

217/782-2113

CONSTRUCTION PERMIT - NSPS SOURCE

PERMITTEE

Owens-Brockway Glass Container, Inc.  
Attn: Mark Tussing  
One Seagate  
Toledo, Ohio 43666

Application No.: 99100020                      I.D. No.: 099490AAD  
Applicant's Designation: FURNACE I              Date Received: October 6, 1999  
Subject: Glass Melting Furnace  
Date Issued: March 23, 2000  
Location: 901 North Shabbona Street, Streator

Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission unit(s) and/or air pollution control equipment consisting of one Glass Melt Furnace, I, as described in the above referenced application. This Permit is subject to standard conditions attached hereto and the following special conditions:

- 1a. This Glass Melting Furnace, I, is subject to a New Source Performance Standard (NSPS) for glass manufacturing plants, 40 CFR 60, Subparts A and CC. The Illinois EPA is administering NSPS in Illinois on behalf of the United States EPA under a delegation agreement.
- b. At all times, the Permittee shall also, to the extent practicable, maintain and operate Furnace I, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions.

2.0 Unit Specific Conditions

2.1 Description

Owens-Brockway is a glass container manufacturing facility, the current permit request is for the addition of increased electric boost to furnace I. This modification will not represent a major modification as defined by 40 CFR 52.21.

2.2 List of Emission Units and Pollution Control Equipment

Emission Unit	Description
Glass Melting Furnace I	Melts Required Raw Material for Glass Production

2.3 Applicability Provisions and Applicable Regulations

- a. An "affected glass melting furnace" for the purpose of these unit-specific conditions, is each piece of equipment as described in Conditions 2.1 and 2.2 unless otherwise stated in the following conditions as unit specific.
- b. The affected glass melting furnace is subject to 35 IAC 212.321(a), which provides that no person shall cause or allow the emission of particulate matter into the atmosphere in any one hour period from any new process emission unit, either alone or in combination with the emission of particulate matter from all other similar process emission units for which construction or modification commenced on or after April 14, 1972, at a source or premises, exceeds the allowable emission rates specified in subsection (c) of 35 IAC 212.321, [35 IAC 212.321(a)].
- i. The emissions of particulate matter into the atmosphere in any one hour period from the affected glass melting furnace shall not exceed the allowable emission rates specified in the following equation

$$E = A(P)^B$$

Where:

P = Process weight rate  
 E = Allowable emission rate

- 1. For process weight rates up to 408 MG/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	1.214	2.54
B	0.534	0.534

- 2. For process weight rates in excess of 408 MG/hr (450 T/hr):

	<u>Metric</u>	<u>English</u>
P	Mg/hr	T/hr
E	kg/hr	lbs/hr
A	11.42	24.8
B	0.16	0.16

Where:

P = Process weight rate in metric or English tons per hour, and

E = Allowable emission rate in kilograms or pounds per hour.

[35 IAC 212.321]

- c. No person shall cause or allow the emission of sulfur dioxide into the atmosphere from any process emission unit to exceed 2000 ppm, [35 IAC 214.301].
- d. On and after the date on which the performance test required to be conducted by Section 60.8 is completed, no owner or operator of a glass melting furnace with modified-processes subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the affected facility:
  - i. Particulate matter at emission rates exceeding 0.5 gram of particulate per kilogram of glass produced (g/kg) as measured according to paragraph (e) of this section for container glass, flat glass, and pressed and blown glass with a soda-lime recipe melting furnaces.[40 CFR 60.293(b)]
- e. An owner or operator may redetermine the opacity value corresponding to the 99 percent upper confidence level as described in paragraph (c)(4) of this section if the owner or operator:
  - i. Conducts continuous opacity monitoring during each test run of a performance test that demonstrates compliance with an emission limit of paragraph 2.3d.
  - ii. Recalculates the 6-minute opacity averages as described in condition 2.7.
  - iii. Uses the redetermined opacity value corresponding to the 99 percent upper confidence level for the purposes of condition 2.7.[40 CFR 60.293]

#### 2.4 Non-Applicability of Regulations of Concern

N/A

2.5 Operational and Production Limits and Work Practices

- a. The affected glass melting furnaces shall not exceed the following material throughput limits:

Affected Equipment	Product	Process Weight Rate (Tons/Hr)	Production (Tons/Day)	Production (Tons/Yr)
Glass Melting Furnace I	Glass Containers	14.1	310	108,500

2.6 Emission Limitations

- a. Emissions from the affected glass melting furnace shall not exceed the following limits:

Glass Melting Furnace I	Emissions (Lb/Hour)	Emissions (Tons/Year)
PM	10.3	43.3
CO	2.42	10.6
NO <sub>x</sub>	68.37	287.2
SO <sub>2</sub>	39.99	168.0
VOM	2.42	10.6

These limits are based on the usage limits in Condition 2.5, 8400 operating hours per year and emission factors as listed in condition 2.12.

- b. Compliance with annual limits shall be determined on a monthly basis from the sum of the data for the current month plus the preceding 11 months (running 12 month total).
- c. The source has addressed the applicability and compliance of 40 CFR 52.21, PSD (See Attachment 1). These limits continue to ensure that the construction and/or modification addressed in this construction permit does not constitute a new major source or major modification pursuant to these rules.

2.7 Testing Requirements

- a. Within 60 days after achieving the maximum production rate at which the affected glass melting furnace will be operated, but not later than 180 days after completion of its construction, the emissions concentration(s), as listed below, in its effluent stream shall be measured by an approved testing service.

- b. The following methods and procedures shall be used for testing of emissions. Refer to 40 CFR 60, Appendix A for USEPA test methods.

Location of Sample Points	USEPA Method 1
Gas Flow and Velocity	USEPA Method 2
Flue Gas Weight	USEPA Method 3
Moisture	USEPA Method 4
Particulate Matter	USEPA Method 5
Sulfur Dioxide	USEPA Method 6
Nitrogen Oxides	USEPA Method 7
Opacity	USEPA Method 9

- c. During the performance test required to be conducted by Section 60.8, continuous opacity monitoring shall be conducted during each test run.
- d. At least thirty (30) days prior to the actual date of testing, a written test plan shall be submitted to the Illinois EPA for review and approval. This plan shall describe the specific procedures for testing including as a minimum:
  - i. The person(s) who will be performing sampling and analysis and their experience with similar tests.
  - ii. The specific conditions under which testing will be performed, including a discussion of why these conditions will be representative of the maximum emissions, the levels of operating parameters at or within which compliance is intended to be shown, if applicable, and the means by which the operating parameters for the process and any control equipment will be determined.
  - iii. The specific determination of emissions and operations which are intended to be made, including sampling and monitoring locations.
  - iv. The test methods which will be used, with the specific analysis method.
  - v. Any minor changes in standard methodology proposed to accommodate the specific circumstances of testing, with justification.
  - vi. Any proposed use of an alternative test method, with detailed justification.

- vii. The format and content of the Source Test Report prior to carrying out these test, the Illinois EPA shall be notified a minimum of thirty (30) days prior to the scheduled date of these tests with the exact date, time, and place of these tests, to enable the Illinois EPA to witness these tests.

If the scheduled date for the test is changed for unforeseen reasons, the Permittee shall inform the Illinois EPA within five (5) working days of the scheduled test date and must specify the date of the rescheduled test.

A copy of the Final Reports for these tests and compliance status shall be submitted to the Illinois EPA within fourteen (14) days after the test results are compiled and finalized, prior to or accompanying the operating permit application. Satisfactory completion of these tests and compliance with the limitations of this permit shall be prerequisite to the issuance of an operating permit.

- viii. A statement that the testing will be performed by a qualified independent testing service.

## 2.8 Monitoring Requirements

The owner or operator of an affected glass melting furnace shall install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere.[40 CFR 60.293(c)(1)]

## 2.9 Recordkeeping Requirements

The Permittee shall maintain records of the following items for each affected glass melting furnace to demonstrate compliance with Conditions 2.3, 2.5, and 2.6, pursuant to Section 39.5(7)(b) of the Act:

- a. Glass Production (lb/hour and tons/year).
- b. Emissions of: PM, PM<sub>10</sub>, SO<sub>2</sub>, NO<sub>x</sub>, and VOM (lb/hour and tons/year).
- c. Operating hours (monthly and yearly).

2.10 Reporting Requirements

- a. The Permittee shall promptly notify the Illinois EPA, Compliance Section of noncompliance of an affected glass melting furnace with the permit requirements, pursuant to Section 39.5(7)(f)(ii) of the Act. Reports shall describe the probable cause of such deviations, and any corrective actions or preventive measures taken
- b. For the purposes of Section 60.7, report to the Administrator as excess emissions all of the 6-minute periods during which the average opacity, as measured by the continuous monitoring system exceeds the opacity value corresponding to the 99 percent upper confidence level as determined in condition 2.3(e)(iii). [40 CFR 60.293(c)(5)]
- c. Two (2) copies of required reports and notifications concerning equipment operation or repairs, performance testing or continuous monitoring system shall be sent to:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
Compliance Section (#40)  
P.O. Box 19276  
Springfield, Illinois 62794-9276

and one (1) copy shall be sent to the Illinois EPA's regional office at the following address unless otherwise indicated:

Illinois Environmental Protection Agency  
Division of Air Pollution Control  
5415 North University  
Peoria, Illinois 61614

2.11 Operational Flexibility/Anticipated Operating Scenarios

None

2.12 Compliance Procedures

Compliance with the emission limits shall be based on the recordkeeping requirements in Condition 2.9 and the emission factors and formulas listed below:

- a. To determine compliance with Condition 2.6, emissions from the affected glass melting furnace shall be calculated based on the following emission factors:

Pollutant	(Lb/Ton)
PM	0.8
SO <sub>2</sub>	3.1
NO <sub>x</sub>	5.3
VOM	0.2
CO	0.2

Emissions shall be calculated using the following equation:  
Throughput x Emission Factor x (1-Control Efficiency) = Emissions

If you have any questions on this, please contact Kevin Smith at 217/782-2113.

Donald E. Sutton, P.E.  
Manager, Permit Section  
Division of Air Pollution Control

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cc: Illinois EPA, FOS, Region 2  
Illinois EPA, Compliance Section  
Lotus Notes

Attachment 1

PSD Applicability

Table I - Emissions Increases Associated With The Proposed Modification

<u>Item of Equipment</u>	<u>Installation Date</u>	Permitted Emission Increases (Tons/Year)		
		<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>PM</u>
Glass Furnace I	2000	168.0	287.2	43.3

Table II - Source-Wide Creditable Contemporaneous Emission Decreases

<u>Item of Equipment</u>	<u>Removal Date</u>	Emission Decreases (Tons/Year) Based on average emissions form 97-99		
		<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>PM<sub>10</sub></u>
Glass Furnace I	2000	133.56	251.41	35.36

Table IV - Net Emissions Change (Tons/Year)

	<u>SO<sub>2</sub></u>	<u>NO<sub>x</sub></u>	<u>PM</u>
Table I	168.0	287.2	43.3
Table II	<u>133.56</u>	<u>251.41</u>	<u>35.36</u>
Totals	34.44	35.79	7.94

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