



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: 012015-005 Project Number: 2014-11-001
Installation Number: 187-0091

Parent Company: Bismarck Metal Inc.

Parent Company Address: 600 West Main Street, Bismarck, MO 63624

Installation Name: Bismarck Multimodal Services

Installation Address: 600 West Main Street, Bismarck, MO 63624

Location Information: St. Francois County, S6, T35N, R4E

Application for Authority to Construct was made for:

The installation of a sand transloading facility that loads wet sand onto rail cars. 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.

JAN 27 2015

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.

Page No.	3
Permit No.	
Project No.	2014-11-001

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."

Bismarck Multimodal Services
St. Francois County, S6, T35N, R4E

1. Documented Haul Road Watering/ Use of Chemical Dust Suppressants
Bismarck Multimodal Services shall control fugitive emissions from all of the haul roads areas at this site by performing one of the following:
 - A. Application of Chemical Dust Suppressants
 - 1) The operator shall apply a chemical dust suppressant (such as magnesium chloride, calcium chloride, lignosulfonates, etc.) to unpaved areas.
 - 2) The quantities of the chemical dust suppressant shall be applied and maintained in accordance with the manufacturer's recommendation (if available) and in sufficient quantities to achieve control of fugitive emissions from these areas while the facility is operating.
 - 3) The operator shall record the time, date and the amount of material applied for each application of the chemical dust suppressant agent on the above areas. The operator shall keep these records with the plant for not less than five (5) years and make these records available to Department of Natural Resources' personnel upon request.
 - B. Application of Water-Documented Daily
 - 1) The operator shall apply water to unpaved areas. Water shall be applied at a rate of 100 gallons per day per 1,000 square feet of unpaved or untreated surface area while the plant is operating.
 - 2) Precipitation may be substituted for watering if the precipitation is greater than one quarter of one inch and is sufficient to control fugitive emissions.
 - 3) Watering may also be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.
 - 4) The operator shall record the date, volume of water application and total surface area of active haul roads or the amount of precipitation that day. The operators shall also record the rationale for not watering (e.g. freezing conditions or not operating).

Page No.	4
Permit No.	
Project No.	2014-11-001

SPECIAL CONDITIONS:

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

- 5) The operator shall keep these records with the facility for not less than five (5) years, and the operator shall make these records available to Department of Natural Resources' personnel upon request.
- C. Bismarck Multimodal Services shall keep the following records on file and available for inspection:
- 1) A daily log initialed by the responsible facility operator of roads watered and quantity of water/chemical application used, or notation that there was a quarter inch or greater rainfall within the past 24 hours or that the facility was not in operation.
 - 2) Water tank size, total area of roads to be watered, and the resultant number of fills necessary to accomplish the required application rate.
 - 3) Records of watering equipment breakdowns and repairs.
2. Moisture Content Testing Requirement
- A. Bismarck Multimodal Services shall verify that the moisture content of the incoming sand is greater than or equal to 6.0 percent by weight.
 - B. Testing shall be conducted according to the method prescribed by the American Society for Testing Materials (ASTM) D-2216, C-566 or another method approved by the Director.
 - C. The initial test shall be conducted no later than 45 days after the start of operation. A second test shall be performed the calendar year following the initial test during the months of July or August.
 - D. The test samples shall be taken from the sand upon arrival to the site or from each source of sand (e.g. quarry, mine, etc.).
 - E. The written analytical report shall include the raw data and moisture content of each sample, the test date and the original signature of the individual performing the test. The report shall be filed on-site or at the Bismarck Multimodal Services main office within 30 days of completion of the required test.
 - F. If the moisture content of either of the two tests is less than the moisture content in Special Condition 2.A, another test may be performed within 15 days of the noncompliant test. If the results of that test is also less than

Page No.	5
Permit No.	
Project No.	2014-11-001

SPECIAL CONDITIONS:

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

the moisture content in Special Condition 2.A, Bismarck Multimodal Services shall either:

- 1) Apply for a new permit to account for the revised information, or
- 2) Submit a plan for the installation of wet spray devices to the Compliance/Enforcement Section of the Air Pollution Control Program within 10 days of the second noncompliant test. The wet spray devices shall be installed and operational within 40 days of the second noncompliant test.

G. In lieu of testing, Bismarck Multimodal Services may obtain test results that demonstrate compliance with the moisture content in Special Condition 2.A from the supplier of the aggregate.

3. Product Handling

Bismarck Multimodal Services shall only handle sand and aggregate products. Handling and accepting other products is prohibited.

4. Reporting Requirements

A. Bismarck Multimodal Services shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 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.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW

Project Number: 2014-11-001
Installation ID Number: 187-0091
Permit Number:

Bismarck Multimodal Services
600 West Main Street
Bismarck, MO 63624

Complete: November 4, 2014

Parent Company:
Bismarck Metal Inc.
600 West Main Street
Bismarck, MO 63624

St. Francois County, S6, T35N, R4E

REVIEW SUMMARY

- Bismarck Multimodal Services has applied for authority to install sand transloading facility that loads wet sand onto rail cars.
- HAP emissions are not expected from the proposed equipment.
- None of the NSPS regulations apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Documented watering and chemical dust suppressants are being used to control the PM, PM₁₀, PM_{2.5} emissions from the installation's haul roads.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is located in St. Francois County, an attainment area for all criteria pollutants.
- This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.
- Emissions testing is not required for the equipment.
- No Operating Permit is required for this installation.

- Approval of this permit is recommended with special conditions.

INSTALLATION AND PROJECT DESCRIPTION

Bismarck Multimodal Services is a new installation that will receive wet sand and load it onto rail cars. The sand will be mined off-site at Summit Proppants, Inc., a Ste. Genevieve county sand mine, where it is washed and screened. Summit Proppants, Inc. will test the moisture content of the sand before it leaves their site. The moisture content is expected to be between 6-12% by weight and will have a grit size between 20 and 70. Sand may come from other sources also.

The wet sand will arrive on site via haul trucks. The haul trucks will travel down an unpaved 4127 foot haul road and dump sand into a hopper. Storage piles will not be used. From the hopper, the sand will go to a conveyor that will dump the sand into rail cars. The conveyors are powered by electricity from the grid. Eighteen rail cars will be filled at one time and each car will hold an average of 100 tons of sand. It is estimated that up to 18 rail cars can be filled in an 11 hour shift. The bottleneck of this operation is the number of rail cars that can be serviced. Therefore, the maximum hourly throughput of facility is 163.63 tons of sand per hour. Bismarck Multimodal Services will also use a gasoline powered Trackmobile 5TM mobile rail car mover to move rail cars on the track.

Potential emissions of this project were calculated using a maximum hourly throughput of 163.63 tons of sand per hour and includes hauling and sand handling emissions. Even though the sand will arrive wet with a moisture content of at least six percent, sand handling emissions were included as a worst case scenario. Most emissions are from the haul roads. Because the Trackmobile 5TM mobile rail car mover will be a mobile source and by the nature it's operated, it will not remain in one physical location for longer than 12 consecutive months, its engine is considered a nonroad engine and emissions from this engine were not included in the potential emissions of this project.

Because the uncontrolled potential emissions of this project are above de minimis levels, a construction permit is required. No permits have been issued to Bismarck Multimodal Services from the Air Pollution Control Program.

EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

Emissions from the sand handling were calculated using emission factors from AP-42, 13.2.4 "Aggregate Handling And Storage Piles," November 2006. The controlled emission factors were used because the inherent moisture content of the sand will be at least 6% by weight. PM, PM₁₀, and PM_{2.5} emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42, Section 13.2.2 "Unpaved Roads," November 2006. A 90% control efficiency for PM and PM₁₀ and a 40% control efficiency for PM_{2.5} were applied to the emission calculations for the use of documented haul road watering and chemical dust suppressants.

The following table provides an emissions summary for this project. Uncontrolled potential emissions of the project do not take into account haul road watering and the high moisture content of the sand. Controlled potential emissions of the project include haul road watering and the high moisture content of the sand. Both scenarios assume continuous operation (8760 hours per year).

Table 1: Emissions Summary (tons per year)

Pollutant	<i>De Minimis</i> Level	Uncontrolled Potential Emissions of the Project	Controlled Potential Emissions of the Project
PM	25.0	247.05	6.15
PM ₁₀	15.0	66.93	1.77
PM _{2.5}	10.0	18.85	0.87
SO _x	40.0	N/A	N/A
NO _x	40.0	N/A	N/A
VOC	40.0	N/A	N/A
CO	100.0	N/A	N/A
Total HAPs	25.0	N/A	N/A

N/A = Not Applicable

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 all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Bismarck Multimodal Services 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
- *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

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.

Daronn A. Williams
New Source Review Unit

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 29, 2014, received November 4, 2014, designating Bismarck Metal Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

APPENDIX A

Abbreviations and Acronyms

%percent	m/s meters per second
°Fdegrees Fahrenheit	Mgal 1,000 gallons
acfmactual cubic feet per minute	MW megawatt
BACT Best Available Control Technology	MHDR maximum hourly design rate
BMPs Best Management Practices	MMBtu Million British thermal units
Btu British thermal unit	MMCF million cubic feet
CAM Compliance Assurance Monitoring	MSDS Material Safety Data Sheet
CAS Chemical Abstracts Service	NAAQS ... National Ambient Air Quality Standards
CEMS Continuous Emission Monitor System	NESHAPs National Emissions Standards for Hazardous Air Pollutants
CFR Code of Federal Regulations	NO_x nitrogen oxides
CO carbon monoxide	NSPS New Source Performance Standards
CO₂ carbon dioxide	NSR New Source Review
CO₂e carbon dioxide equivalent	PM particulate matter
COMS Continuous Opacity Monitoring System	PM_{2.5} particulate matter less than 2.5 microns in aerodynamic diameter
CSR Code of State Regulations	PM₁₀ particulate matter less than 10 microns in aerodynamic diameter
dscf dry standard cubic feet	ppm parts per million
EQ Emission Inventory Questionnaire	PSD Prevention of Significant Deterioration
EP Emission Point	PTE potential to emit
EPA Environmental Protection Agency	RACT Reasonable Available Control Technology
EU Emission Unit	RAL Risk Assessment Level
fps feet per second	SCC Source Classification Code
ft feet	scfm standard cubic feet per minute
GACT Generally Available Control Technology	SDS Safety Data Sheet
GHG Greenhouse Gas	SIC Standard Industrial Classification
gpm gallons per minute	SIP State Implementation Plan
gr grains	SMAL Screening Model Action Levels
GWP Global Warming Potential	SO_x sulfur oxides
HAP Hazardous Air Pollutant	SO₂ sulfur dioxide
hr hour	tph tons per hour
hp horsepower	tpy tons per year
lb pound	VMT vehicle miles traveled
lbs/hr pounds per hour	VOC Volatile Organic Compound
MACT Maximum Achievable Control Technology	
µg/m³micrograms per cubic meter	

Ms. Katie Barton
Freight Manager
Bismarck Multimodal Services
600 West Main Street
Bismarck, MO 63624

RE: New Source Review Permit - Project Number: 2014-11-001

Dear Ms. Barton:

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 and your new source review permit application 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 were adversely affected by this permit decision, you may be entitled to pursue an appeal before the administrative hearing commission pursuant to Sections 621.250 and 643.075.6 RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty 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 administrative hearing commission, whose contact information is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.oa.mo.gov/ahc.

If you have any questions regarding this permit, please do not hesitate to contact Daronn A. Williams, 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:dwl

Enclosures

c: Southeast Regional Office
PAMS File: 2014-11-001

Permit Number: