

PERMIT BOOK

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: **112008-006** Project Number: 2007-07-053

Parent Company: Toyota Motor Engineering and Manufacturing North America, Inc.

Parent Company Address: 25 Atlantic Avenue, Erlanger, KY 41018

Installation Name: Bodine Aluminum, Inc.

Installation Address: 100 Cherry Blossom Way, Troy, MO 63379

Location Information: Lincoln County, S36, T36, 7W

Application for Authority to Construct was made for:
Bodine Aluminum, Inc. is modifying its product mix and introducing new technology to their production by revising the production facility. They will install 83 core molding and casting machines and will operate with a sand throughput of 67,506 tons sand/year. In addition, line-side machining and 40 natural gas fired heat treating furnaces with 20 rated at 1.587 Million British Thermal Units per hour (MMBtu/hr) and 20 rated at 0.7936 MMBtu/hr will be installed. This review was conducted in accordance with Section (6), 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.

NOV 14 2008

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 departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 source(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.

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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."

Bodine Aluminum, Inc.
Lincoln County, S36, T36, 7W

1. **Superseding Condition**
The conditions of this permit supersede all special conditions found in the previously issued construction permit (permit number 032006-004 with project number 2005-12-045) from the Air Pollution Control Program.

2. **Emission Limitations**
 - A. Bodine Aluminum, Inc. shall emit less than 250 tons of Particulate Matter less than 10 microns in diameter (PM₁₀) from the entire installation in any consecutive 12-month period. Table One lists the stack and equipment that are applicable to this limitation. This limitation includes all existing emission sources on site.

 - B. Bodine Aluminum, Inc. shall emit less than 250 tons of Volatile Organic Compounds (VOCs) from the entire installation in any consecutive 12-month period. Table One lists the stack and equipment that are applicable to this limitation. This limitation includes all existing emission sources on site.

 - C. Bodine Aluminum, Inc. shall emit less than 250 tons of Nitrogen Oxide (NO_x) from the entire installation in any consecutive 12-month period. Table One lists the stack and equipment that are applicable to this limitation. This limitation includes all existing emission sources on site.

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2.

Stack Identification	Equipment Identification	Description
ST-3	OD2	Receive approximately 14% of casting (O2) and core molding (O5) emissions and a number of die preheaters (C1) - Potential sand usage - 68506 tons/year and 7.82 tons/hour based on 8760 hours/year
ST-6B	DC1B	Used sand crushing (P1), used sand sieving (P2), al/sand sep (P3), sand sep/storage (P6, P7), sand crush (P4) - Potential sand usage - 68506 tons/year and 8.8 tons/hour.
ST-6A	DC1A	Sand weighing (P8), heating (P9), heat storage (P10), resin charging (P12), coated sand crush (P14) and cooling (P14) and sieving (P15) and storage (P16) - Potential sand usage - 68506 tons/year and 8.8 tons/hour.
ST-7	DC2	Rec furnace 1 and combustion emissions
ST-8	DC3/ OD1	Resin coating and TO combustion emissions
ST-12	DC12	Melter 5 and combustion emissions
ST-19	OD3	Receive approximately 25% of casting (O2) and core molding (O5) emissions and a number of die preheaters - Potential sand usage - 68506 tons/year and 7.82 tons/hour based on 8760 hours/year
ST-20	OD4	Receive approximately 25% of casting (O2) and core molding (O5) emissions and a number of die preheaters - Potential sand usage - 68506 tons/year and 7.82 tons/hour based on 8760 hours/year

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
ST-23	DC16	Rec furnace 2 and combustion emissions
ST-24	OD5	Receive approximately 14% of casting (O2) and core molding (O5) emissions and a number of die preheaters - Potential sand usage - 68506 tons/year and 7.82 tons/hour based on 8760 hours/year
ST-25	OD6	Receive approximately 25% of casting (O2) and core molding (O5) emissions and a number of die preheaters - Potential sand usage - 68506 tons/year and 7.82 tons/hour based on 8760 hours/year
WH1		2 water heaters to 1 stack - combustion emissions
EF1		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF2		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF3		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF4		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF5		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF6		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF7		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF8		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF9		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
EF10		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF11		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF29		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF30		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF31		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF32		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF33		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF34		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF37		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF38		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF36		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF40		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF44A		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF45		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF48		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF49		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
EF50		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF52		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF53		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF54		Remaining Plant Nat Gas, 5 old Heat Transfer (OA7), G1, Machining
EF55		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF56		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF57		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF58		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF59		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF60		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF61		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF62		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF63		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF64		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
EF65		Remaining Plant Nat Gas, 5 old HT (OA7), G1, Machining
HF5	OA7	Combustion emissions only to stack, HT emissions to G1

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
HF8	OA7	Combustion emissions only to stack, Heat Treating emissions to G1
HF9	OA7	Combustion emissions only to stack, Heat Treating emissions to G1
HF10	OA7	Combustion emissions only to stack, Heat Treating emissions to G1
HF 11	OA7	Combustion emissions only to stack, Heat Treating emissions to G1
HF12	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF13	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF14	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF15	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF16	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF17	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF18	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF19	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF20	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF21	OA7	Combustion and new Heat Treating (OA7) emissions to stack

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
HF22	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF23	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF24	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF25	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF26	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF27	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF28	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF29	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF30	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF31	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF32	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF33	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF34	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF35	OA7	Combustion and new Heat Treating (OA7) emissions to stack

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SPECIAL CONDITIONS:

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

Table 1: Stack and Equipment Identification Applicable to Special Condition 2 Continued.

Stack Identification	Equipment Identification	Description
HF36	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF37	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF38	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF39	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF40	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF41	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF42	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF43	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF44	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF45	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF46	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF47	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF48	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF49	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF50	OA7	Combustion and new Heat Treating (OA7) emissions to stack
HF51	OA7	Combustion and new Heat Treating (OA7) emissions to stack

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SPECIAL CONDITIONS:

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

D01	Die Heat Ovens combustion emissions
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- D. Attachment A, B and C or equivalent forms approved by the Air Pollution Control Program that are adequate to determine the total emissions of PM₁₀, NO_x and VOC shall be used to demonstrate compliance with Special Conditions 2.A., 2.B., and 2.C. Bodine Aluminum, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - E. Bodine Aluminum, Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 2.D. indicate that the source exceeds the limitation of Special Condition Number 2.A., 2.B., and 2.C.
3. Pollution Control Equipment
- A. The control equipment detailed in Table Two must be in operation all times when the equipment is in operation. The control equipment shall be operated and maintained in accordance with the manufacturer's specifications.
 - B. Bodine Aluminum, Inc. shall maintain an operating and maintenance log for the control equipment which shall include the following:
 - i. Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions;
 - ii. Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
 - iii. A written record of regular inspection schedule, the date and results of all inspections including any actions or maintenance activities that result from that inspection.
 - iv. Bodine Aluminum, Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.

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SPECIAL CONDITIONS:

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

Table 2: Pollution Control Equipment Applicable to Special Condition 2.

Device Number and Code	Type	Device Number and Code	Type
OD-6, 001	ABB Wet Scrubber	DC-1B, 017	Baghouse
OD-5, 001	ABB Wet Scrubber	DC-1A, 017	Baghouse
OD-4, 001	ABB Wet Scrubber	DC-2, 017	Baghouse
OD-3, 001	ABB Wet Scrubber	DC-3, 016	Baghouse
OD-2, 001	ABB Wet Scrubber	DC-12, 016	Baghouse
OD-1, 021	Baghouse/thermal Oxidizer	DC-16, 017	

4. Stack Testing Requirements –Stack ST-6A
 - A. Bodine Aluminum, Inc. shall conduct stack testing on Stack ST-6A. In order to verify that the NO_x emissions rate is at or below 5.5 pounds per hour (0.7 grams/second) claimed in the permit application from this source. The application used 5.5 pounds per hour (0.7 grams per second) of NO_x. The emission tests should provide emission factors in pounds per hour so that an accurate estimate of NO_x emissions from the installation can be determined. The test(s) shall be done in accordance with the procedures outlined below and subject to the Compliance Section's discretion.
 - B. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program at least 30 days prior to the proposed test date of any such performance tests so that a pretest meeting may be arranged, if necessary, and to assure that the test date is acceptable for an observer from the Air Pollution Control Program to be present. The Proposed Test Plan must be approved by the director prior to conducting the above required emissions testing.
 - C. The stack tests required by this permit shall be performed within 60 days after achieving the maximum generation production rate at which the units will be operated or at a production rate as agreed upon by the Department, but not later than 180 days after permit issuance.
 - D. Two (2) copies of a written report of the performance test results must be submitted to the director within 90 days of completion of the performance testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required method for at least one sample run for each air pollutant tested.

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SPECIAL CONDITIONS:

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

- E. If the stack tests required by Special Condition 4.A of this permit indicate that the emission rate is higher than 5.5 pounds per hour (0.7 grams per second) of NOx then this permit will have to be amended to account for the higher emission rate within 90 days of the final test report.
5. Stack Testing Requirements –Stacks ST-3, ST-19, ST-20, ST-24, and ST-25
- A. Bodine Aluminum, Inc. shall conduct stack testing on Stacks ST-3, ST-19, ST-20, ST-24, ST-25 to verify the benzene emission rates in Table Three. Table Three lists the stacks and the Benzene emission rates used in the application. The emission tests should provide emission factors in pounds per hour so that an accurate estimate of Benzene emissions from the installation can be determined. The test(s) shall be done in accordance with the procedures outlined below and subject to the Compliance Section’s discretion.

Table 3: Benzene Emission Rates used in the Application.

Stack Identification	Benzene emission rate used in application (Lbs/hr)	Benzene emission rate used in application (grams/second)
ST-3	0.010	0.00126
ST-7	0.0396	0.005
ST-12	2.32×10^{-05}	2.93×10^{-06}
ST-19	0.017	0.00224
ST-20	0.017	0.00224
ST-23	0.0396	0.005
ST-24	0.010	0.00126
ST-25	0.017	0.00224

- B. A completed Proposed Test Plan (form enclosed) must be submitted to the Air Pollution Control Program at least 30 days prior to the proposed test date of any such performance tests so that a pretest meeting may be arranged, if necessary, and to assure that the test date is acceptable for an observer from the Air Pollution Control Program to be present. The Proposed Test Plan must be approved by the director prior to conducting the above required emissions testing.
- C. The stack tests required by this permit shall be performed within 60 days after achieving the maximum generation production rate at which the units will be operated or at a production rate as agreed upon by the Department, but not later than 180 days after permit issuance.

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SPECIAL CONDITIONS:

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

- D. Two (2) copies of a written report of the performance test results must be submitted to the director within 90 days of completion of the performance testing. The report must include legible copies of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required method for at least one sample run for each air pollutant tested.
 - E. If the stack tests required by Special Condition 5.A of this permit indicate the testing shows that the emission rate is higher than the emission rates in Table Three for the corresponding stacks of Benzene then this permit will have to be amended to account for the higher emission rates within 90 days of the final test report.
6. Restriction of Odors
- A. If a continued situation of demonstrated nuisance odors exists in violation of 10 CSR 10-3.090, the director may require through written notice Bodine Aluminum Inc. to submit a corrective action plan within ten (10) days adequate to timely and significantly mitigate the odors. Bodine Aluminum, Inc. shall implement any such plan immediately upon its approval by the director. Failure to either submit or implement such a plan shall be in violation of this permit.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (6) REVIEW

Project Number: 2007-07-053
Installation ID Number: 113-0029
Permit Number:

Bodine Aluminum, Inc.
100 Cherry Blossom Way
Troy, MO 63379

Complete: November 12, 2008

Parent Company:
Toyota Motor Engineering and Manufacturing North America, Inc.
25 Atlantic Avenue
Erlanger, KY 41018

Lincoln County, S36, T36, 7W

REVIEW SUMMARY

- Bodine Aluminum, Inc. has applied for authority to install 83 core molding and casting machines that will increase the maximum potential sand throughput to 68,506 tons sand/year. In addition, line-side machining and 40 natural gas fired heat treating furnaces with 20 rated at 1.587 Million British Thermal Units per hour (MMBtu/hr) and 20 rated at 0.7936 MMBtu/hr will be installed.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are acetaldehyde, benzene, hexane, formaldehyde, phenol, cresol, phenol, toluene, xylene, hydrogen fluoride, and hydrogen chloride.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment. The Maximum Achievable Control Technology (MACT) standard, 40 CFR Part 63, Subpart RRR, *National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production*, does not apply since the installation is not a major source of HAPs. Furthermore, Bodine Aluminum, Inc. is a die casting installation that only melts clean charge.
- The five (5) existing ABB KEM-PAK wet scrubbers will be used to control VOC and PM₁₀ emissions from the new and replaced core and casting machines. The VOCs are passing through a packed tower counter current to a scrubbing liquid containing hydrogen peroxide and ferrous ion. Baghouses will be used to control PM₁₀ emissions.

- This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC, NO_x, and PM₁₀ are above de minimis levels but below major levels.
- This installation is located in Lincoln County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was performed for this review.
- Emissions testing is required for the equipment.
- Bodine Aluminum, Inc. will submit an application to modify its existing Part 70 Operating Permit within one year of new equipment startup. Recognizing that there will be numerous instances of new equipment startup under this permit, the submission of an application to modify the existing Part 70 operating permit is required only once, with the one-year clock starting with the installation of the first piece of new equipment. This permit covers construction that will be occurring from March 2006 to December 2013. However, Bodine Aluminum, Inc. shall provide an attachment to the P70 Annual Compliance Certification containing a list of equipment upgrades, equipment relocation, removal, and new equipment installed for the equipment authorized under this permit.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Bodine Aluminum, Inc. is an aluminum die casting installation located in Lincoln County. They are a wholly owned division of Toyota Motor Manufacturing of North America. They have operated an aluminum casting facility in Troy, Missouri since 1992. Bodine Aluminum, Inc. produces engine components to support Toyota's North American vehicle manufacturing operations. In order to reach its present production capacity, they have had two plant expansions since the original construction in 1992. Processes at the installation include, but are not limited to, aluminum melting, aluminum casting, heat treating, core molding and sand reclamation.

Bodine Aluminum, Inc. was issued a renewal to their Part 70 Operation Permit (Permit Number: 2005-001) on January 1, 2005. The installation's Part 70 Operating Permit will expire on January 02, 2010.

The following construction permits have been issued to Bodine Aluminum, Inc. from the Air Pollution Control Program.

Table 4: Permits issued to Bodine Aluminum, Inc. (113-0029)

Permit	Project Description
0591-003	Original permit for the existing plant
0593-008	Installation of natural gas oven to dry recycled aluminum prior to melting
1193-006	Addition of six (6) machining centers and a washing station to produce engine brackets
0194-014	Addition of a shot blaster to rework surface areas
0995-005	Increase production by 1,825 tons of poured aluminum
0196-019	Addition of new building and increase production
0996-011	Addition of a natural gas fired die heating oven, burner capacity 2 MMBtu/hr
1299-009	Addition of casting machines
1299-009A	Amendment to Permit Number 1299-009.
112004-005	Replace Casting and Machine equipment
032006-004	New Casting Line

PROJECT DESCRIPTION

Bodine Aluminum, Inc. will be revising its production facility, modifying the product mix, and introducing new technology to its production building. The activities associated with this project include: 1) eliminating all melting furnaces except for melter number 5, 2) eliminating gravity casting and associated machining, 3) eliminating vacuum casting, 4) eliminating high pressure casting, 5) replacing the 30 low pressure, two cavity machines with 83 low pressure, single cavity machines, 6) increasing the number of core machines from 45 to 83, 7) expand the size of the current building in three steps, 8) add a total of six (6) HVAC units over the three building expansions, 9) add a total of nine (9) general plant exhaust vents for the three building expansions, 10) install 40 natural gas fired heat treating furnaces with 20 rated at 1.587 Million British Thermal Units per hour (MMBtu/hr) and 20 rated at 0.7936 MMBtu/hr, 11) increasing the maximum potential sand throughput to 68,506 tons sand/year.

If a new emission source is added, in order to remain minor for New Source Review Permits any additional PM₁₀, VOC or NO_x sources obtained after this permit should be viewed in conjunction with the less than 250 ton per year limitation.

In order to remain competitive, the proposed project will involve the removal of several machines that will be replaced with new machines that represent updated technological advances. The upgrades to associated equipment will be completed in 2013. The new equipment cannot be installed unless the old equipment is removed. Therefore, Bodine Aluminum, Inc. does not have the potential to exceed 250 tons VOC. The maximum Potential To Emit (PTE) will occur in 2013 when all of the new equipment is installed.

With the expansion of the building, nine (9) additional general plant exhaust fans (EF63-EF71) will be installed along with six natural gas fired furnaces (HVAC) to heat the additional space. The installation of the exhaust fans will exhaust fugitive emissions from the new products. The emissions from the general exhaust are included in the emission calculations.

The finished block castings must be heat treated to 600C to age the casting and to allow for complete removal of the sand binder. This generates minimal VOC emissions which are exhausted to the atmosphere through the plant ventilation system. The baghouses used to collect the PM emissions from die cleaning are vented inside of the building and are exhausted to the atmosphere through the plant ventilation system.

The core molding machines are identified with individual serial numbers. Resin-coated sand is poured into a metal form within the core molding machines and heated to create a specific shape that is later used to form the inner pathways of the castings. The facility maintains old and new core molding machines but the function of the equipment remains the same. The equipment is capable of producing several different types of core molds. For purposes of determining future maximum PTE, Bodine Aluminum, Inc. assumed the heaviest core weight would be produced by every machine.

All of the emissions from the current and future core and casting machines will continue to be vented through the existing odor scrubbers. Bodine Aluminum, Inc. assumed 100% capture efficiency from core molding activities. The core molding process is enclosed and the emissions are directed upward towards the ductwork that leads to an odor scrubber. The odor scrubbers are connected to each core molding machine and create a negative pressure at the face of the unit, which is the only opening other than the outlet stack opening. Therefore, the emissions are expected to be drawn upward within the enclosed core molding equipment to the ductwork. Emissions from core molding activities are vented to one of five odor scrubbers (OD2, OD3, OD4, OD5, OD6) which are connected to one of five stacks (ST3, ST19, ST20, ST24, ST25). Due to size variations, each odor scrubber has its own maximum air throughput capacity. At the time all 83 core molding and casting machines are installed, OD2 and OD5 will each have the capacity to control 13.61% of the emissions (volume of air) from core molding and casting. OD3, OD4, and OD6 are larger odor scrubber and each is capable of controlling 24.26% of the emissions. During other production rates, the odor scrubbers may control different percentages of the emissions. Emissions from individual core molding and casting machines are routed to the odor scrubbers in a manner to ensure that the scrubber incoming air flow volume does not exceed its rated capacity.

Bodine Aluminum, Inc. has done a detailed review of the flux usage used in the melters as a result of the permitting process. Based on that review it was determined that 106,380 pounds (lbs) flux would be needed to process 105,984 tons metal. Flux is added at a consistent rate in order to prevent hydrogen, magnesium, and calcium from causing casting defects. The nature of the flux is to cause these metal impurities to float to the surface where they can be skimmed off the top in solid form as metal salts (dross) such as magnesium chloride. Information provided by the flux supplier indicates that the cryolite resin does not decompose and remains 100% in the dross and 99.5% of the silicofluoride also remains in the dross. The decomposed amount of

silicofluorides emitting fluorides was not more than 0.5% of the silicofluorides added. During the fluxing process the fluorides react with hydrogen in the molten metal to form HF. Bodine Aluminum, Inc. has stated during this permit review that they do not emit Fluoride. Therefore, Fluoride emissions were not considered in this review as they emit HF. Emission factors for HF are based on Toyota design data and stack tests and have remained consistent over the past 15 years. These factors have been accepted previously by MDNR.

The in-line machining units are equipped with stacks that vent inside the building. Therefore, the VOC emissions from machining would be directed upwards towards the exhaust fans and emitted.

Bodine Aluminum, Inc. will have the potential to process 68,506 tons of sand/year and 107,554.4 tons of metal/year in 2013. Therefore, heat treating has the potential to process 12.278 tons metal/hour (107,554.4 tons metal divided 8,760 hours). However, will process only 67,506 tons of sand because of modeling requirements limiting the NOx emission with Stack 6A. The PTE spreadsheet indicates VOC and NOx emissions which are process emissions. There are also combustion emissions from heat treating and these are included under C1, Plant Natural Gas. The emission factors are based on design data which has previously been submitted and approved by MDNR in previous permit applications.

The maximum hourly design rate for the sand reclamation system (P1-P15) is 8.8 tons sand/hour and this is the rate used in the models. Although the sand reclamation system has the potential to process 8.8 tons sand/hour, it does not have the capacity to process 77,088 tons sand/year (8.8 tons/hour x 8760 hours/year = 77,088 tons sand/year) since it is bottlenecked by the casting and core molding machines. Bodine Aluminum, Inc. assumed 100% efficiency for the casting/core molding machines and Bodine Aluminum, Inc. assumed that all machines would operate at the quickest cycle time with the heaviest core weight. The previous application assumed that certain machines would produce certain engine parts. For this application, we are assuming that all machines will produce the heaviest core weight which represents the maximum potential of the facility. There are no changes to any sand reclamation equipment (P1-P15). Refer to Table Two, identifying the control equipment (baghouses) connected to the sand reclamation equipment.

Bodine Aluminum, Inc. is assuming 100% capture efficiency for the sand reclamation system as it is enclosed and the emissions are directed to the stack. The sand reclamation system is not an open system. However, Bodine Aluminum, Inc. does maintain a PM₁₀ emission factor for general exhaust to account for any fugitive emissions released within the building.

There are two (2) furnaces associated with P5 – one is connected to ST-7 and the other to ST-23. All combustion emissions in the calculations are accounted for under Plant Natural Gas, C1. For modeling purposes, the combustion emissions were allocated to the individual stacks. Bodine Aluminum, Inc. is not modifying this equipment, the increased sand throughput will not change the MHDR of the equipment. The HAPs are emitted during sand heating due to the resin. The toluene emissions are due to the

heating of the sand and the associated decomposition of the resin. The PM₁₀, VOC, and HAP emission factors are based on Toyota design data and stack test data. This data has been submitted and approved by MDNR in previous permit applications. The plant was built in 1992. Organic stack testing was conducted on February 23, 2000, and particulate stack testing was conducted May 10-12, 1993. Results of this testing were submitted to MDNR on June 19, 2001, as supplemental information to the facility's 1999 and 2000 EIQ. These MSDSs were submitted to MDNR on September 19, 2007. While the MSDSs for the resins may not list the HAPs that result from decomposition of the phenolic resin (Acetaldehyde, Benzene, Formaldehyde, Phenol, Cresol), these HAPs were identified through the design data and organic stack testing.

The 1,206 mmcf is based on the mmbtu/hr for each combustion unit at the facility. The combustion units include HVACs, melter, furnaces, heat treat, etc. See Table Five for a list of this equipment. The 1,206 mmcf is based on all combustion equipment operating 8,760 hours/year except for the HVACs which were assumed to operate for 65% of the year. The combustion emissions are also included under C1, Plant Natural Gas in the PTE spreadsheet. For modeling purposes, the combustion emissions were allocated to the appropriate stacks. OA7 combustion emissions are also included under C1, Plant Natural Gas. The emissions reported under OA7 are the process emissions.

Table 5: Bodine Aluminum, Inc. Troy - Combustion Units

Combustion Unit	Size (MMBtu/Hr)	No. of Units
Ladle Preheaters	<1 each	10
Die Preheaters	<1 each	10
HV Units	<120 total	34
Water Heaters	<1 each	2
Die Heat Ovens	<1 each	3
Heat Treating	<2 each	43
Melting Furnace	<15	1
Sand Reclamation Furnace	<5 each	2
Resin Coating and TO	<5	1
Sand Heating	<2	1

Bodine Aluminum, Inc. maintains VOC emission factors for certain activities (e.g., casting, core molding, etc.). These VOC emission factors are used to calculate total VOCs from that particular activity and include organic HAPs. Bodine Aluminum, Inc. utilizes separate emission factors to speciate HAPs from the total VOCs. The HAPs emissions identified on the PTE spreadsheet are not in addition to the VOCs – they represent a portion of the total VOCs reported.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were based on test data already approved by the Air Pollution Control Program. Benzene emissions are based on factors provided in the EPA Document EPA-454/R-98-011, June 1998,

entitled “*Locating and Estimating Air Emissions from Sources of Benzene*”. The emission factor was derived from test data at an aluminum casting facility for casting and pouring operations. As stated in the guidance (Section 6.11.2, first paragraph), most benzene emissions from aluminum casting are associated with sand handling activities such as casting shake-out and sand cleaning. Emissions were measured from casting shakeout to yield a factor of 0.00548 lb benzene/ton aluminum. Bodine Aluminum, Inc. believes that this emission factor is a documented factor based on measurements that are similar to Bodine Aluminum, Inc.’s operations emitting benzene. Following the methodology used previously to convert the emission factors from lb/ton aluminum to lb/ton sand, 0.00548 is divided by 0.791 to yield a benzene emission factor for casting and core molding of 0.00693 lb benzene/ton sand. Use of this emission factor and MHDR of 8.8 tons per hour of sand and converting to grams per second, results in the emission rates used in Table Three.

The combustion emissions are based on AP-42 emission factors and machining emissions are based on the VOC content of the coolant. The remaining sand emission factors are based on Toyota design data. The Toyota design data is based on studies of similar Toyota plants in Japan (e.g., Tahara Plant). These studies were used to develop the emission factors for Bodine Aluminum, Inc. The stack test results confirm that Bodine Aluminum, Inc. can meet permitted emission limits based on the approved emission factors.

The manufacturers data indicates >99% control efficiency for PM control on the odor scrubbers. Bodine Aluminum, Inc. used 90% as a PM₁₀ control efficiency. The VOC destruction efficiency is based on stack test data observed and approved by MDNR (stack test conducted on February 23, 2000). No new emission sources have been added to the odor scrubbers since this test was conducted. The sand processing baghouses provided 95%.

Table 5: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Application	Installation Conditioned Potential
PM ₁₀	15.0	<250	33.23	122.32	<250
SO _x	40.0	N/D	0.073	3.20	N/A
NO _x	40.0	<250	45.49	198.05	<250
VOC	40.0	<250	97.09	237.31	<250
CO	100.0	N/D	1.37	50.65	N/A
HAPs	10.0/25.0	N/D	2.50	10.31	N/A
Acetaldehyde	10	N/D	N/D	1.91	N/A
Benezene	10	N/D	N/D	0.320	N/A
Hexane	10	N/D	N/D	1.09	N/A
Naphtalene	10	N/D	N/D	0.0004	N/A
Formaldehyde	10	N/D	N/D	2.25	N/A
Phenol	10	N/D	N/D	3.86	N/A
Cresol	10	N/D	N/D	0.35	N/A
Toluene	10	N/D	N/D	0.19	N/A
Xylene	10	N/D	N/D	0.0031	N/A
Hydrogen Fluoride	10	N/D	N/D	0.0057	N/A
Hydrogen Chloride	10	N/D	N/D	0.0056	N/A

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

Existing Potential Emissions are from permit 032006-004 with project number 2005-12-045.

The emission factors and control efficiencies used in the construction permit application are consistent with those found in the facility's most recent Title V and construction permits. A stack test conducted in February 2000, verifies that the emission factors used in the application are conservative. In a letter dated October 03, 2000, Steve Feeler of the Enforcement Section of the Air Program concurred with these findings. However, emission factors for casting operations were originally calculated based on the amount of aluminum processed. Emissions occur from core sand usage in the process and from the associated resin thermal destruction. However, many of the current casting machines produce two (2) parts per shot (e.g. 2 parts each time the machine cycles). The design of the new machines only allows for the production of one part per shot. The sand to metal usage ratio used in the casting operations is essentially constant at 0.791 ton of sand per ton of aluminum metal. The emission factors for casting operations that were previously adjusted to represent metal usage have been adjusted to represent a sand usage basis. The same calculations apply for converting the HAP emission factors.

(3.25 pounds of PM₁₀/ 1 ton metal) multiplied by (1 ton metal/0.791 ton of sand)=4.11 pounds of PM₁₀/ton sand

(4.94 pounds of VOC/ 1 ton metal) multiplied (1 ton metal/0.791 ton of sand)=6.25 pounds of VOC/ton sand

In project number 2001-06-013, which was an amendment to permit 1299-099, Bodine Aluminum, Inc. proposed to use a new record keeping sheet to track emissions of criteria air pollutants from the entire installation. This record keeping sheet simplified the review of plant operations during a plant compliance audit. They can continue to use the existing format with some modification. As the plant emissions will now be based on tons of sand rather than tons of metal, this form will need to be updated. It is important to note that the original emission tests were conducted on the sand basis and converted to metal bases. As new products are added and existing products are removed the production data will change. However, review of the record keeping forms and the calculations submitted with the application give support that the emissions limits are closely monitored and compliance audits are simplified.

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (6) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM₁₀, NO_x and VOC are above de minimis levels. All other pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Bodine 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. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *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 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060

AMBIENT AIR QUALITY IMPACT ANALYSIS

The following sections give a summary of the Ambient Air Quality Impact Analysis conducted for Bodine Aluminum, Inc. Please see the attached Memo dated November 13, 2008 *Ambient Air Quality Impact Analysis (AAQIA) for Bodine Aluminum, Inc.* for more information.

Preliminary Impact Analysis

In order to determine whether a full impact model analysis is necessary, a preliminary model analysis was performed. The preliminary analysis was performed using the AERMOD modeling system. For PM₁₀, if modeling results exceed the significance level of 1.0 µg/m³ on an annual basis and 5.0 µg/m³ on a 24-hour basis, full impact modeling would be necessary. For NO_x, if modeling results exceed the significance level of 1.0 µg/m³ on an annual basis, full impact modeling would be necessary. It was determined that the modeled impact for both pollutants exceeds the significance level, and a full impact analysis must be conducted for both.

NAAQS Evaluation

An NAAQS compliance demonstration is required for all pollutant that exceeds the significance levels. Unlike a significance determination, the NAAQS compliance demonstration must consider emissions from other existing sources in the area that contribute to background pollutant concentrations. To show compliance with NAAQS for PM₁₀, Bodine Aluminum, Inc. must demonstrate that its impact will be below 150 µg/m³ on a 24-hour basis and 50 µg/m³ on an annual basis. To show compliance with NAAQS for NO_x, Bodine Aluminum, Inc. must demonstrate that its impact will be below 100 µg/m³ on an annual basis.

For both PM₁₀ and NO_x, results show that NAAQS will be exceeded due to nearby sources. However, when a violation of NAAQS is predicted at one or more receptors in the impact area, if the facility's impacts at the receptor are below the significance levels, then a permit can be issued. Modeling results show that there should not be significant impact at the violating receptor.

Increment Consumption

Bodine Aluminum, Inc. must demonstrate that the plant will not deteriorate the air quality beyond the limits in Table One of 10 CSR 10-6.060 (11)(A). To show compliance with increment for PM₁₀, the facility must demonstrate that its impact will be below 30 µg/m³ on a 24-hour basis and 17 µg/m³ on an annual basis. To show compliance with increment for NO_x, the facility must demonstrate that its impact will be below 25 µg/m³.

Several violations of increment due to nearby sources are expected for both PM₁₀ and NO_x. However, the same reasoning for issuance of permit used for NAAQS exceedances can be applied to increment. The facility is not expected to exceed the significance levels at the violating receptor.

The modeling analysis was based on site-specific information such as emission rates. Bodine Aluminum, Inc. must abide by the limits set in this permit and any information submitted in the application for this project in order to ensure the accuracy and integrity of the modeling analysis.

HAPS Evaluation

The Department's Air Pollution Control Program maintains a list of emission thresholds for HAPs as defined in 10 CSR 6.060, Appendix J. A facility is required to submit an air quality analysis for each pollutant that exceeds these thresholds (screen model action levels). Initial estimates provided by the permit engineer indicate that the proposed project will result in an increase of several HAP emissions in excess of the screen model action levels.

Under the Departments' Air Pollution Control Program guidelines, a facility must submit an air quality analysis for all emission points within a facility when a refined analysis for a HAP is required. This requirement was introduced to ensure that any applicable RAL is not violated near a facility since background concentrations are not a required component of a HAP analysis. It is important to note that background concentrations are not currently required because they are virtually unknown for most HAPs, thereby making a background assessment impossible. The RALs are being met for all pollutants, averaging times and meteorological periods. As such, no further analysis is necessary.

The AAQIA submitted in support of the Bodine Aluminum, Inc. minor source application is complete. The following recommendations should be incorporated into the permit as special conditions. Failure to do so may invalidate the results obtained from the AAQIA.

1. The point source emission rates should not be exceeded.
2. The area source emission rates should not be exceeded.
3. Emissions from the ST-6a should not exceed the following:
 - a. 0.7 grams/second of NO_x.
4. Emission of benzene should not exceed the following emission rates:

- a. ST-19 should be limited to 0.00224 grams/second
 - b. ST-20 should be limited to 0.00224 grams/second
 - c. ST-23 should be limited to 0.005 grams/second
 - d. ST-24 should be limited to 0.00126 grams/second
 - e. ST-25 should be limited to 0.00224 grams/second
 - f. ST-3 should be limited to 0.00126 grams/second
 - g. ST-7 should be limited to 0.005 grams/second
 - h. ST-12 should be limited to 2.93e-06 grams/second
5. If significant alterations are made to the facility design as proposed in the permit application, the applicant will be required to submit an updated air quality analysis in order to ensure continued compliance with the air quality standards.

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (6), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

Timothy Paul Hines
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated June 27, 2008, received June 28, 2008, designating Toyota Motor Engineering and Manufacturing North America, Inc. as the owner and operator of the installation.
- Memo dated November 13, 2008, *Ambient Air Quality Impact Analysis (AAQIA) for Bodine Aluminum, Inc.*
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- NERO Regional Office Site Survey.

Mr. Bill Kronmueller
Assistant Manager
Bodine Aluminum, Inc.
100 Cherry Blossom Way
Troy, MO 63379

RE: New Source Review Permit - Project Number: 2007-07-053

Dear Mr. Kronmueller:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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 Mr. Tim Hines at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:tphk

Enclosures

c: Northeast Regional Office
PAMS File: 2007-07-053

Permit Number: