

STATE OF 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: 012012-003

Project Number: 2011-09-057  
Installation Number: 510-1761

Parent Company: Nestle Purina PetCare Company

Parent Company Address: 901 Chouteau Avenue, St. Louis, MO 63164

Installation Name: Nestle Purina PetCare Company

Installation Address: 901 Chouteau Avenue, St. Louis, MO 63164

Location Information: Saint Louis City, Lat 38.61843, Long 90.198507

Application for Authority to Construct was made for:  
The replacement of three 300 HP natural gas boilers (EP-02 thru EP-04) with two new 500 HP dual fuel boilers (EP-14 and EP-15). 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.

JAN 9 2012

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "Ryan L. Moore".  
\_\_\_\_\_  
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 Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. 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 these air contaminant sources.

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 sources(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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**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."*

Nestle Purina PetCare Company  
Saint Louis City County, 38.61843,-90.198507

1. #2 Fuel Oil Usage Limitation
  - A. Nestle Purina PetCare Company shall burn #2 Fuel Oil in their 500 HP boiler (EP-14) and 500 HP boiler (EP-15) only during periods of gas curtailment, gas supply emergencies, or periodic testing on #2 Fuel Oil.
  - B. Nestle Purina PetCare Company shall burn #2 Fuel Oil during periodic testing of #2 Fuel Oil for a total of 48 hours per year for each boiler (EP14 and EP-15)
  - C. Nestle Purina PetCare Company shall burn exclusively #2 fuel oil with a sulfur content less than or equal to 0.0015 percent by weight in their 500 HP boiler (EP-14) and 500 HP boiler (EP-15)
  - D. Nestle Purina PetCare Company shall demonstrate compliance with Special Condition 2.C by either obtaining records from the vendor of the fuel's sulfur content for each shipment of fuel received or by testing each shipment of fuel for the sulfur content in accordance with the method described in 10 CSR 10-6.040 *Reference Methods*. In cases where records for each shipment from the vendor is not possible Nestle Purina PetCare Company may obtain a certification from the fuel oil vendor saying that all fuel oil they supply to us is less than 0.0015 percent by weight.
  - E. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A.
  - F. Attachment B or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.B.

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**SPECIAL CONDITIONS:**

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

- G. Nestle Purina PetCare Company shall keep the records required by Special Condition 1.D., 1.E., and 1.F. with the unit and make them available for Department of Natural Resources' employees upon request.
2. Record Keeping and Reporting Requirements
- A. Nestle Purina PetCare Company 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. These records shall include Material Safety Data Sheets (MSDS) for all materials used
  - B. Nestle Purina PetCare Company shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

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

Project Number: 2011-09-057  
Installation ID Number: 510-1761  
Permit Number:

Nestle Purina PetCare Company  
901 Chouteau Avenue  
St. Louis, MO 63164

Complete: September 27, 2011

Parent Company:  
Nestle Purina PetCare Company  
901 Chouteau Avenue  
St. Louis, MO 63164

Saint Louis City, (Latitude: 38.61843, Longitude: -90.198507)

REVIEW SUMMARY

- Nestle Purina PetCare Company has applied for authority to replace three 300 Horsepower (HP) natural gas fired boilers (EP-02 thru EP-04) with two new 500 HP dual fuel fired boilers (EP-14 and EP-15).
- Hazardous Air Pollutant (HAP) emissions are expected from the proposed combustion equipment but are estimated to stay below their respective screen modeling action levels.
- 40 CFR 60 Subpart Dc, "*Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*" applies to the equipment.
- The Maximum Achievable Control Technology (MACT) 40 CFR Part 63, Subpart JJJJJJ, "*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*" regulations does not apply to the proposed equipment. Nestle Purina has agreed, as per the special conditions of this permit, to only burn #2 fuel oil in their two new boilers during periods of gas curtailment, gas supply emergencies, or periodic testing of #2 fuel oil. Therefore for the purpose of subpart JJJJJJ the new boilers will be considered solely natural gas fired boilers which are exempt from subpart JJJJJJ.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants are below de minimis levels.

- This installation is located in St. Louis City, a nonattainment area for the 8-hour ozone standard and the PM-2.5 standard and an attainment area for all other criteria pollutants
- This installation is not on the List of Named Installations found in 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 are not required for the equipment.
- An amendment to your Intermediate Operating Permit application is required for this installation within 180 days of equipment startup.
- Approval of this permit is recommended with special conditions.

#### INSTALLATION DESCRIPTION

Nestle Purina PetCare Company (Nestle Purina) operates a pet food production facility in St. Louis, Missouri. Nestle has received five construction permit from the St. Louis City Air Program. Currently Nestle Purina operates under an intermediate operating permit that was also issued by the St. Louis City Air Program.

The following permits have been issued to Nestle Purina PetCare Company from the St. Louis Air Program.

Table 1: Permit History

Permit Number	Description
97-10-098	Generator and Paint Booth
01-08-023	Plate Makers and Pressers
01-08-023A	Small Print Shop Nullification
97-10-098PM	Update Limitations
09-10-020	Generator

#### PROJECT DESCRIPTION

Nestle Purina is replacing three, 300 HP natural gas fired boilers (EP-02 thru EP-04) with two new 500 HP dual fuel fired boilers (EP-14 and EP-15).

A no permit required determination was made for Nestle Purina (Project # 2011-09-007) for an emergency generator. Because this project and the emergency generator determination have only one month between projects they will be considered one project for permitting purposes. This results in the emergency generator potential emissions and the boiler replacement potential emissions being included in this project (Project # 2011-09-057).

No control devices are being use to control emissions on the new boilers. The old boilers will be removed from the site. The two new boilers also have the capabilities to burn #2 fuel oil but Nestle Purina has agreed, as per the special conditions of this permit, to only operate the two new boilers during periods of gas curtailment, gas supply emergencies, or periodic testing on #2 fuel oil. This allows the two new boilers to be classified as solely dual fuel fired boilers as per the Maximum Achievable Control Technology (MACT) 40 CFR Part 63, Subpart JJJJJJ, “*National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources*” which exempts the two, new boilers from Subpart JJJJJJ . The potential emissions for construction permit applicability for the two new boilers will still be calculated as if #2 fuel oil is the primary fuel because the boilers still have the approval to burn #2 Fuel Oil in emergency situations.

### EMISSIONS/CONTROLS EVALUATION

The emission factors and control efficiencies used to calculate the potential emissions of the two new boilers were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 1.3 *Fuel Oil Combustion* (September 1999) and Section 1.4 *Natural Gas Combustion* (July 1998).

Emissions from the emergency generator was calculated using emission factors from AP-42 Section 3.4 *Large Stationary Diesel and All Stationary Dual-fuel Engines*, (October 1996) and the EPA Tier 2 Nonroad Diesel Engine Emission Standards. Nestle Purina PetCare Company will be using a Tier 2 rated diesel engine to provide emergency power to their plant. All the criteria pollutants emissions except for Nitrogen Oxides (NO<sub>x</sub>) and Carbon Monoxide (CO) were calculated using AP-42. The NO<sub>x</sub> and CO emissions were calculated using the EPA Tier 2 Emission Standards.

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.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2010 EIQ)	*Potential Emissions of the Application	**New Potential Emissions of the Installation
PM <sub>2.5</sub>	10.0	N/D	0.37	3.01	N/D
PM <sub>10</sub>	15.0	5.16	0.37	3.35	N/D
PM	25.0	N/D	N/D	3.35	N/D
SO <sub>x</sub>	40.0	95.03	0.87	0.28	N/D
NO <sub>x</sub>	40.0	95.32	8.41	32.28	N/D
VOC	40.0	5.64	0.35	1.36	N/D
CO	100.0	45.44	4.25	18.28	N/D
HAPs	10.0/25.0	0.50	0.00	0.35	N/D

N/D = Not Determined

\* Potential Emissions of the Application include the worst case fuel for each criteria pollutant for the two boilers and the potential emission from the emergency generator at 500 hours of operation.

## 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 all pollutants are below de minimis levels.

## APPLICABLE REQUIREMENTS

Nestle Purina PetCare Company 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
- *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 10-6.165

### SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) for Small Industrial-Commercial-Institutional Steam Generating Units*, 40 CFR Part 60, Subpart Dc
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060



## 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.

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Gerad Fox  
Environmental Engineer

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Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 20, 2011, received September 22, 2011, designating Nestle Purina PetCare Company as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.





Mr. Steve Luthy  
Safety & Regulatory Affairs Manager  
Nestle Purina PetCare Company  
901 Chouteau Avenue  
St. Louis, MO 63164

RE: New Source Review Permit - Project Number: 2011-09-057

Dear Mr. Luthy:

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 Gerad Fox, 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

Susan Heckenkamp  
New Source Review Unit Chief

SH:gfl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2011-09-057

Permit Number: