



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

MAY 13 2019

Mr. Terry Miner
Manager - EHS
Zoltek
3101 McKelvey Road
Bridgeton, MO 63044

RE: New Source Review Permit Amendment - Permit Number: 012018-001A
Project Number: 2018-10-045; Installation Number: 183-0110

Dear Mr. Miner:

We received your request to amend Permit No. 012018-001 to account for changes made to the Desizing Material Handling Baghouses (CD-11 and CD-12). The flowrate to baghouse CD-11 has been updated from 2,233 standard cubic feet per minute (cfm) to 6,000 cfm. The flowrate to baghouse CD-12 remains at 3,000 cfm; however, the exit grain loading for both CD-11 and CD-12 have been updated from 0.02 grains per dry standard cubic foot (gr/dscf) to 0.01 gr/dscf. Even though the flowrate to CD-11 has increased, the project emissions have decreased due to the lower grain loading rating of the baghouses.

Table 3 from Permit No. 012018-001 has been updated to account for the changes noted above. Existing potential emissions were taken from construction permit #082015-009. Existing actual emissions were taken from the installation's 2016 EIQ. The controlled potential emissions of the project represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Please note that the VOC emissions of the project have also been corrected. The VOC emissions were inadvertently doubled in the original permit and therefore the VOC emissions have been updated from 4.34 tpy to 2.17 tpy.

Updated Table 3: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2016 EIQ)	Controlled Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	0.93	N/D	8.93	9.86
PM ₁₀	15.0	3.40	1.42	8.93	12.33
PM _{2.5}	10.0	3.40	1.42	8.93	12.33
SO _x	40.0	0.05	N/D	N/A	0.05
NO _x	40.0	51.46	5.32	8.58	60.04
VOC	40.0	11.75	0.28	2.17	13.92
CO	100.0	54.71	0.12	0.09	54.80



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Mr. Terry Miner
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Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2016 EIQ)	Controlled Potential Emissions of the Project	New Installation Conditioned Potential
Cyanide Compounds	10.0/0.1 ^b	0.77	N/D	0.087	N/D
Styrene	10.0/1.0 ^b	2.88	N/D	N/A	N/D
MIBK ^a	10.0/10.0 ^b	0.01	N/D	N/A	N/D
Total HAPs	25.0	3.67	N/D	0.087	N/D

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

^aMethyl Isobutyl Ketone

^bSMAL

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 do not hesitate to contact Susan Heckenkamp, at the department's 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



Kendall B. Hale
Permits Section Chief

KBH:shj

Enclosures

c: St. Louis Regional Office
PAMS File: 2018-10-045

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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."

Zoltek
St. Charles County, S34, T46N, R2E

1. Superseding Condition
 - A. The conditions of this permit supersede Special Condition 1 of the previously issued construction permit, Permit No. 012018-001 issued by the Air Pollution Control Program.

2. Control Device Requirement-Baghouse
 - A. Zoltek Carbon Fibers shall capture and control all emissions from the following emission units using baghouses (CD-11 & CD-12) as specified in the permit application.
 - 1) EP-11 (CD-11): EU-11 (Pierre precutter), EU-12 (belt conveyor), EU-13 (belt conveyor)
 - 2) EP-12 (CD-12): EU-14 (knife chopper), EU-15 (hammer mill), EU-16 (vacuum conveyor)

 - B. The total particulate matter (filterable plus condensable) emissions for each individual filter shall not exceed 0.01 gr / dscf. Zoltek Carbon Fibers shall demonstrate compliance by keeping onsite a guarantee/statement from the filter manufacturer showing the filter rating.

 - C. Each air flowrate shall not exceed 6000 cfm for CD-11 and 3000 cfm for CD-12. Zoltek Carbon Fibers shall demonstrate compliance at each control device by,
 - 1) At least once per calendar quarter conducting testing to determine the average velocity at each respective control device. Testing shall be conducted using a method preapproved by the Air Pollution Control Program. The respective velocity shall be multiplied by the cross sectional area to determine the flowrate., or
 - 2) Obtaining a copy of the manufacturer's calculations showing the theoretical flowrate, fan size, fan speed, motor amperage.

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SPECIAL CONDITIONS:

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

- 3) Copies of the compliance method shall be maintained on site
- D. The baghouses shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that Department of Natural Resources' employees may easily observe them.
- E. Zoltek Carbon Fibers shall develop a written standard operating procedure to monitor pressure drop and filter condition. Normal operation and replacement parameters shall be indicated. The standard operating procedure shall be kept on site.
- F. Zoltek Carbon Fibers shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours when the associated equipment is in operation. The operating pressure drop shall be maintained within the design conditions specifications of the standard operating procedure.
- G. Zoltek Carbon Fibers shall operate the filters according to the standard operating procedure. The operating pressure drop shall be maintained within the specifications of the standard operating procedure
- H. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance). The replacement filter material type and weight shall meet or exceed the specifications of the existing filter. The air to cloth ratio or air to filter ratio shall not be increased when filter replacement is performed.
- I. Zoltek Carbon Fibers shall maintain an operating and maintenance log for the baghouses which shall include the following:
 - 1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
 - 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.