

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: **062009-010** Project Number: 2009-03-058

Parent Company: Saint-Gobain Containers, Inc.

Parent Company Address: P.O. Box 4200, Muncie, IN 47307-4200

Installation Name: Saint-Gobain Containers, Inc.

Installation Address: 1500 Saint-Gobain Drive, Pevely, MO 63070-0000

Location Information: Jefferson County, S7, T41N, R5E

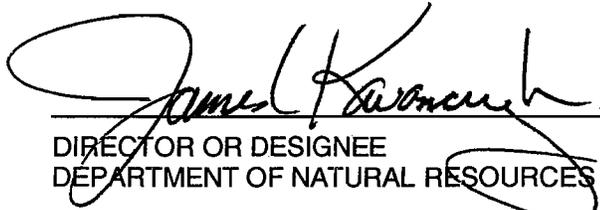
Application for Authority to Construct was made for:

The installation of variable frequency drive (VFD) on the fans and/or chilled air units on furnace 20 glass container forming lines that will increase the rate of cooling and debottleneck furnace 20 and its forming lines. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

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

JUN 30 2009

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 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 not more than 60 days but at least 30 days in advance of this date. 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: 2009-03-058
Installation ID Number: 099-0068
Permit Number:

Saint-Gobain Containers, Inc.
1500 Saint-Gobain Drive
Pevely, MO 63070-0000

Complete: March 16, 2009

Parent Company:
Saint-Gobain Containers, Inc.
P.O. Box 4200
Muncie, IN 47307-4200

Jefferson County, S7, T41N, R5E

REVIEW SUMMARY

- Saint-Gobain Containers, Inc. has applied for authority to construct variable frequency drive (VFD) on the fans and/or chilled air units that will increase the rate of cooling and debottleneck furnace 20 and its forming lines.
- Small Amounts of Hazardous Air Pollutants (HAPs) emissions are expected from the processes due to combustion of natural gas but in amounts less than their respective Screening Model Action Levels (SMAL).
- Subpart CC of the New Source Performance Standards (NSPS), *Standards of Performance for Glass Manufacturing Plants*, applies to this installation.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations applies to the proposed equipment. Subpart SSSSSS, *National Emissions Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources*, of the MACT does not apply to this installation because this installation does not use batch formulation containing glass manufacturing metal HAPs (Arsenic, Cadmium, Chromium, Lead, Manganese and Nickel).
- No air pollution control equipment is being used to control emissions from furnace 20 and its forming lines. Baghouse(s) are being used to control emissions from the batchhouse.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Project emissions for all pollutants are below *de minimis* levels.
- This installation is located in Jefferson County, a nonattainment area for the 8-hour ozone and the PM_{2.5} standard and an attainment area for all other criteria pollutants.

- This installation is on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since the potential emissions of the project are below de minimis levels.
- A modification to the installation's Part 70 Operating Permit is required for this installation within one (1) year of equipment startup.
- Approval of this permit is recommended without special conditions.

INSTALLATION DESCRIPTION

Saint-Gobain Containers, Inc. owns and operates a glass container manufacturing facility in Pevely, Missouri in Jefferson County that produces glass bottles for the beverage industry. This installation is a major source for both construction and operating permits. A Part 70 Operating Permit was first issued to the installation in July of 2000 and a renewal was issued in July of 2007. Currently, the installation has a Part 70 Operating Permit Amendment application (Project No. 2008-12-028) to allow the use of 30-day rolling average method when measuring the nitrogen oxides (NO_x) and sulfur dioxide (SO₂) emissions using the continuous emissions monitoring systems (CEMs) pending with the Air Pollution Control Program

The major source level for VOC and NO_x is 100 tons per year because Jefferson County has been designated an 8-hour ozone nonattainment area. The major source level for all other criteria pollutants is 250 tons per year. Missouri State Rules 10 CSR 10-6.020(3)(B), Table 2 lists types of facilities that are considered "Named Installations." The last item in Table 2 lists as a Named Installation any stationary source which, as of August 7, 1980, is being regulated under section 111 (NSPS) or section 112 (MACT) of the Clean Air Act. Since subpart CC of the NSPS applies to this installation and this subpart was promulgated prior to August 7, 1980, this installation is considered a Named Source. However, this list is for facilities that should include fugitive emissions in calculating potential emissions for major source determinations (See Code of Federal Regulations 40 CFR 52.21 (b)(1)(iii)). According to 40 CFR 52.21 (b)(1)(i)(a), the list of plants that have major source level of 100 tons per year of regulated New Source Review (NSR) pollutants does not include the last item in Table 2. Therefore, even though this installation is considered a Named Installation, it has a major source level of 250 tons per year for each of the other criteria pollutants, with the exception being VOC and NO_x.

The following permits have been issued to Saint-Gobain Containers, Inc. from the Air Pollution Control Program.

Table 1: Previous Permits Issued to the Installation

Permit Number	Description
0680-014	Permit for a glass bottle manufacturing plant.
0680-014-1	Permit to change hot end coating.
0397-006	Converting Furnace Number 20 to Oxy-Fire.
042000-008	Converting Furnace Number 20 from Oxy-Fire to Oxy-Fuel.

PROJECT DESCRIPTION

The installation proposes to install variable frequency drive (VFD) on the fans and/or chilled air units to glass container forming lines that are downstream of Furnace 20. Currently, the installation has not determined which equipment will be installed at the lines. However, the VFD on the fans and the chilled air units are not themselves emission units. Instead, the VFD on the fans and the chilled air units will enable the glass to be cooled at an increased rate during the warmer, summer months which will allow the installation to operate the equipment closer to the maximum design rates year-round. No new emission units will be installed as a result of this project and no existing sources of emissions will be physically modified.

EMISSIONS/CONTROLS EVALUATION

Emissions of the project were calculated using the potential emissions of the equipment minus the actual emissions of the equipment. The potential emissions of the equipment were calculated using the maximum design rate (MHDR) for each equipment while the actual emissions were calculated using either production data or fuel usage from 2005 and 2006.

Potential emissions of PM₁₀, SO_x and NO_x from Furnace 20 were calculated using emission factors developed from stack tests of similar units from other facilities owned by Saint-Gobain Containers, Inc. and applying a safety factor to ensure that the estimates will be conservative. The actual PM₁₀ and SO_x emissions were calculated from emission factors developed using stack tests performed on Furnace 21 (August, 1998), which is a similar unit to Furnace 20. The actual NO_x emissions were calculated from an emission factor developed from a stack test performed in 2008 on Furnace 20. The emission factors used to calculate potential emissions are higher than the factors used to calculate the actual emissions. Saint-Gobain recommended the use of the higher emission factors because it believes that the emission factor would not stay constant but will increase with increasing throughput rate.

No stack testing data were available for carbon monoxide (CO) and volatile organic compounds (VOC) emissions from Furnace 20 so emission factors from Environmental Protection Agency (EPA) document AP-42, *Compilation of Air Pollutant Emission Factors, Volume 1: Stationary Point and Area Sources*, fifth edition, Chapter 11.15, *Glass Manufacturing (10/86)* were used instead. Hazardous Air Pollutants (HAPs) emissions from Furnace 20 were calculated using emission factors from AP-42, Chapter 1.4, *Natural Gas Combustion (7/98)*. Combustion emissions from the annealing lehrs,

the distributors and the forehearths were also calculated using emission factors from AP-42, Chapter 1.4. Emission factors from AP-42 does not vary based on throughput rate so the emission factors used for potential emissions and actual emissions calculations are the same for these pollutants.

The coating used is composed of primarily Monobutyltin Trichloride (>98%), which is not listed as a hazardous air pollutant (HAP), but it may be a volatile organic compound (VOC). For a conservative emissions estimate, it was assumed that all of the coating will be emitted as VOC. During the mold swabbing process, the swabbing compound will come into contact with hot surface up to 1,000 °F. The swabbing compound is composed of graphite with oil used as a carrier. It was assumed that oil may flash off and create PM₁₀.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory De Minimis Levels	Existing Potential Emissions	Existing Actual Emissions (2007 EIQ)	Potential Emissions of the Project	New Project Conditioned Potential
PM ₁₀	15.0	Major	82.03	6.93	N/A
SO _x	40.0	Major	240.70	8.96	N/A
NO _x	40.0	Major	234.77	39.04	N/A
VOC	40.0	N/D	26.66	1.43	N/A
CO	100.0	<Major	7.37	1.23	N/A
HAPs	10.0/25.0	N/D	0.20	0.14	N/A

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

It was determined, in the previous permit issued to the installation (042000-008, Project 2000-01-073) that PM₁₀, SO_x and NO_x emissions are above the major source level of 250 tons per year and that emissions for VOC and CO were less than the major source level of 250 tons per year, but the exact amount of emissions were not determined. When permit 042000-008 was issued, Jefferson County was not a nonattainment area for the 8-hour ozone standard, but it became a nonattainment area for 8-hour ozone in 2004 and the major source level for VOC is now 100 tons per year. Therefore, it could not be determined currently whether VOC is above or below major source levels. Furthermore, HAPs emissions were never calculated for this installation and no determination could be made on whether it is above its major level. The determination of major/minor status does not affect this permit issuance so no effort was made to calculate the installation-wide VOC and HAPs 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 all pollutants are below de minimis levels.

APPLICABLE REQUIREMENTS

Saint-Gobain Containers, Inc. 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
- *Control of Odors in the Ambient Air*, 10 CSR 10-5.160

SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *New Source Performance Regulations*, 10 CSR 10-6.070 – *New Source Performance Standards (NSPS) of Performance for Glass Manufacturing Plants*, 40 CFR Part 60, Subpart CC.
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Control of Emissions of Nitrogen Oxides*, 10 CSR 10-5.510

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 without special conditions.

Chia-Wei Young
Environmental Engineer

Date

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated March 11, 2009, received March 16, 2009, designating Saint-Gobain Containers, Inc. 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 March 24, 2009.

Mr. John Renz
Saint-Gobain Containers, Inc.
1500 Saint-Gobain Dr.
Pevely, MO 63070-0000

RE: New Source Review Permit - Project Number: 2009-03-058

Dear Mr. Renz:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact Chia-Wei Young, 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: cwyl

Enclosures

c: St. Louis Regional Office
PAMS File: 2009-03-058
Permit Number: