

PERMIT BOOK

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:

042015-008

Project Number: 2014-12-019

Installation Number: 207-0014

Parent Company: Nestlé Purina PetCare Company

Parent Company Address: Checkerboard Square - 2B, St. Louis, MO 63164-0001

Installation Name: Nestlé Purina PetCare Company, Golden Products Division

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

Location Information: Stoddard County, S28, T27N, R11E

Application for Authority to Construct was made for:

This is an "as-built" update to construction permit 012014-004. Project Edison will install equipment to produce a lightweight litter using expanded perlite. Litter will be produced using newly constructed coaters, storage bins, filter receivers, screener, and conveyor equipment. The existing building will require that the 5th floor be expanded in the southwest bay to accommodate the new screener and coating drum. The project includes the receiving of perlite and bentonite via railcar or truck and material transfer. Fines from perlite processing will be transferred and loaded into trucks and transported back to the mine. 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.

APR 30 2015

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "Kyna Z Moore".  
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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 startup 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 startup 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."*

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

1. **Superseding Condition**  
The conditions of this permit supersede all special conditions found in the previously issued construction permit 012014-004 issued by the Air Pollution Control Program.
2. Nestlé Purina PetCare Company, Golden Products Division shall control emissions from the project equipment, listed in Attachment B to this review, using controls as listed below:

Table 1 Control Devices

<i>Source Id</i>	<i>Emission Source and Operation</i>	<i>Control Id</i>	<i>Control Device Description</i>
EP11	Perlite Railcar & Truck Unloading Pit	CD11	Fabric Filter
EP16	Fines Recovery Bin Vent (BNV0001177)	CD15	Bin Vent Filter
EP20	Engineered Litter Production and Transfer	CD20	Enclosed Structure
EP22	Bentonite Unloading	CD22	Bin Vent Filters and Filter Receivers
EP30	Scoop Litter Building Addition	CD30	Fabric Filter - Low Temperature
EP31	Edison -Raw Material Unloading to Storage Bins	CD31	Bin Vent Filters
EP32	Edison - Filter Receivers & Fines Loadout	CD32	Fabric filters and Bin Vent Filter

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**SPECIAL CONDITIONS:**

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

<i>Source Id</i>	<i>Emission Source and Operation</i>	<i>Control Id</i>	<i>Control Device Description</i>
EP33	Edison Coater Expansion Aspirated Equipment	CD33	Baghouse
EP35	Perlite Unloading Conveyance] (four conveyor filter groups and a single conveyor without filter)	S35	Fabric Filter Receivers (4 units)
EP36	Perlite Fines Truck Loadout	CD36	Fabric Filter Dust Collector

3. The permittee shall do the following with regard to each fabric filter:
  - A. Operate and maintain them in accordance with the manufacturer's specifications. The fabric filter 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 the Department of Natural Resources' employees may easily observe them.
  - B. Keep replacement filters 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).
  - C. 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.
  - D. Maintain a copy of the baghouse manufacturer's performance warranty on site.
  - E. 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

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**SPECIAL CONDITIONS:**

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

- 2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.
4. Record Keeping and Reporting Requirements
  - A. Nestlé 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. These records shall include MSDS for all materials used.
  - B. Nestlé Purina PetCare Company, Golden Products Division 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.
5. Performance Testing
  - A. Nestlé Purina PetCare Company, Golden Products Division shall perform testing on EP11, EP16, portions of EP20b, portions of EP22, portions of EP30, portions of EP31, portions of EP32, portions of EP33, POL0004035<sup>1</sup> of EP35 and POL0003994 of EP36 in accordance with 40 CFR Part 60, Subpart OOO, §60.675 Test methods and procedures. [refer to the color coded entries in Attachment B]

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<sup>1</sup> The dust collectors for the chain of conveyors that comprise EP35 are small, and similar in nature to powered bin vent filters. They are equipped with a small diameter stack and testing (in accordance with EPA protocols) will be difficult. Likewise, the equipment can only be operated for the length of time it takes to offload a railcar or the capacity of the receiving bin space, which usually takes less time than the two hours required run time of the EPA method. Each of the four units are identical and in series on the same production line. The agency is allowing the testing of one of the dust collectors (POL0004035) to be representative of all four units, since it is the first unit in the chain and should yield the most conservative results.

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**SPECIAL CONDITIONS:**

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

- B. § 60.8 Performance tests.  
(a) Except as specified in paragraphs (a)(1),(a)(2), (a)(3), and (a)(4) of this section, within 60 days after achieving the maximum production rate from the proposed equipment (see Attachment B, the proposed equipment are highlighted), but not later than 180 days after initial startup of the proposed equipment<sup>2</sup> (see Attachment B, the proposed equipment are highlighted), and at such other times as may be required by the Administrator under section 114 of the Act, the owner or operator of such facility shall conduct performance test(s) and furnish the Administrator a written report of the results of such performance test(s).
  
- C. 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.
  
- D. Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report must include legible copies 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.
  
- E. 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.

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<sup>2</sup> The Edison Coater Expansion Project construction permit involved a mix of existing and new equipment. Also, a pilot permit was approved related to this permit. Therefore, in order to avoid confusion for the permitting authority and the applicant, an initial startup date for the originally installed Edison Coaters equipment was considered to be June 10, 2013. The Edison Coater Expansion project as well as this perlite unloading expansion project equipment initial start date will be considered January 10, 2014.

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

Project Number: 2014-12-019  
Installation ID Number: 207-0014  
Permit Number:

Nestlé Purina PetCare Company, Golden Products Division  
22450 East State Hwy Y  
Bloomfield, MO 63825

Parent Company:  
Nestlé Purina PetCare Company  
Checkerboard Square - 2B  
St. Louis, MO 63164-0001

Stoddard County, S28, T27N, R11E

REVIEW SUMMARY

- Nestlé Purina PetCare Company, Golden Products Division has applied for authority to install equipment to produce an lightweight litter using expanded perlite. Litter will be produced using newly constructed coaters, storage bins, filter receivers, screener, and conveyor equipment. The existing building will require that the 5th floor be expanded in the southwest bay to accommodate the new screener and coating drum. This project includes the addition of perlite and bentonite railcar and truck unloading and transfer. Perlite processing fines will be loaded out to trucks and transported back to the mine. This is the second of a two phase project. The first phase was issued permit 112013-004.
- HAP emissions are not expected from the proposed equipment.
- 40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants" applies to some of the equipment.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- CD11, CD15, CD20, CD22, CD30, CD31, CD32, CD33, S35 (includes four control devices), and POL0003994 of CD36 are being used to control the PM, PM<sub>10</sub>, PM<sub>2.5</sub> 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 PM<sub>10</sub> are below de minimis levels.
- This installation is located in Stoddard 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.
- Emission testing is required for EP11, EP16, portions of EP20b, portions of EP22, portions of EP30, portions of EP31, portions of EP32, portions of EP33, POL0004035 of EP35 and EP36. EP20a and EP20c are not being retested.
- A revised Intermediate Operating Permit is required for this installation within 90 days of equipment startup.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Nestlé Purina PetCare Company, Golden Products Division is an Intermediate State Installation under the Missouri operating permit program. The engineered litter products facility is located in Bloomfield, Missouri, Stoddard County (denoted by the “A” on the map).

Figure 1



Ralston acquired the Golden Cat Corporation, North America's leading marketer of cat box filler in 1995. Nestle Purina PetCare Company – Golden Products Division (formerly Ralston Purina Company) operates a pet absorbent products plant in Bloomfield, Missouri.

The Golden Products Bloomfield facility mines and processes clay to produce pet absorbent materials, such as cat litter. The facility has numerous pieces of equipment

in series that handle in-process clay, e.g., elevators, conveyors, receiving bins, etc. An essential and integral part of the production process involves the removal of fines from the clay as it passes through the various production steps in order to meet product specifications. To enhance the removal of fines from the clay, the Bloomfield facility uses special devices called an aspirator (also referred to as "air ladders") at several locations throughout each production line. The aspirators are devices uniquely designed for the express purpose of pneumatically separating fines from the in-process clay. After passing an aspirator, the in-process clay is essentially free of fines. Fines picked-up at the aspirators and at various material transfer points along the production line, are aspirated to and removed by a common fabric filter collectors (baghouse) prior to the air stream being discharged to atmosphere. It is important to emphasize that the primary function of this aspiration system, including the collectors, is for fines removal to achieve strict product specifications which include a 99% dust free product, and not for emission control. This makes the collector an integral part of the process and not an emission control device. Nearly all of the fines removed from the processed clay are reworked as a raw ingredient in the Engineered Litter process.

The permitting authority has reviewed the following Nestlé Purina PetCare Company, Golden Products Division projects (Table 1).

Table 2 Project History

Reference No.	Permit Number	Start Date	Complete Date	Description
EX46000014005	1093-013	2/19/1993	9/27/1993	New dust collection installation
EX46000014006	1094-012	6/28/1994	10/17/1994	Installation of a Bemis bagger system as a replacement
EX46000014007	0195-004	9/26/1994	12/20/1994	
EX46000014008		10/24/1994	11/7/1994	
EX46000014009	0495-004	12/21/1994	3/16/1995	Two screens, hammermill, storage bin, two vibrating feeders, one rotary filler, two conveyors and one bucket elevator
EX46000014010	0995-009	5/16/1995	9/11/1995	One bucket elevator, conveyors, surge hoppers and one supersack unloading station
EX46000014011	0396-027	11/30/1995	3/27/1996	modifications to system
EX46000014012		5/13/1996	6/26/1996	Contaminated storm water aeration
EX46000014015		7/15/1996	9/21/2001	Clay Cat Litter, OP
EX46000014013	1296-005	8/1/1996	12/4/1996	install baghouse and dust collection
EX46000014014		1/7/1997	10/20/1997	Truck Unloading Process
EX46000014016		1/28/1997	2/20/1997	elevator replacement
EX46000014017		3/10/1997	3/18/1997	Extension of two year time limit to construct on permit # 0195-004; to install second packaging line covered in the permit.
EX199807004		6/30/1998	8/11/1998	Replacing Packing & Unloading Equipment

Reference No.	Permit Number	Start Date	Complete Date	Description
EX199902037		2/5/1999	3/25/1999	Like for like screen replacement
EX199907073	1199-006	7/23/1999	11/10/1999	Aspiration system upgrade
EX200002006	072000-010	1/28/2000	2/27/2001	finer recovery & dryer control
EX200101045	032001-014	1/17/2001	3/28/2001	Clumping Process Modifications
AP200104053	052001-025	4/13/2001	5/31/2001	Rotary Drying modifications
AP200110042		10/11/2001	9/24/2004	Kitty Litter, OP
AP200110047		10/15/2001	12/12/2001	Conveyor replacement
AP200203101	082002-018	6/11/2002	8/27/2002	Clay Mining & Handling
AP200206046		6/11/2002	8/27/2002	Confidentiality Request for 2002-03-101
AP200310084	032004-013	12/9/2003	3/12/2004	Clay fine recycling
AP200409072		9/24/2004	10/1/2007	Kitty Litter, OP
AP200501087	052005-009	1/27/2005	5/11/2005	Clay Process
AP200504033	072005-046	4/11/2005	7/22/2005	Cat litter expansion
AP200603006		3/1/2006	6/14/2006	Pin Mixer Project
AP200603036		3/1/2006	5/30/2006	Confidentiality for 2006-03-006
AP200604005		4/3/2006	5/31/2006	Belt conveyor and elevator
AP200607001		7/3/2006		Cat Litter Production, OP
AP200607086		7/3/2006	12/19/2007	Confidentiality for OP - 2006-07-001
AP201004024		4/7/2010	10/7/2010	Litter Dryers
AP201012061		12/20/2010	3/19/2012	Confidentiality for 2006-07-001 Resubmittal, OP
AP201101001	102011-009	1/3/2011	10/17/2011	Additional Equipment
AP201101002		1/3/2011	3/19/2012	Confidentiality for 2011-01-001
AP201111029	102011-009A	11/21/2011	1/18/2012	Monitoring Changes
AP201210071		10/31/12	02/28/13	Scoop Capacity Increase
AP201210075		10/31/12	01/09/13	Confidentiality for 2012-10-071
AP201211061	042013-012	11/27/12	04/30/13	Litter Line
AP201211062		11/27/12	12/18/12	confidentiality for 2012-11-061
AP201301058	032013-009	01/25/13	03/15/13	
AP201310064		06/21/13	09/23/13	confidentiality for 2013-10-063
AP201310063	112013-004	06/21/13	11/06/13	

## PROJECT DESCRIPTION

### **Overall**

The Edison Coater Expansion Project will increase the permittee's ability to manufacture lightweight litter. The permittee will install new equipment for receiving, handling and coating to supplement equipment listed in the November 2012 Edison Project construction permit application. The new construction of this equipment will be similar to the November 2012 construction application, but also includes 4 new coaters, a new baghouse, perlite and bentonite unloading equipment, and new fines loadout equipment. This permit does not address potential emissions from EP-29 (Dryer C #3207) since the equipment is shared with existing engineered litter material. The dryer can only be used with one product at a time which represents an "either/or" scenario. The existing engineered litter material is denser than the lightweight material and will not increase the emission potential from this emission point. Fines from perlite processing will be transferred and loaded into trucks and transported back to the mine. There will be new coaters, storage bins, filter receivers, a screener, a truck unloading spout, bentonite unloading equipment, dust collectors, and conveyor equipment constructed for the Edison Coater Expansion Project. These components are addressed in this permit application. EP33, EP35, and EP36 represent new emission points at the facility. Additional sources are being added and/or changed to existing emission points EP11, EP20, EP22, EP30, EP31, and EP32, and the incremental additional emissions from these sources are addressed for each of these emission points. EP16 (Fines Recovery Bin Vent BNV0001177) will be modified to accommodate additional material. The net potential emissions increase from the proposed equipment can be found in Attachment A.

### **EP11**

The existing granular bentonite rail pit area is being reconfigured to accommodate receiving perlite via railcar or truck. The existing rail shed, drop and grizzly screen equipment is being reused. The unloading shed is protected from the elements and material is gravity fed through unloading pans equipped with adjustable sides to capture the material being unloaded. The drop point is into pans that extend from the rail level to drop onto a new belt conveyor. The unloading pans are equipped with side shields to create a seal with the unloading railcar during the unloading event. The headspace from the pan is aspirated through a fabric filter unit. Material collected by the filter is returned to the conveyor. The fabric filter receiver exhaust will be the new EP11.

### **EP16**

This is an existing emission point at the facility. EP16, the existing Fines Recovery Bin Vent BNV0001177, is being modified to accommodate additional material from aspiration dust and fines blowers.

### **EP20**

This is an existing emission point at the facility and represents various non-aspirated engineered litter handling equipment. Five conveyors are to be added to this emission point. These are CNV3849, CNV3850, BSC3851, CNV3852 & 3876. These proposed conveyors are indicated in red in the emission point detail.

**EP22**

This is an existing emission point at the facility and represents the receipt of bentonite from railcars into BIN0001882. Pneumatic receiver tanks POL0002674 and POL0001826 are vacuum hopper systems which receiver bentonite material from railcars. Additional unloading equipment was installed to accommodate trucks and one PD railcar. The existing bin vent filter (BNV0001177) from BIN0001882 was replaced with new two filters (BNV0003494 and BNV0004008). A pneumatic receiver tank was installed for PD railcar unloading (POL0003492).

**EP30**

This is an existing emission point at the facility and represents existing aspirated engineered litter sources, as well as outdoor transfer and storage equipment. The existing baghouse (POL3287) controls aspirated emissions from these sources. The emission factor is based on a stack test conducted in September of 2014 during production of lightweight litter. The Edison Coater Expansion project planned to remove aspiration from coater receiving conveyors (CNV0003198, CNV0003199, CNV0003273 and CNV0003244) but aspiration was never removed. These conveyors continue to be aspirated to this baghouse (POL0003288).

**EP31**

This is an existing emission point at the facility. This emission point accounts for the two existing storage bin vents from the November 2012 construction permit. Similarly, this emission point will account for the two new storage bin vents (POL0003984 and POL0003986) for this Edison Coater Expansion permit application. The pneumatic unloading systems from both railcar and truck will vent the emissions to the storage bin vents. The emission factor for EP31 was developed from a stack test report for EP33 conducted in July of 2014. The emission factor was scaled based on the air flow rate and design rate of the storage bin vents used in EP31 to predict the emissions. The emission factor calculation was done using the data from Exhibit 31b.

**EP32**

This is an existing emission point for the facility. One existing filter receiver (POL0003731) and one existing storage bin (BIN0003728) will no longer be used; they will be abandoned in place. Filter receiver (POL0003837) is similar to the previous filter receiver (POL0003733) from the construction permit of November 2012. These two filter receivers will receive vacuum transferred raw material to be processed. Two new filter receivers (POL0003996 and POL0003842) and one new bin vent filter (POL0003990) will be added to this emission point. These filter receivers will accept transferred perlite fines for truck loadout. The bin vent filter is located on BIN3845, the loadout bin. The emission factors for EP32 were developed similarly to EP31. The emission factor calculations used data from Exhibit32b to predict emissions.

### **EP33**

This emission point is a new emission point at the facility. The emission point will account for emissions from the new indoor aspirated engineered litter sources. Baghouse (POL3893) was added to control aspirated emissions from these new sources. These sources are listed in Attachment B and represent proposed new equipment in this permit application. Four new coaters (MIX3862, MIX3863, MIX3881 and MIX3882) will be aspirated to this emission point. The emission factor is based on a stack test conducted in July of 2014.

### **EP35**

EP35 is a new emission point that includes the grouping of five (5) conveyors and four (4) fabric filter units to transport material from the existing rail shed to the new perlite bins installed for the Edison Coater Expansion project. Four small MAC M2V2 dust collectors (POL0004035, POL0004036, POL0004037 and POL0004097) will be installed at each of the conveyor belt transfer points. Collected material will be returned to the conveyors.

### **EP36**

This is a new emission point at the facility. Fines from BIN3845 will be unloaded into trucks through a load out spout. The load out spout is telescoping and can raise/move as the fines pile up in the truck bed. The spout has an inner pipe that the fines flow through to the truck and an outer pipe that pulls dust emissions to a dust collector. The dust collector drops the dust back into the inner pipe and to the truck. The fan on the dust collector discharges to the second level of the loadout structure.

## **EMISSIONS/CONTROLS EVALUATION**

Much of the project information is confidential and contained in a separate, confidential folder. Requests can be made to review that information and will only be granted under certain circumstances. Please refer to state rule *10 CSR 10-6.210 Confidential Information*.

Control devices are involved with this project and are being required as special permit conditions. That means that the control devices are considered in the emissions analysis.

Because this facility is covered by an Intermediate State Installation operating permit, all pollutants must remain below the Part 70 State Installation thresholds. However, should the individual project exceed the significance thresholds, then air quality modeling would need to be performed. A significant emissions increase of a regulated NSR pollutant is projected to occur if the sum of the difference between the potential to emit from each new emissions unit following completion of the project and the baseline actual emissions of these units before the project equals or exceeds the significant amount for that pollutant. Since the potential to emit of the project as a whole is below the de minimis levels, the permitting authority did not conduct any further analysis.

The emission factors and control efficiencies used in this analysis were appropriately documented on the associated workbooks.

The following table provides an emissions summary for this project. Since this project is primarily a correction to emission estimates in the original analysis, many of the values represent a reduction in emissions. Existing potential emissions are based on the permittee's Intermediate State Installation operating permit. If the permittee becomes a Part 70 State Installation, then the accumulation of projects will be evaluated for the applicability of 10 CSR 10-6-060 section (8) ("Prevention of Significant Deterioration"). Existing actual emissions were taken from the installation's 2013 EIQ (use of the new emission factors are not reflected here). Potential emissions of the application represent the potential of the new equipment and utilized existing equipment, assuming continuous operation (8760 hours per year).

Table 3 Emission Summary

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2013 EIQ)	Potential Emissions of the Application <sup>3</sup>	New Installation Conditioned Potential <sup>4</sup>
PM <sub>10</sub>	15.0	95	26	13	47
PM <sub>2.5</sub>	10.0	100	17	7	19
SO <sub>x</sub>	40.0	100	0	0	38 <sup>5</sup>
NO <sub>x</sub>	40.0	100 <sup>6</sup>	60	0	95 <sup>7</sup>
VOC	40.0	7.5	3	0	8
CO	100.0	100	39	0	95 <sup>8</sup>
GHG (CO <sub>2</sub> e)	75,000 / 100,000	122,924	48,416	0	151,167
GHG (mass)	0.0 / 100.0 / 250.0	100	N/D	N/A	N/A
HAPs	10.0/25.0	10.0/25.0	1	0	3

N/A = Not Applicable; N/D = Not Determined; all values have been rounded

<sup>3</sup> Rotary dryer #1231 - on-spec fuel oil - no longer burns #4 fuel, PM<sub>10</sub> and PM<sub>2.5</sub> emissions were recalculated for the November 2014 submittal using a fractionation method. This method assumes that PM<sub>10</sub> emission factors are equal to 50% of the total PM emission factors and that PM<sub>2.5</sub> emission factors are equal to 20% of the total PM emission factors. These values are based on testing performed for another installation.

<sup>4</sup> The new equipment will be incorporated into the existing installation, plant-wide emission caps. The new installation potential to emit is now based on new emission factors and other plant-wide reductions.

<sup>5</sup> This permit will remove the SO<sub>x</sub> installation wide limit.

<sup>6</sup> This facility is an Intermediate State Installation according to 10 CSR 10-6.065 Operating Permits. As such, the facility is limited to less than the Part 70 State Installation threshold levels for all regulated pollutants whose potential to emit, in absence of the voluntary limit, exceed the Part 70 thresholds.

<sup>7</sup> This permit establishes a limit on the entire installation NO<sub>x</sub> emissions.

<sup>8</sup> This permit imposes a limit on the entire installation CO emissions.

## 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 PM<sub>10</sub> are below de minimis levels.

## APPLICABLE REQUIREMENTS

Nestlé 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

- *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

- *New Source Performance Regulations*, 10 CSR 10-6.070
  - *40 CFR 60 Subpart OOO, "Standards of Performance for Nonmetallic Mineral Processing Plants"*

## 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.

\_\_\_\_\_  
Randy Raymond  
Environmental Technician

\_\_\_\_\_  
Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct Form, dated November 25, 2014, received December 5, 2014, designating Nestlé Purina PetCare Company as the owner and operator of the installation.
- The Application for Authority to Construct Form, dated, received, designating Nestlé 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.

Attachment A  
Nestle Purina PetCare Co., Golden Products Division  
Bloomfield Facility

<b>Max Controlled Potential Emissions</b>	PM10	PM2.5	LEAD <sup>9</sup>	SO <sub>x</sub> <sup>5</sup>	NO <sub>x</sub> <sup>5</sup>	CO <sup>5</sup>	VOC <sup>5</sup>	HAPS <sup>5</sup>
Prior to Initial Edison Construction	45.02	35.47	0.01	561.31	290.57	93.82	6.24	35.27
After Initial Edison Construction Permit Application (November 2012)	45.50	35.95	0.01	561.31	290.57	93.82	6.24	35.27
After Edison Coater Addition Construction Permit Application <sup>10</sup> (June 2013)	55.91	44.72	0.00	38.18	167.67	93.82	6.22	0.00
<b>Second Amendment to the Edison Coater Expansion Construction Permit (November 2014)</b>	42.10	15.44	0.00	38.18	167.67	93.82	6.22	0.00
<b>Net Increase</b>								
From Initial Edison Construction (November 2012)	0.48	0.48	0.00	0.00	0.00	0.00	0.00	0.00
From Edison Coater Expansion (June 2013)	13.49	6.94	0	0	0	0	0	0
From the Second Amendment to the Edison Coater Expansion (November 2014)	-13.81	-29.28	0.00	0.00	0.00	0.00	0.00	0.00
Total Increase From Edison Project	-2.91	-20.03	-0.01	-523.14	-122.90	0.00	-0.02	-35.27

<sup>9</sup> Rotary Dryer #1231 - On-Spec Fuel Oil - NO LONGER RECEIVES #4 fuel (limit on sulfur contained in 2014-04-036 project)

<sup>10</sup> This line item includes both the June 2013 application, plus the perlite unloading equipment (EP11 & EP35).

**Attachment B**  
**Nestle Purina PetCare Co., Golden Products Division**  
**Bloomfield Facility**

<b>Emission Point No.</b>	<b>Description</b>	<b>Current Equipment ID</b>	<b>Equipment Type</b>	<b>Relation to Project</b>
EP11	Railcar Unloading (new perlite railcar unloading)	POL0004039	Filter Receiver	Proposed "OOO" Test
EP16	Bin Vent for dust bin	POL0003306	Bin Vent	Changed or Redesignated Existing Equipment "OOO" Test
EP20a	Belt Conveyor Transfer Points - Existing	CNV0001801	Conveyor	Existing
	Belt Conveyor Transfer Points - New	CNV0001812	Conveyor	Existing
	Storage Bin	BIN0001907	Bin	Existing
	Screening storeveyor	CNV0002823	Storeveyor	Existing
	Screening storeveyor	CNV0002824	Storeveyor	Existing
EP20b	Belt Conveyor Transfer Points - Existing	CNV0001813	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001815	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001816	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	BSC0001817	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001818	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001819	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001820	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001822	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001823	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001824	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001825	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001847	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001849	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001854	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001855	Conveyor	Existing "OOO" Test
Belt Conveyor Transfer Points - Existing	CNV0001856	Conveyor	Existing "OOO" Test	

**Attachment B**  
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<b>Emission Point No.</b>	<b>Description</b>	<b>Current Equipment ID</b>	<b>Equipment Type</b>	<b>Relation to Project</b>
	Belt Conveyor Transfer Points - Existing	CNV0001863	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0002364	Conveyor	Existing "OOO" Test
	Volumetric Feeder - Existing	DSP0001930	Feeder	Existing
	Volumetric Feeder - Existing	DSP0001932	Feeder	Existing
	Storage Bin – Existing	BIN0001908	Bin	Existing "OOO" Test
	Storage Bin - Existing	BIN0001909	Bin	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001917	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - New	CNV0003174	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - New	CNV0003271	Conveyor	Existing "OOO" Test
	CONVEYOR B/W STORVEYOR AND EX CNV1813	CNV0003272	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0001803	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0002330	Conveyor	Existing "OOO" Test
	Belt Conveyor Transfer Points - Existing	CNV0002633	Conveyor	Existing "OOO" Test
	CONVEYOR BETWEEN STORVEYOR AND SHUTTLE	CNV0003192	Conveyor	Existing "OOO" Test
	Edison Belt Conveyor Transfer Point	CNV0003725	Conveyor	Existing "OOO" Test
	SEED SHUTTLE CONVEYOR	CNV0003193	Conveyor	Existing "OOO" Test
	COATER STORVEYOR	CNV0003194	Storeveyor	Existing "OOO" Test
	SPLITS BETWEEN E COATERS AND F COATERS	BSC0003195	Conveyor	Existing "OOO" Test
	SPLITS BETWEEN 1E AND 2E	CNV0003196	Conveyor	Existing "OOO" Test
	SPLITS BETWEEN 1F AND 2F	CNV0003197	Conveyor	Existing "OOO" Test
	DRYER C STORVEYOR	CNV0003201	Storeveyor	Existing "OOO" Test
	COATER RECYCLE CONVEYOR	CNV0003202	Conveyor	Existing "OOO" Test
	DRYER RECEIVING CONVEYOR	CNV0003212	Conveyor	Existing "OOO" Test

**Attachment B**  
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<b>Emission Point No.</b>	<b>Description</b>	<b>Current Equipment ID</b>	<b>Equipment Type</b>	<b>Relation to Project</b>
	Edison Belt Conveyor Transfer Point	CNV0003849	Conveyor	Proposed "OOO" Test
	SEED SHUTTLE CONVEYOR	CNV0003850	Conveyor	Proposed "OOO" Test
	SPLITS BETWEEN G COATERS AND H COATERS	BSC0003851	Conveyor	Proposed "OOO" Test
	SPLITS BETWEEN 1G AND 2G	CNV0003852	Conveyor	Proposed "OOO" Test
	SPLITS BETWEEN 1H AND 2H	CNV0003876	Conveyor	Proposed "OOO" Test
	COATER 1E & 1G RECEIVING - REVERSIBLE	CNV0003198	Conveyor	"OOO" Test Changed or Redesignated Existing Equipment
	COATER 1F & 1H RECEIVING - REVERSIBLE	CNV0003199	Conveyor	"OOO" Test Changed or Redesignated Existing Equipment
	COATER 2E & 2G RECEIVING - REVERSIBLE	CNV0003273	Conveyor	"OOO" Test Changed or Redesignated Existing Equipment
	COATER 2F & 2H RECEIVING - REVERSIBLE	CNV0003274	Conveyor	"OOO" Test Changed or Redesignated Existing Equipment
EP20c	Bentonite Storage Bin – Existing	POL0001896	Bin	Existing
	Bentonite Storage Bin - Existing	POL0001936	Bin	Existing
	Enrober - Existing	ERB0001931	Enrober	Existing
	Enrober - Existing	ERB0001933	Enrober	Existing
	COATING BENTONITE RECEIVER	POL0003151	Filter Receiver	Existing
	SCREW CONVEYOR ABOVE DRY SCREEN	CNV0003280	Conveyor	Existing
	Coating Bentonite Receiver C	POL0003853	Filter Receiver	Proposed
EP30	DRY SCEEN OVERS RECYCLE CONVEYOR	CNV0003203	Conveyor	Existing "OOO" Test
	CLOD CATCHER ON ELEVATOR INLET	3213		Existing "OOO" Test
	SCREW CONVEYOR ON ASPIRATION BAGHOUSE	CNV0003288	Conveyor	Existing "OOO" Test

**Attachment B**  
**Nestle Purina PetCare Co., Golden Products Division**  
**Bloomfield Facility**

Emission Point No.	Description	Current Equipment ID	Equipment Type	Relation to Project
	DRYER SHUTTLE CONVEYOR	CNV0003200	Conveyor	Existing "OOO" Test
	STORVEYOR TO NEW SYSTEMS	CNV0003175	Storeveyor	Existing "OOO" Test
	ELEVATOR BETWEEN DRYER AND DRY SCREEN	ELV0003214	Elevator	Existing "OOO" Test
	FINISHED PRODUCT ELEVATOR	ELE0003224	Elevator	Existing "OOO" Test
	REPLACES EX ELEVATOR 2994 ON BLEND BACK SYSTEM	ELE0003315	Elevator	Existing "OOO" Test
	CNV B/W COATER REC CNVS & DRYER C SHUTTLE	CNV0003275	Conveyor	Existing "OOO" Test
	COATER 1E	MIX0003160	Coater	Existing
	COATER 2E	MIX0003161	Coater	Existing
	COATER 1F	MIX0003169	Coater	Existing
	COATER 2F	MIX0003170	Coater	Existing
	DRY SCREEN	SCR0003217	Screen	Existing "OOO" Test
	Vacuum Pick-Up Adapter	BIN0003719	Bin	Proposed "OOO" Test
	Raw Material Screen	SCR0003722	Screen	Existing "OOO" Test
	Surge Bin	BIN0003723	Bin	Existing "OOO" Test
	Belt Scale	BSC0003723	Scale	Existing "OOO" Test
	Enrober	ENR0003724	Enrober	Existing
	Belt Conveyor Transfer Point	CNV0003739	Conveyor	Existing "OOO" Test
	Bucket Elevator	ELE0003741	Elevator	Existing "OOO" Test
	Surge Bin	BIN0003743	Bin	Existing "OOO" Test
	Belt Conveyor Transfer Point	CNV0003744	Conveyor	Existing "OOO" Test
	Aspiration Baghouse D	POL0003287	Baghouse	Existing "OOO" Test
	COATER 1E & 1G RECEIVING - REVERSIBLE	CNV0003198	Conveyor	Changed or Redesignated Existing Equipment

**Attachment B**  
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**Bloomfield Facility**

<b>Emission Point No.</b>	<b>Description</b>	<b>Current Equipment ID</b>	<b>Equipment Type</b>	<b>Relation to Project</b>
	<del>COATER 1F &amp; 1H RECEIVING-REVERSIBLE</del>	CNV0003199	Conveyor	Changed or Redesignated Existing Equipment
	<del>COATER 2E &amp; 2G RECEIVING-REVERSIBLE</del>	CNV0003273	Conveyor	Changed or Redesignated Existing Equipment
	<del>COATER 2F &amp; 2H RECEIVING-REVERSIBLE</del>	CNV0003274	Conveyor	Changed or Redesignated Existing Equipment
EP31	Storage Bin	BIN0003713	Bin	Existing
	Storage Bin	BIN0003714	Bin	Existing
	Storage Bin	BIN0003826	Bin	Proposed "OOO" Test
	Storage Bin	BIN0003827	Bin	Proposed "OOO" Test
EP32	Filter Receiver (Raw Material)	BIN0003733	Bin	Existing
	Filter Receiver (Overs/Fines)	BIN0003728	Bin	Existing
	Filter Receiver (Raw Material)	BIN0003837	Bin	Proposed "OOO" Test
	Filter Receiver (Overs/Fines)	BIN0003842	Bin	Proposed "OOO" Test
EP33	Pickup Bin	BIN0003835	Bin	Proposed "OOO" Test
	Raw Material Screen (Screener)	SCR0003834	Screen	Proposed "OOO" Test
	Surge Bin	BIN0003840	Bin	Proposed "OOO" Test
	Belt Scale	BSC0003840	Scale	Proposed "OOO" Test
	Enrober	ENR0003848	Enrober	Proposed
	COATER 1G	MIX0003862	COATER	Proposed
	COATER 2G	MIX0003863	COATER	Proposed
	COATER 1H	MIX0003881	COATER	Proposed
	COATER 2H	MIX0003882	COATER	Proposed
	SCREW CONVEYOR ON ASPIRATION BAGHOUSE	CNV0003894	Conveyor	Proposed "OOO" Test
	Aspiration Baghouse E	POL0003893	Baghouse	Proposed "OOO" Test
EP35	CO1 Rail Pit Conveyor Unload	CNV0004029	Belt Conveyor	Proposed "OOO" Test

**Attachment B  
Nestle Purina PetCare Co., Golden Products Division  
Bloomfield Facility**

<b>Emission Point No.</b>	<b>Description</b>	<b>Current Equipment ID</b>	<b>Equipment Type</b>	<b>Relation to Project</b>
	CO1 Dust Collector	POL0004035	Filter Receiver	
	CO2 Field Conveyor	CNV0004030	Belt Conveyor	<b>Proposed</b> "OOO" Test
	CO2 Dust Collector	POL0004036	Filter Receiver	
	CO3 Field Conveyor	CNV0004031	Belt Conveyor	<b>Proposed</b> "OOO" Test
	CO3 Dust Collector	POL0004037	Filter Receiver	
	Weigh Belt	BSC0004034	Scale	<b>Proposed</b> "OOO" Test
CO4 Dust Collector	POL0004038	Filter Receiver		
	CO4 Storage Feed Conveyor	CNV0004032	Belt Conveyor	<b>Proposed</b> "OOO" Test

**Color Code:**

**Existing**

"OOO" Test

**Proposed**

Changed or Redesignated Existing Equipment

**Proposed**

## APPENDIX A

### 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>SIC</b> ..... Standard Industrial Classification
<b>GHG</b> ..... Greenhouse Gas	<b>SIP</b> ..... State Implementation Plan
<b>gpm</b> ..... gallons per minute	<b>SMAL</b> ..... Screening Model Action Levels
<b>gr</b> ..... grains	<b>SO<sub>x</sub></b> ..... sulfur oxides
<b>GWP</b> ..... Global Warming Potential	<b>SO<sub>2</sub></b> ..... sulfur dioxide
<b>HAP</b> ..... Hazardous Air Pollutant	<b>tph</b> ..... tons per hour
<b>hr</b> ..... hour	<b>tpy</b> ..... tons per year
<b>hp</b> ..... horsepower	<b>VMT</b> ..... vehicle miles traveled
<b>lb</b> ..... pound	<b>VOC</b> ..... Volatile Organic Compound
<b>lbs/hr</b> ..... pounds per hour	
<b>MACT</b> ..... Maximum Achievable Control Technology	
<b>µg/m<sup>3</sup></b> ..... micrograms per cubic meter	