



APR 09 2014

Mr. Michael Gibbons
Sain-Gobain Containers, Inc.
P O Box 4200
Muncie, Indiana 47302-4200

**Re: Notice of Minor Title V Permit Modification
District Facility # C-801
Project # 1132561**

Dear Mr. Gibbons:

Enclosed is the District's analysis of your application for minor Title V permit modification for the facility identified above. You proposed a Title V minor permit modification to incorporate recently issued Authority to Construct (ATC) C-801-1-17 into the Title V operating permit. This ATC authorized the modification of one 75 MMBtu/hr container glass furnace (Furnace #1) to convert it from a regenerative gas-fired furnace to an oxy-fuel fired furnace.

Enclosed is the engineering evaluation with the following attachments: proposed modified Title V permit, recently issued ATC C-801-1-17, application, and previous Title V permit. This project will be subject to a 45-day EPA commenting period prior to the District taking final action.

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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TITLE V APPLICATION REVIEW

Minor Modification
Project #: 1132561

Engineer: Dustin Brown
Date: April 1, 2014

Facility Number: C-801
Facility Name: Saint-Gobain Containers, Inc.
Mailing Address: P O Box 4200
Muncie, Indiana 47302-4200

Contact Name: Michael Gibbons
Phone: (765) 741-7117

Responsible Official: Michael Gibbons
Title: Plant Manager

I. PROPOSAL

Saint-Gobain Containers is proposing a Title V minor permit modification to incorporate recently issued Authority to Construct (ATC) C-801-1-17 into the Title V operating permit. This ATC authorized the modification of one 75 MMBtu/hr container glass furnace (Furnace #1) to convert the furnace from a regenerative furnace to an oxy-fuel fired furnace. This conversion is being performed to meet the requirements of Rule 4354 and a consent decree signed by Saint-Gobain Containers, Inc., SJVAPCD, and USEPA.

In addition to the Furnace #1 conversion to oxy-fuel firing, the following changes will be performed as a part of this project.

Rule 4354 Compliance

The following modifications are required as part of the Furnace #1 oxy-fuel conversion.

- New Ganna chargers to replace the existing blanket chargers
- Modifications to the batch delivery system for the Ganna chargers
- Add exhaust flow monitor to existing Continuous Emissions Monitoring System (CEMS)

Routine Replacement

The following changes included in this project are considered a routine replacement and are not necessarily required as a part of the the oxy-fuel conversion.

- Replace three existing 10-section IS machines with three new 10-section IS machines (like-kind replacement) (routine replacement)

The purpose of this evaluation is to identify all applicable requirements, determine if the facility will comply with the applicable requirements and to provide the legal and factual basis for the proposed revisions.

II. FACILITY LOCATION

Saint-Gobain Containers is located at 24441 Avenue 12 and Road 24 ½ in Madera, CA.

III. EQUIPMENT DESCRIPTION

Current Permit Equipment Descriptions:

C-801-1-13: 75 MMBTU/HR (APPROXIMATELY) NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS, 2,000 KVA ELECTRIC BOOST, A BLOWER AIR STAGING (BAS) SYSTEM, NOX, SOX, CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS), AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3-700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2), AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS)

ATC Equipment Description:

C-801-1-17: MODIFICATION OF 75 MMBTU/HR (APPROXIMATELY) NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS, 2,000 KVA ELECTRIC BOOST, A BLOWER AIR STAGING (BAS) SYSTEM, NOX, SOX, CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS), AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3-700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2), AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS): CONVERT FURNACE FROM REGENERATIVE TO OXY-FUEL, ALLOW USE OF EXISTING COMBUSTION TEC LOW NOX BURNERS OR NEW CUSTOM DILUTE COMBUSTION BURNERS, REPLACE EXISTING BLANKET CHARGERS WITH NEW GANNA CHARGERS, MODIFY BATCH DELIVERY SYSTEM FOR GANNA CHARGERS, AND ADD EXHAUST FLOW MONITOR TO EXISTING CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) FOR RULE 4354 COMPLIANCE AND COMPLIANCE WITH SJVAPCD AND USEPA CONSENT DECREE; AND REPLACE THREE EXISTING 10-SECTION IS MACHINES WITH THREE NEW 10 SECTION IS MACHINES

Post Project Equipment Description:

C-801-1-18: 75 MMBTU/HR (APPROXIMATELY) OXY-FUEL NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS OR CUSTOM DILUTE COMBUSTION BURNERS, 2,000 KVA ELECTRIC BOOST, A BLOWER AIR STAGING (BAS) SYSTEM, NOX, SOX, CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS), AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3-700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2), AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS)

IV. SCOPE OF EPA AND PUBLIC REVIEW

This change to a Title V permit is considered to be a minor modification and, as such, requires no public review.

V. APPLICABLE REQUIREMENTS

District Rule 2520, Federally Mandated Operating Permits (Adopted June 21, 2001)

VI. DESCRIPTION OF PROPOSED MODIFICATIONS

Saint-Gobain Containers, Inc. (SGCI) received an ATC permit to convert Furnace #1 from a regenerative gas-fired furnace to an oxy-fuel fired furnace. This conversion is being performed to meet the requirements of Rule 4354 and a consent decree signed by Saint-Gobain Containers, Inc., SJVAPCD, and USEPA. This modification involves replacing nearly all of the combustion air with oxygen. Furnace #1 is currently a regenerative furnace and NO_x emissions from this furnace are currently reduced through the use of blower air staging. The conversion to oxy-fuel firing will further reduce NO_x emissions. The production rate of Furnace #1 is proposed to remain at the current level of 450 tons/day after the conversion and there is no proposed change in fuel use for the furnace.

The proposed changes to this container glass furnace do not result in emission increases for any pollutant.

Existing PTO Changes:

Existing PTO condition 21 was revised in accordance with the glass furnace changing from regenerative to oxy fuel and the emission requirements of Rule 4354, Sections 5.2 and 5.3. The revised requirement has been included as condition 21 of this revised permit.

Existing PTO condition 22 was revised in accordance with the latest requirements of Rule 4354 and the change of this glass furnace to firing on oxy fuel. The revised requirement has been included as condition 22 of this revised permit.

Existing PTO condition 23 was revised in accordance with Rule 2201 and the new lower emission rates produced from the furnace while firing on oxy fuel. The revised requirement has been included as condition 23 of this revised permit.

Existing PTO condition 25 was revised in accordance with the glass furnace changing from regenerative to oxy fuel and the Tier 3 NO_x emission requirement of Rule 4354, Section 5.1. The revised requirement has been included as condition 25 of this revised permit.

Existing PTO condition 32 was revised to modify the ESP secondary voltage monitoring frequency from two times during every eight hours of operation to a minimum of once per hour of operation in accordance with the CAM requirement of 40 CFR Part 64 and the alternate monitoring requirements of Rule 4354, Section 5.9.4. The revised requirement has been included as condition 32 of this revised permit.

Existing PTO conditions 39 and 40 were revised in accordance with the updated source testing requirements of Rule 4354, Sections 6.4.2 and 6.5. The revised requirements have been included as conditions 42 and 43 of this revised permit.

Existing PTO conditions 49 and 50 were revised in accordance with the updated recordkeeping requirements of Rule 4354, Section 6.3. The revised requirements have been included as conditions 56 and 64 of this revised permit.

Existing PTO condition 51 was removed as this project and ATC will bring the facility in to compliance with the Tier 3 NO_x limits of Rule 4354. Therefore, this condition is no longer necessary.

Existing PTO conditions 56 through 58 were updated and expanded in accordance with the requirements of 40 CFR 60, Subpart SSSSSS. The revised requirements have been included as conditions 69 through 79 of this revised permit.

New PTO Conditions:

Condition 34 of the requirements for this revised permit was added in accordance with Rule 2201 to assure compliance with the VOC emission limit specified within this permit and in accordance with Rule 4354 to assure continued compliance with the VOC monitoring requirements of Section 5.9.2.

Condition 35 of the requirements for this revised permit was added in accordance with Rule 4354 to assure continued compliance with the VOC monitoring requirements of Section 5.9.2.

Condition 39 of the requirements for this revised permit was added in accordance with Rule 2201 to assure initial compliance with the revised NO_x, SO_x, PM₁₀, CO and VOC emission limits established as a part of this project.

Conditions 44 through 47 of the requirements for this revised permit were added to assure compliance with the source testing requirements specified in Rule 4354, Section 6.4.

Conditions 57 through 63 of the requirements for this revised permit were added to assure compliance with the furnace batter or multiple furnaces control requirements specified in Rule 4354, Section 9.

Conditions 80 through 109 of the requirements for this revised permit were added to assure compliance with USEPA Consent Decree 2:10-cv-00121-TSZ, dated May 7, 2010.

ATC Condition Changes:

ATC condition 1 has been removed and not included in the requirements for this revised permit as SGCI has submitted the appropriate Title V application to incorporate this ATC in to their Title V operating permit.

VII. COMPLIANCE

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include;
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including;

1. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs;
2. The source's suggested draft permit; and
3. Certification by a responsible official that the proposed modification meets the criteria for use of minor permit modification procedures and a request that such procedures be used.

VIII. ATTACHMENTS

- A. Proposed Modified Title V Operating Permit C-801-1-18
- B. Authority to Construct C-801-1-17
- C. Application
- D. Previous Title V Operating Permit C-801-1-13

ATTACHMENT A

Proposed Modified Title V Operating
Permit C-801-1-18

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-801-1-18

EXPIRATION DATE: 01/31/2015

EQUIPMENT DESCRIPTION:

75 MMBTU/HR (APPROXIMATELY) OXY-FUEL NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS OR CUSTOM DILUTE COMBUSTION BURNERS, 2,000 KVA ELECTRIC BOOST, A BLOWER AIR STAGING (BAS) SYSTEM, NOX, SOX, CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS), AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3-700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2), AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
2. Particulate matter emissions shall not exceed the maximum allowable emission rate (lb/hr), as determined using the following formula: $E = 3.59 \times P^{0.62}$, where E equals the maximum allowable emission rate (lb/hr) and P equals the process weight rate (tons/hr) and is less than or equal to 30 tons/hr. [District Rule 4202] Federally Enforceable Through Title V Permit
3. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (12/17/92), by using EPA method 9. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101 and Madera County Rule 401] Federally Enforceable Through Title V Permit
4. Discharge of sulfur compounds shall not exceed in concentration at the point of discharge 0.2 percent by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801]
5. The furnace shall be equipped with a continuous emission monitor (CEM) for NO_x, CO, and O₂. This CEM shall be located in the duct for furnace #1 upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct. [District Rule 4354] Federally Enforceable Through Title V Permit
6. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures), and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354] Federally Enforceable Through Title V Permit
7. The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous opacity monitoring system (COMS) downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60.13 and 40 CFR part 60 Appendix B (Performance Specification 1), and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 1080] Federally Enforceable Through Title V Permit
8. The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous emission monitor (CEM) for SOX at the inlet of the scrubber and downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures), and applicable sections of Rule 1080 (Stack Monitoring). [District Rules 1080 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.1.1 at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
14. Permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
15. Permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions; nature and cause of excess (averaging period used for data reporting shall correspond to the averaging period for each respective emission standard); corrective actions taken and preventive measures adopted; applicable time and date of each period during a CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
16. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO_x, CO, and O₂ analyzer during District inspections. The sampling ports shall be located upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit
19. The container glass pull rate from furnace #1 shall not exceed either of the following limits: 450 U.S. short tons per day or 157,680 U.S. short tons per year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
20. Annual emissions from furnace #1 and #2 combined shall not exceed either of the following limits: 265,632 lb-SO_x/year or 164,719 lb-PM₁₀/year. [District Rule 2201] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

21. Except during idling, start-up, or shutdown, emissions rates from this unit shall not exceed any of the following limits: 0.8 lb-SO_x/ton of container glass pulled, 1.0 lb-CO/ton of container glass pulled, or 0.25 lb-VOC/ton of container glass pulled. SO_x emissions limit is based on a 24 hour rolling average. CO and VOC emissions limits are based on a three hour rolling average. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
22. The pollutant mass emission rate in lb/hr shall be converted to lb pollutant/ton of glass pulled as specified in Rule 4354. The operator of a oxy-fuel fired furnace, oxygen-assisted combustion furnace, or a furnace utilizing any fuel oxidants other than 100% ambient air, shall submit to the APCO, ARB, and EPA for approval any methodologies and data that will be used to calculate emission rates for NO_x, CO, and VOC if the methods are different from those specified in Rule 4354. Unless the operator received prior written approval from APCO, ARB, and EPA of all the calculation methods to be used that are different from those specified in Rule 4354, compliance with the emissions limits cannot be fully demonstrated, and it shall be deemed to be a violation of the rule. [District Rule 4354] Federally Enforceable Through Title V Permit
23. Emissions from this furnace shall not exceed either of the following limits: 450.0 lb-CO/day or 21.6 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Except during idling, start-up, or shutdown, Particulate Matter emissions (as PM₁₀) shall not exceed 0.5 pounds per ton glass pulled on a block 24-hour average from the glass melting furnace. [District Rule 4354] Federally Enforceable Through Title V Permit
25. Except during idling, start-up, or shutdown, NO_x emissions from this furnace shall not exceed 1.3 lbs/ton of glass produced, on a 30 day rolling average basis. [District Rules 2201 and 4354 and USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.t, IV.7.c.iii.1, entered on May 7, 2010] Federally Enforceable Through Title V Permit
26. NO_x, CO, VOC, SO_x, and PM₁₀ emissions during idling shall not exceed the emissions limits as calculated using the following equation: NO_x, CO, VOC, SO_x, or PM₁₀ (lb/day) = (Applicable emission limit (in lbs/ton)) x (Furnace permitted production capacity (in tons/day)). [District Rule 4354] Federally Enforceable Through Title V Permit
27. Permittee shall notify the District at least 24 hours before initiating idling, shutdown and startup and this notification shall include: date and time of the start of the exempt operation, reason for performing the operation, and an estimated completion date. The permittee shall notify the District by telephone within 24 hours after completion of the operation and shall maintain operating records and/or support documentation necessary to claim exemption. [District Rule 4354] Federally Enforceable Through Title V Permit
28. The length of time allowed for a start-up shall be determined by the APCO and EPA on a case-by-case basis, in accordance with District Rule 4354. [District Rule 4354] Federally Enforceable Through Title V Permit
29. The permittee shall operate and maintain the electrostatic precipitator (ESP) system to reduce particulate emissions to 0.2 pounds of particulate per ton of glass pulled, using EPA Method 5 as set forth in 40 C.F.R. Part 60, Appendix A, and 0.45 pounds of particulate per ton of glass pulled, using the combined results of EPA Methods 5 and 202 as set forth in 40 C.F.R. Part 60, Appendix A. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Monitoring of the ESP shall comply with the requirements of 40 CFR Part 64. [District Rule 4354] Federally Enforceable Through Title V Permit
31. The ESP shall be operated at a secondary voltage of at least 12 kV. [District Rules 2520 and 4354 and 40 CFR 64] Federally Enforceable Through Title V Permit
32. The ESP secondary voltage shall be monitored and recorded at a minimum during every one hour of operation. [District Rules 2520 and 4354 and 40 CFR 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

33. If the monitored ESP secondary voltage is below the minimum allowable voltage, the permittee shall return the voltage to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the ESP secondary voltage readings continue to be below the allowable range after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (as amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520 and 4354 and 40 CFR 64] Federally Enforceable Through Title V Permit
34. The permittee shall establish minimum excess oxygen (%) in the flue gas during the next annual source test while demonstrating compliance with VOC emission limits of this permit. The established limit shall be listed on the Permit to Operate. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
35. Excess oxygen (%) in the flue gas shall be measured continuously. The measured excess oxygen (%) shall be averaged over 30 consecutive-minute to demonstrate compliance with the established minimum excess oxygen (%). The averaged reading shall be recorded each day at the frequency specified in this condition. [District Rule 4354] Federally Enforceable Through Title V Permit
36. The permittee shall operate and maintain the semi-dry scrubber system to reduce SOx emissions by at least 85%, excluding days when the scrubber inlet's daily average concentration of SO2 is 353 ppmvd or less, in which case the scrubber outlet's daily average concentration of SO2 shall be reduced to at least 53 ppmvd, except during periods of scheduled or preventative maintenance. The averaging period for the reduction efficiency shall be calculated on a rolling 30-day average basis, excluding days when the scrubber inlet's daily average concentration of SO2 is 353 ppmvd or less. Compliance with the SOx reduction efficiency and daily concentration standard shall be demonstrated by the combined ductwork scrubber inlet and downstream of the control equipment outlet SO2 continuous concentration monitoring. [District Rule 2201] Federally Enforceable Through Title V Permit
37. This unit shall be fired on PUC regulated natural gas or LPG backup fuel only. [District Rule 2201] Federally Enforceable Through Title V Permit
38. Certification of the continuous opacity monitoring system (COMS) shall be demonstrated by meeting the requirements of 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1. [40 CFR 60.13] Federally Enforceable Through Title V Permit
39. Source testing to measure NOx, SOx, PM10, CO, and VOC shall be conducted within 90 days of the startup period as defined in Rule 4354 and USEPA Consent Decree 2:10-cv-00121-TSZ, entered on May 7, 2010. [District Rule 2201] Federally Enforceable Through Title V Permit
40. Source testing to measure NOx, CO, and VOC emissions shall be conducted once every calendar year, but no more than every 18 months and not sooner than every 6 months. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. Source testing to measure SOx and PM10 emissions shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork once every calendar year, but no more than every 18 months and not sooner than every 6 months. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
42. Source testing shall be conducted using the following test methods: NOx (heat input basis) - USEPA Method 19, NOx (ppmv) - USEPA Method 7E or CARB Method 100; CO (ppmv) - USEPA Method 10 or CARB Method 100; VOC (ppmv) - USEPA Method 25A, expressed in terms of carbon; Stack gas oxygen, carbon dioxide, excess air and dry molecular weight - USEPA Method 3 or 3A, or CARB Method 100; Stack gas velocity and volumetric flow rate - USEPA Method 2; SOx - USEPA Method 6C or 8 or CARB Method 100; PM10 - EPA methods 201 and 202, or EPA methods 201A and 202, or CARB method 501 in conjunction with CARB method 5. In lieu of performing a source test for PM10, the results of CARB Method 5 or EPA Methods 5 and 8 may be used for compliance with the PM10 emissions limit. If this option is used, then all of the particulate emissions will be considered to be PM10. [District Rules 1081, 2520 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

43. Source test results shall be representative of normal operations, but not less than 60 percent of the permitted glass production capacity. [District Rule 4354] Federally Enforceable Through Title V Permit
44. For operators using alternative monitoring systems, during the source test, the operator shall monitor and record, at a minimum, all operating data for each parameter, fresh feed rate, and flue gas flow rate and submit this data with the test report. [District Rule 4354] Federally Enforceable Through Title V Permit
45. During source testing, the arithmetic average of three (3) 30-consecutive-minute test runs shall be used to determine compliance with NO_x, CO, VOC, and SO_x emission limits. [District Rule 4354] Federally Enforceable Through Title V Permit
46. During source testing, the arithmetic average of three (3) 60-consecutive-minute test runs shall be used to determine compliance with PM₁₀ emission limits. [District Rule 4354] Federally Enforceable Through Title V Permit
47. For a given pollutant, if two of the three runs individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the furnace, even if the averaged emissions of all three test runs is less than the applicable limit. [District Rule 4354] Federally Enforceable Through Title V Permit
48. Compliance testing for particulate shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork in accordance with USEPA Reference Methods 1, 2, 5, and 202 as set forth in 40 CFR Part 60, Appendix A. Each test shall consist of three runs. The sampling time and volume for each run shall be at least 60 minutes and 31.8 dry standard cubic feet. Thereafter, compliance testing of particulate matter shall be conducted on an annual basis within 60 days of the anniversary date of the latest compliance testing. [District Rule 1081] Federally Enforceable Through Title V Permit
49. Commercial arsenic shall not be used as a raw material in this glass furnace. This prohibition is required for continued exemption from the requirements of 40 CFR 61, Subpart N. [District Rule 2520] Federally Enforceable Through Title V Permit
50. Idling is defined as the operation of the furnace at less than 25% of the permitted production capacity or fuel use capacity as stated on the Permit to Operate. [District Rule 4354] Federally Enforceable Through Title V Permit
51. The emission control system shall be in operation whenever technologically feasible during idling to minimize emissions. Emissions of NO_x, CO, VOC, SO_x, and PM₁₀ during idling shall not exceed the amount as calculated pursuant to Rule 4354. Notifications shall be performed and records kept in accordance with Rule 4354. [District Rule 4354] Federally Enforceable Through Title V Permit
52. Shutdown shall mean the period of time during which the glass melting furnace is purposely allowed to cool from its operating temperature and molten glass is removed from the tank for the purpose of a furnace rebuild or reconstruction, or during a natural gas curtailment, or, subject to EPA's approval, when it is commercially necessary. [District Rule 4354] Federally Enforceable Through Title V Permit
53. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. The emission control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. Notifications shall be performed and records kept in accordance with Rule 4354. [District Rule 4354] Federally Enforceable Through Title V Permit
54. Start-up shall mean the period of time, after initial construction, a furnace rebuild, or a shutdown, during which the glass melting furnace is heated to operating temperature by the primary furnace combustion systems, and systems and instrumentation are brought to stabilization and calibrated. The operator shall submit a request for a start-up exemption to the APCO, ARB, and EPA in conjunction with or in advance of an application for Authority to Construct (ATC) associated with a furnace rebuild. The emission control system shall be in operation as soon as technologically feasible during start-up to minimize emissions and notifications shall be performed and records kept in accordance with Rule 4354. [District Rule 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

55. NO_x, CO, VOC, SO_x and PM₁₀ emission limitations of District Rule 4354 shall not apply during periods of routine maintenance of an add-on emission control system as long as the routine maintenance does not exceed 144 hours total per calendar year for all add-on controls and the routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions. [District Rule 4354] Federally Enforceable Through Title V Permit
56. Operators shall maintain daily records of the following items: total hours of operation, the quantity of glass pulled from each furnace, NO_x emission rate in lb/ton glass pulled, CO emission rate, VOC emission rate, SO_x emission rate in lb/ton glass pulled, PM₁₀ emission rate in lb/ton glass pulled, weight of mixed color cullet used, total amount of cullet used by weight, ratio, expressed in percent, of mixed color mix weight to total cullet weight, source tests and source test results, maintenance and repair, malfunction, idling, start-up, and shutdown. For pollutants monitored using an approved parametric monitoring arrangement, operators shall maintain records of the acceptable range for each approved key system operating parameter, as established during source test, and shall record the operating values of the key system operating parameters at the approved recording frequency. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
57. Aggregated emissions for a given pollutant of a furnace battery are the emissions for the pollutant as measured at the common stack divided by the sum of the daily glass pulled from each furnace. [District Rule 4354] Federally Enforceable Through Title V Permit
58. An operator of either furnace battery or multiple furnaces that elects to meet the emission limits for the furnaces through the requirements of Section 9.7 shall be subject to a 10% air quality benefit in accordance with 40 CFR Part 51 Subpart U. The maximum emission rate shall be at least 10% lower than the applicable limit specified in Section 5.1 (Tier 3 NO_x), Section 5.2 (CO and VOC), Section 5.3 (SO_x), or Section 5.4 (PM₁₀), for each pollutant subject to this option. [District Rule 4354] Federally Enforceable Through Title V Permit
59. The operator of a furnace battery or multiple furnaces choosing the alternate emission limit shall operate the furnace battery or multiple furnaces according to Sections 9.7.3 through 9.7.8.5. Only those pollutants with emissions that are averaged across multiple furnaces/furnace battery are subject to all subparts of Section 9.7. Pollutant emissions that are not averaged across multiple furnaces/furnace battery are subject to the applicable emission limits of Sections 5.1 through 5.4. [District Rule 4354] Federally Enforceable Through Title V Permit
60. The daily aggregate emissions shall be no greater than those obtained by controlling each furnace to comply individually with applicable emission limits, less the 10% air quality benefit. [District Rule 4354] Federally Enforceable Through Title V Permit
61. The operator shall demonstrate compliance with the daily aggregate emissions through source test results and monitoring by either CEMS or approved alternate emission monitoring methods. [District Rule 4354] Federally Enforceable Through Title V Permit
62. Any violation of the aggregated emission limits shall constitute a violation of the rule for each furnace for the entire averaging period. [District Rule 4354] Federally Enforceable Through Title V Permit
63. The operator shall notify the APCO of any violation of Rule 4354 Section 9.7.3 within 24 hours. The notification shall include: name and location of the facility; identification of furnace(s) causing the violation; the cause and the expected duration of violation; calculation of actual NO_x, CO, VOC, SO_x, and PM₁₀ emissions during the violation; corrective actions and schedules to complete the work. [District Rule 4354] Federally Enforceable Through Title V Permit
64. The permittee shall retain records for a period of five years; make the records available on site during normal business hours to the APCO, ARB, or EPA; and submit the records to the APCO, ARB, or EPA upon request. [District Rules 1070, 2201 and 4354] Federally Enforceable Through Title V Permit
65. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201 (as amended December 17, 1992), District Rule 4202 (as amended December 17, 1992), District Rule 4354 (as amended May 19, 2011), and District Rule 4801 (as amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520] Federally Enforceable Through Title V Permit
66. The requirements of District Rule 4301 (as amended December 17, 1992) were determined to not apply to this unit. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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67. The requirements of 40 CFR 61, Subpart N were determined to not apply to this unit. A permit shield is granted from this requirement. [District Rule 2520] Federally Enforceable Through Title V Permit
68. Compliance with a Sulfuric Acid mist emission limit of 1.0 pound per ton of glass produced shall be demonstrated by a stack test performed using Conditional Test Method 13A or B on this furnace on or before December 31, 2011. Stack testing shall be required to be performed after this initial test only once during the life of the Title V permit renewal. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.8.n, filed 4/22/2010] Federally Enforceable Through Title V Permit
69. The permittee shall comply with the applicable emission limits specified in 40 CFR Part 63 Subpart SSSSSS Table 1. Existing glass melting furnace that produces glass at an annual rate of at least 45 Mg/yr (50 tpy) and is charged with compounds of arsenic, cadmium, chromium, manganese, lead, or nickel as raw materials shall meet one of the following emission limits: the 3-hour block average production based PM mass emission rate must not exceed 0.1 gram per kilogram (g/kg) (0.2 pound per ton (lb/ton)) of glass produced; or the 3-hour block average production based metal HAP mass emission rate must not exceed 0.01 g/kg (0.02 lb/ton) of glass produced. The permittee may request the APCO to grant an extension allowing up to one additional year to comply with the applicable emission limits if such additional period is necessary for the installation of emission controls. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
70. A furnace that produces glass at an annual rate of at least 45 Mg/yr (50 tpy) and is not charged with glass manufacturing metal HAP, and begins production of a glass product that includes one or more glass manufacturing metal HAP as raw materials, and produces at least 45 Mg/yr (50 tpy) of this glass product, shall comply with the applicable emission limit specified in Section 63.11451 within 2 years of the date on which the facility introduced production of the glass product that contains glass manufacturing metal HAP. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
71. For each monitoring system required by this subpart, the permittee shall install, calibrate, operate, and maintain the monitoring system according to the manufacturer's specifications and the requirements specified in Section 63.11454 paragraphs (a)(1) through (7). [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
72. For each existing furnace that is subject to the emission limit specified in Table 1 to this subpart and is controlled with an ESP, the permittee shall meet the requirements specified in Section 63.11454 paragraphs (b)(1) or (2). The permittee shall monitor the secondary voltage and secondary electrical current to each field of the ESP according to the requirements of Section 63.11454 paragraph (a) or submit a request for alternative monitoring, as described in Section 63.11454 paragraph (g). [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
73. The permittee shall be in compliance with the applicable emission limits in this subpart at all times, except during periods of startup, shutdown, and malfunction. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
74. The permittee shall always operate and maintain the affected source, including air pollution control and monitoring equipment, according to the provisions in Section 63.6(e)(1)(i). [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
75. For each affected furnace that is subject to the emission limit specified in Table 1 to this subpart, the permittee shall monitor the performance of the furnace emission control device under the conditions specified in Section 63.11454(a)(7) and according to the requirements in Sections 63.6(e)(1) and 63.8(c) and Section 63.11455 paragraphs (c)(1) through (6). [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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76. Following the initial inspections, the permittee shall perform periodic inspections and maintenance of each affected furnace control device according to the requirements in Section 63.11455 paragraphs (d)(1) through (4). For each ESP, the permittee shall conduct inspections according to the requirements in Section 63.11455 paragraphs (d)(2)(i) through (iii). The permittee shall conduct visual inspections of the system ductwork, housing unit, and hopper for leaks at least every 12 months. The permittee shall conduct inspections of the interior of the ESP to determine the condition and integrity of corona wires, collection plates, plate rappers, hopper, and air diffuser plates every 24 months. If an initial inspection is not required, as specified in Section 63.11453(b)(3)(ii), the first inspection must not be more than 24 months from the last inspection. The permittee shall record the results of each periodic inspection specified in this section in a logbook (written or electronic format), as specified in Section 63.11457(c). If the results of a required inspection indicate a problem with the operation of the emission control system, the permittee shall take immediate corrective action to return the control device to normal operation according to the equipment manufacturer's specifications or instructions. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
77. For each affected furnace that is subject to the emission limit specified in Table 1 to this subpart and can meet the applicable emission limit without the use of a control device, the permittee shall demonstrate continuous compliance by satisfying the applicable recordkeeping requirements specified in Section 63.11457. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
78. The permittee shall keep the records specified in Section 63.11457 paragraphs (a)(1) through (8). [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
79. Records must be in a form suitable and readily available for expeditious review, according to Section 63.10(b)(1). The permittee shall record the results of each inspection and maintenance action in a logbook (written or electronic format). The permittee shall keep the logbook onsite and make the logbook available to the permitting authority upon request. As specified in §63.10(b)(1), the permittee shall keep each record for a minimum of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. [40 CFR 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
80. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.a, entered on May 7, 2010] Federally Enforceable Through Title V Permit
81. "Abnormally Low Production Rate (ALPR)" shall mean a glass production rate at or below the production rate (P) set forth below, unless production capacity is increased through a permit modification. For Furnace #1, ALPR = 158 tons per day. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.c and IV.10, entered on May 7, 2010] Federally Enforceable Through Title V Permit
82. "Abnormally Low Production Rate Day" shall mean any Operating Day where production falls into the range of Abnormally Low Production Rate for the Furnace, for at least one continuous hour. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.d, entered on May 7, 2010] Federally Enforceable Through Title V Permit
83. "CEMS Certification Event" shall mean an event that triggers the requirement to complete a first or subsequent CEMS Certification. 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 not 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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.h, entered on May 7, 2010] Federally Enforceable Through Title V Permit
84. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.j, entered on May 7, 2010] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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85. "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 for Consent Decree requirements, 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 the next working day. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.r, entered on May 7, 2010] Federally Enforceable Through Title V Permit
86. "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: $30\text{-day average (lb-E/ton)} = (\text{COD E(lbs)} + \text{P29D E(lbs)}) / (\text{COD Prod(tons)} + \text{P29D Prod(tons)})$ where 30-day average (lb-E/ton) = The Emission Rate 30-day Rolling Average; E = Emissions of the pollutant in question (NOx or SO2); COD = Current Operating Day where the relevant Emission Rate 30-day Rolling Average is the applicable limit; COD E = The daily Emission as measured by a CEMS (continuous emission monitoring system) on the COD, in pounds; COD Prod = Daily glass production on the COD, in tons of glass; P29D = Previous 29 Operating Days where the relevant Emission Rate 30-day Rolling Average is the applicable limit; P29D E = Sum of the daily NOx or SO2 Emissions as measured by a CEMS during the P29D, in pounds; P29D Prod = 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) As specified in the Global Consent Decree, some Operating Days will be excluded from the Emission Rate 30-day Rolling Average. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.t, entered on May 7, 2010] Federally Enforceable Through Title V Permit
87. "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 system, heat exchanger, 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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.x, entered on May 7, 2010] Federally Enforceable Through Title V Permit
88. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.y, entered on May 7, 2010] Federally Enforceable Through Title V Permit
89. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.y.i, entered on May 7, 2010] Federally Enforceable Through Title V Permit
90. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.y.ii, entered on May 7, 2010] Federally Enforceable Through Title V Permit
91. "Furnace Stabilization Period" 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. However, notwithstanding the previous sentence, EPA or SJVAPCD may seek stipulated penalties if SGCI has unduly delayed completion of the Furnace Stabilization Phase. SGCI must track the status of the Furnace Startup as required in Exhibit A of the Global Consent Decree. Exhibit A includes 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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.y.iii, entered on May 7, 2010] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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92. "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 inches above the glass line) and the crown skew (where the Furnace crown meets the Furnace sidewall). [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.z, entered on May 7, 2010] Federally Enforceable Through Title V Permit
93. "Maintenance" shall mean activities necessary to keep the system or equipment working in its normal operation condition. [USEPA Consent Decree 2:10-cv-00121-TSZ, Citation III.6.cc, entered on May 7, 2010] Federally Enforceable Through Title V Permit
94. "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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.ee, entered on May 7, 2010] Federally Enforceable Through Title V Permit
95. "Operating Day" shall mean any Day where any fuel is fired into the Furnace. The Day starts at 12:00 a.m. and ends at 11:59 p.m. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.kk, entered on May 7, 2010] Federally Enforceable Through Title V Permit
96. Limit emissions of Sulfuric Acid (H₂SO₄) Mist to no greater than 1.0 pounds per ton of glass produced. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.8.n, entered on May 7, 2010] Federally Enforceable Through Title V Permit
97. Compliance with the Sulfuric Acid Mist emission limit shall be demonstrated by a stack test conducted on Furnace #1 using EPA Conditional Test Method 13A or B once per Title V permit renewal term. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.8.n, entered on May 7, 2010] Federally Enforceable Through Title V Permit
98. SGCI shall install, maintain, and operate the Oxyfuel Furnace such that the gas that provides the oxidant for combustion of the fuel is at least 90 percent oxygen. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.b.i, IV.7.c.ii, entered on May 7, 2010]
99. The Furnace may not exceed the Emission Rate 30-day Rolling Average limit of 1.3 pounds NO_x per ton of glass produced, as measured using NO_x CEMS (commencing on the first Operating Day after the completion of the Furnace Startup period and CEMS Certificate), except that SGCI may elect to exclude the emissions generated during the following periods from the Emission Rate 30-day Rolling Average: Abnormally Low Production Rate Days, Furnace Startup, malfunction of the Furnace, and Maintenance of the Furnace. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section III.6.t, IV.7.c.iii.1, entered on May 7, 2010] Federally Enforceable Through Title V Permit
100. For any Abnormally Low Production Rate Day where production falls into the range of ALPR for at least one continuous hour, SGCI may exclude emissions generated during that Day from the Emission Rate 30-day Rolling Average. During these Days, a CEMS shall be used to demonstrate compliance with the 24-hour Block Average limit of 587 lb/day of NO_x. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.c.iii.2, entered on May 7, 2010] Federally Enforceable Through Title V Permit
101. For any Operating Day when the Furnace is in startup, the following limits apply: (a) Initial Heating Phase Operational Limit: SGCI shall burn no more than 5.0 million standard cubic feet (5.0 MMscf) of natural gas in Furnace #1; (b) Refractory Soak and Seal Phase Operational Limits: (i) Burn no more than 60 MMscf of natural gas; (ii) Limit excess oxygen below 5% at the furnace exhaust flue as determined by a handheld monitor once per shift; (iii) Limit hot spot temperature to 2,900 degrees F; and (iv) Use thermal blankets or similar techniques to minimize air infiltration until expansion joints are sufficiently closed; (c) Furnace Stabilization Phase Operational Limits: (i) Burn no more than 90 MMscf of natural gas; (ii) Limit excess oxygen below 5% at the furnace exhaust flue as determined by a handheld monitor once per shift; and (iii) Limit hot spot temperature to 2,900 degrees F. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.c.iii.3, entered on May 7, 2010] Federally Enforceable Through Title V Permit
102. For any Operating Day when a Malfunction of the Furnace occurs for any period of time, SGCI may elect to exclude the emissions generated during that Operating Day (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 a 2,348 lb/day limit. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.c.iii.4, entered on May 7, 2010] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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103. For any Operating Day where Maintenance activities on the Furnace are performed, SGCI may elect to exclude the emissions generated during the Maintenance Day from the Emission Rate 30-day Rolling Average. 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 a pound per day limit calculated using the equation below: $\text{NOx OxyMaint} = [(MH \times 4 \times \text{NOx Oxy Abn}) / 24] + [(NH \times \text{NOx Oxy Abn}) / 24]$ where NOx OxyMaint = NOx emission limit for an Oxyfuel Furnace during a Maintenance Day, in pounds per day; MH = Hours of Maintenance; NH = Normal Hours = 24 - MH; NOx Oxy Abn = NOx emission limit for an Oxyfuel Furnace during an Abnormally Low Production Rate Day, in pounds per day = 587 lb/day for Furnace #1. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.c.iii.5, entered on May 7, 2010] Federally Enforceable Through Title V Permit
104. CEMS Certification cannot occur during periods of Abnormally Low Production Rate Days, Furnace Startup, Malfunction, Maintenance, or Color Transition. SGCI shall commence a new CEMS Certification on the Furnace on the first Operating Day after each CEMS Certification Event concludes on the Furnace. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.15.a, entered on May 7, 2010] Federally Enforceable Through Title V Permit
105. If a CEMS Certification Event occurs, then the requirement to demonstrate compliance continuously with the limit for the 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). [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.f, entered on May 7, 2010] Federally Enforceable Through Title V Permit
106. 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, Furnace Malfunction, Furnace Maintenance) under which it is excluded, a calculation of the applicable limit (pounds per day) according to the appropriate equations, 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. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.h, entered on May 7, 2010] Federally Enforceable Through Title V Permit
107. Maintenance Days that SGCI elects to exclude from the Emission Rate 30-day Rolling Average shall not include more than 96 hours of Maintenance annually for Furnace #1. Maintenance shall mean activities necessary to keep the system or equipment working in its normal operating condition, including checker burning and raking. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.13.a, entered on May 7, 2010] Federally Enforceable Through Title V Permit
108. Recordkeeping and Reporting requirements applicable to Furnace Startup: (a) For the Initial Heating Phase: (i) Total natural gas usage in Furnace #1 (in MMscf); (b) For the Refractory Soak and Seal Phase: (i) Total natural gas usage in Furnace #1 (in MMscf); (ii) Excess oxygen percentage at Furnace exhaust flue (as determined by handheld monitor once per shift); (iii) Hot Spot Temperature (measured once per shift); and (iv) A certified statement asserting whether thermal blankets or similar techniques were used during this period; (c) For the Furnace Stabilization Phase: (i) Total natural gas usage in Furnace #1 (in MMscf); (ii) Excess oxygen percentage at the Furnace Exhaust flue (as determined by handheld monitor once per shift); and (iii) Average Hot Spot Temperature (measured once per shift). [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.7.i, entered on May 7, 2010] Federally Enforceable Through Title V Permit
109. At all times, including periods of Abnormally Low Production Rate Days, Furnace Startup, Malfunction, Maintenance, and Color Transition, SGCI shall, to the extent practicable, maintain and operate all Furnaces in a manner consistent with good air pollution control practices for minimizing emissions. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.12, entered on May 7, 2010] Federally Enforceable Through Title V Permit

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ATTACHMENT B

Authority to Construct C-801-1-17



AUTHORITY TO CONSTRUCT

PERMIT NO C-801 1-17

ISSUANCE DATE 10/15/2013

LEGAL OWNER OR OPERATOR SAINT-GOBAIN CONTAINERS INC
MAILING ADDRESS 24441 AVENUE 12
ATTN ENVIRO MANAGER/S ARUNAGIRI
MADERA CA 93637

LOCATION 24441 AVENUE 12 & ROAD 24 1/2
MADERA CA 93637

EQUIPMENT DESCRIPTION

MODIFICATION OF 75 MMBTU/HR (APPROXIMATELY) NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS 2 000 KVA ELECTRIC BOOST A BLOWER AIR STAGING (BAS) SYSTEM NOX SOX CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3 700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2) AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS) CONVERT FURNACE FROM REGENERATIVE TO OXY FUEL ALLOW USE OF EXISTING COMBUSTION TEC LOW NOX BURNERS OR NEW CUSTOM DILUTE COMBUSTION BURNERS REPLACE EXISTING BLANKET CHARGERS WITH NEW GANNA CHARGERS MODIFY BATCH DELIVERY SYSTEM FOR GANNA CHARGERS AND ADD EXHAUST FLOW MONITOR TO EXISTING CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS) FOR RULE 4354 COMPLIANCE AND COMPLIANCE WITH SJVAPCD AND USEPA CONSENT DECREE AND REPLACE THREE EXISTING 10-SECTION IS MACHINES WITH THREE NEW 10 SECTION IS MACHINES

CONDITIONS

- 1 The facility shall submit an application to modify the Title V permit in accordance with the timeframes and procedures of District Rule 2520 [District Rule 2520] Federally Enforceable Through Title V Permit
- 2 All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere [District Rule 4102]
- 3 Particulate matter emissions shall not exceed the maximum allowable emission rate (lb/hr) as determined using the following formula $E = 3.59 \times P^{0.62}$ where E equals the maximum allowable emission rate (lb/hr) and P equals the process weight rate (tons/hr) and is less than or equal to 30 tons/hr [District Rule 4202] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230 5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT This is NOT a PERMIT TO OPERATE Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans specifications and conditions of this Authority to Construct and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District Unless construction has commenced pursuant to Rule 2050 this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance The applicant is responsible for complying with all laws ordinances and regulations of all other governmental agencies which may pertain to the above equipment

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DAVID WARNER Director of Permit Services

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- 4 No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater unless specifically exempted by District Rule 4101 (12/17/92), by using EPA method 9. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101 and Madera County Rule 401] Federally Enforceable Through Title V Permit
- 5 Discharge of sulfur compounds shall not exceed in concentration at the point of discharge 0.2 percent by volume calculated as SO₂ on a dry basis averaged over 15 consecutive minutes. [District Rule 4801]
- 6 The furnace shall be equipped with a continuous emission monitor (CEM) for NO_x, CO, and O₂. This CEM shall be located in the duct for furnace #1 upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct. [District Rule 4354] Federally Enforceable Through Title V Permit
- 7 Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354] Federally Enforceable Through Title V Permit
- 8 The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous opacity monitoring system (COMS) downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60.13 and 40 CFR part 60 Appendix B (Performance Specification 1) and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 1080] Federally Enforceable Through Title V Permit
- 9 The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous emission monitor (CEM) for SO_x at the inlet of the scrubber and downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and applicable sections of Rule 1080 (Stack Monitoring). [District Rules 1080 and 4354] Federally Enforceable Through Title V Permit
- 10 The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
- 11 Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
- 12 Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
- 13 The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60 Appendix F 5.1.1 at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60 Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
- 14 Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
- 15 Permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 16 Permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including time intervals, data and magnitude of excess emissions nature and cause of excess (averaging period used for data reporting shall correspond to the averaging period for each respective emission standard) corrective actions taken and preventive measures adopted applicable time and date of each period during a CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments, and a negative declaration when no excess emissions occurred [District Rule 1080] Federally Enforceable Through Title V Permit
- 17 The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections The sampling ports shall be located upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing [District Rule 1081] Federally Enforceable Through Title V Permit
- 18 Compliance demonstration (source testing) shall be conducted using the methods and procedures approved by the District The District must be notified 30 days prior to any compliance source test and a source test plan must be submitted for approval 15 days prior to testing The results of each source test shall be submitted to the District within 60 days thereafter [District Rule 1081] Federally Enforceable Through Title V Permit
- 19 All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16 1993) [District Rule 1081] Federally Enforceable Through Title V Permit
- 20 The container glass pull rate from furnace #1 shall not exceed either of the following limits 450 U S short tons per day or 157 680 U S short tons per year [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
- 21 Annual emissions from furnace #1 and #2 combined shall not exceed either of the following limits 265,632 lb-SOx/year or 164,719 lb-PM10/year [District Rule 2201] Federally Enforceable Through Title V Permit
- 22 Except during idling start-up or shutdown emissions rates from this unit shall not exceed any of the following limits 0 8 lb SOx/ton of container glass pulled, 1 0 lb CO/ton of container glass pulled, or 0 25 lb-VOC/ton of container glass pulled SOx emissions limit is based on a 24 hour rolling average CO and VOC emissions limits are based on a three hour rolling average [District Rules 2201 and 4354]
- 23 The pollutant mass emission rate in lb/hr shall be converted to lb pollutant/ton of glass pulled as specified in Rule 4354 The operator of a oxy-fuel fired furnace oxygen-assisted combustion furnace, or a furnace utilizing any fuel oxidants other than 100% ambient air, shall submit to the APCO, ARB, and EPA for approval any methodologies and data that will be used to calculate emission rates for NOx, CO, and VOC if the methods are different from those specified in Rule 4354 Unless the operator received prior written approval from APCO, ARB and EPA of all the calculation methods to be used that are different from those specified in Rule 4354, compliance with the emissions limits cannot be fully demonstrated and it shall be deemed to be a violation of the rule [District Rule 4354]
- 24 Emissions from this furnace shall not exceed either of the following limits 450 0 lb-CO/day or 21 6 lb-VOC/day [District Rule 2201]
- 25 Except during idling start-up or shutdown Particulate Matter emissions (as PM10) shall not exceed 0 5 pounds per ton glass pulled on a block 24-hour average from the glass melting furnace [District Rule 4354] Federally Enforceable Through Title V Permit
- 26 Except during idling start-up or shutdown NOx emissions from this furnace shall not exceed 1 3 lbs/ton of glass produced, on a 30 day rolling average basis [District Rules 2201 and 4354 and USEPA Consent Decree 2 10 cv 00121-TSZ, Section III 6 t IV 7 c iii 1 entered on May 7 2010]
- 27 NOx CO, VOC SOx and PM10 emissions during idling shall not exceed the emissions limits as calculated using the following equation NOx, CO, VOC, SOx, or PM10 (lb/day) = (Applicable emission limit (in lbs/ton)) x (Furnace permitted production capacity (in tons/day)) [District Rule 4354] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 28 Permittee shall notify the District at least 24 hours before initiating idling shutdown and startup and this notification shall include date and time of the start of the exempt operation reason for performing the operation, and an estimated completion date The permittee shall notify the District by telephone within 24 hours after completion of the operation and shall maintain operating records and/or support documentation necessary to claim exemption [District Rule 4354] Federally Enforceable Through Title V Permit
- 29 The length of time allowed for a start-up shall be determined by the APCO and EPA on a case-by-case basis in accordance with District Rule 4354 [District Rule 4354] Federally Enforceable Through Title V Permit
- 30 The permittee shall operate and maintain the electrostatic precipitator (ESP) system to reduce particulate emissions to 0.2 pounds of particulate per ton of glass pulled, using EPA Method 5 as set forth in 40 C.F.R. Part 60, Appendix A and 0.45 pounds of particulate per ton of glass pulled, using the combined results of EPA Methods 5 and 202 as set forth in 40 C.F.R. Part 60 Appendix A [District Rule 2201] Federally Enforceable Through Title V Permit
- 31 Monitoring of the ESP shall comply with the requirements of 40 CFR Part 64 [District Rule 4354] Federally Enforceable Through Title V Permit
- 32 The ESP shall be operated at a secondary voltage of at least 12 kV [District Rules 2520 and 4354 and 40 CFR 64] Federally Enforceable Through Title V Permit
- 33 The ESP secondary voltage shall be monitored and recorded at a minimum during every one hour of operation [District Rules 2520 and 4354 and 40 CFR 64]
- 34 If the monitored ESP secondary voltage is below the minimum allowable voltage the permittee shall return the voltage to within the acceptable range as soon as possible but no longer than 1 hour of operation after detection If the ESP secondary voltage readings continue to be below the allowable range after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance In lieu of conducting a source test the permittee may stipulate a violation has occurred subject to enforcement action The permittee must then correct the violation show compliance has been re-established, and resume monitoring procedures If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (as amended December 17 1992) the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition [District Rules 2520 and 4354 and 40 CFR 64] Federally Enforceable Through Title V Permit
- 35 The permittee shall establish minimum excess oxygen (%) in the flue gas during the next annual source test while demonstrating compliance with VOC emission limits of this permit The established limit shall be listed on the Permit to Operate [District Rules 2201 and 4354]
- 36 Excess oxygen (%) in the flue gas shall be measured continuously The measured excess oxygen (%) shall be averaged over 30 consecutive-minute to demonstrate compliance with the established minimum excess oxygen (%) The averaged reading shall be recorded each day at the frequency specified in this condition [District Rule 4354]
- 37 The permittee shall operate and maintain the semi-dry scrubber system to reduce SO_x emissions by at least 85% excluding days when the scrubber inlet's daily average concentration of SO₂ is 353 ppmvd or less, in which case the scrubber outlet's daily average concentration of SO₂ shall be reduced to at least 53 ppmdv except during periods of scheduled or preventative maintenance The averaging period for the reduction efficiency shall be calculated on a rolling 30-day average basis excluding days when the scrubber inlet's daily average concentration of SO₂ is 353 ppmdv or less Compliance with the SO_x reduction efficiency and daily concentration standard shall be demonstrated by the combined ductwork scrubber inlet and downstream of the control equipment outlet SO₂ continuous concentration monitoring [District Rule 2201] Federally Enforceable Through Title V Permit
- 38 This unit shall be fired on PUC regulated natural gas or LPG backup fuel only [District Rule 2201] Federally Enforceable Through Title V Permit
- 39 Certification of the continuous opacity monitoring system (COMS) shall be demonstrated by meeting the requirements of 40 CFR Part 60.13 and 40 CFR Part 60 Appendix B, Performance Specification 1 [40 CFR 60.13] Federally Enforceable Through Title V Permit
- 40 Source testing to measure NO_x, SO_x, PM₁₀, CO and VOC shall be conducted within 90 days of the startup period as defined in Rule 4354 and USEPA Consent Decree 2:10-cv-00121-TSZ, entered on May 7, 2010 [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

- 41 Source testing to measure NOx CO and VOC emissions shall be conducted once every calendar year but no more than every 18 months and not sooner than every 6 months [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
- 42 Source testing to measure SOx and PM10 emissions shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork once every calendar year but no more than every 18 months and not sooner than every 6 months [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
- 43 Source testing shall be conducted using the following test methods NOx (heat input basis) - USEPA Method 19, NOx (ppmv) - USEPA Method 7E or CARB Method 100, CO (ppmv) USEPA Method 10 or CARB Method 100, VOC (ppmv) - USEPA Method 25A expressed in terms of carbon Stack gas oxygen, carbon dioxide, excess air and dry molecular weight - USEPA Method 3 or 3A or CARB Method 100 Stack gas velocity and volumetric flow rate - USEPA Method 2 SOx - USEPA Method 6C or 8 or CARB Method 100, PM10 - EPA methods 201 and 202, or EPA methods 201A and 202 or CARB method 501 in conjunction with CARB method 5 In lieu of performing a source test for PM10, the results of CARB Method 5 or EPA Methods 5 and 8 may be used for compliance with the PM10 emissions limit If this option is used then all of the particulate emissions will be considered to be PM10 [District Rules 1081 2520 and 4354]
- 44 Source test results shall be representative of normal operations but not less than 60 percent of the permitted glass production capacity [District Rule 4354]
- 45 For operators using alternative monitoring systems, during the source test the operator shall monitor and record, at a minimum all operating data for each parameter fresh feed rate and flue gas flow rate and submit this data with the test report [District Rule 4354]
- 46 During source testing the arithmetic average of three (3) 30-consecutive-minute test runs shall be used to determine compliance with NOx CO VOC, and SOx emission limits [District Rule 4354]
- 47 During source testing the arithmetic average of three (3) 60-consecutive-minute test runs shall be used to determine compliance with PM10 emission limits [District Rule 4354]
- 48 For a given pollutant if two of the three runs individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the furnace even if the averaged emissions of all three test runs is less than the applicable limit [District Rule 4354]
- 49 Compliance testing for particulate shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork in accordance with USEPA Reference Methods 1 2 5 and 202 as set forth in 40 CFR Part 60, Appendix A Each test shall consist of three runs The sampling time and volume for each run shall be at least 60 minutes and 31.8 dry standard cubic feet Thereafter compliance testing of particulate matter shall be conducted on an annual basis within 60 days of the anniversary date of the latest compliance testing [District Rule 1081] Federally Enforceable Through Title V Permit
- 50 Commercial arsenic shall not be used as a raw material in this glass furnace This prohibition is required for continued exemption from the requirements of 40 CFR 61 Subpart N [District Rule 2520] Federally Enforceable Through Title V Permit
- 51 Idling is defined as the operation of the furnace at less than 25% of the permitted production capacity or fuel use capacity as stated on the Permit to Operate [District Rule 4354] Federally Enforceable Through Title V Permit
- 52 The emission control system shall be in operation whenever technologically feasible during idling to minimize emissions Emissions of NOx CO, VOC SOx, and PM10 during idling shall not exceed the amount as calculated pursuant to Rule 4354 Notifications shall be performed and records kept in accordance with Rule 4354 [District Rule 4354] Federally Enforceable Through Title V Permit
- 53 Shutdown shall mean the period of time during which the glass melting furnace is purposely allowed to cool from its operating temperature and molten glass is removed from the tank for the purpose of a furnace rebuild or reconstruction or during a natural gas curtailment or subject to EPA's approval, when it is commercially necessary [District Rule 4354] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

- 54 The duration of shutdown as measured from the time the furnace operations drop below the idle threshold specified in Rule 4354 to when all emissions from the furnace cease shall not exceed 20 days. The emission control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. Notifications shall be performed and records kept in accordance with Rule 4354 [District Rule 4354] Federally Enforceable Through Title V Permit
- 55 Start-up shall mean the period of time after initial construction, a furnace rebuild, or a shutdown, during which the glass melting furnace is heated to operating temperature by the primary furnace combustion systems and systems and instrumentation are brought to stabilization and calibrated. The operator shall submit a request for a start-up exemption to the APCO, ARB, and EPA in conjunction with or in advance of an application for Authority to Construct (ATC) associated with a furnace rebuild. The emission control system shall be in operation as soon as technologically feasible during start up to minimize emissions and notifications shall be performed and records kept in accordance with Rule 4354 [District Rule 4354] Federally Enforceable Through Title V Permit
- 56 NO_x, CO, VOC, SO_x and PM₁₀ emission limitations of District Rule 4354 shall not apply during periods of routine maintenance of an add-on emission control system as long as the routine maintenance does not exceed 144 hours total per calendar year for all add-on controls and the routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions [District Rule 4354] Federally Enforceable Through Title V Permit
- 57 Operators shall maintain daily records of the following items: total hours of operation, the quantity of glass pulled from each furnace, NO_x emission rate in lb/ton glass pulled, CO emission rate, VOC emission rate, SO_x emission rate in lb/ton glass pulled, PM₁₀ emission rate in lb/ton glass pulled, weight of mixed color cullet used, total amount of cullet used by weight, ratio, expressed in percent, of mixed color mix weight to total cullet weight, source tests and source test results, maintenance and repair, malfunction, idling, start-up, and shutdown. For pollutants monitored using an approved parametric monitoring arrangement, operators shall maintain records of the acceptable range for each approved key system operating parameter as established during source test, and shall record the operating values of the key system operating parameters at the approved recording frequency [District Rules 2201 and 4354]
- 58 Aggregated emissions for a given pollutant of a furnace battery are the emissions for the pollutant as measured at the common stack divided by the sum of the daily glass pulled from each furnace [District Rule 4354]
- 59 An operator of either furnace battery or multiple furnaces that elects to meet the emission limits for the furnaces through the requirements of Section 9.7 shall be subject to a 10% air quality benefit in accordance with 40 CFR Part 51 Subpart U. The maximum emission rate shall be at least 10% lower than the applicable limit specified in Section 5.1 (Tier 3 NO_x), Section 5.2 (CO and VOC), Section 5.3 (SO_x) or Section 5.4 (PM₁₀) for each pollutant subject to this option [District Rule 4354]
- 60 The operator of a furnace battery or multiple furnaces choosing the alternate emission limit shall operate the furnace battery or multiple furnaces according to Sections 9.7.3 through 9.7.8.5. Only those pollutants with emissions that are averaged across multiple furnaces/furnace battery are subject to all subparts of Section 9.7. Pollutant emissions that are not averaged across multiple furnaces/furnace battery are subject to the applicable emission limits of Sections 5.1 through 5.4 [District Rule 4354]
- 61 The daily aggregate emissions shall be no greater than those obtained by controlling each furnace to comply individually with applicable emission limits, less the 10% air quality benefit [District Rule 4354]
- 62 The operator shall demonstrate compliance with the daily aggregate emissions through source test results and monitoring by either CEMS or approved alternate emission monitoring methods [District Rule 4354]
- 63 Any violation of the aggregated emission limits shall constitute a violation of the rule for each furnace for the entire averaging period [District Rule 4354]
- 64 The operator shall notify the APCO of any violation of Rule 4354 Section 9.7.3 within 24 hours. The notification shall include name and location of the facility, identification of furnace(s) causing the violation, the cause and the expected duration of violation, calculation of actual NO_x, CO, VOC, SO_x and PM₁₀ emissions during the violation, corrective actions and schedules to complete the work [District Rule 4354]
- 65 The permittee shall retain records for a period of five years, make the records available on site during normal business hours to the APCO, ARB, or EPA, and submit the records to the APCO, ARB, or EPA upon request [District Rules 1070, 2201 and 4354]

CONDITIONS CONTINUE ON NEXT PAGE

- 66 Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201 (as amended December 17, 1992) District Rule 4202 (as amended December 17 1992) District Rule 4354 (as amended May 19 2011) and District Rule 4801 (as amended December 17 1992) A permit shield is granted from these requirements [District Rule 2520] Federally Enforceable Through Title V Permit
- 67 The requirements of District Rule 4301 (as amended December 17, 1992) were determined to not apply to this unit A permit shield is granted from this requirement [District Rule 2520] Federally Enforceable Through Title V Permit
- 68 The requirements of 40 CFR 61 Subpart N were determined to not apply to this unit A permit shield is granted from this requirement [District Rule 2520] Federally Enforceable Through Title V Permit
- 69 Compliance with a Sulfuric Acid mist emission limit of 1 0 pound per ton of glass produced shall be demonstrated by a stack test performed using Conditional Test Method 13A or B on this furnace on or before December 31, 2011 Stack testing shall be required to be performed after this initial test only once during the life of the Title V permit renewal [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 8 n, filed 4/22/2010] Federally Enforceable Through Title V Permit
- 70 The permittee shall comply with the applicable emission limits specified in 40 CFR Part 63 Subpart SSSSSS Table 1 Existing glass melting furnace that produces glass at an annual rate of at least 45 Mg/yr (50 tpy) and is charged with compounds of arsenic cadmium chromium manganese lead or nickel as raw materials shall meet one of the following emission limits the 3-hour block average production based PM mass emission rate must not exceed 0 1 gram per kilogram (g/kg) (0 2 pound per ton (lb/ton)) of glass produced, or the 3 hour block average production based metal HAP mass emission rate must not exceed 0 01 g/kg (0 02 lb/ton) of glass produced The permittee may request the APCO to grant an extension allowing up to one additional year to comply with the applicable emission limits if such additional period is necessary for the installation of emission controls [40 CFR 63 Subpart SSSSSS]
- 71 A furnace that produces glass at an annual rate of at least 45 Mg/yr (50 tpy) and is not charged with glass manufacturing metal HAP, and begins production of a glass product that includes one or more glass manufacturing metal HAP as raw materials, and produces at least 45 Mg/yr (50 tpy) of this glass product, shall comply with the applicable emission limit specified in Section 63 11451 within 2 years of the date on which the facility introduced production of the glass product that contains glass manufacturing metal HAP [40 CFR 63 Subpart SSSSSS]
- 72 For each monitoring system required by this subpart the permittee shall install calibrate operate and maintain the monitoring system according to the manufacturer's specifications and the requirements specified in Section 63 11454 paragraphs (a)(1) through (7) [40 CFR 63 Subpart SSSSSS]
- 73 For each existing furnace that is subject to the emission limit specified in Table 1 to this subpart and is controlled with an ESP the permittee shall meet the requirements specified in Section 63 11454 paragraphs (b)(1) or (2) The permittee shall monitor the secondary voltage and secondary electrical current to each field of the ESP according to the requirements of Section 63 11454 paragraph (a) or submit a request for alternative monitoring as described in Section 63 11454 paragraph (g) [40 CFR 63 Subpart SSSSSS]
- 74 The permittee shall be in compliance with the applicable emission limits in this subpart at all times except during periods of startup shutdown and malfunction [40 CFR 63 Subpart SSSSSS]
- 75 The permittee shall always operate and maintain the affected source including air pollution control and monitoring equipment according to the provisions in Section 63 6(e)(1)(i) [40 CFR 63 Subpart SSSSSS]
- 76 For each affected furnace that is subject to the emission limit specified in Table 1 to this subpart the permittee shall monitor the performance of the furnace emission control device under the conditions specified in Section 63 11454(a)(7) and according to the requirements in Sections 63 6(e)(1) and 63 8(c) and Section 63 11455 paragraphs (c)(1) through (6) [40 CFR 63 Subpart SSSSSS]

CONDITIONS CONTINUE ON NEXT PAGE

- 77 Following the initial inspections the permittee shall perform periodic inspections and maintenance of each affected furnace control device according to the requirements in Section 63 11455 paragraphs (d)(1) through (4) For each ESP, the permittee shall conduct inspections according to the requirements in Section 63 11455 paragraphs (d)(2)(i) through (iii) The permittee shall conduct visual inspections of the system ductwork, housing unit, and hopper for leaks at least every 12 months The permittee shall conduct inspections of the interior of the ESP to determine the condition and integrity of corona wires collection plates, plate rappers, hopper, and air diffuser plates every 24 months If an initial inspection is not required as specified in Section 63 11453(b)(3)(ii) the first inspection must not be more than 24 months from the last inspection The permittee shall record the results of each periodic inspection specified in this section in a logbook (written or electronic format) as specified in Section 63 11457(c) If the results of a required inspection indicate a problem with the operation of the emission control system, the permittee shall take immediate corrective action to return the control device to normal operation according to the equipment manufacturer's specifications or instructions [40 CFR 63 Subpart SSSSSS]
- 78 For each affected furnace that is subject to the emission limit specified in Table 1 to this subpart and can meet the applicable emission limit without the use of a control device, the permittee shall demonstrate continuous compliance by satisfying the applicable recordkeeping requirements specified in Section 63 11457 [40 CFR 63 Subpart SSSSSS]
- 79 The permittee shall keep the records specified in Section 63 11457 paragraphs (a)(1) through (8) [40 CFR 63 Subpart SSSSSS]
- 80 Records must be in a form suitable and readily available for expeditious review, according to Section 63 10(b)(1) The permittee shall record the results of each inspection and maintenance action in a logbook (written or electronic format) The permittee shall keep the logbook onsite and make the logbook available to the permitting authority upon request As specified in §63 10(b)(1) the permittee shall keep each record for a minimum of 5 years following the date of each occurrence measurement maintenance corrective action report or record [40 CFR 63 Subpart SSSSSS]
- 81 "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 [USEPA Consent Decree 2 10-cv-00121-TSZ Section III 6 a, entered on May 7, 2010]
- 82 'Abnormally Low Production Rate (ALPR) shall mean a glass production rate at or below the production rate (P) set forth below unless production capacity is increased through a permit modification For Furnace #1, ALPR = 158 tons per day [USEPA Consent Decree 2 10 cv-00121 TSZ Section III 6 c and IV 10 entered on May 7 2010]
- 83 'Abnormally Low Production Rate Day" shall mean any Operating Day where production falls into the range of Abnormally Low Production Rate for the Furnace, for at least one continuous hour [USEPA Consent Decree 2 10 cv 00121 TSZ Section III 6 d entered on May 7, 2010]
- 84 "CEMS Certification Event" shall mean an event that triggers the requirement to complete a first or subsequent CEMS Certification Events that will trigger subsequent CEMS Certification include a Furnace Startup or a First Control Device Startup SGC I shall commence such recertification no later than thirty (30) days after the Furnace Startup period concludes (but not 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 [USEPA Consent Decree 2 10-cv-00121 TSZ Section III 6 h entered on May 7 2010]
- 85 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 [USEPA Consent Decree 2 10-cv 00121-TSZ Section III 6 j, entered on May 7 2010]
- 86 '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 for Consent Decree requirements 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 the next working day [USEPA Consent Decree 2 10-cv 00121-TSZ, Section III 6 r, entered on May 7, 2010]

CONDITIONS CONTINUE ON NEXT PAGE

- 87 "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 $30\text{-day average (lb-E/ton)} = (\text{COD E(lbs)} + \text{P29D E(lbs)}) / (\text{COD Prod(tons)} + \text{P29D Prod(tons)})$ where $30\text{-day average (lb-E/ton)} = \text{The Emission Rate 30-day Rolling Average}$ E = Emissions of the pollutant in question (NO_x or SO₂) COD = Current Operating Day where the relevant Emission Rate 30-day Rolling Average is the applicable limit COD E = The daily Emission as measured by a CEMS (continuous emission monitoring system) on the COD, in pounds, COD Prod = Daily glass production on the COD, in tons of glass P29D = Previous 29 Operating Days where the relevant Emission Rate 30-day Rolling Average is the applicable limit, P29D E = Sum of the daily NO_x or SO₂ Emissions as measured by a CEMS during the P29D, in pounds P29D Prod = 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) As specified in the Global Consent Decree some Operating Days will be excluded from the Emission Rate 30-day Rolling Average [USEPA Consent Decree 2 10 cv-00121-TSZ Section III 6 t entered on May 7 2010]
- 88 '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 system heat exchanger, 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 [USEPA Consent Decree 2 10-cv 00121-TSZ Section III 6 x, entered on May 7 2010]
- 89 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 [USEPA Consent Decree 2 10 cv-00121-TSZ Section III 6 y entered on May 7 2010]
- 90 '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 [USEPA Consent Decree 2 10-cv-00121-TSZ Section III 6 y i entered on May 7, 2010]
- 91 "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 [USEPA Consent Decree 2 10-cv 00121-TSZ Section III 6 y ii entered on May 7, 2010]
- 92 "Furnace Stabilization Period' 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 However notwithstanding the previous sentence EPA or SJVAPCD may seek stipulated penalties if SGCI has unduly delayed completion of the Furnace Stabilization Phase SGCI must track the status of the Furnace Startup as required in Exhibit A of the Global Consent Decree Exhibit A includes 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 [USEPA Consent Decree 2 10-cv-00121-TSZ Section III 6 y iii entered on May 7 2010]
- 93 ' 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 inches above the glass line) and the crown skew (where the Furnace crown meets the Furnace sidewall) [USEPA Consent Decree 2 10-cv-00121-TSZ Section III 6 z, entered on May 7 2010]
- 94 Maintenance shall mean activities necessary to keep the system or equipment working in its normal operation condition [USEPA Consent Decree 2 10-cv-00121-TSZ, Citation III 6 cc, entered on May 7, 2010]
- 95 ' 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 [USEPA Consent Decree 2 10-cv 00121 TSZ, Section III 6 ee, entered on May 7 2010]

CONDITIONS CONTINUE ON NEXT PAGE

- 96 'Operating Day' shall mean any Day where any fuel is fired into the Furnace. The Day starts at 12 00 a.m. and ends at 11 59 p.m. [USEPA Consent Decree 2 10-cv 00121-TSZ, Section III 6 k entered on May 7, 2010]
- 97 Limit emissions of Sulfuric Acid (H₂SO₄) Mist to no greater than 1 0 pounds per ton of glass produced [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 8 n entered on May 7 2010]
- 98 Compliance with the Sulfuric Acid Mist emission limit shall be demonstrated by a stack test conducted on Furnace #1 using EPA Conditional Test Method 13A or B once per Title V permit renewal term [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 8 n entered on May 7 2010]
- 99 SGCI shall install, maintain, and operate the Oxyfuel Furnace such that the gas that provides the oxidant for combustion of the fuel is at least 90 percent oxygen [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 7 b i, IV 7 c ii entered on May 7, 2010]
- 100 The Furnace may not exceed the Emission Rate 30-day Rolling Average limit of 1 3 pounds NO_x per ton of glass produced as measured using NO_x CEMS (commencing on the first Operating Day after the completion of the Furnace Startup period and CEMS Certificate) except that SGCI may elect to exclude the emissions generated during the following periods from the Emission Rate 30-day Rolling Average: Abnormally Low Production Rate Days, Furnace Startup, malfunction of the Furnace, and Maintenance of the Furnace [USEPA Consent Decree 2 10 cv-00121-TSZ Section III 6 t IV 7 c iii 1 entered on May 7 2010]
- 101 For any Abnormally Low Production Rate Day where production falls into the range of ALPR for at least one continuous hour, SGCI may exclude emissions generated during that Day from the Emission Rate 30-day Rolling Average. During these Days a CEMS shall be used to demonstrate compliance with the 24-hour Block Average limit of 587 lb/day of NO_x [USEPA Consent Decree 2 10-cv 00121-TSZ Section IV 7 c iii 2 entered on May 7 2010]
- 102 For any Operating Day when the Furnace is in startup, the following limits apply: (a) Initial Heating Phase Operational Limit: SGCI shall burn no more than 5 0 million standard cubic feet (5 0 MMscf) of natural gas in Furnace #1; (b) Refractory Soak and Seal Phase Operational Limits: (i) Burn no more than 60 MMscf of natural gas; (ii) Limit excess oxygen below 5% at the furnace exhaust flue as determined by a handheld monitor once per shift; (iii) Limit hot spot temperature to 2 900 degrees F; and (iv) Use thermal blankets or similar techniques to minimize air infiltration until expansion joints are sufficiently closed; (c) Furnace Stabilization Phase Operational Limits: (i) Burn no more than 90 MMscf of natural gas; (ii) Limit excess oxygen below 5% at the furnace exhaust flue as determined by a handheld monitor once per shift; and (iii) Limit hot spot temperature to 2 900 degrees F [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 7 c iii 3 entered on May 7 2010]
- 103 For any Operating Day when a Malfunction of the Furnace occurs for any period of time, SGCI may elect to exclude the emissions generated during that Operating Day (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 a 2 348 lb/day limit [USEPA Consent Decree 2 10-cv 00121-TSZ Section IV 7 c iii 4 entered on May 7 2010]
- 104 For any Operating Day where Maintenance activities on the Furnace are performed, SGCI may elect to exclude the emissions generated during the Maintenance Day from the Emission Rate 30 day Rolling Average. 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 a pound per day limit calculated using the equation below: $NO_x \text{ OxyMaint} = [(MH \times 4 \times NO_x \text{ Oxy Abn}) / 24] + [(NH \times NO_x \text{ Oxy Abn}) / 24]$ where $NO_x \text{ OxyMaint}$ = NO_x emission limit for an Oxyfuel Furnace during a Maintenance Day, in pounds per day; MH = Hours of Maintenance; NH = Normal Hours = 24 - MH; $NO_x \text{ Oxy Abn}$ = NO_x emission limit for an Oxyfuel Furnace during an Abnormally Low Production Rate Day, in pounds per day = 587 lb/day for Furnace #1 [USEPA Consent Decree 2 10-cv 00121-TSZ Section IV 7 c iii 5, entered on May 7 2010]
- 105 CEMS Certification cannot occur during periods of Abnormally Low Production Rate Days, Furnace Startup, Malfunction, Maintenance, or Color Transition. SGCI shall commence a new CEMS Certification on the Furnace on the first Operating Day after each CEMS Certification Event concludes on the Furnace [USEPA Consent Decree 2 10-cv 00121-TSZ Section IV 15 a, entered on May 7, 2010]

CONDITIONS CONTINUE ON NEXT PAGE

- 106 If a CEMS Certification Event occurs then the requirement to demonstrate compliance continuously with the limit for the 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) [USEPA Consent Decree 2 10-cv-00121-TSZ Section IV 7 f, entered on May 7, 2010]
- 107 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, Furnace Malfunction Furnace Maintenance) under which it is excluded, a calculation of the applicable limit (pounds per day) according to the appropriate equations 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 [USEPA Consent Decree 2 10-cv-00121-TSZ, Section IV 7 h, entered on May 7 2010]
- 108 Maintenance Days that SGCI elects to exclude from the Emission Rate 30 day Rolling Average shall not include more than 96 hours of Maintenance annually for Furnace #1 Maintenance shall mean activities necessary to keep the system or equipment working in its normal operating condition, including checker burning and raking [USEPA Consent Decree 2 10-cv-00121 TSZ Section IV 13 a entered on May 7, 2010]
- 109 Recordkeeping and Reporting requirements applicable to Furnace Startup (a) For the Initial Heating Phase (i) Total natural gas usage in Furnace #1 (in MMscf), (b) For the Refractory Soak and Seal Phase (i) Total natural gas usage in Furnace #1 (in MMscf) (ii) Excess oxygen percentage at Furnace exhaust flue (as determined by handheld monitor once per shift) (iii) Hot Spot Temperature (measured once per shift) and (iv) A certified statement asserting whether thermal blankets or similar techniques were used during this period (c) For the Furnace Stabilization Phase (i) Total natural gas usage in Furnace #1 (in MMscf) (ii) Excess oxygen percentage at the Furnace Exhaust flue (as determined by handheld monitor once per shift) and (iii) Average Hot Spot Temperature (measured once per shift) [USEPA Consent Decree 2 10 cv-00121 TSZ Section IV 7 i entered on May 7 2010]
- 110 At all times, including periods of Abnormally Low Production Rate Days Furnace Startup Malfunction Maintenance and Color Transition SGCI shall, to the extent practicable maintain and operate all Furnaces in a manner consistent with good air pollution control practices for minimizing emissions [USEPA Consent Decree 2 10-cv-00121-TSZ, Section IV 12 entered on May 7 2010]

ATTACHMENT C

Application

San Joaquin Valley Air Pollution Control District

www.valleyair.org

RECEIVED

AUG 26 2013

Permit Application For:

Permits Section
SJVAPCD

ADMINISTRATIVE AMENDMENT MINOR MODIFICATION SIGNIFICANT MODIFICATION

1. PERMIT TO BE ISSUED TO: Saint-Gobain Containers, Inc.		
2. MAILING ADDRESS: STREET/P.O. BOX: <u>P.O. Box 4200</u> CITY: <u>Muncie</u> STATE: <u>Indiana</u> 9-DIGIT ZIP CODE: <u>47302-4200</u>		
3. LOCATION WHERE THE EQUIPMENT WILL BE OPERATED: STREET: <u>24441 Avenue 12 & Road 24 1/2</u> CITY: <u>Madera</u> _____ 1/4 SECTION _____ TOWNSHIP _____ RANGE _____		INSTALLATION DATE: TBD
4. GENERAL NATURE OF BUSINESS: <u>Container glass production</u>		
5. DESCRIPTION OF EQUIPMENT OR MODIFICATION FOR WHICH APPLICATION IS MADE (include Permit #'s if known, and use additional sheets if necessary) <u>Modification of permit for C-801-1 (Furnace 1) to add flexibility to use dilute combustion burners</u>		
6. TYPE OR PRINT NAME OF APPLICANT: <u>Michael Gibbons</u>		TITLE OF APPLICANT: <u>Plant Manager</u>
7. SIGNATURE OF APPLICANT: 		DATE: <u>8/23/13</u> PHONE: (765) 741-7117 FAX: (765) 741-4846 EMAIL: Michael.J.Gibbons@saint-gobain.com

For APCD Use Only:

DATE STAMP RECEIVED AUG 27 2013 FINANCE SJVUAPCD	FILING FEE RECEIVED: \$ <u>71.00</u> CHECK#: <u>2700476</u> DATE PAID: <u>8/26/13</u> KM PROJECT NO: <u>C-1132561</u> FACILITY ID: <u>C-801</u>
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San Joaquin Valley Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Saint-Gobain Containers, Inc.	FACILITY ID: C- 801
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Saint-Gobain Containers, Inc.	
3. Agent to the Owner: n/a	

II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Michael Gibbons
Signature of Responsible Official

5/23/13
Date

Michael Gibbons

Name of Responsible Official (please print)

Plant Manager

Title of Responsible Official (please print)

ATTACHMENT D

Previous Title V Operating
Permit C-801-1-13

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-801-1-13

EXPIRATION DATE: 01/31/2015

EQUIPMENT DESCRIPTION:

75 MMBTU/HR (APPROXIMATELY) NATURAL GAS-FIRED (WITH PROPANE BACKUP) CONTAINER GLASS MELTING FURNACE #1 (NORTH) WITH COMBUSTION TEC LOW NOX BURNERS, 2,000 KVA ELECTRIC BOOST, A BLOWER AIR STAGING (BAS) SYSTEM, NOX, SOX, CO AND O2 CONTINUOUS EMISSIONS MONITORING SYSTEM (CEMS), AND THREE (3) PRODUCTION LINES EACH WITH A 10 INDIVIDUAL SECTION (IS) FORMING MACHINE WITH A MCGILL AIRCLEAN MODEL 3-700 SEMI-DRY SCRUBBER/ESP SYSTEM (COMMON TO FURNACE #2), AND A CONTINUOUS OPACITY MONITORING SYSTEM (COMS)

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 4102]
2. Particulate matter emissions shall not exceed the maximum allowable emission rate (lb/hr), as determined using the following formula: $E = 3.59 \times P^{0.62}$, where E equals the maximum allowable emission rate (lb/hr) and P equals the process weight rate (tons/hr) and is less than or equal to 30 tons/hr. [District Rule 4202, 4.0] Federally Enforceable Through Title V Permit
3. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (12/17/92), by using EPA method 9. If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and Madera County Rule 401] Federally Enforceable Through Title V Permit
4. Discharge of sulfur compounds shall not exceed in concentration at the point of discharge 0.2 percent by volume calculated as SO₂, on a dry basis averaged over 15 consecutive minutes. [District Rule 4801, 3.1]
5. The furnace shall be equipped with a continuous emission monitor (CEM) for NO_x, CO, and O₂. This CEM shall be located in the duct for furnace #1 upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct. [District Rule 4354, 5.9.1 & 5.9.2; and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.c.i, issued June 22, 2005] Federally Enforceable Through Title V Permit
6. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures), and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6 and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.c.i, issued June 22, 2005] Federally Enforceable Through Title V Permit
7. The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous opacity monitoring system (COMS) downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 60.13 and 40 CFR part 60 Appendix B (Performance Specification 1), and applicable sections of Rule 1080 (Stack Monitoring). [District Rule 1080 and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.c.iii, issued June 22, 2005] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

8. The common exhaust stack for furnaces #1 and #2 shall be equipped with a continuous emission monitor (CEM) for SOX at the inlet of the scrubber and downstream of the control equipment. Continuous emissions monitor(s) shall meet the requirements of 40 CFR part 51, 40 CFR parts 60.7 and 60.13, 40 CFR part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures), and applicable sections of Rule 1080 (Stack Monitoring). [District Rules 1080 and 4354, 5.9.3; and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.c.i, issued June 22, 2005] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
11. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F, 5.1.1 at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
13. Audits of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and compliance source testing are both performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
14. Permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
15. Permittee shall submit a written report to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions; nature and cause of excess (averaging period used for data reporting shall correspond to the averaging period for each respective emission standard); corrective actions taken and preventive measures adopted; applicable time and date of each period during a CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
16. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located upstream of the point where furnace #1 and furnace #2 emissions merge into a common duct. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. Compliance demonstration (source testing) shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval 15 days prior to testing. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. All required source testing shall conform to the compliance testing procedures described in District Rule 1081 (as amended December 16, 1993). [District Rule 1081] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

19. The container glass pull rate from furnace #1 shall not exceed either of the following limits: 450 U.S. short tons per day or 157,680 U.S. short tons per year. [District Rules 2201 and 4354, 6.1] Federally Enforceable Through Title V Permit
20. Annual emissions from furnace #1 and #2 combined shall not exceed either of the following limits: 265,632 lb-SOx/year or 164,719 lb-PM10/year. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Except during idling, start-up, or shutdown, emissions rates from this unit shall not exceed any of the following limits: 0.8 lb-SOx/ton of container glass pulled, 300 ppmv CO @ 8% O₂, or 20 ppmv VOC @ 8% O₂. SOx emissions limit is based on a 24 hour rolling average. CO and VOC emissions limits are based on a three hour rolling average. [District Rules 2201 and 4354, 5.2 & 5.3] Federally Enforceable Through Title V Permit
22. The pollutant mass emission rate in lb/hr shall be converted to lb pollutant/ton of glass pulled as specified in Section 8.1 of Rule 4354. The CO and VOC emission concentrations shall be corrected to 8.0 percent oxygen as specified in Section 8.2 of Rule 4354. The operator of a oxy-fuel fired furnace, oxygen-assisted combustion furnace, or a furnace utilizing any fuel oxidants other than 100% ambient air, shall submit to the APCO, ARB, and EPA for approval any methodologies and data that will be used to calculate emission rates for NO_x, CO, and VOC if the methods are different from those specified in Sections 8.1 or 8.2 of Rule 4354. Unless the operator received prior written approval from APCO, ARB, and EPA of all the calculation methods to be used that are different from those specified in Sections 8.1 or 8.2 of Rule 4354, compliance with the emissions limits cannot be fully demonstrated, and it shall be deemed to be a violation of the rule. [District Rule 4354, 8.0] Federally Enforceable Through Title V Permit
23. Emissions from this furnace shall not exceed either of the following limits: 554.4 lb-CO/day or 21.6 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Except during idling, start-up, or shutdown, Particulate Matter emissions (as PM10) shall not exceed 0.5 pounds per ton glass pulled on a block 24-hour average from the glass melting furnace. [District Rule 4354, 5.4] Federally Enforceable Through Title V Permit
25. Except during idling, start-up, or shutdown, NO_x emissions from this furnace shall not exceed 4.0 lbs/ton of glass produced, on a 24 hour block average basis. [District Rules 2201 and 4354, 5.1] Federally Enforceable Through Title V Permit
26. NO_x, CO, VOC, SO_x, and PM10 emissions during idling shall not exceed the emissions limits as calculated using the following equation: NO_x, CO, VOC, SO_x, or PM10 (lb/day) = (Applicable emission limit (in lbs/ton)) x (Furnace permitted production capacity (in tons/day)). [District Rule 4354, 5.7.2] Federally Enforceable Through Title V Permit
27. Permittee shall notify the District at least 24 hours before initiating idling, shutdown and startup and this notification shall include: date and time of the start of the exempt operation, reason for performing the operation, and an estimated completion date. The permittee shall notify the District by telephone within 24 hours after completion of the operation and shall maintain operating records and/or support documentation necessary to claim exemption. [District Rule 4354, 6.7] Federally Enforceable Through Title V Permit
28. The length of time allowed for a start-up shall be determined by the APCO and EPA on a case-by-case basis, in accordance with District Rule 4354 (amended 05/19/2011). [District Rule 4354, 5.5.4] Federally Enforceable Through Title V Permit
29. The permittee shall operate and maintain the electrostatic precipitator (ESP) system to reduce particulate emissions to 0.2 pounds of particulate per ton of glass pulled, using EPA Method 5 as set forth in 40 C.F.R. Part 60, Appendix A, and 0.45 pounds of particulate per ton of glass pulled, using the combined results of EPA Methods 5 and 202 as set forth in 40 C.F.R. Part 60, Appendix A. [District Rules 2201 and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.12.c.i, issued June 22, 2005] Federally Enforceable Through Title V Permit
30. Monitoring of the ESP shall comply with the requirements of 40 CFR. Part 64. [District Rule 4354, 5.9.4; and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.c.iv, issued June 22, 2005] Federally Enforceable Through Title V Permit
31. The ESP shall be operated at a secondary voltage of at least 12 kV. [District Rules 2520, 9.3.2 and 4354, 5.9.4; and 40 CFR 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

32. The ESP secondary voltage shall be monitored and recorded two times during every eight hours of operation. [District Rules 2520, 9.3.2 & 9.4 and 4354, 5.9.4; and 40 CFR 64] Federally Enforceable Through Title V Permit
33. If the monitored ESP secondary voltage is below the minimum allowable voltage, the permittee shall return the voltage to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the ESP secondary voltage readings continue to be below the allowable range after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100 (as amended December 17, 1992), the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 2520, 9.5 and 4354, 5.9.4; and 40 CFR 64] Federally Enforceable Through Title V Permit
34. The permittee shall operate and maintain the semi-dry scrubber system to reduce SOx emissions by at least 85%, excluding days when the scrubber inlet's daily average concentration of SO₂ is 353 ppm_{dv} or less, in which case the scrubber outlet's daily average concentration of SO₂ shall be reduced to at least 53 ppm_{dv}, except during periods of scheduled or preventative maintenance. The averaging period for the reduction efficiency shall be calculated on a rolling 30-day average basis, excluding days when the scrubber inlet's daily average concentration of SO₂ is 353 ppm_{dv} or less. Compliance with the SOx reduction efficiency and daily concentration standard shall be demonstrated by the combined ductwork scrubber inlet and downstream of the control equipment outlet SO₂ continuous concentration monitoring. [USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.12.b, issued June 22, 2005] Federally Enforceable Through Title V Permit
35. This unit shall be fired on PUC regulated natural gas or LPG backup fuel only. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Certification of the continuous opacity monitoring system (COMS) shall be demonstrated by meeting the requirements of 40 CFR Part 60.13 and 40 CFR Part 60, Appendix B, Performance Specification 1. [USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.b.iii, issued June 22, 2005] Federally Enforceable Through Title V Permit
37. Source testing to measure NO_x, CO, and VOC emissions shall be conducted once every calendar year, but no more than every 18 months and not sooner than every 6 months. [District Rules 2201 and 4354, 6.4] Federally Enforceable Through Title V Permit
38. Source testing to measure SO_x and PM₁₀ emissions shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork once every calendar year, but no more than every 18 months and not sooner than every 6 months. [District Rules 2201 and 4354, 6.4] Federally Enforceable Through Title V Permit
39. Source testing shall be conducted using the following test methods: NO_x (heat input basis) - USEPA Method 19, NO_x (ppmv) - USEPA Method 7E or CARB Method 100; CO (ppmv) - USEPA Method 10 or CARB Method 100; VOC (ppmv) - USEPA Method 25A, expressed in terms of carbon, or ARB Method 100; VOC (exempt compounds) - EPA Method 18 or ARB Method 422; Stack gas oxygen, carbon dioxide, excess air and dry molecular weight - USEPA Method 3 or 3A, or CARB Method 100; Stack gas velocity and volumetric flow rate - USEPA Method 2; SO_x - USEPA Method 6C, EPA Method 8, or CARB Method 100; Filterable PM₁₀ - EPA Method 5 (all PM collected shall be counted as PM₁₀), EPA Method 201, or EPA Method 201A; Condensable PM₁₀ - EPA Method 202 with procedures specified in Rule 4354, sections 6.5.9.2.1 through 6.5.9.2.3. [District Rules 1081, 2520, 9.3.2, and 4354, 6.5] Federally Enforceable Through Title V Permit
40. Source test results shall be representative of operations equal to or greater than 60% of the permitted production capacity or fuel use capacity. [District Rule 4354, 6.4.2] Federally Enforceable Through Title V Permit
41. Compliance testing for particulate shall be conducted at the outlet of the combined furnace #1 and furnace #2 ductwork in accordance with USEPA Reference Methods 1, 2, 5, and 202 as set forth in 40 CFR Part 60, Appendix A. Each test shall consist of three runs. The sampling time and volume for each run shall be at least 60 minutes and 31.8 dry standard cubic feet. Thereafter, compliance testing of particulate matter shall be conducted on an annual basis within 60 days of the anniversary date of the latest compliance testing. [USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section V.13.b.ii, issued June 22, 2005] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

42. Commercial arsenic shall not be used as a raw material in this glass furnace. This prohibition is required for continued exemption from the requirements of 40 CFR 61, Subpart N. [District Rule 2520, 9.1] Federally Enforceable Through Title V Permit
43. Idling is defined as the operation of the furnace at less than 25% of the permitted production capacity or fuel use capacity as stated on the Permit to Operate. [District Rule 4354, 3.17] Federally Enforceable Through Title V Permit
44. The emission control system shall be in operation whenever technologically feasible during idling to minimize emissions. Emissions of NO_x, CO, VOC, SO_x, and PM₁₀ during idling shall not exceed the amount as calculated pursuant to section 5.7.2 of rule 4354. Notifications shall be performed and records kept in accordance with section 6.7 of rule 4354. [District Rule 4354, 5.7.1, 5.7.2 & 5.7.3] Federally Enforceable Through Title V Permit
45. Shutdown shall mean the period of time during which the glass melting furnace is purposely allowed to cool from its operating temperature and molten glass is removed from the tank for the purpose of a furnace rebuild or reconstruction, or during a natural gas curtailment, or, subject to EPA's approval, when it is commercially necessary. [District Rule 4354, 3.36 and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section III.y, issued June 22, 2005] Federally Enforceable Through Title V Permit
46. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. The emission control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. Notifications shall be performed and records kept in accordance with section 6.7 of rule 4354. [District Rule 4354, 5.6.1, 5.6.2 & 5.6.3] Federally Enforceable Through Title V Permit
47. Start-up shall mean the period of time, after initial construction, a furnace rebuild, or a shutdown, during which the glass melting furnace is heated to operating temperature by the primary furnace combustion systems, and systems and instrumentation are brought to stabilization and calibrated. The operator shall submit a request for a start-up exemption to the APCO, ARB, and EPA in conjunction with or in advance of an application for Authority to Construct (ATC) associated with a furnace rebuild. The emission control system shall be in operation as soon as technologically feasible during start-up to minimize emissions and notifications shall be performed and records kept in accordance with section 6.7 of rule 4354. [District Rule 4354, 3.37 & 5.5; and USEPA Consent Decree No. 1:05-CV-00516-REC-SMS, Section III.z, issued June 22, 2005] Federally Enforceable Through Title V Permit
48. NO_x, CO, VOC, SO_x and PM₁₀ emission limitations of District Rule 4354 shall not apply during periods of routine maintenance of an add-on emission control system as long as the routine maintenance does not exceed 144 hours total per calendar year for all add-on controls and the routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions. [District Rule 4354, 5.10] Federally Enforceable Through Title V Permit
49. Operators shall maintain daily records of the following items: total hours of operation, the quantity of glass pulled from each furnace, NO_x emission rate in lb/ton glass pulled, CO emission rate, VOC emission rate, SO_x emission rate in lb/ton glass pulled, PM₁₀ emission rate in lb/ton glass pulled, source tests and source test results; maintenance and repair; malfunction, idling, start-up, and shutdown. For pollutants monitored using an approved parametric monitoring arrangement, operators shall maintain records of the acceptable range for each approved key system operating parameter, as established during source test, and shall record the operating values of the key system operating parameters at the approved recording frequency. [District Rules 2201 and 4354, 6.3.1, 6.3.2 & 6.3.3] Federally Enforceable Through Title V Permit
50. All records shall be maintained on the premises for a period of at least five years and shall be made available for District inspection upon request. [District Rules 2201 and 4354, 6.3.4] Federally Enforceable Through Title V Permit
51. Permittee shall submit an Authority to Construct application for compliance with Section 5.1 Tier 3 NO_x limits by June 1, 2012, and be in full compliance with Section 5.1 Tier 3 NO_x limits by January 1, 2014. [District Rule 4354, 7.1.1] Federally Enforceable Through Title V Permit
52. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201 (as amended December 17, 1992), District Rule 4202 (as amended December 17, 1992), District Rule 4354 (as amended May 19, 2011), and District Rule 4801 (as amended December 17, 1992). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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53. The requirements of District Rule 4301 (as amended December 17, 1992) were determined to not apply to this unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
54. The requirements of 40 CFR 61, Subpart N were determined to not apply to this unit. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
55. Compliance with a Sulfuric Acid mist emission limit of 1.0 pound per ton of glass produced shall be demonstrated by a stack test performed using Conditional Test Method 13A of B on this furnace on or before December 31, 2011. Stock testing shall be required to be performed after this initial test only once during the life of the Title V permit renewal. [USEPA Consent Decree 2:10-cv-00121-TSZ, Section IV.8.n, filed 4/22/2010] Federally Enforceable Through Title V Permit
56. Except during periods of startup, shutdown, or malfunction: either the 3-hour block average production-based PM mass emission rate must not exceed 0.2 pound per ton (lb/ton) of glass produced; or the 3-hour block average production-based metal HAP mass emission rate must not exceed 0.02 lb/ton of glass produced. [40 CFR 63.11451 & 63.11455] Federally Enforceable Through Title V Permit
57. Performance tests for compliance with 40 CFR 63.11451 emission rates shall be conducted as specified in 40 CFR 63.11452. [40 CFR 63.11452] Federally Enforceable Through Title V Permit
58. Monitoring, inspection, and recordkeeping requirements for compliance with 40 CFR 63.11451 emission rates shall be conducted as specified in 40 CFR 63.11454, 63.11455, and 63.11457. [40 CFR 63.11454; 63.11455; & 63.11457] Federally Enforceable Through Title V Permit

These terms and conditions are part of the Facility-wide Permit to Operate.