlined in Special Condition 3.C.

   C. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.

   D. Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.

   E. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

   F. If the performance testing required by Special Condition 3 of this permit indicates that any of the emission factors specified in Special Condition 2 are being exceeded, Noranda Aluminum, Inc. must propose a plan to the Air Pollution Control Program within thirty (30) days of submitting the performance test results. This plan must demonstrate how Noranda Aluminum, Inc. will reduce the emission factors below those stated in Special Condition 2. Noranda Aluminum, Inc. shall implement any such plan immediately upon its approval by the Director.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

4. Record Keeping and Reporting Requirements
   A. Noranda Aluminum, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request.
   
   B. Noranda Aluminum, Inc. shall report to the Air Pollution Control Program’s Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

5. Modeling Requirements
   A. Noranda Aluminum, Inc. shall include the emissions from Holding Furnace #8 and Holding Furnace #9 in Rod Mill 3 and ancillary haul road emissions in any modeling analysis conducted as a part of Permit Number 102004-001 or Permit Number 082010-003 and subsequent amendments.
   
   B. If a modeling analysis is not conducted for Permit Number 102004-001 or Permit Number 082010-003 and subsequent amendments, Noranda Aluminum, Inc. shall submit a compliant modeling analysis for the emission units in this project. The modeling analysis shall include an analysis of any applicable PM$_{10}$ and PM$_{2.5}$ standards and HAP Risk Assessment Levels.
Noranda Aluminum, Inc.
391 St. Jude Industrial Park
P.O. Box 70
New Madrid, MO 63869

Parent Company:
Noranda Aluminum Holding Corporation
801 Crescent Center Drive, Suite 600
Franklin, TN 37067

New Madrid County, S32, T22N, R14E

REVIEW SUMMARY

- Noranda Aluminum, Inc. has applied for authority to construct two (2) 220,000 pound rectangular tilting holding furnaces to supply molten aluminum for a new continuous cast rod mill.

- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are hydrogen fluoride and hydrochloric acid.

- Subpart S of the New Source Performance Standards (NSPS) applies to potroom groups and anode bake plants at this primary aluminum reduction plant.


- The National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries, Subpart ZZZZZZZZ, does not apply to this installation. The definition of aluminum foundries does not include primary or secondary metal producers that cast molten aluminum to produce simple shapes such as sows, ingots, bars, rods, or billets.

- No control devices are being used in conjunction with the equipment in this permit.

- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of particulate matter are conditioned below de minimis levels through limitations set forth in this construction permit.

- This installation is located in New Madrid County, an attainment area for all criteria pollutants.
- This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation is classified as item number 6. Primary aluminum ore reduction plants. The installation’s major source level is 100 tons per year and fugitive emissions are counted toward major source applicability.

- Ambient air quality modeling was performed by the applicant and a summary of the analysis was submitted with the application. However, since an ambient air quality modeling analysis is currently under review for this installation, the emissions from this project will be included in the on-going analysis. A separate analysis for this project was not conducted by the Air Pollution Control Program.

- Emissions testing are required for the equipment.

- A Part 70 Operating Permit application is required for this installation within 1 year of equipment startup.

- Approval of this permit is recommended with special conditions.

**INSTALLATION DESCRIPTION**

Noranda Aluminum, Inc. (Noranda) operates a primary aluminum reduction plant in New Madrid County. The company is an existing primary aluminum reduction installation with existing secondary aluminum production operations. Alumina (Al₂O₃) is received at the plant and undergoes electrolytic reduction, known as the Hall-Heroult process, to produce aluminum.

Noranda Aluminum, Inc. is considered a major source under construction and operating permits. An operating permit renewal application has been submitted and is currently under review. The following permits have been issued to Noranda Aluminum, Inc. from the Air Pollution Control Program.

**Table 1: Permit History**

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0679-008</td>
<td>Potline I</td>
</tr>
<tr>
<td>0679-009</td>
<td>Alumina handling facilities associated with potline III</td>
</tr>
<tr>
<td>0679-010</td>
<td>Potline III</td>
</tr>
<tr>
<td>0679-011</td>
<td>Carbon baking furnace for potline III</td>
</tr>
<tr>
<td>1282-007A</td>
<td>Dross cooling system</td>
</tr>
<tr>
<td>1288-003A</td>
<td>Dross cooling system</td>
</tr>
<tr>
<td>0990-013</td>
<td>Additional melting furnace</td>
</tr>
<tr>
<td>0194-008</td>
<td>Reverberatory melting furnace</td>
</tr>
<tr>
<td>0894-022</td>
<td>Filtered exhaust system</td>
</tr>
<tr>
<td>OP2001-066</td>
<td>Part 70 Operating Permit Primary Aluminum Reduction Facility</td>
</tr>
<tr>
<td>OP2001-032</td>
<td>Part 70 Operating Permit Primary Aluminum Reduction Facility</td>
</tr>
<tr>
<td>OP2001-062</td>
<td>Part 70 Operating Permit Primary Aluminum Reduction Facility</td>
</tr>
<tr>
<td>OP2001-033</td>
<td>Part 70 Operating Permit Primary Aluminum Reduction Facility</td>
</tr>
<tr>
<td>0298-001</td>
<td>Replacement of existing batch mixers for anode paste with continuous mixer and the replacement of the existing hydraulic press anode mold with a turntable vibratory anode former to produce a larger single piece anode</td>
</tr>
<tr>
<td>0799-017</td>
<td>Addition of a downdraft welding table</td>
</tr>
<tr>
<td>082001-005</td>
<td>Installation of two 80,000 pound holding furnaces, 20 MMBTU per hour each</td>
</tr>
<tr>
<td>102004-001</td>
<td>PSD permit for the increase in aluminum production</td>
</tr>
<tr>
<td>122007-005</td>
<td>Installation of two (2) additional 80,000 pound rectangular holding furnaces in the rod mill department, to supply the Number 2 Rod Mill (Properzi)</td>
</tr>
</tbody>
</table>
Noranda has applied for authority to construct two (2) 220,000 pound rectangular tilting holding furnaces to supply molten aluminum for a new continuous cast rod mill. The furnaces will combust natural gas and propane. Each furnace will have maximum heat input capacities of 20 MMBTU per hour. Molten aluminum will be transported from the existing potlines to the furnaces. The furnaces will have the capacity to re-melt 10,000 pounds per hour of aluminum rod not within customer specifications. The total aluminum feed rate to the new furnaces will be 33,069 pound per hour. The new furnaces will be operated similar to the existing holding furnaces and use only clean charge and reactive flux as defined in Subpart RRR, National Emission Standards for Secondary Aluminum Production.

The secondary aluminum operations include aluminum alloying, processing into rods and auxiliary operations. The furnaces have emissions due to the aluminum refining process itself and emissions from the combustion of natural gas for the operation of the equipment. Noranda currently has an installation-wide natural gas usage limitation which restricts the total emissions of natural gas combustion. According to email correspondences, Noranda does not intend to include the new Rod Mill furnaces in the installation-wide natural gas usage limitation. Noranda proposes to equip the furnaces with meters to determine individual gas usage by furnace. A special condition has been included in this permit that reflects Noranda’s proposal to install meters on each furnace. The intention of the condition is to collect data on the natural gas usage of the new furnaces to separate it from the existing natural gas usage limit. Therefore, it is necessary for Noranda to track the natural gas usage of the new furnaces for comparison with the installation-wide natural gas limit.

Propane was proposed as a secondary fuel supply for the new furnaces. Noranda does not anticipate using the propane unless natural gas becomes unavailable. Therefore, the potential emissions of propane combustion were not evaluated for this project. A special condition has been added to this construction permit that will restrict the combustion of propane to those periods when natural gas becomes unavailable.

To determine PM$_{10}$ emissions from the holding furnace, 60% of the total PM emissions was used as stated in AP-42 Section 12.8 Secondary Aluminum Operations for refining. For PM$_{2.5}$ emissions, 50% of the PM emissions were taken. However, Noranda is requesting a limit on the emission factors for the furnaces. The following is a summary of the emission factors for the furnace.
Table 2: Comparison of emission factors

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Emission Factor (pound pollutant per ton product)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AP-42 Section 12.8</td>
</tr>
<tr>
<td>Total PM</td>
<td>4.3</td>
</tr>
<tr>
<td>PM(_{10}) (total)</td>
<td>2.58</td>
</tr>
<tr>
<td>PM(_{2.5}) (total)</td>
<td>2.15</td>
</tr>
</tbody>
</table>

Hydrogen chloride and hydrogen fluoride emissions are a result of the metal fluxing that occurs in the rod mill furnaces. The mass balance approach was used to estimate the potential emissions based on the maximum potential use of the injectaflux used to flux the furnaces at the rod mill. According to the applicant, the two injectaflux materials that will be used in the process are SF7 and Promag. A charge amount of 200,000 pounds of aluminum was proposed by Noranda to determine the maximum rate of usage of each material. As proposed, the maximum rate of usage is 52 pounds of SF7 per charge and 74 pounds of Promag per charge. All fluoride and chloride in the injectaflux materials were assumed to be emitted as hydrogen fluoride and hydrogen chloride, respectively.

EMISSIONS/CONTROLS EVALUATION

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit 082010-003. Existing actual emissions were taken from the installation’s 2011 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The potential emissions of the holding furnaces also take into account the requested limit on particulate emissions from the new equipment.

Table 3: Emissions Summary (tons per year)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM</td>
<td>25.0</td>
<td>Major</td>
<td>N/D</td>
<td>24.5</td>
<td>N/A</td>
</tr>
<tr>
<td>PM(_{10})</td>
<td>15.0</td>
<td>1,141.4</td>
<td>488.32</td>
<td>14.5</td>
<td>N/A</td>
</tr>
<tr>
<td>PM(_{2.5})</td>
<td>10.0</td>
<td>722.7</td>
<td>220.86</td>
<td>9.5</td>
<td>N/A</td>
</tr>
<tr>
<td>SOx</td>
<td>40.0</td>
<td>6,077.7</td>
<td>5876.44</td>
<td>0.10</td>
<td>N/A</td>
</tr>
<tr>
<td>NOx</td>
<td>40.0</td>
<td>42.1</td>
<td>30.53</td>
<td>17.18</td>
<td>N/A</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>262.5</td>
<td>243.95</td>
<td>0.94</td>
<td>N/A</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>22,351.5</td>
<td>24562.97</td>
<td>14.43</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG (CO(_{2})e)</td>
<td>75,000</td>
<td>Major</td>
<td>N/D</td>
<td>20,660</td>
<td>N/A</td>
</tr>
<tr>
<td>GHG (mass)</td>
<td>100.0</td>
<td>Major</td>
<td>N/D</td>
<td>20,639</td>
<td>N/A</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>10.0</td>
<td>2.74</td>
<td>N/D</td>
<td>24.85</td>
<td>N/A</td>
</tr>
<tr>
<td>Hydrogen Fluoride</td>
<td>10.0</td>
<td>99.37</td>
<td>N/D</td>
<td>6.47</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = Not Applicable; N/D = Not Determined

*The potential emissions are based on the proposed emission factors which are included as limits in this construction permit.
PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of particulate matter are conditioned below de minimis levels.

APPLICABLE REQUIREMENTS

Noranda Aluminum, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved.

GENERAL REQUIREMENTS

- Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110

- Operating Permits, 10 CSR 10-6.065

- Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170

- Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220

- Restriction of Emission of Odors, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- Restriction of Emission of Particulate Matter From Industrial Processes, 10 CSR 10-6.400

- New Source Performance Regulations, 10 CSR 10-6.070
  - Standards of Performance for Primary Aluminum Reduction Plants, 40 CFR Part 60, Subpart S

- MACT Regulations, 10 CSR 10-6.075
  - National Emission Standards for Primary Aluminum Reduction Plants, 40 CFR Part 63, Subpart LL
  - National Emission Standards for Secondary Aluminum Production, 40 CFR Part 63, Subpart RRR

- Restriction of Emission of Sulfur Compounds, 10 CSR 10-6.260

- Restriction of Particulate Matter Emissions From Fuel Burning Equipment Used for Indirect Heating, 10 CSR 10-6.405
Noranda submitted a modeling analysis for PM$_{10}$, hydrogen fluoride and hydrogen chloride. Based on this information submitted with the application, the impact of PM$_{10}$ emissions from this project did not exceed the modeling significance level and no further modeling was performed by the applicant. In addition, the impact of both hydrogen fluoride and hydrogen chloride from this project did not exceed the Risk Assessment Levels for either HAP.

Although Noranda submitted the information, the modeling analyses for PM$_{10}$, hydrogen fluoride and hydrogen chloride were not reviewed nor approved by the Air Pollution Control Program. Noranda is currently in the process of conducting a model performance evaluation on the version of the model that was used in the modeling analysis submitted with this application. The model performance evaluation is being conducted in conjunction with an amendment request for Permit 082010-003. Since the results of the model performance evaluation may affect current and future modeling analyses at the facility, it would be ineffective and inappropriate to approve a modeling analysis at this time for this project.

In an effort to address the modeling requirements for this project, a special condition has been included in this construction permit that requires the equipment from this project be included for consideration in any modeling analysis resulting from the model performance evaluation. If no such modeling analysis is performed, Noranda will be required to evaluate the emissions approved by this construction permit in a separate modeling analysis to demonstrate compliance with applicable air standards. Additional conditions may be required at that time to ensure the emission rates used to determine compliance will not be exceeded.
STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required, I recommend this permit be granted with special conditions.

________________________________   _________________________________
Emily Wilbur                          Date
New Source Review Unit

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated December 13, 2012, received December 17, 2012, designating Noranda Aluminum Holding Corporation as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

% ............ percent
°F ............ degrees Fahrenheit
acfm .......... actual cubic feet per minute
BACT .......... Best Available Control Technology
BMPs .......... Best Management Practices
Btu .......... British thermal unit
CAM .......... Compliance Assurance Monitoring
CAS .......... Chemical Abstracts Service
CEMS .......... Continuous Emission Monitor System
CFR .......... Code of Federal Regulations
CO .......... carbon monoxide
CO₂ .......... carbon dioxide
CO₂e .......... carbon dioxide equivalent
COMS .......... Continuous Opacity Monitoring System
CSR .......... Code of State Regulations
dscf .......... dry standard cubic feet
EIQ .......... Emission Inventory Questionnaire
EP .......... Emission Point
EPA .......... Environmental Protection Agency
EU .......... Emission Unit
fps .......... feet per second
ft .......... feet
GACT .......... Generally Available Control Technology
GHG .......... Greenhouse Gas
gpm .......... gallons per minute
gr .......... grains
GWP .......... Global Warming Potential
HAP .......... Hazardous Air Pollutant
hr .......... hour
hp .......... horsepower
lb .......... pound
lbs/hr .......... pounds per hour
MACT .......... Maximum Achievable Control Technology
µg/m³ .......... micrograms per cubic meter
m/s .......... meters per second
Mgal .......... 1,000 gallons
MW .......... megawatt
MHDR .......... maximum hourly design rate
MMBtu .......... Million British thermal units
MMCF .......... million cubic feet
MSDS .......... Material Safety Data Sheet
NAAQS .......... National Ambient Air Quality Standards
NESHAPs .......... National Emissions Standards for Hazardous Air Pollutants
NOₓ .......... nitrogen oxides
NSPS .......... New Source Performance Standards
NSR .......... New Source Review
PM .......... particulate matter
PM₂·₅ .......... particulate matter less than 2.5 microns in aerodynamic diameter
PM₁₀ .......... particulate matter less than 10 microns in aerodynamic diameter
ppm .......... parts per million
PSD .......... Prevention of Significant Deterioration
PTE .......... potential to emit
RACT .......... Reasonable Available Control Technology
RAL .......... Risk Assessment Level
SCC .......... Source Classification Code
scfm .......... standard cubic feet per minute
SIC .......... Standard Industrial Classification
SIP .......... State Implementation Plan
SMAL .......... Screening Model Action Levels
SOₓ .......... sulfur oxides
SO₂ .......... sulfur dioxide
tph .......... tons per hour
tpy .......... tons per year
VMT .......... vehicle miles traveled
VOC .......... Volatile Organic Compound
Mr. Mark Jones  
Director of EH&S and Quality Assurance  
Noranda Aluminum, Inc.  
P.O. Box 70  
New Madrid, MO 63869  

RE: New Source Review Permit - Project Number: 2012-12-035  

Dear Mr. Jones:  

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.  

If you have any questions regarding this permit, please do not hesitate to contact Emily Wilbur, at the Department of Natural Resources’ Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817. Thank you for your attention to this matter.  

Sincerely,  

AIR POLLUTION CONTROL PROGRAM  

Susan Heckenkamp  
New Source Review Unit Chief  

SH:ewl  

Enclosures  

c: Southeast Regional Office  
PAMS File: 2012-12-035  

Permit Number: