217/785-1705

CONSTRUCTION PERMIT
NSPS SOURCE

PERMITTEE

Saint-Gobain Containers, Inc.
Attn: Robert Hunt, Environmental Engineer
1509 South Macedonia Avenue
Muncie, Indiana 47307

Application No.: 12100052
I.D. No.: 031069AAI
Applicant's Designation:
Date Received: October 30, 2012
Subject: Modified Glass Furnaces #1-3
Date Issued:
Location: 13850 Cottage Grove Avenue, Dolton, 60419

This Permit is hereby granted to the above-designated Permittee to CONSTRUCT emission source(s) and/or air pollution control equipment consisting of modifications and installation of controls for Furnaces #1-3, as described in the above-referenced application. This Permit is subject to standard conditions attached hereto and the following special condition(s):

1.1 Description

This permit authorizes changes to Furnaces #1-3 (the "affected furnaces") and ancillary operations at this glass container manufacturing plant. This permit also addresses 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.

a. Furnace #1 will be modified during 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 increase.

b. Furnace #2 will be modified by increasing its permitted capacity above capacity and emission limits established by Construction Permit 11100030.

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

d. A shared control system (the "affected control system") will be installed for Furnaces #1-3, consisting of a Catalyst Embedded Ceramic Filter System with Reagent Injection for control of sulfur dioxide (SO_2), particulate matter (PM), and nitrogen oxides (NO_x).

Note: On August 16, 2012, USEPA approved use of the Catalyst Embedded Ceramic Filter System with Reagent Injection as an alternative control technology under the consent decree in lieu of a dry scrubber for SO_2 control and electrostatic precipitator for PM control for Furnaces 1, 2, and 3 at the Dolton facility, and concurred that the ceramic filter technology, when used with upstream urea or ammonia injection, meets the Consent Decree definition of SCR.

e. The annealing lehrs and other supporting operations at the plant may experience an increase in utilization as a result of this project. These potential increases are summarized in Attachment 1b.

1.2 Applicable Requirements

a. For purposes of this permit "SGCI" shall mean the Permittee, as the Consent Decree defines SGCI as Saint-Gobain Containers, Inc. and its successors and assigns.

b. Pursuant to Paragraph 9.l of the Consent Decree:

i. The affected furnaces shall become affected facilities under the New Source Performance Standards (NSPS) for Glass Manufacturing Plants (40 CFR 60 Subpart CC) and General Provisions of the NSPS (40 CFR 60 Subpart A), 180 days after installation of the affected control system but no later than December 31, 2014.

ii. On and after the date on which the performance test required to be conducted by 40 CFR 60.8 is completed and except as provided in 40 CFR 60.292(e), filterable PM emissions from the affected furnaces shall not exceed 0.2 lb PM/ton of glass produced. [40 CFR 60.292(a)(1)]

c. The affected furnaces are subject to 35 IAC 212.123, which provides that no person shall cause or allow the emission of smoke or other particulate matter, with an opacity greater than 30 percent, into the atmosphere from any emission unit.

d. The affected furnaces are 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 35 IAC 212.321(c).

e. The affected furnaces shall comply with the applicable requirements of 35 IAC 217 Subpart G no later than the applicable compliance dates in 35 IAC 217.152.

Note: The compliance date for the glass furnaces is currently January 1, 2015.

i. On and after January 1, 2015, no person shall cause or allow emissions of NO_x into the atmosphere from any glass melting furnace to exceed 5.0 lb NO_x/ton glass produced. Compliance must be demonstrated with the emissions limitation on an ozone season and annual basis.

ii. The emissions during glass melting furnace startup (not to exceed 70 days) or furnace idling (operation at less than 35% of furnace capacity) shall be excluded from calculations for the purpose of demonstrating compliance with the seasonal and annual emissions limitations above, provided that the owner or operator, at all times, including periods of startup and idling, to the extent practicable, maintain and operate any affected emission unit, including associated air pollution control equipment, in a manner consistent with good air pollution control practice for minimizing emissions. The owner or operator of a glass melting furnace must maintain records that include the date, time, and duration of any startup or idling in the operation of the glass melting furnace.

f. This permit does not affect applicable requirements for ancillary equipment, as set forth in the Clean Air Act Permit Program (CAAPP) permit for the plant, Permit No. 95090177.

1.3 Non-Applicability Provisions

a. This permit is issued based on this project not being a major modification for purposes of the federal rules for Prevention of Significant Deterioration (PSD), 40 CFR 52.21 and the state rules for Major Stationary Sources Construction and Modification (MSSCAM), 35 IAC Part 203. This is because the Permittee has shown that this project would not result in a significant increase in emissions of any New Source Review pollutants. (See Attachment 1b.)

b. This permit is issued based on the affected furnaces not being subject to National Emission Standard for Inorganic Arsenic Emissions (NESHAP) for Glass Manufacturing Plants, 40 CFR 61 Subpart N, because the affected furnaces do not use commercial arsenic as a raw material. [40 CFR 61.160(a)]

c. The affected furnaces are not subject to 35 IAC 214.301, pursuant to 35 IAC 214.401(a).

1.4 Control Requirements

a. For the affected furnaces, the Permittee shall comply with the Control Requirements specified in Attachment 2 of this permit using the affected control system, as follows:

i. Control of SO_2 emissions (Attachment 2, Section 3.b)

ii. Control of PM emissions (Attachment 2, Section 5.b)

iii. Control of NO_x emissions (Attachment 2, Section 2.b)

b. Bypass of the Affected Control System. Beginning on the date(s) specified in Attachment 2, the Permittee shall operate the affected furnaces passing all stack gases through the affected control system, except during periods of control device startup, malfunction of the affected control system, and maintenance of the affected control system.

i. Bypass of the affected control system for no more than the first seven days of furnace startup is also allowed as provided in Attachment 2, Sections 2.b.iii.C and 3.b.ii.B.II.

ii. Bypass of the affected control system during scheduled or preventative maintenance of the affected control system is allowed as provided in Attachment 2, Section 7.b.

c. The Permittee shall comply with the “Good Operation” requirements specified in Attachment 2, Section 6 of this permit for affected furnaces.

d. The Permittee shall comply with the “Maintenance” requirements specified in Attachment 2, Section 7 of this permit for affected furnaces.

1.5 Production and Emission Limits

a. Production for the affected furnaces shall not exceed the following limits. Compliance with the annual limits shall be determined from a running total of 12 months of data.

	Interim Production Limit*		Final Production Limit**	
Furnace	Tons/Mo	Tons/Yr	Tons/Mo	Tons/Yr
Furnace #1	13,140	78,840	23,300	139,795
Furnace #2	11,790	70,745	17,035	102,200
Furnace #3	12,870	77,205	16,425	98,550

* The “interim production limits” apply between initial startup of the altered furnace and startup of the new control system.

** The “final production limits” apply after initial startup of the control system.

b. i. Prior to installation of the affected control system, the Permittee shall comply with the Interim Emission Limits in Attachment 2, as follows:

A. Interim NO_x Emission Limits (Attachment 2, Section 2.a)

B. Interim SO_2 Emission Limits (Attachment 2, Section 3.a)

C. Interim PM Emission Limits (Attachment 2, Section 5.a)

ii. Following installation of the affected control system, the Permittee shall comply with the following emission limits for the plant:

A. Limits in Attachment 2, as follows:

1. Final NO_x Emission Limits (Attachment 2, Section 2.b.iii)

2. Final SO_2 Emission Limits (Attachment 2, Section 3.b.ii)

3. Final PM Emission Limits (Attachment 2, Section 5.c.ii)

B. Annual limits in Attachment 1b. Compliance with the annual limits shall be determined from a running total of 12 months of data. Compliance shall be determined considering all emissions, including emissions during bypass of the affected control system as addressed by Condition 1.4(b).

1.6 <u>Testing Requirements</u>

a. For the affected furnaces, the Permittee shall comply with the PM testing requirements in Attachment 2, Section 5.c.iii of this permit.

b. PM Testing for the NSPS

i. For the affected furnaces, the Permittee shall conduct performance tests for PM in accordance with the applicable test methods and procedures of the NSPS, as specified by 40 CFR 60.8 and 60.296.

ii. In conducting the performance tests required in 40 CFR 60.8, the Permittee shall use as reference methods and procedures the test methods in Appendix A of 40 CFR 60 or other methods and procedures as specified 40 CFR 60.296, except as provided in 40 CFR 60.8(b). [40 CFR 60.296(c)]

c. For the affected furnaces, the Permittee shall comply with the applicable testing requirements in 35 IAC 217.154 and 217.157.

d. Additional testing of the affected furnaces shall be performed upon Illinois EPA request.

1.7 Monitoring Requirements

a. For the affected furnaces, the Permittee shall comply with the Monitoring Requirements in Attachment 2, Section 9 of this permit.

b. For the affected furnaces, the Permittee shall comply with the applicable monitoring requirements in 35 IAC 217.157.

c. The Permittee shall equip, operate, and maintain the affected control system with instrumentation to measure relevant operating parameters to enable effective control of SO_2 emissions, which may include parameters such as reagent injection rate.

d. The Permittee shall equip, operate, and maintain the affected control system with instrumentation to measure relevant operating parameters to enable effective control of NO_x emissions, which may include parameters such as reagent injection rate and flue gas temperature at the inlet of the catalyst embedded filters.

1.8 Recordkeeping Requirements

a. For the affected furnaces, the Permittee shall comply with the recordkeeping requirements specified in Attachment 2, Sections 2.d, 2.e, 3.d, and 3.e of this permit.

b. For the affected furnaces, the Permittee shall comply with the applicable recordkeeping requirements in 35 IAC 217.156.

c. The Permittee shall maintain the following operational records:

Records of glass production for each affected furnace (tons/month and tons/year).

d. The Permittee shall maintain the following emission records:

For each emission unit identified in Attachment 1a, records of emissions (tons/month and tons/year) of pollutants identified in Attachment 1a, with supporting documentation and calculations.

e. The Permittee shall maintain the following records for the affected control system:

i. A file containing the manufacturer/vendor or source specific operating and maintenance procedures.

ii. An operating log or other records that identify periods when the affected control system is not in service.

iii. A maintenance or repair log for the affected control system, including the date and nature of maintenance and repair activities performed.

iv. A. Usage of dry scrubbing reagent on a monthly basis.

B. Usage of NO_x reduction reagent on a monthly basis.

v. A file containing the design NO_x emission rates of the affected control system with supporting documentation, and manufacturer/vendor or source specific operating and maintenance procedures, including the catalyst management plan.

vi. Amount of dust collected on a monthly basis.

1.9 Reporting Requirements

a. The Permittee shall promptly notify the Illinois EPA of deviations from the requirements of this permit within 30 days of such occurrence. Reports shall describe the deviation, the probable cause of such deviation, the corrective actions taken, and any preventive measures taken.

b. For the affected furnaces, the Permittee shall comply with the applicable reporting requirements in 35 IAC 217.155 and 217.156.

c. One copy of required reports and notifications 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 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
9511 West Harrison
Des Plaines, Illinois 60016

and one copy of reports and notifications concerning emission testing shall be sent to:

Illinois Environmental Protection Agency
Division of Air Pollution Control
Source Monitoring Unit
9511 West Harrison
Des Plaines, Illinois 60016

1.10 Authorization to Operate

The affected furnaces, glass forming machines, and other supporting units addressed by this construction permit may be operated under this permit until renewal of or modification to the CAAPP permit to address this project.

It should be noted that the 750 kW diesel-fired emergency engine generator that will be installed as part of this project is exempt from state permit requirements, pursuant to 35 IAC 201.146(i). This unit may also qualify as an insignificant activity under the CAAPP (See 35 IAC 201.210(a)(16)). The emissions of this unit have been included as part of the project emissions as shown Attachment 1.

If you have any questions on this permit, please contact Jason Schnepp at 217/785-1705.

Edwin C. Bakowski, P.E. Date Signed: _____
Manager, Permit Section
Division of Air Pollution Control

ECB:JMS:psj

cc: Region 1

Attachment 1a: Emission Limits[1] for the Project (Tons/Year)

Operation	NO_x	CO	PM	PM_{10}	$PM_{2.5}$	SO_2	VOM	H_2SO_4	Lead	GHG[2]
Furnace #1	90.87	13.98	20.27	16.78	13.70	38.58	13.98	6.99	0.15	
Furnace #2	66.43	10.22	16.86	14.31	12.06	41.45	10.22	5.11	0.11	94,561
Furnace #3	64.06	9.86	14.78	12.32	10.15	53.71	9.86	4.93	0.10	
Distributors/Forehearths - #1	7.11	5.97	0.54	0.54	0.54	0.04	0.39	---		
Distributors/Forehearths - #2	4.97	4.18	0.38	0.38	0.38	0.03	0.27	---		
Distributors/Forehearths - #3	4.79	4.03	0.36	0.36	0.36	0.03	0.26	---		
Material Handling	---	---	0.02	0.02	0.02	---	---	---		22,790
Lehrs - #1	0.75	0.63	0.06	0.06	0.06	0.01	0.04	---		
Lehrs - #2	0.63	0.53	0.05	0.05	0.05	0.01	0.03	---		
Lehrs - #3	0.69	0.58	0.05	0.05	0.05	0.01	0.04	---		
Mold Swab - #1	---	---	7.43	7.43	7.43	---	---	---		---
Mold Swab - #2	---	---	5.53	5.53	5.53	---	---	---		---
Mold Swab - #3	---	---	5.35	5.35	5.35	---	---	---		---
Hot End Coating - #1	---	---	1.59	1.59	1.59	---	---	---		---
Hot End Coating - #2	---	---	1.19	1.19	1.19	---	---	---		---
Hot End Coating - #3	---	---	1.14	1.14	1.14	---	---	---		---
Mixers - #1	---	---	1.28	1.23	1.20	---	---	---		---
Mixers - #2	---	---	1.25	1.22	1.19	---	---	---		---
Mixers - #3	---	---	1.25	1.22	1.19	---	---	---		---
Emergency Generator	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:	242.95	51.43	79.48	70.87	63.28	133.88	35.63	17.03	0.36	117,709

Notes:

--- No increase in emissions.

1 Values in the table represent the unit's potential to emit as limited by this permit.

2 Greenhouse gas emissions expressed as CO_2e.

Attachment 1b: Emission Changes[1] for the Project (Tons/Year)

Operation	NO_x	CO	PM	PM_{10}	$PM_{2.5}$	SO_2	VOM	H_2SO_4	Lead	GHG[2]
Furnace #1	-52.32	6.64	1.53	-1.20	-3.66	1.56	6.64	-1.75	0.02	
Furnace #2	-41.48	3.63	-1.67	-3.47	-5.12	-7.37	3.63	-2.73	0	38,213
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	---		
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	---	---	---		8,665
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	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:	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.

[1] The change in emissions is determined as the difference in actual (or baseline actual emissions for attainment pollutants) emissions and permitted emissions.

[2] Greenhouse gas emissions expressed as CO_2e.

Attachment 2: Requirements Incorporated from Consent Decree

Sections:

1. Applicable Definitions. [See also Paragraph 6 of the Consent Decree]

"24-hour Block Average" shall be calculated by averaging the twenty-four (24) one-hour relevant data outputs (concentration or pounds) for a given Day and using the daily glass production rates (tons) on that Operating Day where applicable. [See also Paragraph 6.a of the Consent Decree]

"Abnormally Low Production Rate" shall mean a glass production rate at or below the production rate set forth below: [See also Paragraph 6.c and 10 of the Consent Decree]

Furnace #1: 134 tons/day*
Furnace #2: 98 tons/day
Furnace #3: 95 tons/day

*Revised as provided by Paragraph 10 of the Consent Decree.

"Abnormally Low Production Rate Day" shall mean any Operating Day where production falls into the range of Abnormally Low Production Rate, for at least one continuous hour. [See also Paragraph 6.d of the Consent Decree]

"CEMS Certification Event" shall mean an event that triggers the requirement to complete a first or subsequent CEMS Certification. The first CEMS Certification shall not be required until December 31, 2014. Events that will trigger subsequent CEMS Certification include a Furnace Startup or a First Control Device Startup. SGCI shall commence such recertification no later than thirty (30) days after the Furnace Startup period concludes (but no later than seventy (70) Days after Furnace Startup commences) or First Control Device Startup period concludes. If a Furnace Startup and a First Control Device Startup happen at the same time, then the recertification shall not be conducted until the first Operating Day after the conclusion of the later startup event. [See also Paragraph 6.h of the Consent Decree]

"Color Transition" shall mean the period of not more than seven Days from the time when a glass color of an oxidation state different from that previously melted in the Furnace, is introduced to the Furnace, to the time when saleable glass bottles are being produced in the new color. [See also Paragraph 6.j of the Consent Decree]

"Continuous Operating Year" shall mean a Calendar Year during which, on every day of the year, at least one of the Furnaces connected to a control system is Operating. [See also Paragraph 6.n of the Consent Decree]

"Control Device Startup" shall mean the period of time from commencement of operation of the affected control system until the operation of the device has been stabilized and the device has achieved normal operating conditions. Such period shall not exceed thirty (30) Days. [See also Paragraph 6.o of the Consent Decree]

"Day" shall mean a calendar day unless expressly stated to be a working day or unless a State rule requires that CEMs data be reported on Standard time (with no change for Daylight Savings Time). In computing any period of time for determining reporting deadlines under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal or State holiday, in the State where the Facility is located, the period shall run until the close of business of the next working day. [See also Paragraph 6.r of the Consent Decree]

"Emission Rate 30-day Rolling Average" shall be expressed as pounds of pollutant per ton of glass produced calculated at the Furnace in question in accordance with the following formula and subparagraphs (i) and (ii) below: [See also Paragraph 6.t of the Consent Decree]

30-day average(lb E/ton) = [COD_E (lbs) + $P29D_E$ (lbs)]/[COD_{Prod} (tons) + $P29D_{Prod}$ (tons)]

Where:

30-day average (lb E/ton) = The Emission Rate 30-day rolling Average

E = Emissions of the pollutant in question (NO_x or SO_2)

COD = Current Operating Day where the relevant Emission Rate 30-day Rolling Average is the applicable limit.

COD_E = The daily Emissions as measured by a CEMS on the COD, in pounds.

COD_{Prod} = Daily glass production on the COD, in tons of glass.

P29D = The Previous 29 Operating Days where the relevant Emission Rate 30-day Rolling Average is the applicable limit.

$P29D_E$ = The sum of the daily NO_x or SO_2 Emissions as measured by a CEMS during the P29D, in pounds.

$P29D_{Prod}$ = The sum of the daily glass production during the P29D, in tons of glass.

i. A new Emission Rate 30-day Rolling Average shall be calculated for each new Operating Day where the Emission Rate 30-day Rolling Average is the applicable standard. Any Operating Day where the newly calculated Emission Rate

30-day Rolling Average exceeds the limit is a separate one Day violation; and

ii. Some Operating Days may be excluded from the Emission Rate 30-day Rolling Average as set forth in this Attachment 2, Sections 2-4.

"First Control Device Startup" shall only refer to the first startup of the relevant add-on control device (the affected control system). First Control Device Startup shall represent the period of time from commencement of operation of the device until the operation of the device has been stabilized and the device has achieved normal operating conditions, but shall not exceed thirty (30) Days. [See also Paragraph 6.w of the Consent Decree]

"Furnace" means for the purposes of NSPS only, a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass which includes foundations, superstructure and retaining walls, raw material charger systems, heat exchangers, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. For all other purposes, "Furnace" means a unit comprised of a refractory-lined vessel in which raw materials are charged and melted at high temperature to produce molten glass. [See also Paragraph 6.x of the Consent Decree]

"Furnace Startup" means the period of time while a Furnace's refractory is being heated up from ambient temperature and includes the Initial Heating Phase, Refractory Soak and Seal Phase, and Furnace Stabilization Phase. [See also Paragraph 6.y of the Consent Decree]

i. "Initial Heating Phase" means the slow heating of the Furnace refractory using portable natural-gas burners placed in the openings in the Furnace. This phase typically lasts no longer than four (4) Days and ends when the main Furnace burners commence operation.

ii. "Refractory Soak and Seal Phase" means the phase of the Furnace Startup following the Initial Heating Phase when the Furnace is filled with molten glass, the temperature of the Furnace reaches operating conditions, and the refractory components reach thermal equilibrium. This phase typically lasts no longer than twenty-one (21) Days and ends when the joints between the refractory components are sealed and the Furnace is closed to the atmosphere.

iii. "Furnace Stabilization Phase" means the phase of Furnace Startup following the Refractory Soak and Seal Phase when the Furnace Operation is being stabilized. This phase will end no later than seventy (70) Days after the beginning of the Initial Heating Phase.

“Hot Spot Temperature” shall mean the highest temperature of the Furnace breastwall refractory. Breastwall refractory is the refractory sidewall between the tuck stone (about 18” above glass line) and the crown skew (where the Furnace crown meets the Furnace sidewall). [See also Paragraph 6.z of the Consent Decree]

“Inlet” shall be the emission concentration (in parts per million by volume dry) measured prior to the control device. [See also Paragraph 6.aa of the Consent Decree]

“Maintenance” shall mean activities necessary to keep the system or equipment working in its normal operating condition as set forth in this Attachment 2, Section 7. [See also Paragraph 6.cc of the Consent Decree]

“Malfunction” shall mean, consistent with 40 CFR 60.2, any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor Maintenance or careless operation. [See also Paragraph 6.ee of the Consent Decree]

“Operating Day” shall mean any Day where any fuel is fired into the Furnace. The Day starts at 12:00 am and ends at 11:59 pm. [See also Paragraph 6.kk of the Consent Decree]

“Outlet” shall mean the emission concentration (in parts per million by volume dry) measured after a control device. [See also Paragraph 6.ll of the Consent Decree]

“Outlet 30-day Rolling Average” is a term which applies only to SO_2 and shall be calculated by determining the Outlet 24-hour Block Average concentration from each Furnace (or combined stack, if applicable) during an Operating Day and previous twenty-nine (29) Operating Days when Outlet 30-day Rolling Average was the applicable standard. A new Outlet 30-day Rolling Average shall be calculated for each Operating Day. Any Operating Day where the newly calculated Outlet 30-day Rolling Average exceeds the limit is a separate one Day violation. As specified in this Consent Decree, the following Operating Days are exempt from this average: Control Device Startup, Malfunction of the affected control system and Maintenance on the affected control system. [See also Paragraph 6.mm of the Consent Decree]

“Removal Efficiency” for SO_2 means the percent reduction in concentration of that pollutant achieved by a Furnace’s pollution control device. This percent reduction shall be calculated by subtracting the Outlet from the Inlet, dividing by the Inlet and then multiplying by 100. [See also Paragraph 6.vv of the Consent Decree]

“Removal Efficiency 30-day Rolling Average” is a term which applies to SO_2 emissions and shall be calculated by summing the Removal Efficiency

24-hour Block Averages from each Furnace (or combined stack, if applicable) for each Operating Day and previous twenty-nine (29) Operating Days when Removal Efficiency 30-day Rolling Average was the applicable standard and then dividing by 30. A new Removal Efficiency 30-day Rolling Average shall be calculated for each new Operating Day. Any Operating Day where the newly calculated Removal Efficiency 30-day Rolling Average is less than the Removal Efficiency limit is a separate one-day violation. The following Operating Days are exempt from this average: Control Device Startup of the affected control system; Malfunction of the affected control system; and Maintenance on the affected control system. [See also Paragraph 6.ww of the Consent Decree]

2. <u>NO_x Emission Controls, Limits, and Compliance Schedule.</u> [See also Paragraph 7 of the Consent Decree]

a. Interim NO_x Emission Limits: [See also Paragraph 7.a of the Consent Decree]

i. Emissions of NO_x from the following furnaces shall not exceed the following annual limits. The “ton/year” NO_x emission limits shall remain in place until the affected control system has been installed.

Furnace #2: 316.8 tons NO_x/calendar year
Furnace #3: 305.5 tons NO_x/calendar year

ii. Compliance with the annual ton per year interim limit shall be calculated using the following equation:

NO_x = [(PastTest x 1stProd)/2000] + [(NewTest x 2ndProd)/2000]

Where:

NO_x = NO_x Emissions (tpy)

PastTest = Last source test result (lb/ton). If no source test has been conducted pursuant to this Consent Decree, the Interim Emission Factor of 6.2 lb/ton, shall be used.

NewTest = New test from the year for which emissions are being calculated (lb/ton).

1stProd = Production from January 1st through the Day prior to the Day the new source test is commenced (tons of glass).

2ndProd = Production from the Day of the new source test through the end of that same Calendar Year (tons of glass).

Note: If SGCI elects to do more than one test in a year, emissions calculated on the Days following the second test, will be based on that second test.

[See also Paragraph 7.a.iv of the Consent Decree]

iii. Upon NO_x CEMS installation and certification, compliance with the interim NO_x emission limit shall be demonstrated using emissions data generated by the NO_x CEMS in order to calculate all subsequent daily emission rates that are used to calculate the annual emission rate for the Calendar Year. For the first Calendar Year during which CEMS are installed and certified, the annual emissions calculated will be the sum of the tons of NO_x emitted on the Days when the emissions were determined from source test data and the tons of NO_x emitted on the Days when emissions were determined by CEMS data. [See also Paragraph 7.a.v of the Consent Decree]

b. NO_x Emission Controls and Compliance Schedule: [See also Paragraph 7.b of the Consent Decree]

i. The Permittee shall install the affected control system for the affected furnaces no later than December 31, 2014. [See also Paragraph 7.b of the Consent Decree.]

ii. No later than the first Operating Day after December 31, 2014, the Permittee shall commence operation of the affected control system to control emissions from each of the affected furnaces. [See also Paragraph 7.d.i of the Consent Decree.]

A. The affected control system shall be designed for a removal efficiency of at least 90 percent; and

B. When the affected control system is operating, the Permittee shall continuously operate the affected control system according to the vendor recommendations in order to minimize emissions to the extent practicable taking into consideration ammonia slip.

iii. The Permittee shall comply with the following applicable NO_x limits for Furnaces #1, #2, and #3: [See also Paragraph 7.d.ii of the Consent Decree.]

A. Emission Rate 30-day Rolling Average Limit – Commencing on the first Operating Day after completion of the Control Device Startup and CEMS Certification, but no later than December 31, 2014, SGCI shall not emit more than 1.3 pounds of NO_x per

ton of glass produced on a 30-day rolling average, as measured using a NO_x CEMS (where available), except during the following periods (as set forth below): Abnormally Low Production Rate Days for any of the Furnaces; Control Device Startup; up to the first seven (7) days of the Furnace Startup; Malfunction of the affected control system; and Maintenance of the affected control system.

Compliance with the 30-day rolling limit may be determined by averaging the emissions from all Furnaces subject to the same emission limit. [See also Paragraph 7.j of the Consent Decree]

B. NO_x Limit during Abnormally Low Production Rate Days – When any of the Furnace(s) ducted through the affected control system is Operating at an Abnormally Low Production Rate, SGCI may elect to exclude emissions from all Furnaces connected to the affected control system from the Emission Rate 30-day Rolling Average. During these Days, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

$NO_{x\ SCR\ Abn}$ = 1.3 lb NO_x/ton x (P/0.35)

Where:

NO_x SCR Abn= NO_x emission limit for affected control system during an Abnormally Low Production Rate Day on any of the Furnaces ducted through the affected control system, in pounds per day

P = Sum of the Furnace-specific production thresholds as defined in this Attachment 2, Section 1 (definition of Abnormally Low Production Rate), in tons of glass produced per day for all of the Furnaces ducted through the affected control system.

C. The first seven (7) days of the Furnace Startup – For no more than the first seven (7) Days of the Furnace Startup, the Furnace exhaust may bypass the affected control system to avoid having the operating inlet temperature of the affected control system fall below its operational range. During these bypass Days SGCI shall burn no more than 15.0 million standard cubic feet of natural gas in that Furnace.

D. NO_x limit during Startup of the affected control system and Malfunction of the affected control system

– For any Operating Day during the Startup of the affected control system or where a Malfunction of the affected control system occurs for any period of time, SGCI may elect to exclude the emissions generated during that Operating Day (or Operating Days if the event covers more than one Operating Day) from the Emission Rate 30-day Rolling Average. During the Malfunction Days excluded from the Emission Rate 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

$NO_{x\ SCR\ Malf,\ SCR\ Startup} = 5 \times NO_{x\ SCR\ Abn}$

Where:

$NO_{x\ SCR\ Malf,\ SCR\ Startup}$ = NO_x emission limit for a Furnace using the affected control system during a Malfunction Day and during the affected control system Startup, in pounds per day.

$NO_{x\ SCR\ Abn}$ = As defined in this Attachment 2, Section 2.b.iii.B, NO_x emission limit for the affected control system during an Abnormally Low Production Rate Day, in pounds per day.

E. NO_x limit during Maintenance of the affected control system – For any Operating Day where Maintenance activities on the affected control system are performed, SGCI may elect to exclude the Maintenance Day from the Emission Rate 30-day Rolling Average. For any Day which is excluded from the 30-day rolling average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

$NO_{x\ SCR\ Maint} = [MH \times (5 \times NO_{x\ SCR\ Abn})/24] + [(NH \times NO_{x\ SCR\ Abn})/24]$

Where:

$NO_{x\ SCR\ Maint}$ = NO_x emission limit for a Furnace using the affected control system during a Maintenance Day, in pounds per day

$NO_{x\ SCR\ Abn}$ = As defined in this Attachment 2, Section 2.b.iii.B, NO_x emission limit for a Furnace using the affected control system during an Abnormally Low Production Rate Day, in pounds per day

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

c. Monitoring: A CEMS, if available, shall be used to demonstrate compliance with the NO_x limits in this Attachment 2, Section 2.b.iii. If SGCI does not have a CEMS when it is required to meet these limits, compliance shall be demonstrated using data generated from annual stack tests complying with 40 CFR 60 Appendix A Method 7E. If a CEMS Certification Event occurs, then the requirement to demonstrate compliance continuously with the limit for that Furnace will be suspended until Certification is completed (provided the seven-day test required for Certification is commenced the first Operating Day following the conclusion of the CEMS Certification Event). [See also Paragraph 7.f of the Consent Decree]

d. Recordkeeping: For any Operating Day that SGCI is excluding emissions from the relevant Emission Rate 30-day Rolling Average, it shall record the date, the exception (Abnormally Low Production Rate Day, Furnace Startup, Control Device Startup, Malfunction, or Maintenance) under which it is excluded, a calculation of the applicable limit (pounds per day) according to the equations above, and the recorded emissions according to the CEMS (pounds per day). For any Operating Day excluded for Maintenance, SGCI shall record the total number of hours during which Maintenance occurred. [See also Paragraph 7.h of the Consent Decree]

e. Recordkeeping and Reporting during Furnace Startup: In addition to the recordkeeping in this Attachment 2, Section 2.d above, during the applicable Furnace Startup period phases SGCI must also keep the following records: [See also Paragraph 7.i and 6 of the Consent Decree]

i. For the Initial Heating Phase, total natural gas usage in that Furnace (in million standard cubic feet).

ii. For the Refractory Soak and Seal Phase:

A. Total natural gas usage in that Furnace (in million standard cubic feet);

B. Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift);

C. Hot Spot Temperature (measured once per shift);and

D. A certified statement asserting whether thermal blankets or similar techniques were used during this period.

iii. For the Furnace Stabilization Phase:

A. Total natural gas usage in that Furnace (in million standard cubic feet);

B. Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift); and

C. Average Hot Spot Temperature (measured once per shift).

iv. The Permittee shall track the status of the Startup including conditions that may be used to indicate whether the Furnace Stabilization Phase should have been completed earlier than 70 days after the beginning of the Initial Heating Phase.

3. <u>SO_2 Emission Controls, Limits, and Compliance Schedule.</u> [See also Paragraph 8 of the Consent Decree]

a. Interim SO_2 Emission Limits: [See also Paragraph 8.a of the Consent Decree]

i. The affected furnaces shall meet an interim limit of 2.5 pounds of SO_2 per ton of glass produced except during periods of Abnormally Low Production Rate Days, Furnace Startup, Malfunction, Maintenance, and Color Transition. This interim limit shall remain in effect until the Furnace is required to comply with an SO_2 emission limit specified in this Attachment 2, Section 3.b.i. [See also Paragraph 8.a.i of the Consent Decree]

ii. While more than one furnace is subject to an interim limit, compliance may be determined by averaging the emissions from all such Furnaces at a given Facility. [See also Paragraph 8.a.iv of the Consent Decree]

b. SO_2 Emission Controls and Compliance Schedule. [See also Paragraph 8.b of the Consent Decree]

i. No later than the first Operating Day after December 31, 2014, SGCI shall Operate the Furnace passing all stack gases through the affected control system except during periods of Control Device Startup, up to the first seven (7) days of the Furnace Startup, and during Malfunction of the affected control system and Maintenance on the affected control system. [See also Paragraph 8.d.i of the Consent Decree]

ii. SGCI shall comply with the following applicable SO_2 limits for Furnaces #1, #2, and #3: [See also Paragraph 8.d.ii of the Consent Decree]

A. SO_2 30-day Rolling Average Limit – Commencing on the first Operating Day after completion of the Control Device Startup and CEMS Certification, but no later than December 31, 2014, SGCI shall comply with the following limits as measured using an SO_2 CEMS, except during the following periods (as set forth in this Subparagraph): Control Device Startup, up to the first seven (7) days of Furnace Startup, Malfunction of the affected control system, and Maintenance of the affected control system. [See also Paragraph 8.d.ii.1 of the Consent Decree]

I. No dilution air will be intentionally added to the stack gases between the affected control system and the CEMS. When determining compliance with all affected control system limits, there shall be no oxygen correction, as per vendor guarantee. [See also Paragraph 8.d.ii.1.a of the Consent Decree]

II. SGCI shall determine a daily Inlet 24-Hour Block Average. The compliance limit for each Operating Day will depend on the daily Inlet 24-hour Block Average and will either be as defined in (III) or (IV) below, but not both. [See also Paragraph 8.d.ii.1.b of the Consent Decree]

III. If the average daily Inlet calculated in (II) above is equal to or greater than 167 parts per million by volume dry (ppmvd) then the Removal Efficiency on a 24-hour Block Average for that Day and a Removal Efficiency 30-day Rolling Average shall be calculated. SGCI must operate the affected control system such that the Removal Efficiency 30-day Rolling Average is greater than or equal to 70 percent. [See also Paragraph 8.d.ii.1.c of the Consent Decree]

IV. If the average daily Inlet calculated in (II) above is less than 167 ppmvd, then the Outlet 24-hour Block Average for that Day and Outlet 30-day Rolling Average shall be calculated. SGCI must operate the affected control system such that the Outlet 30-day Rolling Average is less than or equal to 50 ppmvd. [See also Paragraph 8.d.ii.1.d of the Consent Decree]

B. SO_2 limit during Control Device Startup or up to the first seven (7) days of Furnace Startup – SGCI shall comply with the following operational limit to limit SO_2 emissions during all phases of Control Device Startup or up to the first seven (7) days of Furnace Startup: [See also Paragraph 8.d.ii.2 of the Consent Decree]

I. During the startup period, SGCI will limit the amount of sulfur added to the batch materials to 2.6 pounds per ton of total batch material (including cullet) or less. [See also Paragraph 8.d.ii.2.a of the Consent Decree]

II. For no more than the first seven (7) Days of Furnace Startup, the Furnace exhaust may bypass the affected control system to avoid having the operating inlet temperature of the affected control system fall below its operational range. During these bypass Days, SGCI shall burn no more than 15.0 million standard cubic feet of natural gas in that furnace. [See also Paragraph 8.d.ii.2.b of the Consent Decree]

C. SO_2 limit during Malfunction of the affected control system – For any Operating Day where a Malfunction of the affected control system occurs for any period of time, SGCI may elect to exclude the emissions generated during that Operating Day (or Operating Days if the event covers more than one Operating Day) from the Removal Efficiency 30-day Rolling Average and Outlet 30-day Rolling Average emission rates. During the Malfunction Days excluded from the Removal Efficiency 30-day Rolling Average and Outlet 30-day Rolling Average emission rates, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit: [See also Paragraph 8.d.ii.2.c of the Consent Decree]

$SO_{2\ Scrub\ Malf} = (2.5\ lb\ SO_2/ton) \times (P/0.35)$

Where:

$SO_{2\ Scrub\ Malf}$ = SO_2 emission limit during a Malfunction Day, in pounds per day.

P = Furnace-specific production threshold as defined in this Attachment 2, Section 1 (definition of Abnormally Low Production Rate, in tons of glass produced per day.

D. SO_2 limit during Maintenance of the affected control system – For any Operating Day where Maintenance activities on the affected control system are performed, SGCI may elect to exclude the Maintenance Day from the Removal Efficiency 30-day Rolling Average and Outlet 30-day Rolling Average emission rates. For any Maintenance Day which is excluded from the 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit: [See also Paragraph 8.d.ii.2.d of the Consent Decree]

$$SO_{2\ Scrub\ Maint} = [MH \times (2.5\ lb\ SO_2/ton) \times (P/0.35)]/24 + [NH \times ((2/3) \times 2.5\ lb\ SO_2/ton \times (P/0.35)]/24$$

Where:

$SO_{2\ Scrub\ Maint}$ = SO_2 emission limit during a Maintenance Day, in pounds per day

P = Furnace-specific production threshold as defined in this Attachment 2, Section 1 (Abnormally Low Production Rate), in tons of glass produced per day

MH = Hours of Maintenance

NH = Normal Hours = 24 – MH

c. Monitoring. [See also Paragraph 8.h of the Consent Decree]

A CEMS, if available, shall be used to demonstrate compliance with the SO_2 limits in this Attachment 2, Section 3.b.i and ii. using data generated by the SO_2 CEMS. If the Facility does not have a CEMS when it is required to meet these limits, compliance shall be demonstrated using data generated from annual stack tests complying with 40 CFR 60 Appendix A. If a CEMS Certification Event occurs, then the requirement to demonstrate compliance continuously with the limit for that Furnace will be suspended until Certification is completed (provided the seven-day test required for Certification is commenced the first Operating Day following the conclusion of the CEMS Certification Event).

d. Recordkeeping. [See also Paragraph 8.j of the Consent Decree]

For any Operating Day that SGCI is excluding emissions from the relevant Emission Rate 30-day Rolling Average, it shall record the date, the exception (during periods of affected control system startup, up to the first seven (7) days of Furnace Startup, during malfunction of the affected control system, or during maintenance of the affected control system) under which it

is excluded, a calculation of the applicable limit (pounds per day) according to the equations above, and the recorded emissions according to the CEMS, if a certified CEMS is available (in pounds per day).

e. Recordkeeping and Reporting during Furnace Startup: [See also Paragraph 8.k of the Consent Decree]

In addition to the recordkeeping above, during all Furnace Startup phases SGCI must also keep records of the amount of sulfur added to the batch materials in pounds per ton of total batch material.

f. Where a Facility has more than one Furnace subject to the same emission limit, compliance with the 30-day rolling average limits set forth herein may be determined by averaging the emissions from all Furnaces subject to the same emission limit at a given Facility. [See also Paragraph 8.l of the Consent Decree]

4. Sulfuric Acid Mist Limits: [See also Paragraph 8.n of the Consent Decree]

Compliance with a Sulfuric Acid Mist emission limit of 1.0 pounds per ton of glass produced shall be demonstrated by a stack test performed using Conditional Test Method 13A or B on all Furnaces once during the life of each CAAPP permit renewal.

5. PM Emission Controls, Limits, and Compliance Schedule: [See also Paragraph 9 of the Consent Decree]

a. Interim PM Emission Limit: [See also Paragraph 9.a of the Consent Decree]

i. SGCI shall comply with an interim PM emission limit of 1.0 pound of filterable PM per ton of glass produced. [See also Paragraph 9.a.i of the Consent Decree]

ii. The interim PM emission limit shall remain in effect until the Furnace is required to comply with a PM emission limit specified in Paragraph 5.c through 5.h below. [See also Paragraph 9.a.iv of the Consent Decree]

b. PM Emission Controls and Compliance Schedule [See also Paragraph 9.b of the Consent Decree]

For each affected furnace, SGCI shall operate the affected control system. [See also Paragraph 9.b.i of the Consent Decree]

c. i. After up to the first seven (7) days of the Furnace Startup period following the next Major Rebuild, but no later than the first Operating Day after December 31, 2014, SGCI shall Operate the Furnace passing all stack gases through the

affected control system, except during periods of Control Device Startup, Malfunction of the affected control system, and Maintenance of the affected control system. [See also Paragraph 9.c.i of the Consent Decree]

ii. SGCI shall comply with the PM emission limit of 0.2 pounds of filterable PM per ton of glass produced; for such Furnaces there shall be no limit for total or condensable PM. [See also Paragraph 9.c.ii of the Consent Decree]

iii. A. Compliance with the PM limit shall be demonstrated through annual stack tests. SGCI shall conduct an initial stack test no later than twelve (12) months after December 31, 2014 and once each Calendar Year thereafter. [See also Paragraph 9.c.iii of the Consent Decree]

B. Filterable PM shall be determined using EPA Method 5 (40 CFR 60 Appendix A). [See also Paragraph 9.c.iii.1 of the Consent Decree]

d. Compliance with the limits on each Furnace set forth herein shall be determined using the following equation: [See also Paragraph 9.j of the Consent Decree]

PM Emission Rate = [(lbs of PM from ST)/(Daily production (tons))] x [(24 hours)/(source test length (hrs))]

Where:

PM Emission Rate = PM Emissions rate (lb PM/ton glass)

Lbs of PM from ST = The pounds of PM measured during the entire length of the source test (including all runs).

Daily production = The amount of glass produced on all Furnaces during the Day of the source test.

Source test length = Length of the entire source test (including all runs), in hours.

If the resulting number is below the limit set forth on each Furnace individually, then all included Furnaces are in compliance. If the resulting number is above the limits set forth on each Furnace individually, then all included Furnaces are in noncompliance.

6. Good Operation. [See also Paragraph 12 of the Consent Decree]

At all times, including periods of Abnormally Low Production Rate Days, Furnace Startup, Control Device Startup, Malfunction, Maintenance, and Color Transition, SGCI shall, to the extent practicable, maintain and

operate all Furnaces and all control devices in a manner consistent with good air pollution control practice for minimizing emissions.

7. Maintenance. [See also Paragraph 13 of the Consent Decree]

a. Scheduled or preventative Furnace Maintenance, including checker raking and burning, shall not exceed ninety-six (96) Operating hours annually per furnace and shall be conducted only when any downstream control devices required by this permit, i.e., the affected control system, if applicable, is operating. [See also Paragraph 13.a of the Consent Decree]

b. Control system scheduled or preventative Maintenance

i. Scheduled or preventative Maintenance of the emission control system shall occur when the Furnace(s) connected to the affected control system are not Operating. However, for any Calendar Year which is a Continuous Operating Year, scheduled or preventative maintenance may be conducted while the Furnace(s) are Operating. During these Continuous Operating Years, Maintenance lasting greater than twenty-four consecutive hours, shall occur only during Abnormally Low Production Rate Days. Control system Maintenance must be done in compliance with the following: [See also Paragraph 13.b of the Consent Decree]

ii. Bypass for the purpose of preventative Maintenance of the affected control system shall not exceed 144 hours annually in any Calendar Year. [See also Paragraph 13.b.i through 13.b.iii of the Consent Decree]

Note: Because the affected control system is an integrated system and individual components of the control system cannot be bypassed, only a single 144-hour aggregate bypass limit is allowed per calendar year.

8. Source Testing. [See also Paragraph 14 of the Consent Decree]

Each source test shall be conducted in accordance with the requirements of the specified test method and shall be performed under representative operating conditions and shall not be conducted during periods of Abnormally Low Production Rate Days, Furnace Startup, Control Device Startup, Malfunction of the Furnace or relevant control system, Maintenance of the Furnace or relevant control system, or Color Transition.

9. Monitoring Requirements:

By no later than December 31, 2014, SGCI shall install, calibrate, certify, maintain, and operate NO_x and SO_2 CEMS. The CEMS certification cannot occur during periods of Abnormally Low Production Rate Days, Furnace Startup, Control Device Startup, Malfunction, Maintenance, or

Color Transition. SGCI shall commence a new CEMS Certification on a particular Furnace on the first Operating Day after each CEMS Certification Event concludes on that Furnace. [See also Paragraph 15.a and 15.c of the Consent Decree]

a. The NO_x and SO_2 CEMS shall monitor continuously and record the hourly NO_x and SO_2 emission concentration (parts per million) during each Operating Day from each Furnace (or Furnaces where more than one Furnace subject to the same emission limit is routed through a common exhaust stack). The CEMS shall calculate and record in units of parts per million of NO_x and SO_2 emitted. [See also Paragraph 15.c.i of the Consent Decree]

b. The CEMS shall be installed, calibrated, certified, maintained, and operated in accordance with 40 CFR 60.13, 40 CFR 60 Appendix B (Performance Specification 2) and 40 CFR 60 Appendix F (Quality Assurance Procedures). [See also Paragraph 15.c.ii of the Consent Decree]

c. Where this permit requires the use of CEMS to determine an emission rate (pound per ton or ton per year), then SGCI is required to either:

i. Follow requirements set forth above in Condition 8 for the CEMS and then use an EPA approved method for calculating flow. In conjunction with the EPA approved flow method calculation, the data acquisition and handling system for the CEMS shall convert the ppm values into pound per hour values where the limit is expressed in pounds of pollutant per ton of glass produced. At the end of each Operating Day, the data acquisition and handling system shall divide the total daily emissions in pounds per day for valid CEMS hourly data by the total tons of glass produced during the Operating Day (reduced proportionally based on the valid CEMS data hours) to describe the pound per ton emission rate for the Operating Day. This number shall be recorded in units of pounds of pollutant per ton of glass produced; or

ii. Install, calibrate, certify, maintain, and operate NO_x and SO_2 Continuous Emission Rate Monitoring System (CERMS) as follows:

A. The CERMS shall be installed, calibrated, certified, maintained, and operated in accordance with 40 CFR 60.13, 40 CFR 60 Appendix B (Performance Specification 6), and 40 CFR 60 Appendix F (Quality Assurance Procedures);

B. SGCI must comply with all monitoring, recordkeeping and reporting requirements in 40 CFR 60.13 and 40 CFR 60 Appendix B (Performance Specification 6); and

C. In conjunction with the flow rate monitoring device, the data acquisition and handling system for the CEMS shall convert the ppm values into pound per hour values where the limit is expressed in pounds of pollutant per ton of glass produced. At the end of each Operating Day, the data acquisition and handling system shall divide the total daily emissions in pounds per day for valid CEMS hourly data by the total tons of glass produced during the Operating Day (reduced proportionally based on the valid CEMS data hours) to describe the pound per ton emission rate for the Operating Day. This number shall be recorded in units of pounds of pollutant per ton of glass produced for the applicable Day.