

STATE OF MISSOURI

PERMIT BOOK



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: **042008-006** Project Number: 2007-10-032

Parent Company: Purina Mills, LLC

Parent Company Address: P.O. Box 66812, St. Louis, MO 63166

Installation Name: Land O'Lakes Purina Feed, LLC

Installation Address: 4225 S. Highway 169, St. Joseph, MO 64501

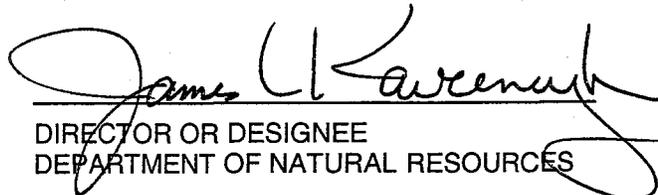
Location Information: Buchanan County, S26, T57N, R35W

Application for Authority to Construct was made for:
Installation of new section to an existing cooler with a new dual cyclone. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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- Standard Conditions (on reverse) are applicable to this permit.
 - Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

APR 22 2008

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 this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. 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 this (these) air contaminant source(s).

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 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 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.

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Project No.	2007-10-032

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."

Land O'Lakes Purina Feed, LLC
Buchanan County, S26, T57N, R35W

Cyclone conditions

1. Land O'Lakes Purina Feed, LLC shall control emissions from the cooler using the dual cyclone as specified in the permit application. The cyclone must be in use at all times when the cooler is in operation. The cyclone shall be operated and maintained in accordance with the manufacturer's specifications.

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

Project Number: 2007-10-032
Installation ID Number: 021-0019
Permit Number:

Land O'Lakes Purina Feed, LLC
4225 S. Highway 169
St. Joseph, MO 64501

Complete: February 27th, 2008

Reviewed: February 27th, 2008

Parent Company:
Purina Mills LLC
P.O. Box 66812
St. Louis, MO 63166

Buchanan County, S26, T57N, R35W

REVIEW SUMMARY

- Land O'Lakes Purina Feed, LLC has applied for authority to construct a new section to an existing cooler with a new dual cyclone.
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed equipment. HAPs of concern from this process are manganese compounds.
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- Dual cyclone control equipment is being used in association with the new equipment to control the PM₁₀ and HAPs 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 Particulate Matter Less than Ten Microns In Diameter (PM₁₀) and HAPs are below de minimis levels.
- This installation is located in Buchanan County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].

- Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.
- Emissions testing is not required for the equipment.
- Revision to the Basic Operating Permit application is required for this installation within 30 days of issuance of this permit.
- Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Land O'Lakes Purina Feed, LLC operates an animal feed mill in Buchanan County in St. Joseph, Missouri. This facility manufactures both pelleted and extruded animal feed. The extrusion feed plant began operation in 1992. Purina Mills is considered a minor source under construction permits. An amended Basic Operating Permit (OP2001-086) was issued on February 25, 2002. Basic Operating Permit Renewal was issued on January 17, 2008.

The following permits have been issued to Land O'Lakes Purina Feed, LLC from the Air Pollution Control Program.

Permit Number	Description
0188-003	Relocated grinding operations, installation of new cyclone and scratch feed plant
1088-006	Installation of 200 HP pellet mill and vertical cooling tower
0589-007	Replaced boiler with natural gas boiler
0393-009	Installation of a corn grinding unit, dryer, and cooler
1295-006	Installation of new grain cleaning system
OP2001-086	Basic Operating Permit
1299-005	Installation of 30 gallon solvent-based parts cleaner, new bag filter on grinder.
1299-006	Construction of a new grinder, dryer, cooler, and boiler and increase design rates for storage bins, product loadout and an existing grinder.
102000-008	Authority to burn fuel oil in a previously permitted boiler
112003-007	Modification of existing permit number 1299-006, section 5 issued

PROJECT DESCRIPTION

Land O'Lakes Purina Feed, LLC has applied for authority to construct a new section to an existing cooler with a new dual cyclone. The review of this project was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of the project were below de minimis levels. The expected emissions are PM₁₀ and HAPs, to control these emissions, Land O'Lakes Purina Feed, LLC will have a dual cyclone on the new cooler section.

EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used in this analysis were obtained from the Environmental Protection Agency (EPA) – Fire 6.22 program, Section 9.11.1, Vegetable Oil Processing. AP-42, Fifth Edition, Supplement A. OAQPS, RTP, NC. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year.) The following table provides an emissions summary for this project.

Emissions from the cooler will be controlled by cyclones with a control efficiency of 85% as shown in table B.2-3. Typical Collection Efficiencies of Various Particulate Control Devices in AP-42 Volume I, Fifth Edition. Control efficiency of 85% was assumed because the dual cyclone has a medium control efficiency that was decided based on calculations that had been done using the parameters of the dual cyclone. In addition the company confirmed that the dual cyclone is not in series. The above control equipment must be in use at all times this equipment is in operation. Existing potential emissions are from the Project 2003-09-050 (Permit No. 112003-007)

Table 1: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM ₁₀	15.0	16.5	7.87	6.84	N/A
SO _x	40.0	41.49	0.05	N/A	N/A
NO _x	40.0	26.5	8.12	N/A	N/A
VOC	40.0	1.4	0.5	N/A	N/A
CO	100.0	6.2	6.82	N/A	N/A
Manganese Compounds (HAPs)	10.0	N/A	N/A	0.0022	N/A
Sulfuric Acid Mist	7.0	2.15	N/D	N/A	N/A

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 PM₁₀ and HAPs are below de minimis levels.

APPLICABLE REQUIREMENTS

Land O'Lakes Purina Feed, LLC 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

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *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 10-3.090

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400

AMBIENT AIR QUALITY IMPACT ANALYSIS

Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

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.

Samer Al-Shoukhi
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated October 3, 2007, received October 5, 2007, designating Purina Mills, LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- Kansas City Regional Office Regional Office Site Survey, dated October 23, 2007.

Mr. Paul A. Luther
EHS leader
Land O'Lakes Purina Feed, LLC
4225 South Highway 169
St. Joseph, MO 64501

RE: New Source Review Permit - Project Number: 2007-10-032

Dear Mr. Luther:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, 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.

If you have any questions regarding this permit, please do not hesitate to contact Mr. Samer Al-Shouhi at the departments' Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or by telephone at (573) 751-4817. Thank you for your attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale
New Source Review Unit Chief

KBH:san

Enclosure

c: Kansas City Regional Office
PAMS File: 2007-10-032
Permit Number: