



Missouri Department of dnr.mo.gov

**NATURAL RESOURCES**

Michael L. Parson, Governor

Carol S. Comer, Director

November 13, 2020

Tom Weier  
Plant Manager  
Archer Daniels Midland Processing - Deerfield  
17700 South Highway T  
Deerfield, MO 64741

RE: New Source Review Temporary Permit Request - Project Number: 2020-10-025

Installation ID Number: 217-0043  
Expiration Date: February 11, 2021  
Temporary Permit Number: 112020-009

Dear Tom Weier:

The Missouri Department of Natural Resources' Air Pollution Control Program has completed a review of your request to operate a rented portable natural gas fired boiler complete with a low-NOx burner and flue gas recycle during the maintenance of the existing Nebraska Boiler. The Air Pollution Control Program is hereby granting your request to conduct this temporary operation at this location in accordance with Missouri State Rule 10 CSR 10-6.060(3).

Archer Daniels Midland Company (ADM) owns and operates an installation near Deerfield (S98, T35N, R33W) that includes a soybean vegetable oil extraction plant and a biodiesel manufacturing plant. The installation is a major VOC and HAP source for NSR purposes and currently has an active Part 70 Operating Permit (Permit OP2017-062). ADM will be planning a 90-day maintenance of the 149 MMBtu/hr Nebraska Boiler (EU-17), during which they plan to run the proposed 95 MMBtu/hr (0.09 MMcf/hr) temporary natural gas-fired boiler in its place. The 95 MMBtu/hr boiler will be on skids and is considered a temporary boiler.

Potential emissions from the use of a 95.0 MMBtu/hr natural gas fired boiler were calculated using the emission factors found in EPA document AP-42 Section 1.4 *Natural Gas Combustion* (July 1998). Operation of the temporary boiler is being allowed until February 11, 2021.

Therefore, emissions calculations are based on 2,160 hours. The boiler includes a low-NOx burner and flue gas recycle; however, to remain conservative in the calculations and not require a Special Condition for these items, the uncontrolled NOx emission factor from AP-42 was used. Table 1, below, provides a potential emissions summary for the project.



Table 1: Project Emissions Summary

Pollutant	Regulatory <i>De Minimis</i> Levels (tpy)	Emission Factor (lb/MMcf)	90-Day (2,160 hours) Potential Emissions (tons)
PM	25.0	1.9	0.19
PM <sub>10</sub>	15.0	7.6	0.76
PM <sub>2.5</sub>	10.0	7.6	0.76
SO <sub>x</sub>	40.0	0.6	0.06
NO <sub>x</sub>	40.0	100	10.06
VOC	40.0	5.5	0.55
CO	100.0	84	8.45
Combined HAPs	10.0/25.0	1.89	0.19

The Missouri Code of State Regulations sets forth requirements for a temporary permit, 10 CSR 10-6.060(10); the duration of the project is less than 2 years, the potential emissions from the source are less than 100 tons per year, and the permitting authority receives the application for authority to construct prior to start of construction. The applicant has met all three of the temporary permit requirements.

ADM- Deerfield is authorized to construct and operate subject to the following special conditions:

1. ADM – Deerfield shall not exceed 2,160 hours of operation from the temporary boiler. ADM - Deerfield shall keep records of the days operated with hours of operation on site.
2. Fuel Restriction - ADM-Deerfield shall exclusively combust natural gas in the temporary boiler.

You are still obligated to meet all applicable air pollution control rules, Department of Natural Resources' rules, or any other applicable federal, state, or local agency regulations. Specifically, you should avoid violating 10 CSR 10-6.045 *Open Burning Requirements*, 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.165 *Restriction of Emission of Odors*, 10 CSR 10-6.170 *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, and 10 CSR 10-6.400 *Restriction of Emission of Particulate Matter From Industrial Processes*. In addition, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*, 40 CFR 63 Subpart JJJJJ does not apply to the boiler, as natural gas boilers are exempt, and *National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters* 40 CFR 63 Subpart DDDDD and *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units* 40 CFR 60 Subpart Dc do not apply, as the new boiler is a temporary boiler.

Tom Weier  
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A copy of this letter should be kept with the unit and be made available to Department of Natural Resources' personnel upon verbal request. If you have any questions regarding this determination, please do not hesitate to contact Susan Heckenkamp at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 75 1-4817. Thank you for your time and attention to this matter.

Sincerely,  
AIR POLLUTION CONTROL PROGRAM

A handwritten signature in blue ink that reads "Darcy A. Bybee". The signature is written in a cursive style.

Darcy A. Bybee  
Director

DAB:sha

c: PAMS File: 2020-10-025  
Southwest Regional Office