

217/782-2113

FEDERALLY ENFORCEABLE STATE OPERATING PERMIT -- RENEWAL

PERMITTEE

Nichols Aluminum Lincolnshire
Attn: Gary Stimpson
1725 Rockingham Road
Davenport, Iowa 52802

<u>Application No.:</u> 96050019	<u>I. D. No.:</u> 097095AAB
<u>Applicant's Designation:</u>	<u>Date Received:</u> January 18, 2007
<u>Operation of:</u> Aluminum Rolling Mills and Annealing Furnaces	
<u>Date Issued:</u>	<u>Expiration Date:</u>
<u>Location:</u> 200 Schelter Road, Lincolnshire, Lake County 60069	

This permit is hereby granted to the above-designated Permittee to OPERATE emission unit(s) and/or air pollution control equipment consisting of an aluminum rolling mill controlled by fume control system and seven annealing furnaces pursuant to the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

- 1a. This federally enforceable state operating permit is issued:
 - i. To limit the emissions of air pollutants from the source to less than major source thresholds (i.e., 100 tons/year for volatile organic material (VOM) and 10 tons/year for a single HAP and 25 tons/year of any combination of such HAPs). As a result, the source is excluded from the requirement to obtain a Clean Air Act Permit Program (CAAPP) permit. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - ii. To limit the potential emissions of VOM from the source to less than 25 tons/year. As a result, the source is excluded from the requirement of 35 Ill. Adm. Code Part 205, Emission Reduction Market System. The maximum emissions of this source, as limited by the conditions of this permit, are described in Attachment A.
 - iii. To establish federally enforceable production and operating limitations, which restrict the potential to emit for VOM to less than 25 tons per year so that the source is not subject to the requirements of 35 Ill. Adm. Code Part 218 Subpart TT (Other Emission Units).
- b. Prior to issuance, a draft of this permit has undergone a public notice and comment period.
- c. This permit supersedes all operating permits for this location.

- 2a. No person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit other than those emission units subject to the requirements of 35 Ill. Adm. Code 212.122, pursuant to 35 Ill. Adm. Code 212.123(a), except as allowed by 35 Ill. Adm. Code 212.123(b) and 212.124.
- b. No person shall cause or allow any visible emissions of fugitive particulate matter from any process, including any material handling or storage activity beyond the property line of the emission source unless the wind speed is greater than 40.2 kilometers per hour (25 miles per hour), pursuant to 35 Ill. Adm. Code 212.301 and 212.314.
- c. Pursuant to 35 Ill. Adm. Code 212.321(a), no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit which, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 Ill. Adm. Code 212.321.
3. Pursuant to 35 Ill. Adm. Code 214.301, no person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission source to excess 2000 ppm.
4. Pursuant to 35 Ill. Adm. Code 218.301, no person shall cause or allow the discharge of more than 3.6 kg/hour (8 lbs/hour) of organic material into the atmosphere from any emission unit, except as provided in 35 Ill. Adm. Code 218.302, 218.303, or 218.304 and the following exception: If no odor nuisance exists the limitation of 35 Ill. Adm. Code 218 Subpart G shall only apply to photochemically reactive material.
5. This permit is issued based on the source not being subject to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Secondary Aluminum Production, 40 CFR 63 Subpart RRR because the source is not a secondary aluminum production facility as defined in 40 CFR 63.1503. The source does not meet the definition of secondary aluminum production facility because it does not perform scrap shredding, scrap drying/delacquering/decoating, thermal chip drying, furnace operations (i.e., melting, holding, sweating, refining, fluxing, or alloying), recovery of aluminum from dross, in-line fluxing, or dross cooling.
- 6a. In the event that the operation of this source results in an odor nuisance, the Permittee shall take appropriate and necessary actions to minimize odors, including but not limited to, changes in raw material or installation of controls, in order to eliminate the odor nuisance.
- b. The annealing furnaces shall only be operated with natural gas as the fuel.

- 7a. Operations and emissions of rolling mill shall not exceed the following limits:

Aluminum Throughput (Ton/Mo) (Ton/Yr)		Emission Factors (lb/ton)		E M I S S I O N S			
		VOM	PM	VOM (Ton/Mo)(Ton/Yr)		PM (Ton/Mo)(Ton/Yr)	
30,000	240,000	0.13	0.16	2.0	15.6	2.4	19.2

These limits are based on the maximum production rate, emission factors derived from the stack test data, filter control efficiency 95% for PM (manufacturer's specification) and filter VOM collection efficiency 59% (measurements performed at the plant) and 95% control system capture efficiency.

- b. Operations and emissions of the seven annealing furnaces shall not exceed the following limits:

- i. Lubricant oil evaporation emission:

Aluminum Throughput		Emission Factor (Lb/Ton)	VOM Emissions	
(Tons/Mo)	(Tons/Yr)		(Tons/Mo)	(Tons/Yr)
19,000	188,500	0.088	0.8	8.3

These limits are based on the maximum production rate and emission factors derived from the stack test for evaporating losses/

- ii. Natural gas combustion emissions:

Natural gas usage: 20.5 mmscf/Mo, 246.0 mmscf/Yr

Pollutant	Emission Factor (Lb/mmscf)	Emissions	
		(Tons/Mo)	(Tons/Yr)
Nitrogen Oxides (NO _x)	100	1.0	12.3
Carbon Monoxide (CO)	84	0.9	10.3
Particulate Matter (PM)	7.6	0.08	0.9
Volatile Organic Material (VOM)	5.5	0.06	0.7

These limits are based on the maximum fuel use and standard emission factors (Tables 1.4-1 and 1.4-2, AP-42, Fifth Edition, Volume I, Supplement D, July 1998).

- c. The emissions of Hazardous Air Pollutants (HAP) as listed in Section 112(b) of the Clean Air Act shall not exceed 0.9 tons/month and 9.0 tons/year of any single HAP and 2.25 tons/month and 22.5 tons/year of any combination of such HAPs. As a result of this condition, this permit is issued based on the emissions of any HAP from this source not

triggering the requirement to obtain a CAAPP permit from the Illinois EPA.

8. Compliance with the annual limits of this permit shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- 9a. Pursuant to 35 Ill. Adm. Code 201.282, every emission source or air pollution control equipment shall be subject to the following testing requirements for the purpose of determining the nature and quantities of specified air contaminant emissions and for the purpose of determining ground level and ambient air concentrations of such air contaminants:
 - i. Testing by Owner or Operator. The Illinois EPA may require the owner or operator of the emission source or air pollution control equipment to conduct such tests in accordance with procedures adopted by the Illinois EPA, at such reasonable times as may be specified by the Illinois EPA and at the expense of the owner or operator of the emission source or air pollution control equipment. The Illinois EPA may adopt procedures detailing methods of testing and formats for reporting results of testing. Such procedures and revisions thereto, shall not become effective until filed with the Secretary of State, as required by the APA Act. All such tests shall be made by or under the direction of a person qualified by training and/or experience in the field of air pollution testing. The Illinois EPA shall have the right to observe all aspects of such tests.
 - ii. Testing by the Illinois EPA. The Illinois EPA shall have the right to conduct such tests at any time at its own expense. Upon request of the Illinois EPA, the owner or operator of the emission source or air pollution control equipment shall provide, without charge to the Illinois EPA, necessary holes in stacks or ducts and other safe and proper testing facilities, including scaffolding, but excluding instruments and sensing devices, as may be necessary.
- b. Testing required by Condition 10 shall be performed upon a written request from the Illinois EPA by a qualified independent testing service.
- 10a. Pursuant to 35 Ill. Adm. Code 212.107, for both fugitive and nonfugitive particulate matter emissions, a determination as to the presence or absence of visible emissions from emission units shall be conducted in accordance with Method 22, 40 CFR part 60, Appendix A, except that the length of the observing period shall be at the discretion of the observer, but not less than one minute. This Condition shall not apply to 35 Ill. Adm. Code 212.301.
- b. Pursuant to 35 Ill. Adm. Code 212.109, except as otherwise provided in 35 Ill. Adm. Code Part 212, and except for the methods of data

reduction when applied to 35 Ill. Adm. Code 212.122 and 212.123, measurements of opacity shall be conducted in accordance with Method 9, 40 CFR Part 60, Appendix A, and the procedures in 40 CFR 60.675(c) and (d), if applicable, except that for roadways and parking areas the number of readings required for each vehicle pass will be three taken at 5-second intervals. The first reading shall be at the point of maximum opacity and second and third readings shall be made at the same point, the observer standing at right angles to the plume at least 15 feet away from the plume and observing 4 feet above the surface of the roadway or parking area. After four vehicles have passed, the 12 readings will be averaged.

- c. Pursuant to 35 Ill. Adm. Code 212.110(a), measurement of particulate matter emissions from stationary emission units subject to 35 Ill. Adm. Code Part 212 shall be conducted in accordance with 40 CFR part 60, Appendix A, Methods 5, 5A, 5D, or 5E.
 - d. Pursuant to 35 Ill. Adm. Code 212.110(b), the volumetric flow rate and gas velocity shall be determined in accordance with 40 CFR part 60, Appendix A, Methods 1, 1A, 2, 2A, 2C, 2D, 3, and 4.
 - e. Pursuant to 35 Ill. Adm. Code 212.110(c), upon a written notification by the Illinois EPA, the owner or operator of a particulate matter emission unit subject to 35 Ill. Adm. Code Part 212 shall conduct the applicable testing for particulate matter emissions, opacity, or visible emissions at such person's own expense, to demonstrate compliance. Such test results shall be submitted to the Illinois EPA within thirty (30) days after conducting the test unless an alternative time for submittal is agreed to by the Illinois EPA.
11. Pursuant to 40 CFR 63.10(b)(3), if an owner or operator determines that his or her stationary source that emits (or has the potential to emit, without considering controls) one or more hazardous air pollutants regulated by any standard established pursuant to section 112(d) or (f) of the Clean Air Act, and that stationary source is in the source category regulated by the relevant standard, but that source is not subject to the relevant standard (or other requirement established under 40 CFR Part 63) because of limitations on the source's potential to emit or an exclusion, the owner or operator must keep a record of the applicability determination on site at the source for a period of 5 years after the determination, or until the source changes its operations to become an affected source, whichever comes first. The record of the applicability determination must be signed by the person making the determination and include an analysis (or other information) that demonstrates why the owner or operator believes the source is unaffected (e.g., because the source is an area source). The analysis (or other information) must be sufficiently detailed to allow the USEPA and/or Illinois EPA to make a finding about the source's applicability status with regard to the relevant standard or other requirement. If relevant, the analysis must be performed in accordance with requirements established in relevant subparts of 40 CFR Part 63 for this purpose for particular categories of stationary sources. If

relevant, the analysis should be performed in accordance with USEPA guidance materials published to assist sources in making applicability determinations under Section 112 of the Clean Air Act, if any. The requirements to determine applicability of a standard under 40 CFR 63.1(b)(3) and to record the results of that determination under 40 CFR 63.10(b)(3) shall not by themselves create an obligation for the owner or operator to obtain a Title V permit.

12. Pursuant to 35 Ill. Adm. Code 212.110(e), the owner or operator of an emission unit subject to 35 Ill. Adm. Code Part 212 shall retain records of all tests which are performed. These records shall be retained for at least three (3) years after the date a test is performed.
- 13a. The Permittee shall maintain monthly records of the following items so as to demonstrate compliance with the conditions of this permit:
 - i. Aluminum process rate (tons/month and tons/year);
 - ii. Names and amounts of lubricating oils used (tons/month and tons/year) and their VOM content (wt. %);
 - iii. Natural gas usage (mmscf/month and mmscf/year); and
 - iv. Monthly and annual CO, NO_x, PM, VOM, and HAP emissions, with supporting calculations (tons/month and tons/year).
- b. All records and logs required by this permit shall be retained at a readily accessible location at the source for at least five (5) years from the date of entry and shall be made available for inspection and copying by the Illinois EPA or USEPA upon request. Any records retained in an electronic format (e.g., computer) shall be capable of being retrieved and printed on paper during normal source office hours so as to be able to respond to the Illinois EPA or USEPA request for records during the course of a source inspection.
14. If there is an exceedance of or deviation from the requirements of this permit as determined by the records required by this permit, the Permittee shall submit a report to the Illinois EPA's Compliance Section in Springfield, Illinois within 30 days after the exceedance/deviation. The report shall include the emissions released in accordance with the recordkeeping requirements, a copy of the relevant records, and a description of the exceedance or deviation and efforts to reduce emissions and future occurrences.
15. Pursuant to 35 Ill. Adm. Code 212.110(d), a person planning to conduct testing for particulate matter emissions to demonstrate compliance shall give written notice to the Illinois EPA of that intent. Such notification shall be given at least thirty (30) days prior to the initiation of the test unless a shorter period is agreed to by the Illinois EPA. Such notification shall state the specific test methods from 35 Ill. Adm. Code 212.110 that will be used.

16. Two (2) copies of required reports and notifications shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Compliance Section (#40)
P.O. Box 19276
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Agency's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency
Division of Air Pollution Control
9511 West Harrison
Des Plaines, Illinois 60016

If you have any questions on this permit, please call Dwayne Booker at 217/782-2113.

Edwin C. Bakowski, P.E.
Acting Manager, Permit Section
Division of Air Pollution Control

Date Signed: _____

ECB:DLB:psj

cc: Illinois EPA, FOS Region 1
Lotus Notes

Attachment A - Emissions Summary

This attachment provides a summary of the maximum emission from the aluminum processing plant operating in compliance with the requirements of this federally enforceable permit. In preparing this summary, the Illinois EPA used the annual operating scenario which results in maximum emissions from such a plant. This is processing of 275,000 tons of aluminum and burning 246 mmscf of natural gas per year. The resulting maximum emissions are below the levels (e.g., 100 tons per year for VOM 10 tons per year for a single HAP, and 25 tons per year for totaled HAP) at which this source would be considered a major source for purposes of the Clean Air Act Permit Program. Actual emissions from this source will be less than predicted in this summary to the extent that material is handled, and control measures are more effective than required in this permit.

<u>Emission Units</u>	E M I S S I O N S (Tons/Year)					<u>Single HAP</u>	<u>Combined HAPs</u>
	<u>NO_x</u>	<u>CO</u>	<u>PM</u>	<u>VOM</u>			
Rolling Mill			19.2	15.6			
Seven Annealing Furnaces				8.3			
Natural Gas Combustion	12.3	10.3	0.9	0.7			
Total	<u>12.3</u>	<u>10.3</u>	<u>20.1</u>	<u>24.6</u>	<u>9.0</u>		<u>22.5</u>

DLB:psj