

## 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: **012010-015** Project Number: 2009-09-008

Parent Company: Service & Supply Cooperative

Parent Company Address: P.O. Box 48, Bellflower, MO 63333

Installation Name: Service & Supply Cooperative

Installation Number: 139-0028

Installation Address: 22 Coop Avenue, New Florence, MO 63363

Location Information: Montgomery County, S26, T48N, R5W

Application for Authority to Construct was made for an existing soybean storage process. This facility was constructed prior to receipt of a permit from the Missouri Department of Natural Resources. Obtaining a permit is part of a remedial action required by the Air Pollution Control Program. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

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

JAN 29 2010

EFFECTIVE DATE

A handwritten signature in black ink, appearing to read "James K. Kawameh".

DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

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

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

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). 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 this (these) air contaminant source(s).

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

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

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

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

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

Project Number: 2009-09-008  
Installation ID Number: 139-0028  
Permit Number:

Service & Supply Cooperative  
22 Coop Avenue  
New Florence, MO 63363

Complete: September 4, 2009

Parent Company:  
Service & Supply Cooperative  
P.O. Box 48  
Bellflower, MO 63333

Montgomery County, S26, T48N, R5W

REVIEW SUMMARY

- Service & Supply Cooperative has applied for authority to operate an existing soybean storage process.
- Hazardous Air Pollutant (HAP) emissions are expected from the application of fungicide to the seed, but are less than the screen model action levels (SMAL). The HAP of concern is ethylene glycol.
- None of the New Source Performance Standards (NSPS) apply to the installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) apply to this installation. None of the currently promulgated Maximum Achievable Control Technology (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(1)(B), *Construction Permits Required*. Potential emissions of all particulate matter (PM), and particulate matter less than ten microns in aerodynamic diameter (PM<sub>10</sub>), volatile organic compounds (VOCs) and HAPs are below *de minimis* levels.
- This installation is located in Montgomery 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.

- 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 fertilizer processing equipment.
- A Basic Operating Permit application is required for this installation within 30 days of equipment startup. The installation's total potential to emit is above *de minimis* levels but below 100.0 tons per year, therefore a basic operating permit is required per 10 CSR 10-6.065(4).
- Approval of this permit is recommended without special conditions.

### INSTALLATION DESCRIPTION

Service & Supply Cooperative is an existing fertilizer processing and soybean storage facility. No permits have been issued to Service & Supply Cooperative from the Air Pollution Control Program.

The fertilizer process was built prior to May 13, 1982 and is exempt from construction permitting per 10 CSR 10-6.060(6)(E)3. The fertilizer process is bottlenecked by truck unloading at 30 tons per hour. This process was originally built in 1977 with modifications that occurred in 1980. Like-kind replacements have occurred to the truck unloading and under car conveyor emission points (EP 1A and EP 1B) in 1998. The unloading emission point (EP 8) underwent a like-kind replacement in 2004.

According to Missouri State Rule 10 CSR 10-6.061, *Construction Permits Exemptions*, like-kind replacements are exempt from the construction permit rule. Like-kind replacement is described in Missouri State Rule 10 CSR 10-6.061(3)(B)3 as follows:

*Replacement of like-kind emission units that do not involve either any appreciable change either in the quality or nature, or any increase either in the potential to emit or the effect on air quality, of the emissions of any air contaminant."*

A permit is required for the soybean storage process because it was built after 1982. Because the fertilizer process' potential to emit PM<sub>10</sub> is above *de minimis*, the soybean storage process will need a permit per 10 CSR 10-6.060(1)(B).

### PROJECT DESCRIPTION

This permit is permitting the existing soybean storage process, which includes soybean receiving, handling, loading, six (6) storage bins with a total storage capacity of 5,706 bushels, and a 528 foot haul road. The soybean storage process was built in 1997. The maximum hourly design rate of the soybean storage process is 10.0 tons per hour. No control devices are used. Four different fungicides are applied to the soybeans – each with its own maximum application rate. The fungicides will not be applied at the same time; therefore, the fungicide(s) with the greatest potential of VOC and HAP emissions was used.

## EMISSIONS/CONTROLS EVALUATION

The emission factors used in this analysis were obtained from the Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition, Section 9.9.1 “Grain Elevators & Processes” (3/2003). 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.

A mass balance approach was used to determine potential emission from the fungicide. One-hundred percent (100 %) of all HAP and VOC emissions in the fungicide are assumed to be emitted. HAP and VOC emissions were calculated from the material safety data sheets of the fungicides.

Potential emissions of the application represent the potential to emit from the equipment of the soybean storage process and fungicide application, assuming continuous operation (8,760 hours per year). Because control devices are not used, uncontrolled emission factors were used.

The existing potential emissions consist of those emissions from the fertilizer process. This facility has not submitted an Emission Inventory Questionnaire (EIQ).

**Table 1: Emissions Summary (tons per year)**

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions	Potential Emissions of the Application	New Installation Potential
PM	25.0	N/D	N/A	17.89	N/A
PM <sub>10</sub>	15.0	15.77	N/A	6.33	22.11
SO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
NO <sub>x</sub>	40.0	N/A	N/A	N/A	N/A
VOC	40.0	N/A	N/A	4.98	N/A
CO	100.0	N/A	N/A	N/A	N/A
HAPs (Ethylene Glycol)	10.0/25.0	N/A	N/A	0.474	0.474

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

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of PM, PM<sub>10</sub>, VOCs and HAPs are below *de minimis* levels.

## APPLICABLE REQUIREMENTS

Service & Supply Cooperative shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information, 10 CSR 10-6.110*  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required June 1 for the previous year's emissions.
- *Operating Permits, 10 CSR 10-6.065*
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin, 10 CSR 10-6.170*
- *Restriction of Emission of Visible Air Contaminants, 10 CSR 10-6.220*
- *Restriction of Emission of Odors, 10 CSR 10-3.090*

### SPECIFIC REQUIREMENTS

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

## 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/without special conditions.

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Daronn Williams  
Environmental Engineer

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Date

### PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated August 28, 2009, received September 2, 2009, designating Service & Supply Cooperative as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.
- St. Louis Regional Office Site Survey, dated September 29, 2009.

Mr. Don Broz  
General Manager  
Service & Supply Cooperative  
P.O. Box 48  
Bellflower, MO 63333

RE: New Source Review Permit - Project Number: 2009-09-008

Dear Mr. Broz:

Enclosed with this letter is your permit to construct. Please study it carefully. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

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

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:dwl

Enclosures

c: St. Louis Regional Office  
PAMS File: 2009-09-008

Permit Number: