



Missouri Department of dnr.mo.gov

# NATURAL RESOURCES

Michael L. Parson, Governor

Carol S. Comer, Director

FEB 21 2020

Mr. Mike Nohara-LeClair  
Principal Environmental Engineer  
Nestle Purina PetCare Company - Golden Products Division  
22450 East State Highway Y  
Bloomfield, MO 63825

RE: New Source Review Permit - Project Number: 2019-07-033

Dear Mr. Nohara-LeClair:

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 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](http://www.oa.mo.gov/ahc).



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Mr. Mike Nohara-LeClair  
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If you have any questions regarding this permit, please do not hesitate to contact Jared Rhodes, 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



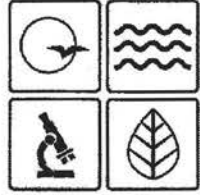
Susan Heckenkamp  
New Source Review Unit Chief

SH:jara

Enclosures

c: Southeast Regional Office  
PAMS File: 2019-07-033

Permit Number: **022020-004**



**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: **022020-004**

Project Number: 2019-07-033  
Installation Number: 207-0014

Parent Company: Nestle Purina PetCare Company

Parent Company Address: 1 Checkerboard Square - 2B, St. Louis, MO 63102

Installation Name: Nestle Purina PetCare Company - Golden Products Division

Installation Address: 22450 East State Highway Y, Bloomfield, MO 63825

Location Information: Stoddard County, S28, T27N, R11E

Application for Authority to Construct was made for:

Installation of equipment that will result in eight new Emission Points (EPs) in a plant expansion dedicated to the manufacturer of Low Density Engineered Litter (LDEL). The new plant expansion will receive both popped perlite granules and perlite fines. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

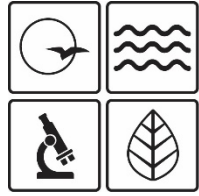
Standard Conditions (on reverse) are applicable to this permit.

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

Director or Designee  
Department of Natural Resources

**FEB 21 2020**

Effective Date



**MISSOURI**  
DEPARTMENT OF  
NATURAL RESOURCES

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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.

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Director or Designee  
Department of Natural Resources

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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 to 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 (3)(E). "Conditions required by permitting authority."*

Nestle Purina PetCare Company - Golden Products Division  
Stoddard County, S28, T27N, R11E

1. Control Device Requirement-Baghouse
  - A. Nestle Purina PetCare Company - Golden Products Division shall control emissions from the equipment listed in Table 1 using baghouses as specified in the permit application.

**Table 1: Baghouses and Equipment Controlled by Baghouses**

Emission Point	Baghouse ID	Equipment ID	Description
EP80	CD80	POL0007606	Lemonade Area Baghouse
EP80	CD80	BSC0007192	Perlite Fines Weigh Belt; 10,000 pounds per hour
EP80	CD80	BSC0007208	Wet Fines Belt Conveyor with Belt Scale
EP80	CD80	BSC0007210	Wet Overs Belt Conveyor with Belt Scale
EP80	CD80	BSC0007213	Dryer Feed Weigh Belt
EP80	CD80	BSC0007224	Lemonade Overs/Fines Weigh Belt
EP80	CD80	BSC0007227	Lemonade Weigh Belt
EP80	CD80	CNV0007638	Waste Belt Conveyor before Dryer
EP80	CD80	ELE0007204	Elevator Between Compactor & Crusher Bot
EP80	CD80	ELE0007228	Lemonade Elevator to Storage Bin 7235
EP80	CD80	SCR0007206	Wet Screener
EP80	CD80	SCR0007223	Dry Screener
EP81	CD81	BIN0007007	Perlite Surge Bin
EP81	CD81	BIN0007049	Perlite Surge Bin
EP81	CD81	BSC0007008	Perlite Belt Scale Prior to Enrober #1
EP81	CD81	BSC0007014	Coater 1A/2A Belt Scale
EP81	CD81	BSC0007032	Coater 1B/2B Belt Scale
EP81	CD81	BSC0007050	Perlite Belt Scale Prior to Enrober #2
EP81	CD81	BSC0007056	Coater 1C/2C Belt Scale
EP81	CD81	BSC0007073	Coater 1D/2D Belt Scale
EP81	CD81	BSC0007145	LDEL Overs/Fines Belt Scale
EP81	CD81	BSC0007147	LDEL Scale Belt Conveyor
EP81	CD81	CNV0007011	Coater A/B Feed Reversing Belt Conveyor
EP81	CD81	CNV0007013	Coater 1A/2A Feed Storeveyor Belt Conveyor
EP81	CD81	CNV0007017	Coater 1A/2A Reversing Feed Belt Conveyor

**SPECIAL CONDITIONS:**

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

Emission Point	Baghouse ID	Equipment ID	Description
EP81	CD81	CNV0007023	Coater 2A Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007029	Coater 1A Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007031	Coater 1B/2B Feed Storeveyor Belt Conveyor
EP81	CD81	CNV0007035	Coater 1B/2B Reversing Feed Belt Conveyor
EP81	CD81	CNV0007041	Coater 2B Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007047	Coater 1B Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007053	Coater C/D Feed Reversing Belt Conveyor
EP81	CD81	CNV0007055	Coater 1C/2C Feed Storeover Belt Conveyor
EP81	CD81	CNV0007058	Coater 1C/2C Reversing Feed Belt Conveyor
EP81	CD81	CNV0007064	Coater 2C Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007070	Coater 1C Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007072	Coater 1D/2D Feed Storeover Belt Conveyor
EP81	CD81	CNV0007075	Coater 1D/2D Reversing Feed Belt Conveyor
EP81	CD81	CNV0007081	Coater 2D Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007087	Coater 1D Discharge Reversing Belt Conveyor
EP81	CD81	CNV0007096	Bentonite Airslide Conveyor to 1A/2A
EP81	CD81	CNV0007104	Bentonite Airslide Conveyor to 1B/2B
EP81	CD81	CNV0007114	Bentonite Airslide Conveyor to 1C/2C
EP81	CD81	CNV0007122	Bentonite Airslide Conveyor to 1D/2D
EP81	CD81	CNV0007131	Coaters A-F LDEL Transfer Belt Conveyor
EP81	CD81	CNV0007132	LDEL Inclined Belt Conveyor from CNV7131
EP81	CD81	CNV0007133	LDEL Inclined Belt Conveyor from CNV7132
EP81	CD81	CNV0007134	LDEL Belt Conveyor from CNV7133
EP81	CD81	CNV0007136	LDEL Dryer Storeveyor Belt Conveyor
EP81	CD81	CNV0007166	Compacted and Non-Compacted Waste Belt Conveyor
EP81	CD81	CNV0007167	Waste Belt Conveyor (Lemonade and LDEL)
EP81	CD81	CNV0007244	Lemonade / Enrober A Waste Belt Conveyor
EP81	CD81	CNV0007633	LDEL Product Inline Belt Conveyor
EP81	CD81	ELE0007150	Elevator Bottom
EP81	CD81	ELE0007632	Elevator to Bin 7632 top
EP81	CD81	MIX0007010	Perlite Enrober #1
EP81	CD81	MIX0007018	2A Coater
EP81	CD81	MIX0007024	1A Coater
EP81	CD81	MIX0007036	2B Coater
EP81	CD81	MIX0007042	1B Coater
EP81	CD81	MIX0007052	Perlite Enrober #2
EP81	CD81	MIX0007059	2C Coater
EP81	CD81	MIX0007065	1C Coater

**SPECIAL CONDITIONS:**

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

Emission Point	Baghouse ID	Equipment ID	Description
EP81	CD81	MIX0007076	2D Coater
EP81	CD81	MIX0007082	1D Coater
EP81	CD81	POL0007163	LDEL Area Baghouse
EP81	CD81	SCR0007143	Screener
EP82	CD82	000	Jug Line Scale Filler
EP82	CD82	000	Combo Line Scale Filler
EP82	CD82	BIN0007415	Jug Line Surge Bin
EP82	CD82	BIN0007467	Combo Line Surge Bin
EP82	CD82	BSC0007291	Product Weigh Belt Feeder from Enrober A
EP82	CD82	BSC0007292	Product Weigh Belt Feeder from Enrober B
EP82	CD82	CNV0007256	Clod Screener
EP82	CD82	CNV0007258	Clod Screener
EP82	CD82	CNV0007260	Clod Screener
EP82	CD82	CNV0007293	Jug Line Additive Belt Conveyor Cover
EP82	CD82	CNV0007294	Clod Screener Conveyor
EP82	CD82	CNV0007295	Combo Line Additive Belt Conveyor Discharge
EP82	CD82	CNV0007296	Clod Screener Conveyor
EP82	CD82	CNV0007297	Jug Line Transfer Conveyor - Incline
EP82	CD82	CNV0007298	Combo Line Transfer Conveyor - Incline
EP82	CD82	ELE0007253	Elevator Top
EP82	CD82	ELE0007255	Elevator Top
EP82	CD82	ELE0007257	Elevator Top
EP82	CD82	ELE0007259	Elevator Top
EP82	CD82	ELE0007263	Elevator Top to Jug Line
EP82	CD82	ELE0007265	Elevator Top to Combo Line
EP82	CD82	FST0007580	Feed Hopper
EP82	CD82	FST0007582	Feed Hopper
EP82	CD82	FST0007584	Feed Hopper
EP82	CD82	FST0007586	Feed Hopper
EP82	CD82	FST0007588	Feed Hopper
EP82	CD82	FST0007589	Feed Hopper
EP82	CD82	NA	Powder Additives Hood
EP82	CD82	NA	Waste Truck Hood A
EP82	CD82	NA	Waste Truck Hood B
EP82	CD82	POL0007611	Blending/Additives/Packaging Baghouse
EP84	CD84	POL0007226	Lemonade Dryer Baghouse
EP85	CD85	POL0007154	LDEL Dryer Baghouse

N/D = Equipment ID yet to be determined



**SPECIAL CONDITIONS:**

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

- B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications.
  - C. The baghouse 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.
  - D. 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).
  - E. Nestle Purina PetCare Company - Golden Products Division shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.
  - F. Nestle Purina PetCare Company - Golden Products Division shall maintain a copy of the baghouse manufacturer's performance warranty on site.
  - G. Nestle Purina PetCare Company - Golden Products Division 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.
2. Capture Device Requirements
- A. Nestle Purina PetCare Company - Golden Products Division shall totally enclose all equipment listed under emission points EP80, EP81, EP82, EP84, and EP85 and vent the total enclosures to associated baghouses as specified in Table 1 and in the permit application.
  - B. A total enclosure is an enclosure that, with the exception of openings for material entry and exit, completely surrounds the emissions from an emission unit.

**SPECIAL CONDITIONS:**

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

3. Record Keeping and Reporting Requirements  
Nestle Purina PetCare Company - Golden Products Division 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.
4. Performance Testing
  - A. Nestle Purina PetCare Company - Golden Products Division shall perform testing on all equipment subject to 40 CFR 60, Subpart OOO and Subpart UUU as specified in each subpart.
  - B. If the stack testing required by Special Condition 5.A. of this permit indicates any of the following, Nestle Purina PetCare Company - Golden Products Division must apply for an amendment to this permit to correct the calculated PTE.
    - 1) PM emissions from EP80 are greater than 0.08 lb/hr of operation
    - 2) PM emissions from EP81 are greater than 0.34 lb/hr of operation
    - 3) PM emissions from EP82 are greater than 0.60 lb/hr of operation
    - 4) PM emissions from EP84 are greater than 0.58 lb/hr of operation
    - 5) PM emissions from EP85 are greater than 0.12 lb/hr of operation
  - C. Testing shall be performed at 90 to 100 percent of the equipment's maximum throughput rate listed in the application. If this cannot be achieved during the initial performance testing, the equipment's throughput rate shall be limited to the throughput rates achieved during testing. If throughput rates during operation increase above 110 percent of the rates achieved during testing, initial testing must be repeated at the higher rate. At no time shall the throughput rates during operation exceed the maximum throughput rate listed in the application.
  - D. These tests shall be performed within 60 days after achieving the maximum production rate of the installation, but not later than 180 days after initial start-up for commercial operation.
  - E. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.
  - F. One electronic copy of a written report of the performance test results shall be submitted to [StackTesting@dnr.mo.gov](mailto:StackTesting@dnr.mo.gov) within 60 days of completion of any required testing. The report must include legible copies

**SPECIAL CONDITIONS:**

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

of the raw data sheets, analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.

- G. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

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

Project Number: 2019-07-033

Installation ID Number: 207-0014

Permit Number:

Installation Address:

Nestle Purina PetCare Company -  
Golden Products Division  
22450 East State Highway Y  
Bloomfield, MO 63825

Parent Company:

Nestle Purina PetCare Company  
1 Checkerboard Square - 2B  
St. Louis, MO 63102

Stoddard County, S28, T27N, R11E

REVIEW SUMMARY

- Nestle Purina PetCare Company - Golden Products Division has applied for authority to install equipment resulting in eight new Emission Points as part of a plant expansion dedicated to the manufacturer of Low Density Engineered Litter (LDEL).
- The application was deemed complete on September 20, 2019.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to the equipment as indicated in Table 3. 40 CFR 60 Subpart UUU, "Standards of Performance for Calciners and Dryers in Mineral Industries" applies to the Lemonade Dryer EP84 and LDEL Dryer EP85. 40 CFR 60 Subpart IIII, "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines" applies to the Lemonade and LDEL Emergency Generator EP86.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- Total enclosures vented to baghouses and an enclosed building are being used to capture and control the particulate 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 all criteria pollutants are below de minimis levels for this project.
- This installation is located in Stoddard County, an attainment/unclassifiable 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.
- Emissions testing is required for the equipment subject to NSPS OOO and UUU as a part of this permit. Testing may be required as part of other state, federal or applicable rules.
- Submittal of an update to the installation's Intermediate Operating Permit application is required for this installation within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Nestle Purina PetCare Company - Golden Products Division operates a facility in Bloomfield, Missouri that manufacturers absorbent materials for pets. The facility mines and processes clay to produce the absorbent materials, such as kitty litter. The facility also processes bentonite and perlite in manufacturing Low Density Engineered Litter (LDEL). The facility is adding a new process (referred to as Lemonade) that produces LDEL using perlite fines/dust, a previously unusable byproduct of LDEL production. Nestle Purina PetCare Company - Golden Products Division is a minor source for construction permitting and has applied for an Intermediate Operating Permit, which has been assigned project number 2017-12-015.

The following New Source Review permits have been issued to Nestle Purina PetCare Company - Golden Products Division from the Air Pollution Control Program.

Table 2: Permit History

Permit Number	Description
1093-013	Installation of a dust collector
1094-012	Installation of a bagging system
0195-004	Installation of various processing and handling equipment
0495-004	Installation of various processing and handling equipment
0995-009	Installation of a transfer system and unloading station
0396-027	Modification of pneumatic conveyor system
1296-005	Modification of rotary dryer control system
1199-006	Modification of conventional processing area and upgrade of aspirator system
072000-010	Installation of a fines recovery system
032001-014	Installation of a silica gel packaging line and modification of clumping process
052001-025	Replacement of rotary dryer and associated equipment
082002-018	Reopening of surface clay mine at Avert Mine site
032004-013	Installation of equipment for clay fines recycling

Permit Number	Description
052005-009	Installation of equipment to Reconstituted Clay Process
072005-046	Increase of mill area throughput to 125 tons per hour
102011-009	Installation of a dryer and associated equipment
102011-009A	Correction to monitoring requirements
102011-009B	Removal of KP Dust Cyclone from the gas stream treatment equipment
042013-012	Installation of equipment for the production of lightweight litter from perlite
032013-009	Temporary permit for lightweight litter production pilot program
112013-004	Installation of equipment for the production of lightweight litter from perlite
012014-004	Installation of equipment for the production of lightweight litter from perlite
032015-010	Installation of equipment for the production of lightweight litter from perlite
042015-008	As-built update to Construction Permit No. 012014-004
042015-008A	Increase in lightweight litter production capacity
012019-001	Installation of two new production lines for lightweight litter from perlite
012019-007	Installation and relocation of equipment within the clumping process

## PROJECT DESCRIPTION

Nestle Purina PetCare Company - Golden Products Division will be installing equipment that will result in eight new emission points as part of a plant expansion dedicated to the manufacturer of Low Density Engineered Litter (LDEL). The installation has been producing LDEL from perlite granules, which are heat-expanded (popped) at the plant, since June 2015. The new plant expansion will receive both popped perlite granules and perlite fines/dust, a previously unusable byproduct of LDEL production. LDEL production will utilize starch, existing raw materials (perlite and bentonite) and various additives. All LDEL will then be sent to a new packaging area for packaging into various sized jugs, pails, and bag-in-box (BIB) product containers.

Emission units of EP11, EP35, and EP36 will be changed to allow raw material that was previously an unusable byproduct of the LDEL process to be transported to the new equipment. These emission units were permitted at their maximum throughput capacity and the proposed change will not increase their throughput. EP80, EP81, and EP82 are new baghouses that will be installed, with the majority of the new equipment being ventilated to these baghouses. EP83 is associated with equipment that is being ventilated within the new building; the building is assumed to act as the control device for these emissions. EP84 and EP85 are dryers installed for the LDEL process line. EP86 is a new emergency generator to maintain operators for the new equipment in case of power loss. EP87 is a pair of new raw material storage bins, equipped with individual bin vents. These storage bins are to be installed on the exterior of the new building. Additional haul road activity is not expected for this project since the new process uses the previously unusable byproduct of other LDEL production at the installation that had been shipped out at a similar rate. A list of equipment associated with each emission point and the NSPS they are subject to is provided in Table 3.

Nestle Purina PetCare Company - Golden Products Division received permit 012019-001 dated January 23, 2019 for the installation of two new production lines for lightweight litter from perlite and permit 012019-007 dated January 23, 2019 for the installation and relocation of equipment within the clumping process. Since little time has passed between that permit and the new application, the projects were combined for potential emission calculation purposes. Since the combined project PTE is below de minimis levels and thus does not affect the type of permit required, the projects were combined with no formal determination of project aggregation.

Table 3: Equipment Summary

Emission Point	Equipment ID	Description	NSPS
EP80	POL0007606	Lemonade Area Baghouse	000
EP80	BSC0007192	Perlite Fines Weigh Belt; 10,000 pounds per hour	000
EP80	BSC0007208	Wet Fines Belt Conveyor with Belt Scale	000
EP80	BSC0007210	Wet Overs Belt Conveyor with Belt Scale	000
EP80	BSC0007213	Dryer Feed Weigh Belt	000
EP80	BSC0007224	Lemonade Overs/Fines Weigh Belt	000
EP80	BSC0007227	Lemonade Weigh Belt	000
EP80	CNV0007638	Waste Belt Conveyor before Dryer	000
EP80	ELE0007204	Elevator Between Compactor & Crusher Bot	000
EP80	ELE0007228	Lemonade Elevator to Storage Bin 7235	000
EP80	SCR0007206	Wet Screener	000
EP80	SCR0007223	Dry Screener	000
EP81	BIN0007007	Perlite Surge Bin	000
EP81	BIN0007049	Perlite Surge Bin	000
EP81	BSC0007008	Perlite Belt Scale Prior to Enrober #1	000
EP81	BSC0007014	Coater 1A/2A Belt Scale	000
EP81	BSC0007032	Coater 1B/2B Belt Scale	000
EP81	BSC0007050	Perlite Belt Scale Prior to Enrober #2	000
EP81	BSC0007056	Coater 1C/2C Belt Scale	000
EP81	BSC0007073	Coater 1D/2D Belt Scale	000
EP81	BSC0007145	LDEL Overs/Fines Belt Scale	000
EP81	BSC0007147	LDEL Scale Belt Conveyor	000
EP81	CNV0007011	Coater A/B Feed Reversing Belt Conveyor	000
EP81	CNV0007013	Coater 1A/2A Feed Storeveyor Belt Conveyor	000
EP81	CNV0007017	Coater 1A/2A Reversing Feed Belt Conveyor	000
EP81	CNV0007023	Coater 2A Discharge Reversing Belt Conveyor	000
EP81	CNV0007029	Coater 1A Discharge Reversing Belt Conveyor	000
EP81	CNV0007031	Coater 1B/2B Feed Storeveyor Belt Conveyor	000
EP81	CNV0007035	Coater 1B/2B Reversing Feed Belt Conveyor	000
EP81	CNV0007041	Coater 2B Discharge Reversing Belt Conveyor	000
EP81	CNV0007047	Coater 1B Discharge Reversing Belt Conveyor	000
EP81	CNV0007053	Coater C/D Feed Reversing Belt Conveyor	000

Emission Point	Equipment ID	Description	NSPS
EP81	CNV0007055	Coater 1C/2C Feed Storeover Belt Conveyor	000
EP81	CNV0007058	Coater 1C/2C Reversing Feed Belt Conveyor	000
EP81	CNV0007064	Coater 2C Discharge Reversing Belt Conveyor	000
EP81	CNV0007070	Coater 1C Discharge Reversing Belt Conveyor	000
EP81	CNV0007072	Coater 1D/2D Feed Storeover Belt Conveyor	000
EP81	CNV0007075	Coater 1D/2D Reversing Feed Belt Conveyor	000
EP81	CNV0007081	Coater 2D Discharge Reversing Belt Conveyor	000
EP81	CNV0007087	Coater 1D Discharge Reversing Belt Conveyor	000
EP81	CNV0007096	Bentonite Airslide Conveyor to 1A/2A	000
EP81	CNV0007104	Bentonite Airslide Conveyor to 1B/2B	000
EP81	CNV0007114	Bentonite Airslide Conveyor to 1C/2C	000
EP81	CNV0007122	Bentonite Airslide Conveyor to 1D/2D	000
EP81	CNV0007131	Coaters A-F LDEL Transfer Belt Conveyor	000
EP81	CNV0007132	LDEL Inclined Belt Conveyor from CNV7131	000
EP81	CNV0007133	LDEL Inclined Belt Conveyor from CNV7132	000
EP81	CNV0007134	LDEL Belt Conveyor from CNV7133	000
EP81	CNV0007136	LDEL Dryer Storeveyor Belt Conveyor	000
EP81	CNV0007166	Compacted and Non-Compacted Waste Belt Conveyor	000
EP81	CNV0007167	Waste Belt Conveyor (Lemonade and LDEL)	000
EP81	CNV0007244	Lemonade / Enrober A Waste Belt Conveyor	000
EP81	CNV0007633	LDEL Product Inline Belt Conveyor	000
EP81	ELE0007150	Elevator Bottom	000
EP81	ELE0007632	Elevator to Bin 7632 top	000
EP81	MIX0007010	Perlite Enrober #1	NA
EP81	MIX0007018	2A Coater	NA
EP81	MIX0007024	1A Coater	NA
EP81	MIX0007036	2B Coater	NA
EP81	MIX0007042	1B Coater	NA
EP81	MIX0007052	Perlite Enrober #2	NA
EP81	MIX0007059	2C Coater	NA
EP81	MIX0007065	1C Coater	NA
EP81	MIX0007076	2D Coater	NA
EP81	MIX0007082	1D Coater	NA
EP81	POL0007163	LDEL Area Baghouse	000
EP81	SCR0007143	Screener	000
EP82	000	Jug Line Scale Filler	NA
EP82	000	Combo Line Scale Filler	NA
EP82	BIN0007415	Jug Line Surge Bin	000
EP82	BIN0007467	Combo Line Surge Bin	000
EP82	BSC0007291	Product Weigh Belt Feeder from Enrober A	000
EP82	BSC0007292	Product Weigh Belt Feeder from Enrober B	000



Emission Point	Equipment ID	Description	NSPS
EP82	CNV0007256	Clod Screener	000
EP82	CNV0007258	Clod Screener	000
EP82	CNV0007260	Clod Screener	000
EP82	CNV0007293	Jug Line Additive Belt Conveyor Cover	000
EP82	CNV0007294	Clod Screener Conveyor	000
EP82	CNV0007295	Combo Line Additive Belt Conveyor Discharge	000
EP82	CNV0007296	Clod Screener Conveyor	000
EP82	CNV0007297	Jug Line Transfer Conveyor - Incline	000
EP82	CNV0007298	Combo Line Transfer Conveyor - Incline	000
EP82	ELE0007253	Elevator Top	000
EP82	ELE0007255	Elevator Top	000
EP82	ELE0007257	Elevator Top	000
EP82	ELE0007259	Elevator Top	000
EP82	ELE0007263	Elevator Top to Jug Line	000
EP82	ELE0007265	Elevator Top to Combo Line	000
EP82	FST0007580	Feed Hopper	000
EP82	FST0007582	Feed Hopper	000
EP82	FST0007584	Feed Hopper	000
EP82	FST0007586	Feed Hopper	000
EP82	FST0007588	Feed Hopper	000
EP82	FST0007589	Feed Hopper	000
EP82	NA	Powder Additives Hood	NA
EP82	NA	Waste Truck Hood A	NA
EP82	NA	Waste Truck Hood B	NA
EP82	POL0007611	Blending/Additives/Packaging Baghouse	000
EP83	POL0007094	Bentonite - Coaters 1A/2A and 1B/2B Filter Receiver	000
EP83	POL0007100	Coater 1A/2A Scale Vent	000
EP83	POL0007108	Coater 1B/2B Scale Vent	000
EP83	POL0007112	Bentonite - Coaters 1C/2C and 1D/2D Filter Receiver	000
EP83	POL0007118	Coater 1C/2C Scale Vent	000
EP83	POL0007126	Coater 1D/2D Scale Vent	000
EP83	POL0007146	Perlite Fines Weigh Belt Infeed Hopper Bin Vent	000
EP83	POL0007170	Starch Storage Bin Vent Filter with Blow-Out Panels	000
EP83	POL0007190	Perlite Fines Filter Receiver	000
EP83	POL0007238	Round Filter - LDEL Air Ladders	NA
EP83	POL0007250	Round Filter - Lemonade Air Ladders	NA
EP83	POL0007320	Silica Gel Bulk Bag Unloading Station Bin Vent	000
EP83	POL0007590	Powder A Filter Receiver - Jug Line	000
EP83	POL0007591	Powder B Filter Receiver - Jug Line	000
EP83	POL0007592	Activated Carbon Bulk Bag Unloading Station Bin Vent	000
EP83	POL0007602	Powder A Filter Receiver - Combo Line	000

Emission Point	Equipment ID	Description	NSPS
EP83	POL0007603	Powder B Filter Receiver - Combo Line	OOO
EP83	POL0007625	Activated Carbon Bin Vent Filter	OOO
EP84	POL0007226	Lemonade Dryer Baghouse	UUU
EP85	POL0007154	LDEL Dryer Baghouse	UUU
EP86	EDR000XXXX	Lemonade and LDEL Emergency Generator	IIII
EP87	POL0007091	Bentonite Storage Bin Vent filter	OOO
EP87	POL0007185	Perlite Fines Storage Bin Vent	OOO

N/D = Equipment ID yet to be determined

N/A = Not Applicable

## EMISSIONS/CONTROLS EVALUATION

Emission calculations for EP80, EP81, and EP82 use particulate matter emission factors of 0.08 lb/hr, 0.34 lb/hr, and 0.60 lb/hr respectively based on the stack test required by NSPS OOO conducted on a similar source at this installation EP37. Calculations use these particulate matter emission factors and continuous operation of 8760 hours per year. A particulate matter distribution of 50% PM being PM<sub>10</sub> and 20% PM being PM<sub>2.5</sub> was used.

Emission calculations for EP83 use emission factors from AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 11.12 Concrete Batching June 2006 for the starch storage bin loading. Emission factors from AP-42, Section 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing, August 2004 were used for the conveying equipment transfer points. Emission factors from AP-42, Section 9.9.1 Grain Elevators & Processes, May 2003 were used for the air ladder cleaners and the storage bins. A 95% control efficiency for each piece of equipment with a vent filter was applied. An additional control efficiency is expected for the equipment vented inside the building but was not applied in the calculations performed in this review.

Particulate emission calculations for EP84 and EP85 were done using the particulate matter emission factors of 0.58 lb/hr and 0.12 lb/hr respectively based on NSPS UUU required stack testing conducted on a similar source at this installation EP-23. These particulate matter emission factors and continuous operation of 8760 hours per year was used in determining potential emissions. A particulate matter distribution of 50% PM being PM<sub>10</sub> and 20% PM being PM<sub>2.5</sub> was used. This particulate matter distribution was provided by Nestle Purina PetCare Company - Golden Products Division and is the average of particulate matter distributions found in AP-42, Section 11.19.2 Crushed Stone Processing and Pulverized Mineral Processing, August 2004.

Combustion emission calculations for EP84 and EP85 use emission factors from AP-42, Section 1.4 *Natural Gas Combustion*, July 1998 for the burners on the dryers.

Emission calculations for EP86 use emission factors from AP-42, Section 3.2 *Natural Gas-fired Reciprocating Engines*, August 2000 for the 150kW emergency generator at the maximum allowable 500 hours of non-emergency use.

Emission calculations for EP87 use a particulate matter emission factor of 0.015 lb/hr based on a stack test conducted on a similar source at this installation EP33. Calculations use this particulate matter emission factor and continuous operation of 8760 hours per year. A particulate matter distribution of 50% PM being PM<sub>10</sub> and 20% PM being PM<sub>2.5</sub> was used.

The following table provides an emissions summary for this project. Existing potential emissions were taken from information provided by Nestle Purina PetCare Company stating PTE before this project as of April 9, 2019. This PTE was used since it is more conservative than the installation potential emissions listed in their most recent construction permit 012019-007. Existing actual emissions were taken from the installation's 2018 EIQ. Potential emissions of the project represent the sum of project potential emissions from construction permit 012019-007 and potential emissions of the new equipment, assuming continuous operation (8760 hours per year) except for the emergency generator.

Table 4: Emissions Summary (tpy)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2018 EIQ)	Potential Emissions of the Project	New Installation Conditioned Potential
PM	25.0	N/D	N/D	21.4	N/D
PM <sub>10</sub>	15.0	57.6	30.3	10.7	68.3
PM <sub>2.5</sub>	10.0	21.6	9.6	4.5	26.1
SO <sub>x</sub>	40.0	38.4	0.3	0.1	38.5
NO <sub>x</sub>	40.0	192.2	67.6	26.3	218.5
VOC	40.0	9.2	3.1	1.8	11.0
CO	100.0	121.1	47.2	24.9	146.0
HAPs	10.0/25.0	0.4	0.2	2.2	2.6

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 all criteria pollutants are below de minimis levels.

### APPLICABLE REQUIREMENTS

Nestle Purina PetCare Company - Golden Products Division 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. a full EIQ is required for the first full calendar year the equipment approved by this permit is in operation. Subsequent full EIQs are required every third year and for any year in which installation-wide emissions subject to fees change by  $\pm 5$  tons or more since the last full EIQ.
- *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

- *New Source Performance Regulations*, 10 CSR 10-6.070
  - *Standards of Performance for Nonmetallic Mineral Processing Plants*, 40 CFR Part 60, Subpart OOO
  - *Standards of Performance for Calciners and Dryers in Mineral Industries*, 40 CFR Part 60, Subpart UUU
- *Control of Sulfur Dioxide Emissions*, 10 CSR 10-6.261

## 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 July 23, 2019, received July 23, 2019, designating Nestle Purina PetCare Company as the owner and operator of the installation.

## APPENDIX A

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### Abbreviations and Acronyms

<b>%</b> ..... percent	<b>m/s</b> .....meters per second
<b>°F</b> ..... degrees Fahrenheit	<b>Mgal</b> ..... 1,000 gallons
<b>acfm</b> ..... actual cubic feet per minute	<b>MW</b> .....megawatt
<b>BACT</b> ..... Best Available Control Technology	<b>MHDR</b> .....maximum hourly design rate
<b>BMPs</b> ..... Best Management Practices	<b>MMBtu</b> ....Million British thermal units
<b>Btu</b> ..... British thermal unit	<b>MMCF</b> .....million cubic feet
<b>CAM</b> ..... Compliance Assurance Monitoring	<b>MSDS</b> .....Material Safety Data Sheet
<b>CAS</b> ..... Chemical Abstracts Service	<b>NAAQS</b> ....National Ambient Air Quality Standards
<b>CEMS</b> ..... Continuous Emission Monitor System	<b>NESHAPs</b> National Emissions Standards for Hazardous Air Pollutants
<b>CFR</b> ..... Code of Federal Regulations	<b>NO<sub>x</sub></b> .....nitrogen oxides
<b>CO</b> ..... carbon monoxide	<b>NSPS</b> .....New Source Performance Standards
<b>CO<sub>2</sub></b> ..... carbon dioxide	<b>NSR</b> .....New Source Review
<b>CO<sub>2e</sub></b> ..... carbon dioxide equivalent	<b>PM</b> .....particulate matter
<b>COMS</b> ..... Continuous Opacity Monitoring System	<b>PM<sub>2.5</sub></b> .....particulate matter less than 2.5 microns in aerodynamic diameter
<b>CSR</b> ..... Code of State Regulations	<b>PM<sub>10</sub></b> .....particulate matter less than 10 microns in aerodynamic diameter
<b>dscf</b> ..... dry standard cubic feet	<b>ppm</b> .....parts per million
<b>EQ</b> ..... Emission Inventory Questionnaire	<b>PSD</b> .....Prevention of Significant Deterioration
<b>EP</b> ..... Emission Point	<b>PTE</b> .....potential to emit
<b>EPA</b> ..... Environmental Protection Agency	<b>RACT</b> .....Reasonable Available Control Technology
<b>EU</b> ..... Emission Unit	<b>RAL</b> .....Risk Assessment Level
<b>fps</b> ..... feet per second	<b>SCC</b> ..... Source Classification Code
<b>ft</b> ..... feet	<b>scfm</b> .....standard cubic feet per minute
<b>GACT</b> ..... Generally Available Control Technology	<b>SDS</b> .....Safety Data Sheet
<b>GHG</b> ..... Greenhouse Gas	<b>SIC</b> ..... Standard Industrial Classification
<b>gpm</b> ..... gallons per minute	<b>SIP</b> ..... State Implementation Plan
<b>gr</b> ..... grains	<b>SMAL</b> ..... Screening Model Action Levels
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>x</sub></b> .....sulfur oxides
<b>HAP</b> ..... Hazardous Air Pollutant	<b>SO<sub>2</sub></b> .....sulfur dioxide
<b>hr</b> ..... hour	<b>SSM</b> ..... Startup, Shutdown & Malfunction
<b>hp</b> ..... horsepower	<b>tph</b> ..... tons per hour
<b>lb</b> ..... pound	<b>tpy</b> ..... tons per year
<b>lbs/hr</b> ..... pounds per hour	<b>VMT</b> ..... vehicle miles traveled
<b>MACT</b> ..... Maximum Achievable Control Technology	<b>VOC</b> ..... Volatile Organic Compound
<b>µg/m<sup>3</sup></b> ..... micrograms per cubic meter	