

RULE 1117 – EMISSIONS FROM CONTAINER GLASS MELTING AND SODIUM SILICATE FURNACES

(a) Purpose

The purpose of this rule is to limit emissions of Oxides of Nitrogen (NO_x) and Oxides of Sulfur (SO_x) from facilities producing container glass and sodium silicate.

(b) Applicability

The provisions of this rule shall apply to the owner or operator of a RECLAIM facility or Former RECLAIM facility that operates a container glass melting furnace and associated auxiliary combustion equipment or that operates a sodium silicate furnace.

(c) Definitions

- (1) AUXILIARY COMBUSTION EQUIPMENT means, for the purposes of this rule, any combustion equipment associated with the conveyance system or annealing equipment used in the container glass production process.
- (2) CONTAINER GLASS MELTING FURNACE means any furnace used to melt material in the production of food and beverage type containers manufactured by pressing, blowing in molds, drawing, rolling, or casting glass. Container glass does not include glass tableware or flat glass that is used in windows, windshields, plate glass, etc., which is produced by the float, sheet, rolled, or plate glass process.
- (3) CULLET means recycled and scrap glass which is added to the formulation being charged to a container glass melting furnace.
- (4) DAY means the continuous 24-hour period from 12:00 am through 11:59 pm.
- (5) FORMER RECLAIM FACILITY means a facility, or any of its successors, that was in the Regional Clean Air Incentives Market as of January 5, 2018, as established in Regulation XX, that has received a final determination notification, and is no longer in the RECLAIM program.
- (6) FURNACE means, for the purpose of this rule, either a container glass melting furnace or sodium silicate furnace.
- (7) IDLING means the operation of a furnace at less than 25 percent of the production capacity as stated on the Permit to Operate and where the furnace is not undergoing startup or shutdown.
- (8) NO_x EMISSIONS means the sum of nitric oxides and nitrogen dioxides emitted, calculated as nitrogen dioxide.
- (9) PRODUCTION CAPACITY means a container glass or sodium silicate pull limit found in a Permit to Operate for the applicable furnace.

- (c) (10) PULL or PULLED means the amount of product produced by a furnace, expressed in short tons per day.
 - (11) RECLAIM FACILITY means a facility, or any of its successors, that was in the Regional Clean Air Incentives Market as of January 5, 2018, as established in Regulation XX.
 - (12) SHUTDOWN means that period of time during which a furnace is allowed to cool from operating temperatures to a furnace temperature below 200° F.
 - (13) SODIUM SILICATE FURNACE means any furnace used to melt material in the production of various water-soluble substances obtained in the form of crystals, glasses, powders, or aqueous solutions, used in a variety of industrial and consumer products.
 - (14) SO_x EMISSIONS means sulfur dioxides emitted.
 - (15) STARTUP means that period of time during which a furnace is heated to operating temperatures from a furnace temperature below 200° F.
- (d) Requirements
- (1) Except during periods of idling, startup, or shutdown, the owner or operator of a container glass melting furnace shall not operate a furnace in a manner that exceeds:
 - (A) 0.75 pound of NO_x per ton of glass pulled, averaged over a rolling 30-day period; and
 - (B) 1.1 pounds of SO_x per ton of glass pulled, averaged over a rolling 30-day period.
 - (2) Except during periods of idling, startup, or shutdown, the owner or operator of a sodium silicate furnace shall not operate a furnace in a manner that exceeds:
 - (A) 0.50 pound of NO_x per ton of product pulled, averaged over a rolling 30-day period; and
 - (B) 1.1 pounds of SO_x per ton of product pulled, averaged over a rolling 30-day period, if not fired on 100% natural gas.
 - (3) Except when the exhaust emission control is in operation, the owner or operator shall not operate a furnace for more than:
 - (A) 240 consecutive hours per event and 960 cumulative hours in any rolling 365-day period during periods of idling;
 - (B) 720 hours per startup period; and
 - (C) 240 hours per shutdown period.

- (d) (4) During operation of a furnace including periods of idling, startup, or shutdown, the owner or operator of a furnace shall maintain in operation any exhaust emission control systems, including the injection of any associated chemical reagent into the exhaust stream to control NO_x, if the temperature of the gas to the inlet of the emission control system is greater than or equal to 450° F.
- (5) On or before May 1, 2035, the owner or operator of a container glass facility shall not operate the auxiliary combustion equipment used in the manufacture of container glass, that exceeds a NO_x emission limit of 30 ppmvd at 3% O₂, dry or 0.036 lb/MMBTU heat input.

(e) Compliance Determination

The owner or operator of a container glass melting furnace or sodium silicate furnace shall:

- (1) Excluding emissions during periods of idling, startup or shutdowns, determine compliance with the emission limits in paragraphs (d)(1) and (d)(2) on a rolling 30-day average using a Continuous Emissions Monitoring System (CEMS), except if a furnace operates for fewer than 30 days, then compliance with the emission limits in paragraphs (d)(1) and (d)(2) will be determined based on the average for the actual days of operation. A facility owner or operator shall comply with the applicable monitoring, reporting, and recordkeeping requirements specified in:
 - (A) Rules 2011 and 2012 for RECLAIM facilities; or
 - (B) Rules 218 and 218.1 for former RECLAIM facilities.
- (2) Determine compliance with the NO_x emission limits in paragraph (d)(5) for auxiliary combustion equipment by:
 - (A) Conducting a source test of the equipment per South Coast AQMD Method 100.1; or
 - (B) Providing certification from the original equipment manufacturer that the equipment is designed to meet the NO_x emission limit.

(f) Recordkeeping

The owner or operator of a container glass melting furnace or sodium silicate furnace shall:

- (1) Maintain daily records of:
 - (A) Total hours of operation;
 - (B) The quantity of product pulled from each furnace; and

- (f) (C) Pollutant emission rate in units of pound of pollutant per ton of product pulled, as applicable, on a rolling 30-day average.
 - (2) Maintain all data, records, and other information required by this rule for at least five years and make available for inspection by the Executive Officer.
 - (3) For RECLAIM facilities, continue to report, pursuant to the requirements of Regulation XX, until such time that the facility becomes a Former RECLAIM facility.

(g) Exemptions

The provisions of this rule shall not apply to:

- (1) Furnaces which are limited to less than 100 tons of product pulled per calendar year as specified in a South Coast AQMD permit.
- (2) Glass remelt facilities using exclusively glass cullet, marbles, chips, or similar feedstock in lieu of basic glass-making raw materials.
- (3) Furnaces used in the melting of glass for the production of fiberglass, which means material consisting of fine filaments of glass that are combined in yarn and woven or spun into fabrics, or that are used as reinforcement in other materials or in masses as thermal or as acoustical insulating products for the construction industry exclusively.