

**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: **122014-002**

Project Number: 2014-09-033  
Installation Number: 210-0131

Parent Company: Gavilon Fertilizer LLC

Parent Company Address: 1331 Capitol Avenue, Omaha, NE 68102

Installation Name: Gavilon Fertilizer LLC - St. Joseph

Installation Address: 201 E Florence Rd, St. Joseph, MO 64501

Location Information: Buchanan County, S20, T57N, R35W

Application for Authority to Construct was made for:

Use of liquid urease inhibitor in existing load-out process. 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.

**DEC 04 2014**

*Randall B. Hall for Kyra Moore*

EFFECTIVE DATE

DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Department's Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources' regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.

|             |             |
|-------------|-------------|
| Page No.    | 3           |
| Permit No.  |             |
| Project No. | 2014-09-033 |

**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."*

Gavilon Fertilizer LLC - St. Joseph  
Buchanan County, S20, T57N, R35W

1. Urease Inhibitor Throughput Limitation
  - A. Gavilon Fertilizer LLC - St. Joseph shall limit the volume of urease inhibitor (EP-11) use to not exceed 32,000 gallons in any consecutive 12-month period.
  - B. Attachment A or equivalent forms, such as electronic forms, approved by the Air Pollution Control Program shall be used to demonstrate compliance with Special Conditions 1.A.
2. Use of Alternative Urease Inhibitor
  - A. When using an alternative urease inhibitor that is different than the material listed in the Application for Authority to Construct, Gavilon Fertilizer LLC - St. Joseph shall calculate and verify that the VOC concentration in the alternative material does not exceed 2.5 pounds per gallon and calculate the HAP content and compare it to the SMAL using Attachment B, or other equivalent forms, approved by the Air Pollution Control Program.
  - B. In cases where the potential individual HAP emissions for the alternative urease inhibitor is above the SMAL for any chemical listed in Appendix B or greater than the exemption level (0.5 pounds per hour), whichever is smaller, Gavilon Fertilizer LLC - St. Joseph shall submit an application for Authority to Construct to the Air Pollution Control Program.
3. Record Keeping and Reporting Requirements
  - A. Gavilon Fertilizer LLC - St. Joseph 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 SDS for all materials used

|             |             |
|-------------|-------------|
| Page No.    | 4           |
| Permit No.  |             |
| Project No. | 2014-09-033 |

**SPECIAL CONDITIONS:**

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

- B. Gavilon Fertilizer LLC - St. Joseph shall report to the Air Pollution Control Program's Compliance/Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than 10 days after the end of the month during which any record required by this permit show an exceedance of a limitation imposed by this permit.

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

Project Number: 2014-09-033  
Installation ID Number: 210-0131  
Permit Number:

Gavilon Fertilizer LLC - St. Joseph  
201 E Florence Rd  
St. Joseph, MO 64501

Complete: October 6, 2014

Parent Company:  
Gavilon Fertilizer LLC  
1331 Capitol Avenue  
Omaha, NE 68102

Buchanan County, S20, T57N, R35W

REVIEW SUMMARY

- Gavilon Fertilizer LLC - St. Joseph has applied for authority to use a liquid urease inhibitor in the existing load-out process.
- HAP emissions are not expected from the proposed equipment.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the NESHAPs apply to this installation. None of the currently promulgated MACT regulations apply to the proposed equipment.
- No air pollution control equipment is being used in association with the new equipment.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of VOC are conditioned below de minimis levels.
- This installation is located in Buchanan 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.
- Emissions testing is not required for the equipment.

- A Basic Operating Permit Amendment application has been received for the use of the urease inhibitor.
- Approval of this permit is recommended with special conditions.

### INSTALLATION DESCRIPTION

Gavilon Fertilizer, LLC – St. Joseph (Gavilon) is a fertilizer storage installation. This facility consists of fertilizer receiving, fertilizer storing, fertilizer handling, fertilizer shipping, and haul road traffic. The installation works with both dry and liquid fertilizers.

Gavilon Fertilizer LLC - St. Joseph currently operates under a Basic Operating Permit. No construction permits have been issued to Gavilon Fertilizer LLC - St. Joseph from the Air Pollution Control Program. The existing processes at this facility were constructed prior to May 13, 1982, and are exempt from construction permitting rules according to 10 CSR 10-6.060(6)(E)3.

### PROJECT DESCRIPTION

Gavilon has proposed the use of a liquid urease inhibitor named Arborite AG-NT, manufactured by Gavilon. Arborite will be coated on dry urea or mixed in urea ammonium nitrate (UAN) solutions. Currently, the installation intends to only apply Arborite to dry urea. The Arborite liquid will be applied via spray hoses to the dry urea as it passes through the truck unloading auger. The auger is covered, preventing the escape of the urea and the Arborite liquid.

Gavilon does not produce urea at this installation.

The usage rate of the urease inhibitor is based on the manufacture's recommended application rate of three quarts per ton of dry urea processed through the truck loading auger. This results in a MHDR of 150 gallons per hour of Arborite. Arborite has a maximum VOC content of 10.9 percent, determined by Method 24 testing by Gavilon. Although the VOC concentration is 1.0 lbs/gal, Gavilon has requested the use of a liquid urease inhibitor with a VOC concentration of 2.50 lbs/gal to allow for the use of different formulations of liquid urease inhibitors. In order to remain below the de minimis level of 40 tons per year of VOC, Gavilon will limit throughput of the urease inhibitor to 32,000 gallons in any consecutive 12-month period.

### EMISSIONS/CONTROLS EVALUATION

Potential emissions from the Arborite AG-NT application were calculated using mass balance, citing the inhibitor SDS. The application rate of the inhibitor is 150 gallons per hour, which is based on the manufacture's recommended application rate of three quarts per ton of dry urea and the MHDR of 200 tons per hour for the truck loading auger. Arborite has a density of 9.2 lbs/gal and a VOC content of 10.9 percent, resulting in a VOC concentration of 1.0 lbs/gal. In order to allow the use of different formulations

of liquid urease inhibitors in the future, a VOC concentration of 2.5 lbs/gal was used to calculate the potential emissions. Arborite does not contain any HAPs.

Emissions from haul roads and vehicular activity areas were calculated using the predictive equation from AP-42 Section 13.2.2 “Unpaved Roads,” November 2006. No controls are being used on the haul roads.

The following table provides an emissions summary for this project. Existing potential emissions do not exist because no construction permits have been issued to Gavilon. Existing actual emissions were taken from the installation’s 2013 EIQ. Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). Conditioned potential emissions of the application are based on a voluntary limit to less than 40 tons of VOC per year to remain below the de minimis level.

Table 1: Emissions Summary (tons per year)

| Pollutant         | Regulatory <i>De Minimis</i> Levels | Existing Potential Emissions | Existing Actual Emissions (2013 EIQ) | Potential Emissions of the Application | <sup>1</sup> Conditioned Potential Emissions of the Application |
|-------------------|-------------------------------------|------------------------------|--------------------------------------|--|---|
| PM                | 25.0                                | N/A                          | N/D                                  | 0.086                                  | N/D   |
| PM <sub>10</sub>  | 15.0                                | N/A                          | 3.87                                 | 0.025                                  | N/D   |
| PM <sub>2.5</sub> | 10.0                                | N/A                          | 0.387                                | 0.003                                  | N/D   |
| SO <sub>x</sub>   | 40.0                                | N/A                          | N/D                                  | N/D                                    | N/D   |
| NO <sub>x</sub>   | 40.0                                | N/A                          | N/D                                  | N/D                                    | N/D   |
| VOC               | 40.0                                | N/A                          | N/D                                  | 823.55                                 | <40.0   |
| CO                | 100.0                               | N/A                          | N/D                                  | N/D                                    | N/D   |
| HAPs              | 10.0/25.0                           | N/A                          | N/D                                  | N/D                                    | N/D   |

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

<sup>1</sup> Conditioned potential emissions of the application were not determined for PM, PM<sub>10</sub>, and PM<sub>2.5</sub> because they were determined to be negligible.

### 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 VOC are conditioned below de minimis levels.

### APPLICABLE REQUIREMENTS

Gavilon Fertilizer LLC - St. Joseph 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

## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

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Bryce Mihalevich  
New Source Review Unit

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Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 15, 2014, received September 18, 2014, designating Gavilon Fertilizer LLC as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.





## Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

| Chemical                    | CAS #      | SMAL (tons/yr) | Group ID | VOC | PM | Chemical                            | CAS #     | SMAL (tons/yr) | Group ID | VOC | PM | Chemical                                   | CAS #    | SMAL (tons/yr) | Group ID | VOC | PM |   |
|-----------------------------|------------|----------------|----------|-----|----|-------------------------------------|-----------|----------------|----------|-----|----|--|----------|----------------|----------|-----|----|---|
| ACETALDEHYDE                | 75-07-0    | 9              |          | Y   | N  | CARBARYL                            | 63-25-2   | 10             | V        | Y   | Y  | DICHLOROPROPANE, [1,2-]                    | 78-87-5  | 1              |          |     | Y  | N |
| ACETAMIDE                   | 60-35-5    | 1              |          | Y   | N  | CARBON DISULFIDE                    | 75-15-0   | 1              |          | Y   | N  | DICHLOROPROPENE, [1,3-]                    | 542-75-6 | 1              |          |     | Y  | N |
| ACETONITRILE                | 75-05-8    | 4              |          | Y   | N  | CARBON TETRACHLORIDE                | 56-23-5   | 1              |          | Y   | N  | DICHLORVOS                                 | 62-73-7  | 0.2            |          |     | Y  | N |
| ACETOPHENONE                | 98-86-2    | 1              |          | Y   | N  | CARBONYL SULFIDE                    | 463-58-1  | 5              |          | Y   | N  | DIETHANOLAMINE                             | 111-42-2 | 5              |          |     | Y  | N |
| ACETYLAMINOFLUORINE, [2-]   | 53-96-3    | 0.005          | V        | Y   | Y  | CATECHOL                            | 120-80-9  | 5              |          | Y   | N  | DIETHYL SULFATE                            | 64-67-5  | 1              |          |     | Y  | N |
| ACROLEIN                    | 107-02-8   | 0.04           |          | Y   | N  | CHLORAMBEN                          | 133-90-4  | 1              | Y        | Y   | Y  | DIETHYLENE GLYCOL MONOBUTYL ETHER          | 112-34-5 | 5              | P        |     | Y  | N |
| ACRYLAMIDE                  | 79-06-1    | 0.02           |          | Y   | N  | CHLORDANE                           | 57-74-9   | 0.01           |          | Y   | Y  | DIMETHOXYBENZIDINE, [3,3-]                 | 119-90-4 | 0.1            | V        |     | Y  | Y |
| ACRYLIC ACID                | 79-10-7    | 0.6            |          | Y   | N  | CHLORINE                            | 7782-50-5 | 0.1            |          | N   | N  | DIMETHYL BENZIDINE, [3,3-]                 | 119-93-7 | 0.008          | V        |     | Y  | Y |
| ACRYLONITRILE               | 107-13-1   | 0.3            |          | Y   | N  | CHLOROACETIC ACID                   | 79-11-8   | 0.1            |          | Y   | N  | DIMETHYL CARBAMOYL CHLORIDE                | 79-44-7  | 0.02           |          |     | Y  | N |
| ALLYL CHLORIDE              | 107-05-1   | 1              |          | Y   | N  | CHLOROACETOPHENONE, [2-]            | 532-27-4  | 0.06           |          | Y   | N  | DIMETHYL FORMAMIDE                         | 68-12-2  | 1              |          |     | Y  | N |
| AMINOBIHENYL, [4-]          | 92-67-1    | 1              | V        | Y   | N  | CHLOROBENZENE                       | 108-90-7  | 10             |          | Y   | N  | DIMETHYL HYDRAZINE, [1,1-]                 | 57-14-7  | 0.008          |          |     | Y  | N |
| ANILINE                     | 62-53-3    | 1              |          | Y   | N  | CHLOROBENZILATE                     | 510-15-6  | 0.4            | V        | Y   | Y  | DIMETHYL PHTHALATE                         | 131-11-3 | 10             |          |     | Y  | N |
| ANISIDINE, [ORTHO-]         | 90-04-0    | 1              |          | Y   | N  | CHLOROFORM                          | 67-66-3   | 0.9            |          | Y   | N  | DIMETHYL SULFATE                           | 77-78-1  | 0.1            |          |     | Y  | N |
| ANTHRACENE                  | 120-12-7   | 0.01           | V        | Y   | N  | CHLOROMETHYL METHYL ETHER           | 107-30-2  | 0.1            |          | Y   | N  | DIMETHYLAMINOAZOBENZENE, [4-]              | 60-11-7  | 1              |          |     | Y  | N |
| ANTIMONY COMPOUNDS          |            | 5              | H        | N   | Y  | CHLOROPRENE                         | 126-99-8  | 1              |          | Y   | N  | DIMETHYLANILINE, [N-N]                     | 121-69-7 | 1              |          |     | Y  | N |
| ANTIMONY PENTAFLUORIDE      | 7783-70-2  | 0.1            | H        | N   | Y  | CHROMIUM (VI) COMPOUNDS             |           | 0.002          | L        | N   | Y  | DINITRO-O-CRESOL, [4,6-] (Note 6)          | 534-52-1 | 0.1            | E        |     | Y  | Y |
| ANTIMONY POTASSIUM TARTRATE | 28300-74-5 | 1              | H        | N   | Y  | CHROMIUM COMPOUNDS                  |           | 5              | L        | N   | Y  | DINITROPHENOL, [2,4-]                      | 51-28-5  | 1              |          |     | Y  | N |
| ANTIMONY TRIOXIDE           | 1309-64-4  | 1              | H        | N   | Y  | CHRYSENE                            | 218-01-9  | 0.01           | V        | Y   | N  | DINITROTOLUENE, [2,4-]                     | 121-14-2 | 0.02           |          |     | Y  | N |
| ANTIMONY TRISULFIDE         | 1345-04-6  | 0.1            | H        | N   | Y  | COBALT COMPOUNDS                    |           | 0.1            | M        | N   | Y  | DIOXANE, [1,4-]                            | 123-91-1 | 6              |          |     | Y  | N |
| ARSENIC COMPOUNDS           |            | 0.005          | I        | N   | Y  | COKE OVEN EMISSIONS                 | 8007-45-2 | 0.03           | N        | Y   | N  | DIPHENYLHYDRAZINE, [1,2-]                  | 122-66-7 | 0.09           | V        |     | Y  | Y |
| ASBESTOS                    | 1332-21-4  | 0              | A        | N   | Y  | CRESOL, [META-]                     | 108-39-4  | 1              | B        | Y   | N  | DIPHENYLMETHANE DIISOCYANATE, [4,4-]       | 101-68-8 | 0.1            | V        |     | Y  | N |
| BENZ(A)ANTHRACENE           | 56-55-3    | 0.01           | V        | Y   | N  | CRESOL, [ORTHO-]                    | 95-48-7   | 1              | B        | Y   | N  | EPICHLOROHYDRIN                            | 106-89-8 | 2              |          |     | Y  | N |
| BENZENE                     | 71-43-2    | 2              |          | Y   | N  | CRESOL, [PARA-]                     | 106-44-5  | 1              | B        | Y   | N  | ETHOXYETHANOL, [2-]                        | 110-80-5 | 10             | P        |     | Y  | N |
| BENZIDINE                   | 92-87-5    | 0.0003         | V        | Y   | N  | CRESOLS (MIXED ISOMERS)             | 1319-77-3 | 1              | B        | Y   | N  | ETHOXYETHYL ACETATE, [2-]                  | 111-15-9 | 5              | P        |     | Y  | N |
| BENZO(A)PYRENE              | 50-32-8    | 0.01           | V        | Y   | N  | CUMENE                              | 98-82-8   | 10             |          | Y   | N  | ETHYL ACRYLATE                             | 140-88-5 | 1              |          |     | Y  | N |
| BENZO(B)FLUORANTHENE        | 205-99-2   | 0.01           | V        | Y   | N  | CYANIDE COMPOUNDS                   |           | 0.1            | O        | Y   | N  | ETHYL BENZENE                              | 100-41-4 | 10             |          |     | Y  | N |
| BENZO(K)FLUORANTHENE        | 207-08-9   | 0.01           | V        | Y   | N  | DDE                                 | 72-55-9   | 0.01           | V        | Y   | Y  | ETHYL CHLORIDE                             | 75-00-3  | 10             |          |     | Y  | N |
| BENZOTRICHLORIDE            | 98-07-7    | 0.006          |          | Y   | N  | DI(2-ETHYLHEXYL) PHTHALATE, (DEHP)  | 117-81-7  | 5              |          | Y   | N  | ETHYLENE GLYCOL                            | 107-21-1 | 10             |          |     | Y  | N |
| BENZYL CHLORIDE             | 100-44-7   | 0.1            |          | Y   | N  | DIAMNOTOLUENE, [2,4-]               | 95-80-7   | 0.02           |          | Y   | N  | ETHYLENE GLYCOL MONOBUTYL ETHER (Delisted) | 111-76-2 |                |          |     |    |   |
| BERYLLIUM COMPOUNDS         |            | 0.008          | J        | N   | Y  | DIAZOMETHANE                        | 334-88-3  | 1              |          | Y   | N  | ETHYLENE GLYCOL MONOHEXYL ETHER            | 112-25-4 | 5              | P        |     | Y  | N |
| BERYLLIUM SALTS             |            | 2E-05          | J        | N   | Y  | DIBENZ(A,H)ANTHRACENE               | 53-70-3   | 0.01           | V        | Y   | N  | ETHYLENE IMINE [AZIRIDINE]                 | 151-56-4 | 0.003          |          |     | Y  | N |
| BIPHENYL, [1,1-]            | 92-52-4    | 10             | V        | Y   | N  | DIOXINS/FURANS                      |           | 6E-07          | D,V      | Y   | N  | ETHYLENE OXIDE                             | 75-21-8  | 0.1            |          |     | Y  | N |
| BIS(CHLOROETHYL)ETHER       | 111-44-4   | 0.06           |          | Y   | N  | DIBENZOFURAN                        | 132-64-9  | 5              | V        | Y   | N  | ETHYLENE THIOUREA                          | 96-45-7  | 0.6            |          |     | Y  | Y |
| BIS(CHLOROMETHYL)ETHER      | 542-88-1   | 0.0003         |          | Y   | N  | DIBROMO-3-CHLOROPROPANE, [1,2-]     | 96-12-8   | 0.01           |          | Y   | N  | FORMALDEHYDE                               | 50-00-0  | 2              |          |     | Y  | N |
| BROMOFORM                   | 75-25-2    | 10             |          | Y   | N  | DIBROMOETHANE, [1,2-]               | 106-93-4  | 0.1            |          | Y   | N  | GLYCOL ETHER (ETHYLENE GLYCOL ETHERS)      |          | 5              | P        |     | Y  | N |
| BROMOMETHANE                | 74-83-9    | 10             |          | Y   | N  | DIBUTYL PHTHALATE                   | 84-74-2   | 10             |          | Y   | Y  | GLYCOL ETHER (DIETHYLENE GLYCOL ETHERS)    |          | 5              | P        |     | Y  | N |
| BUTADIENE, [1,3-]           | 106-99-0   | 0.07           |          | Y   | N  | DICHLOROBENZENE, [1,4-]             | 106-46-7  | 3              |          | Y   | N  | HEPTACHLOR                                 | 76-44-8  | 0.02           |          |     | Y  | N |
| BUTOXYETHANOL ACETATE, [2-] | 112-07-2   | 5              | P        | Y   | N  | DICHLOROBENZIDENE, [3,3-]           | 91-94-1   | 0.2            | V        | Y   | Y  | HEXACHLOROBENZENE                          | 118-74-1 | 0.01           |          |     | Y  | N |
| BUTYLENE OXIDE, [1,2-]      | 106-88-7   | 1              |          | Y   | N  | DICHLOROETHANE, [1,1-]              | 75-34-3   | 1              |          | Y   | N  | HEXACHLOROBUTADIENE                        | 87-68-3  | 0.9            |          |     | Y  | N |
| CADMIUM COMPOUNDS           |            | 0.01           | K        | N   | Y  | DICHLOROETHANE, [1,2-]              | 107-06-2  | 0.8            |          | Y   | N  | HEXACHLOROCYCLOHEXANE, [ALPHA-]            | 319-84-6 | 0.01           | F        |     | Y  | N |
| CALCIUM CYANAMIDE           | 156-62-7   | 10             |          | Y   | Y  | DICHLOROETHYLENE, [1,1-]            | 75-35-4   | 0.4            |          | Y   | N  | HEXACHLOROCYCLOHEXANE, [BETA-]             | 319-85-7 | 0.01           | F        |     | Y  | N |
| CAPROLACTAM (Delisted)      | 105-60-2   |                |          |     |    | DICHLOROMETHANE                     | 75-09-2   | 10             |          | N   | N  | HEXACHLOROCYCLOHEXANE, [DELTA-]            | 319-86-8 | 0.01           | F        |     | Y  | N |
| CAPTAN                      | 133-06-2   | 10             |          | Y   | Y  | DICHLOROPHENOXY ACETIC ACID, [2,4-] | 94-75-7   | 10             | C        | Y   | Y  | HEXACHLOROCYCLOHEXANE, [TECHNICAL]         | 608-73-1 | 0.01           | F        |     | Y  | N |

## Appendix B: Table of Hazardous Air Pollutants and Screening Model Action Levels (May 3, 2012 Revision 10)

| Chemical                               | CAS #      | SMAL (tons/yr) | Group ID | VOC | PM | Chemical                              | CAS #     | SMAL (tons/yr) | Group ID | VOC | PM | Chemical                   | CAS #   | SMAL (tons/yr) | Group ID | VOC | PM |
|--|------------|----------------|----------|-----|----|---------------------------------------|-----------|----------------|----------|-----|----|----------------------------|---|----------------|----------|-----|----|
| HEXACHLOROCYCLOPENTADIENE              | 77-47-4    | 0.1            |          | Y   | N  | NITROSODIMETHYLAMINE, [N-]            | 62-75-9   | 0.001          |          | Y   | N  | TRIMETHYLPENTANE, [2,2,4-] | 540-84-1  | 5              |          | Y   | N  |
| HEXACHLOROETHANE                       | 67-72-1    | 5              |          | Y   | N  | NITROSOMORPHOLINE, [N-]               | 59-89-2   | 1              |          | Y   | N  | URETHANE [ETHYL CARBAMATE] | 51-79-6   | 0.8            |          | Y   | N  |
| HEXAMETHYLENE, -1,6-DIISOCYANATE       | 822-06-0   | 0.02           |          | Y   | N  | NITROSO-N-METHYLUREA, [N-]            | 684-93-5  | 0.0002         |          | Y   | N  | VINYL ACETATE              | 108-05-4  | 1              |          | Y   | N  |
| HEXAMETHYLPHOSPHORAMIDE                | 680-31-9   | 0.01           |          | Y   | N  | OCTACHLORONAPHTHALENE                 | 2234-13-1 | 0.01           | V        | Y   | N  | VINYL BROMIDE              | 593-60-2  | 0.6            |          | Y   | N  |
| HEXANE, [N-]                           | 110-54-3   | 10             |          | Y   | N  | PARATHION                             | 56-38-2   | 0.1            |          | Y   | Y  | VINYL CHLORIDE             | 75-01-4   | 0.2            |          | Y   | N  |
| HYDRAZINE                              | 302-01-2   | 0.004          |          | N   | N  | PCB [POLYCHLORINATED BIPHENYLS]       | 1336-36-3 | 0.009          | X        | Y   | Y  | XYLENE, [META-]            | 108-38-3  | 10             | G        | Y   | N  |
| HYDROGEN CHLORIDE                      | 7647-01-0  | 10             |          | N   | N  | PENTACHLORONITROBENZENE               | 82-68-8   | 0.3            |          | Y   | N  | XYLENE, [ORTHO-]           | 95-47-6   | 10             | G        | Y   | N  |
| HYDROGEN FLUORIDE                      | 7664-39-3  | 0.1            |          | N   | N  | PENTACHLOROPHENOL                     | 87-86-5   | 0.7            |          | Y   | N  | XYLENE, [PARA-]            | 106-42-3  | 10             | G        | Y   | N  |
| HYDROQUINONE                           | 123-31-9   | 1              |          | Y   | N  | PHENOL                                | 108-95-2  | 0.1            |          | Y   | N  | XYLENES (MIXED ISOMERS)    | 1330-20-7   | 10             | G        | Y   | N  |
| INDENO(1,2,3CD)PYRENE                  | 193-39-5   | 0.01           | V        | Y   | N  | PHENYLENEDIAMINE, [PARA-]             | 106-50-3  | 10             |          | Y   | N  |                            |   |                |          |     |    |
| ISOPHORONE                             | 78-59-1    | 10             |          | Y   | N  | PHOSGENE                              | 75-44-5   | 0.1            |          | Y   | N  |                            |   |                |          |     |    |
| LEAD COMPOUNDS                         |            | 0.01           | Q        | N   | Y  | PHOSPHINE                             | 7803-51-2 | 5              |          | N   | N  |                            |   |                |          |     |    |
| LINDANE [GAMMA-HEXACHLOROCYCLOHEXANE]  | 58-89-9    | 0.01           | F        | Y   | N  | PHOSPHOROUS (YELLOW OR WHITE)         | 7723-14-0 | 0.1            |          | N   | N  | Legend                     |   |                |          |     |    |
| MALEIC ANHYDRIDE                       | 108-31-6   | 1              |          | Y   | N  | PHTHALIC ANHYDRIDE                    | 85-44-9   | 5              |          | Y   | N  | Group ID                   | Aggregate Group Name  |                |          |     |    |
| MANGANESE COMPOUNDS                    |            | 0.8            | R        | N   | Y  | POLYCYLIC ORGANIC MATTER              |           | 0.01           | V        | Y   | N  | A                          | Asbestos  |                |          |     |    |
| MERCURY COMPOUNDS                      |            | 0.01           | S        | N   | N  | PROPANE SULTONE, [1,3-]               | 1120-71-4 | 0.03           |          | Y   | Y  | B                          | Cresols/Cresylic Acid (isomers and mixtures)  |                |          |     |    |
| METHANOL                               | 67-56-1    | 10             |          | Y   | N  | PROPIOLACTONE, [BETA-]                | 57-57-8   | 0.1            |          | Y   | N  | C                          | 2,4 - D, Salts and Esters   |                |          |     |    |
| METHOXYCHLOR                           | 72-43-5    | 10             | V        | Y   | Y  | PROPIONALDEHYDE                       | 123-38-6  | 5              |          | Y   | N  | D                          | Dibenzofurans, Dibenzodioxins   |                |          |     |    |
| METHOXYETHANOL, [2-]                   | 109-86-4   | 10             | P        | Y   | N  | PROPOXUR [BAYGON]                     | 114-26-1  | 10             |          | Y   | Y  | E                          | 4, 6 Dinitro-o-cresol, and Salts  |                |          |     |    |
| METHYL CHLORIDE                        | 74-87-3    | 10             |          | Y   | N  | PROPYLENE OXIDE                       | 75-56-9   | 5              |          | Y   | N  | F                          | Lindane (all isomers)   |                |          |     |    |
| METHYL ETHYL KETONE (Delisted)         | 78-93-3    |                |          |     |    | PROPYLENEIMINE, [1,2-]                | 75-55-8   | 0.003          |          | Y   | N  | G                          | Xylenes (all isomers and mixtures)  |                |          |     |    |
| METHYL HYDRAZINE                       | 60-34-4    | 0.06           |          | Y   | N  | QUINOLINE                             | 91-22-5   | 0.006          |          | Y   | N  | H                          | Antimony Compounds  |                |          |     |    |
| METHYL IODIDE                          | 74-88-4    | 1              |          | Y   | N  | QUINONE                               | 106-51-4  | 5              |          | Y   | N  | I                          | Arsenic Compounds   |                |          |     |    |
| METHYL ISOBUTYL KETONE                 | 108-10-1   | 10             |          | Y   | N  | RADIONUCLIDES                         |           | Note 1         | Y        | N   | Y  | J                          | Beryllium Compounds   |                |          |     |    |
| METHYL ISOCYANATE                      | 624-83-9   | 0.1            |          | Y   | N  | SELENIUM COMPOUNDS                    |           | 0.1            | W        | N   | Y  | K                          | Cadmium Compounds   |                |          |     |    |
| METHYL METHACRYLATE                    | 80-62-6    | 10             |          | Y   | N  | STYRENE                               | 100-42-5  | 1              |          | Y   | N  | L                          | Chromium Compounds  |                |          |     |    |
| METHYL TERT-BUTYL ETHER                | 1634-04-4  | 10             |          | Y   | N  | STYRENE OXIDE                         | 96-09-3   | 1              |          | Y   | N  | M                          | Cobalt Compounds  |                |          |     |    |
| METHYLCYCLOPENTADIENYL MANGANESE       | 12108-13-3 | 0.1            | R        | N   | Y  | TETRACHLORODIBENZO-P-DIOXIN,[2,3,7,8] | 1746-01-6 | 6E-07          | D,V      | Y   | Y  | N                          | Coke Oven Emissions   |                |          |     |    |
| METHYLENE BIS(2-CHLOROANILINE), [4,4-] | 101-14-4   | 0.2            | V        | Y   | Y  | TETRACHLOROETHANE, [1,1,2,2-]         | 79-34-5   | 0.3            |          | Y   | N  | O                          | Cyanide Compounds   |                |          |     |    |
| METHYLENEDIANILINE, [4,4-]             | 101-77-9   | 1              | V        | Y   | N  | TETRACHLOROETHYLENE                   | 127-18-4  | 10             |          | N   | N  | P                          | Glycol Ethers   |                |          |     |    |
| METHYLNAPHTHALENE, [2-]                | 91-57-6    | 0.01           | V        | Y   | N  | TITANIUM TETRACHLORIDE                | 7550-45-0 | 0.1            |          | N   | N  | Q                          | Lead Compounds (except elemental Lead)  |                |          |     |    |
| MINERAL FIBERS                         |            | 0              | T        | N   | Y  | TOLUENE                               | 108-88-3  | 10             |          | Y   | N  | R                          | Manganese Compounds   |                |          |     |    |
| NAPHTHALENE                            | 91-20-3    | 10             | V        | Y   | N  | TOLUENE DIISOCYANATE, [2,4-]          | 584-84-9  | 0.1            |          | Y   | N  | S                          | Mercury Compounds   |                |          |     |    |
| NAPHTHYLAMINE, [ALPHA-]                | 134-32-7   | 0.01           | V        | Y   | N  | TOLUIDINE, [ORTHO-]                   | 95-53-4   | 4              |          | Y   | N  | T                          | Fine Mineral Fibers   |                |          |     |    |
| NAPHTHYLAMINE, [BETA-]                 | 91-59-8    | 0.01           | V        | Y   | N  | TOXAPHENE                             | 8001-35-2 | 0.01           |          | Y   | N  | U                          | Nickel Compounds  |                |          |     |    |
| NICKEL CARBONYL                        | 13463-39-3 | 0.1            | U        | N   | Y  | TRICHLOROETHANE, [1,2,4-]             | 120-82-1  | 10             |          | Y   | N  | V                          | Polycyclic Organic Matter   |                |          |     |    |
| NICKEL COMPOUNDS                       |            | 1              | U        | N   | Y  | TRICHLOROETHANE, [1,1,1-]             | 71-55-6   | 10             |          | N   | N  | W                          | Selenium Compounds  |                |          |     |    |
| NICKEL REFINERY DUST                   |            | 0.08           | U        | N   | Y  | TRICHLOROETHANE, [1,1,2-]             | 79-00-5   | 1              |          | Y   | N  | X                          | Polychlorinated Biphenyls (Aroclors)  |                |          |     |    |
| NICKEL SUBSULFIDE                      | 12035-72-2 | 0.04           | U        | N   | Y  | TRICHLOROETHYLENE                     | 79-01-6   | 10             |          | Y   | N  | Y                          | Radionuclides   |                |          |     |    |
| NITROBENZENE                           | 98-95-3    | 1              |          | Y   | N  | TRICHLOROPHENOL, [2,4,5-]             | 95-95-4   | 1              |          | Y   | N  |                            |   |                |          |     |    |
| NITROBIPHENYL, [4-]                    | 92-93-3    | 1              | V        | Y   | N  | TRICHLOROPHENOL, [2,4,6-]             | 88-06-2   | 6              |          | Y   | N  |                            |   |                |          |     |    |
| NITROPHENOL, [4-]                      | 100-02-7   | 5              |          | Y   | N  | TRIETHYLAMINE                         | 121-44-8  | 10             |          | Y   | N  | Note 1                     | The SMAL for radionuclides is defined as the effective dose equivalent to 0.3 millirems per year for 7 years exposure associated with a cancer risk of 1 in 1 million |                |          |     |    |
| NITROPROPANE, [2-]                     | 79-46-9    | 1              |          | Y   | N  | TRIFLURALIN                           | 1582-09-8 | 9              |          | Y   | Y  |                            |   |                |          |     |    |

## 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>2</sub>e</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>tph</b> ..... tons per hour   |
| <b>hp</b> ..... horsepower                               | <b>tpy</b> ..... tons per year   |
| <b>lb</b> ..... pound                                    | <b>VMT</b> ..... vehicle miles traveled  |
| <b>lbs/hr</b> ..... pounds per hour                      | <b>VOC</b> ..... Volatile Organic Compound   |
| <b>MACT</b> ..... Maximum Achievable Control Technology  |  |
| <b>µg/m<sup>3</sup></b> .....micrograms per cubic meter  |  |

Mr. Bob Sheeder  
Environmental Analyst  
Gavilon Fertilizer LLC - St. Joseph  
1331 Capitol Avenue  
Omaha, NE 68102

RE: New Source Review Permit - Project Number: 2014-09-033

Dear Mr. Sheeder:

Enclosed with this letter is your permit to construct. Please study it carefully and refer to Appendix A for a list of common abbreviations and acronyms used in the permit. Also, note the special conditions on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit has important information concerning standard permit conditions and your rights under the laws of the State of Missouri.

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 where 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 petition is sent by registered mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail, it will be deemed filed on the date received. Contact information is: Administrative Hearing Commission, P.O. Box 1557, Jefferson City, Missouri 65102, website: [www.oa.mo.gov/ahc](http://www.oa.mo.gov/ahc).

If you have questions regarding this permit, please contact Bryce Mihalevich, at the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102 or at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Susan Heckenkamp  
New Source Review Unit Chief

SH:bml

Enclosures

c: Kansas City Regional Office  
PAMS File: 2014-09-033  
Permit Number: