



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

August 11, 2020

Bill Yates
Plant Engineering Manager
MetalTek International – Carondelet Division
8600 Commercial Boulevard
Pevely, MO 63070

RE: New Source Review Permit Amendment – Permit Number: 092009-006A
Project Number: 2020-05-011; Installation Number: 099-0111

Dear Bill Yates:

MetalTek International operates a high-alloy steel foundry located in Pevely, Missouri that is designated as the Carondelet Division. Processes at the facility include mold and core manufacturing, steel melting in induction arc furnaces, pouring molten steel, shake-out to remove sand from around cooled parts, sand recycling, and steel finishing.

In September 2009, MetalTek was issued Construction Permit No. 092009-006, which authorized the installation of an Impianti Macchine Fonderia (IMF) molding line that replaced the large and small carousel molding equipment. The IMF line consisted of several new emission points, including Sand Conveying (EP-06B) and IMF Core Mixing (EP-13C), among others. These two specific emission points were both required to be controlled by a cyclone (CD-06) and a baghouse (CD-03 North Baghouse).

MetalTek is now proposing to remove the requirement for CD-06 to control EP-06B. Sampling and data analysis has shown that focusing both CD-06 and CD-03 solely on EP-13C will improve the industrial hygiene of the IMF molding area. EP-06B will now only be controlled by CD-03.

Emissions from EP-06B and EP-13C include only particulate emissions from sand handling. Potential PM₁₀ emissions were calculated using an emission factor of 0.54 pounds per ton of sand handled, which was taken from AP-42 Section 12.13 *Steel Foundries* (January 1995). An overall capture/control efficiency of 88% was applied to the calculations for the use of total enclosure around both emission points, which were vented to the baghouse, as required by Special Conditions 4 and 5 in Construction Permit No. 092009-006. It was assumed that PM₁₀ emissions were equal to PM and PM_{2.5} emissions.

Removing CD-06 from EP-06B will not impact potential emissions because the control efficiency of the cyclone was not accounted for in the original calculations. With neither emission point changing in operation and the baghouse still controlling EP-06B and EP-13C, the particulate emissions from the IMF line and the capture/control efficiency attributed to the units will remain the same. Special Condition 4 was superseded and reinstated to separate the control device requirements for the two emissions points. Special Condition 5 was corrected to clarify that both emission points will continue to have total enclosure.



Bill Yates
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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, United States Post Office Building, 131 West High Street, Third Floor, P.O. Box 1557, Jefferson City, Missouri 65102, phone: 573-751-2422, fax: 573-751-5018, website: www.ao.mo.gov/ahc.

If you have any questions regarding this amendment, please contact the Air Pollution Control Program at 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

A handwritten signature in blue ink that reads "Kendall B. Hale". The signature is written in a cursive style.

Kendall B. Hale
Permits Section Chief

KBH:rsa

Enclosures

c: St. Louis Regional Office
PAMS File: 2020-05-011

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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 to 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 (3)(E). "Conditions required by permitting authority."

MetalTek International – Carondelet Division
Jefferson County (S7, T41N, R6E)

1. Superseding Condition
The conditions of this permit supersede Special Conditions 4 and 5.A of Construction Permit No. 092009-006, previously issued by the Air Pollution Control Program.

Replacement Special Conditions for Construction Permit No. 092009-006:

4. Control Device Requirements – Baghouse and Cyclone
 - A. MetalTek International shall control particulate emissions from the Sand Conveyor (EP-06B) using a baghouse (CD-03 North Baghouse), as specified in the permit application and subsequent amendment request.
 - B. MetalTek International shall control particulate emissions from IMF Core Mixing (EP-13C) using a cyclone (CD-06) vented to a baghouse (CD-03 North Baghouse), as specified in the permit application and subsequent amendment request.
 - C. The baghouse and cyclone shall each be operated and maintained in accordance with their manufacturers' specifications.
 - D. The baghouse shall be equipped with a gauge or meter than indicates the operating pressure drop across the control device. This gauge or meter shall be located such that Missouri Department of Natural Resources' personnel may easily observe it.
 - E. MetalTek International shall monitor and record the operating pressure drop across the baghouse at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty, which shall be kept on site.

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SPECIAL CONDITIONS:

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

- F. Replacement filters for the baghouse shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (temperature limits, acid/alkali resistance, abrasion resistance, etc.).
 - G. MetalTek International shall maintain operating and maintenance logs for both the baghouse and the cyclone, which shall include the following:
 - 1) Incidents of malfunction with impact on emissions, date and duration of event, probable cause, and corrective actions
 - 2) Maintenance activities with inspection schedule, repair actions, replacements, etc.
5. Control Measure – Capture Efficiency
The Sand Conveyor (EP-06B) and IMF Core Mixing (EP-13C) shall each be totally enclosed, sealed with bolt down panels, maintained under negative pressure, and exhausted to their respective control devices.