

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: **07 2 0 1 7 - 0 1 1**

Project Number: 2017-03-070
Installation Number: 215-0026

Parent Company: Dairy Farmers of America, Inc.

Parent Company Address: 800 West Tampa Street, Springfield, MO 65802

Installation Name: Dairy Farmers of America, Inc.

Installation Address: 950 Metrecal Trace, Cabool, MO 65689

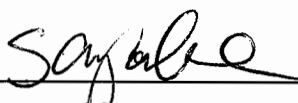
Location Information: Texas County, S11, T28N, R11W

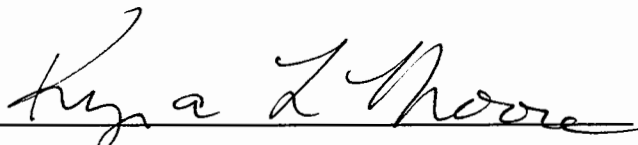
Application for Authority to Construct was made for:

Installation of a 96.3 MMBtu per hour natural gas fired boiler. 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.


Prepared by
Sam Anzalone
New Source Review Unit


Director or Designee
Department of Natural Resources
JUL 19 2017

Effective Date

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 Enforcement and Compliance Section of 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 Enforcement and Compliance Section of the Department's Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available within 30 days of actual startup. Also, you must notify the Department's 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 the permit application and this permit and permit review shall be kept at the installation address and shall be made available to Department's 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 using the contact information below.

Contact Information:
Missouri Department of Natural Resources
Air Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176
(573) 751-4817

The regional office information can be found at the following website:
<http://dnr.mo.gov/regions/>

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."

Dairy Farmers of America, Inc.
Texas County, S11, T28N, R11W

1. **Operational Requirement - Propane**
 - A. Boiler #3 (EP-11) shall be fired with pipeline natural gas as defined in 40 CFR 72.2 or propane
 - B. Dairy Farmers of America, Inc. shall only use propane as a fuel source on an emergency basis not to exceed 500 hours on a rolling 12-month basis for EP-11.
 - C. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Condition 1.A.
2. **Control Device – Low NO_x Burner**
 - A. Boiler #3 (EP-11) shall be equipped with a low NO_x burner
 - B. The low NO_x burner shall be operated and maintained in accordance with the manufacturer's specifications.
 - C. Dairy Farmers of America, Inc. shall maintain a copy of the manufacturer's specifications for the low NO_x burner on site
 - D. Dairy Farmers of America, Inc. shall maintain an operating and maintenance log for the low NO_x burner 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.
3. **Operational Requirement – Natural Gas**

All burners in the Boiler #1 (EP-01) and Boiler #2 (EP-02) shall be fired exclusively with pipeline natural gas as defined in 40 CFR 72.2. Dairy Farmers of America, Inc. shall demonstrate compliance using fuel SDS. All records shall be kept on site.

SPECIAL CONDITIONS:

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

4. **Record Keeping and Reporting Requirements**
 - A. Dairy Farmers of America, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
 - B. Dairy Farmers of America, Inc. 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 shows an exceedance of a limitation imposed by this permit.

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

Project Number: 2017-03-070

Installation ID Number: 215-0026

Permit Number: 07 2017 - 011

Installation Address:

Dairy Farmers of America, Inc.
950 Metrecal Trace
Cabool, MO 65689

Parent Company:

Dairy Farmers of America, Inc.
800 West Tampa Street
Springfield, MO 65802

Texas County, S11, T28N, R11W

REVIEW SUMMARY

- Dairy Farmers of America, Inc. has applied for authority to install a 96.3 MMBtu/hr natural gas fired boiler (EP-11).
- The application was deemed complete on April 18, 2017.
- HAP emissions are expected from the proposed equipment. HAPs of concern from this process are from the combustion of natural gas. All HAPs emissions are below their respective SMALs.
- 40 CFR 60 Subpart Dc, "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units" applies to the equipment.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- A low NO_x burner is being used to control the NO_x emissions from the equipment in this permit.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of NO_x are conditioned below de minimis levels by the propane combustion restrictions in Special Condition 1.
- This installation is located in Texas 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.

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels and below the SMALs.
- Emissions testing is not required for the equipment as a part of this permit. Testing may be required as part of other state, federal or applicable rules.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Dairy Farmers of America, Inc. in Cabool, Missouri blends dry and liquid food ingredients with water, and the product is canned and shipped. Dry milk powder is also rehydrated, then evaporated and used in house or shipped off-site in bulk. There are two boilers (EP-01 & EP-02) which have the possibility of using natural gas or fuel oil #6. However, Dairy Farmers of America, Inc. has voluntarily taken a requirement to exclusively burn natural gas in these existing boilers to stay a basic operating permit.

This installation is a minor source under the new source review permitting program The installation is a basic source under the operating permit program. Their current operating permit is a basic operating permit issued on October 3, 2016.

The following New Source Review permits have been issued to Dairy Farmers of America, Inc. from the Air Pollution Control Program.

Table 1: Permit History

| Permit Number | Description |
|---------------|--|
| 052001-024 | Relocation of existing milk power rehydration unit |

PROJECT DESCRIPTION

Dairy Farmers of America, Inc. is planning to install an additional boiler (EP-11) to meet the increased steam demands brought about by the glass line expansion project. The gas line project has no air pollutants associated with it. The boiler has a maximum heat input of 96.27 mmBTU per hour and can use natural gas or propane as a fuel source. Propane fuel use is limited to 500 hours . Without a limitation of fuel use, NO_x emissions would exceed 40 tpy.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.4 "Natural Gas Combustion" (July 1998) and Section 1.5 "Liquefied Petroleum Gas Combustion" (July 2008).

The following table provides an emissions summary for this project. Existing potential emissions were taken from Permit no. 052001-024 and based on the use of diesel fuel which is no longer allowed.. Existing actual emissions were taken from the installation's 2015 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year).

Table 2: Emissions Summary (tpy)

| Pollutant | Regulatory <i>De Minimis</i> Levels | Existing Potential Emissions | Existing Actual Emissions (2015 EIQ) | Potential Emissions of the Project | New Installation Conditioned Potential |
|-------------------------|---|------------------------------------|---|--|---|
| PM | 25.0 | N/D | N/D | 0.79 | N/D |
| PM ₁₀ | 15.0 | 19.32 | 0.83 | 3.14 | 11.68 |
| PM _{2.5} | 10.0 | N/D | 0.82 | 3.14 | N/D |
| SO _x | 40.0 | 0.39 | 0.064 | 0.25 | 0.63 |
| NO _x | 40.0 | 63.73 | 10.6 | 20.69 | 84.07 |
| VOC | 40.0 | 3.49 | 0.58 | 2.28 | 5.76 |
| CO | 100.0 | 53.4 | 8.89 | 34.76 | 88.0 |
| GHG (CO ₂ e) | N/A | N/D | N/D | 49,653 | N/D |
| GHG (mass) | N/A | N/D | N/D | N/D | N/D |
| HAPs | 10.0/25.0 | N/D | N/D | 0.78 | N/D |

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

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 NO_x are conditioned below de minimis levels by the propane restriction in Special Condition 1.

APPLICABLE REQUIREMENTS

Dairy Farmers of America, 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

- *Operating Permits*, 10 CSR 10-6.065
- *Start-Up, Shutdown, and Malfunction Conditions*, 10 CSR 10-6.050
- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
 - Per 10 CSR 10-6.110(4)(B)2.B(II) and (4)(B)2.C(II) a full EIQ is required for the first full calendar year the equipment (or modifications) approved by this permit are in operation.
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Odors*, 10 CSR 10-6.165

SPECIFIC REQUIREMENTS

- *New Source Performance Regulations*, 10 CSR 10-6.070
 - *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 CFR Part 60, Subpart Dc

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*, it is recommended that this permit be granted with special conditions.

PERMIT DOCUMENTS

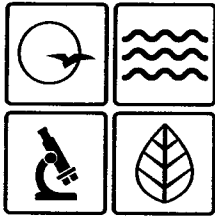
The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 8, 2017, received March 20, 2017, designating Dairy Farmers of America, Inc. as the owner and operator of the installation.

APPENDIX A

Abbreviations and Acronyms

| | | | |
|-------------------------------|--|-------------------------------|--|
| % | percent | Mgal | 1,000 gallons |
| °F | degrees Fahrenheit | MW | megawatt |
| acfm | actual cubic feet per minute | MHDR | maximum hourly design rate |
| BACT | Best Available Control Technology | MMBtu | Million British thermal units |
| BMPs | Best Management Practices | MMCF | million cubic feet |
| Btu | British thermal unit | MSDS | Material Safety Data Sheet |
| CAM | Compliance Assurance Monitoring | NAAQS | National Ambient Air Quality Standards |
| CAS | Chemical Abstracts Service | NESHAPs | National Emissions Standards for Hazardous Air Pollutants |
| CEMS | Continuous Emission Monitor System | NO_x | nitrogen oxides |
| CFR | Code of Federal Regulations | NSPS | New Source Performance Standards |
| CO | carbon monoxide | NSR | New Source Review |
| CO₂ | carbon dioxide | PM | particulate matter |
| CO₂e | carbon dioxide equivalent | PM_{2.5} | particulate matter less than 2.5 microns in aerodynamic diameter |
| COMS | Continuous Opacity Monitoring System | PM₁₀ | particulate matter less than 10 microns in aerodynamic diameter |
| CSR | Code of State Regulations | ppm | parts per million |
| dscf | dry standard cubic feet | PSD | Prevention of Significant Deterioration |
| EIQ | Emission Inventory Questionnaire | PTE | potential to emit |
| EP | Emission Point | RACT | Reasonable Available Control Technology |
| EPA | Environmental Protection Agency | RAL | Risk Assessment Level |
| EU | Emission Unit | SCC | Source Classification Code |
| fps | feet per second | scfm | standard cubic feet per minute |
| ft | feet | SDS | Safety Data Sheet |
| GACT | Generally Available Control Technology | SIC | Standard Industrial Classification |
| GHG | Greenhouse Gas | SIP | State Implementation Plan |
| gpm | gallons per minute | SMAL | Screening Model Action Levels |
| gr | grains | SO_x | sulfur oxides |
| GWP | Global Warming Potential | SO₂ | sulfur dioxide |
| HAP | Hazardous Air Pollutant | tph | tons per hour |
| hr | hour | tpy | tons per year |
| hp | horsepower | VMT | vehicle miles traveled |
| lb | pound | VOC | Volatile Organic Compound |
| lbs/hr | pounds per hour | | |
| MACT | Maximum Achievable Control Technology | | |
| µg/m³ | micrograms per cubic meter | | |
| m/s | meters per second | | |



Missouri Department of dnr.mo.gov

NATURAL RESOURCES

Eric R. Greitens, Governor

Carol S. Comer, Director

JUL 19 2017

Mr. Steve Moore
Environmental Compliance Manager
Dairy Farmers of America, Inc.
800 West Tampa Street
Springfield, MO 65802

RE: New Source Review Permit - Project Number: 2017-03-070

Dear Mr. Moore:

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, 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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at the following website: <http://dnr.mo.gov/regions/>. The online CAV request can be found at <http://dnr.mo.gov/cav/compliance.htm>.

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.oa.mo.gov/ahc.



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Mr. Steve Moore
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If you have any questions regarding this permit, please do not hesitate to contact Sam Anzalone, 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:saj

Enclosures

c: Southeast Regional Office
PAMS File: 2017-03-070

Permit Number: **07 2 0 1 7 - 0 1 1**