

Illinois Environmental Protection Agency  
Bureau of Air, Permit Section  
Springfield, Illinois

Project Summary for a  
Construction Permit Application from  
Saint-Gobain Containers, Inc. for a  
Modifications and Installation of Controls at its  
Glass Container Manufacturing Plant in  
Dolton, Illinois

Site Identification No.: 031069AAI  
Application No.: 12100052

Illinois EPA Contacts:

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Important Dates:

Application Received: October 30, 2012  
Comment Period Begins: May 20, 2013  
Comment Period Closes: June 19, 2013

## **I. Introduction**

Saint-Gobain Containers, Inc. (SGCI) has applied for a construction permit for changes at its glass container manufacturing plant in Dolton. The changes would include major rebuilds of two furnaces and an increase in capacity of a third furnace. In conjunction with these changes, SGCI would also install a control system to reduce nitrogen oxide (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>) and particulate matter (PM) emissions.

The Illinois Environmental Protection Agency (Illinois EPA) has reviewed SGCI's application and made a preliminary determination that it meets applicable requirements for issuance of a permit. Accordingly, the Illinois EPA has prepared a draft of the permit that it would now propose to issue. Before issuing this permit, the Illinois EPA is holding a public comment period to receive comments on the proposed issuance of a permit for this project.

## **II. Project Description**

SGCI manufactures glass containers. Raw materials, consisting of sand, soda ash, limestone, cullet, and lesser quantities of colorants and refining agents, are fed into a natural gas-fired glass melting furnace. The molten glass is then refined and homogenized, formed into bottles and jars, inspected, packed, and shipped to customers.

This permit would authorize changes to the three glass furnaces at the plant (the "affected furnaces") and ancillary operations at this glass container manufacturing plant. This permit would also address certain terms of a Consent Decree, United States, et al. v. Saint-Gobain Containers, Inc., US District Court, Western District of Washington, Case Action No. 2:10-CV-00121-TSZ, entered on May 7, 2010, which establishes emission limits and control requirements for the affected furnaces.

### Furnace #1

Furnace #1 will be modified by a "major" rebuild. A major rebuild entails stopping glass production and fully cooling down the furnace so that physical changes can be made to the furnace, such as replacement of furnace refractories, furnace insulation, and furnace burners. As part of the major rebuild of Furnace #1, the design capacity will be increased.

### Furnace #2

Furnace #2 will be modified by increasing its permitted capacity, with accompanying increases in permitted emissions.

### Furnace #3

Furnace #3 will also undergo a major rebuild. However, no change in the capacity of Furnace #3 is planned.

### New Control System

A shared control system (the "affected control system") will be installed for Furnaces #1-3 for control of SO<sub>2</sub>, PM, and NO<sub>x</sub>. This system will be a Catalyst Embedded Ceramic Filter System with Reagent Injection. USEPA has approved the use of this system under the Consent Decree as an alternative control technology in lieu of a dry scrubber for SO<sub>2</sub> control and electrostatic precipitator for PM control for the affected furnaces. It has also agreed that the ceramic filter technology, when used with upstream urea or ammonia injection, meets the definition of Selective Catalytic Reduction (SCR) in the Consent Decree.

### Other Operations

The annealing lehrs, in which newly formed glass containers are gradually cooled, and other supporting operations at the plant may experience an increase in utilization as a result of this project.

## **III. Project Emissions**

The changes in emissions from this project, as set forth in the application by SGCI, are provided in Attachment 1b of the draft permit and Attachment 1 of this project summary. For new equipment, i.e., a new emergency generator, the increase in emissions is equal to the potential emissions for the unit. For the existing equipment, the change in emissions is the difference between a unit's future permitted emissions and a unit's current actual emissions (a representative two-year average period of emissions).

The first step in evaluating whether this project would be a major project under the state rules for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203 or federal rules for Prevention of Significant Deterioration of Air Quality (PSD), 40 CFR 52.21 is to sum the increases for the project (without considering any project decreases). This sum, as shown in Attachment 1, would not result in a significant increase in emissions; therefore, the project is not subject to MSSCAM or PSD.

## **IV. Applicable Emission Standards**

All emission sources in Illinois must comply with Illinois' emission standards. These standards represent the basic requirements for sources in Illinois. Illinois has standards for emissions of NO<sub>x</sub> (nitrogen oxides), PM (particulate matter) and sulfur dioxide (SO<sub>2</sub>) from glass manufacturing operations. This plant readily complies with these standards.

The affected furnaces will become subject to the New Source Performance Standards (NSPS) for Glass Manufacturing Plants, 40 CFR 60 Subpart CC. The NSPS contains standards for PM emissions from glass furnaces. These furnaces should also readily comply.

SGCI is subject to a Consent Decree, which establishes emission limits and control requirements for the affected furnaces. The required control system will reduce emissions of NO<sub>x</sub>, SO<sub>2</sub> and PM. "Interim emission limits" apply before the control system has been installed. The furnaces currently comply with the interim limits as demonstrated by emissions performance testing. After the control system has been installed, "final emission limits" will apply. Continuous emissions monitoring, testing, recordkeeping and reporting requirements will be required to address compliance with these final emission limits.

**V. Draft Permit**

The conditions of the draft permit contain limitations and requirements to assure that the changes addressed by this application will comply with applicable requirements.

The permit conditions also establish appropriate compliance procedures, including testing requirements, recordkeeping requirements, monitoring requirements and reporting requirements. The Permittee must carry out these procedures on an on-going basis to demonstrate that the plant is operated within the limits set by the permit.

As part of this new control system project, the Consent Decree requires SGCI to apply for a permit that includes Consent Decree emission limits, averaging periods, monitoring requirements, compliance determination procedures and compliance schedules. Accordingly, this construction permit contains those terms and conditions of the Consent Decree along with any relevant definitions from the consent decree (See Attachment 2 of the draft permit).

**VI. Request for Comments**

It is the Illinois EPA's preliminary determination that the project meets all applicable state and federal air pollution control requirements, subject to the conditions proposed in the draft permit. The Illinois EPA is therefore proposing to issue a construction permit for this project.

Comments are requested on this proposed action by the Illinois EPA and the proposed conditions on the draft permit.

JMS:psj

Attachment 1: Emission Changes<sup>1</sup> for the Project (Tons/Year)

| Operation                     | NO <sub>x</sub> | CO    | PM    | PM <sub>10</sub> | PM <sub>2.5</sub> | SO <sub>2</sub> | VOM   | H <sub>2</sub> SO <sub>4</sub> | Lead  | GHG <sup>2</sup> |
|-------------------------------|-----------------|-------|-------|------------------|-------------------|-----------------|-------|--------------------------------|-------|------------------|
| Furnace #1                    | -52.32          | 6.64  | 1.53  | -1.20            | -3.66             | 1.56            | 6.64  | -1.75                          | 0.02  | 38,213           |
| Furnace #2                    | -41.48          | 3.63  | -1.67 | -3.47            | -5.12             | -7.37           | 3.63  | -2.73                          | 0     |                  |
| Furnace #3                    | -107.79         | 2.66  | -6.50 | -8.10            | -9.57             | -17.89          | 2.66  | -3.63                          | -0.02 |                  |
| Distributors/Forehearths - #1 | 3.38            | 2.84  | 0.26  | 0.26             | 0.26              | 0.02            | 0.19  | ---                            |       | 8,665            |
| Distributors/Forehearths - #2 | 1.77            | 1.48  | 0.13  | 0.13             | 0.13              | 0.01            | 0.10  | ---                            |       |                  |
| Distributors/Forehearths - #3 | 1.30            | 1.09  | 0.10  | 0.10             | 0.10              | 0.01            | 0.07  | ---                            |       |                  |
| Material Handling             | ---             | ---   | 0.01  | 0.01             | 0.01              | ---             | ---   | ---                            |       |                  |
| Lehrs - #1                    | 0.36            | 0.30  | 0.03  | 0.03             | 0.03              | 0.01            | 0.02  | ---                            |       |                  |
| Lehrs - #2                    | 0.22            | 0.19  | 0.02  | 0.02             | 0.02              | 0.01            | 0.02  | ---                            |       |                  |
| Lehrs - #3                    | 0.19            | 0.16  | 0.01  | 0.01             | 0.01              | 0.01            | 0.01  | ---                            |       |                  |
| Mold Swab - #1                | ---             | ---   | 3.53  | 3.53             | 3.53              | ---             | ---   | ---                            |       |                  |
| Mold Swab - #2                | ---             | ---   | 1.97  | 1.97             | 1.97              | ---             | ---   | ---                            |       |                  |
| Mold Swab - #3                | ---             | ---   | 1.45  | 1.45             | 1.45              | ---             | ---   | ---                            |       |                  |
| Hot End Coating - #1          | ---             | ---   | 0.76  | 0.76             | 0.76              | ---             | ---   | ---                            |       |                  |
| Hot End Coating - #2          | ---             | ---   | 0.42  | 0.42             | 0.42              | ---             | ---   | ---                            |       |                  |
| Hot End Coating - #3          | ---             | ---   | 0.31  | 0.31             | 0.31              | ---             | ---   | ---                            |       |                  |
| Mixers - #1                   | ---             | ---   | 0.05  | 0.02             | 0.01              | ---             | ---   | ---                            |       |                  |
| Mixers - #2                   | ---             | ---   | 0.02  | 0.01             | 0.01              | ---             | ---   | ---                            |       |                  |
| Mixers - #3                   | ---             | ---   | 0.02  | 0.01             | 0.01              | ---             | ---   | ---                            |       |                  |
| Emergency Generator (new)     | 2.65            | 1.45  | 0.08  | 0.08             | 0.08              | 0.01            | 0.54  | ---                            |       | 105              |
| Dry Sorbent Silo              | ---             | ---   | 0.01  | 0.01             | 0.01              | ---             | ---   | ---                            |       |                  |
| Filter Dust Silo              | ---             | ---   | 0.01  | 0.01             | 0.01              | ---             | ---   | ---                            |       |                  |
| Scrubbing Sorbent Reaction    | ---             | ---   | ---   | ---              | ---               | ---             | ---   | ---                            |       | 253              |
| "TOTAL": <sup>3</sup>         | 9.87            | 20.44 | 10.72 | 9.14             | 9.13              | 1.64            | 13.88 | 0                              | 0.02  | 47,236           |
| Significance Threshold:       | 40              | 100   | 25    | 15               | 10                | 40              | 40    | 7                              | 0.6   | 75,000           |
| Greater Than Significant?     | No              | No    | No    | No               | No                | No              | No    | No                             | No    | No               |

Notes:

--- No increase in emissions.

<sup>1</sup> The change in emissions is determined as the difference in actual (or baseline actual emissions for attainment pollutants) emissions and permitted emissions.

<sup>2</sup> Greenhouse gas emissions expressed as CO<sub>2</sub>e.

<sup>3</sup> Total increases, without consideration of any decreases.