ENVIRONMENTAL AND COMPLIANCE DEPARTMENT

TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Anchor Glass Container Corporation
2121 Huron Street
Jacksonville, FL 32254

Jacksonville Plant 07
Facility ID No. 0310005

PROJECT

Project No. 0310005-012-AC
Application for Major Source Air Construction Permit
Glass Melting Furnace No. 4 Modification

COUNTY

Duval, Florida

PERMITTING AUTHORITY

Environmental and Compliance Department
Environmental Quality Division
407 North Laura Street, Third Floor
Jacksonville, FL 32202
Telephone: (904) 255-7100

I. GENERAL INFORMATION

A. APPLICANT

Anchor Glass Container Corporation
2121 Huron Street
Jacksonville, FL 32254

Revised Draft Permit No: 0310005-012-AC
County: Duval

B. PROJECT

On August 18, 2010, Anchor Glass Container Corporation submitted an application for a construction permit for the modification of Glass Melting Furnace No. 4, located at Jacksonville Plant 07, 2121 Huron St., Jacksonville, Florida. The project includes the complete replacement of the furnace glass contact and superstructure refractory bricks; the rearrangement of the furnace regenerator system from 4 passes to 2 passes; the relocation of the furnace binding steel to allow installation of additional insulation; widening of the combustion air ports; and changes in the furnace superstructure to allow future installation of oxy/fuel burners. Comments to the draft air construction permit were received from Anchor Glass Container Corporation on June 3, 2011. Subsequently, the draft air construction permit was revised.

II. RULE APPLICABILITY

The facility is a major source of air pollution for Title V purposes because the potential emissions of regulated air pollutants are greater than 100 tons per year pursuant to Rule 62-210.200(188), Florida Administrative Code (FAC), and Rule 2.301, Jacksonville Environmental Protection Board (JEPB). The facility is a major stationary source of air pollution for Prevention of Significant Deterioration (PSD) purposes because the potential emissions of PSD air pollutants are greater than 250 tons per year pursuant to Rule 62-210.200(189), FAC, and Rule 2.301, JEPB. The facility is not a major source of hazardous air pollutants (HAPs) based upon the air construction permit application received August 18, 2010. This project is not subject to PSD preconstruction review requirements since the modification does not result in a significant net emissions increase of any PSD pollutants in accordance with Rule 62-212.400(2)(a)1., FAC, Rule 62-210.200(186), FAC, Rule 2.401, JEPB and Rule 2.301, JEPB.

Glass Melting Furnace No. 4 is an existing glass melting furnace with a currently permitted maximum process weight rate of 13.73 tons per hour (equivalent to 329.52 tons per day of glass production). The modified furnace shall **not** be subject to 40 CFR 60, Subpart CC, Standards of Performance for Glass Manufacturing Plants and 40 CFR 60, Subpart A, General Conditions, ((The existing furnace no. 4 was constructed before June 15, 1979 and the physical and operational changes did not result in a Particulate Matter (PM) emission rate increase (NSPS Modification, 40 CFR 60.14) or a fixed capital cost that exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new furnace (NSPS Reconstruction, 40 CFR 60.15)), 40 CFR 61, Subpart N, National Emission Standard for Inorganic Arsenic Emissions from Glass Manufacturing Plants (The facility does not use commercial arsenic as a raw material) and 40 CFR 63 Subpart SSSSSS, National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources (The facility does not use metal HAP compounds as a raw material).

III. TECHNICAL EVALUATION

Glass Melting Furnace No. 4

This EU shall be allowed to operate continuously, i.e., 8760 hours per year.

Emission Limitations

The maximum process weight rate shall be limited to 13.73 tons per hour and 120,274.8 tons per year of raw materials, cullet, and additives for glass production. The glass pull rate shall be limited to a maximum of 280 tons per day (TPD) and 102,200 tons per year (TPY).

Fossil fuels which may be fired are natural gas or propane. The maximum heat input from the combustion of fossil fuels shall be limited to 54.60 X 10^6 Btu per hour and 478,296 X 10^6 Btu per year (468.92 X 10^6 cubic feet per year of natural gas at a nominal heat content of 1020 Btu per cubic foot). The maximum heat input from the electrical boost system shall be limited to 7.0 X 10^6 Btu per hour and 61,320 X 10^6 Btu per year.

Allowable PM emissions shall be determined by use of the equation $E = 3.59 \times P^{0.62}$, where P is less than or equal to 13.73 tons per hour, E = emissions in pounds per hour and P = process weight rate in tons per hour. The maximum allowable PM emissions at the maximum permitted process weight rate (13.73 tons per hour) shall not exceed 18.22 pounds per hour and 79.72 tons per year.
[Rule 62-296.320(4)(a)2., FAC, Rule 62-212.300(3)(c), FAC, Rule 2.1101, JEPB, and Rule 2.401, JEPB]

Visible emissions (VE) shall be limited to less than twenty (20) percent (%) opacity.
[Rule 62-296.320(4)(b), FAC, and Rule 2.1101, JEPB]

Test Methods and Procedures

Testing for demonstration of compliance shall be performed in accordance with EPA Reference Method 5 (as described in 40 CFR 60, Appendix A) for the determination of the PM emissions rate.

Testing for demonstration of compliance shall be performed in accordance with EPA Reference Method 9 (as described in 40 CFR 60, Appendix A) for the visual determination of opacity.

Testing for demonstration of compliance shall be performed in accordance with EPA RM 6 or 6C (as described in 40 CFR 60, Appendix A) for the determination of SO_2 emissions.

Testing for demonstration of compliance shall be performed in accordance with EPA RM 7, 7A, or 7E (as described in 40 CFR 60, Appendix A) for the NO_x emissions.

PM and VE compliance testing shall be conducted concurrently and shall be conducted a minimum of 135 days prior to the expiration date of this permit. PM testing minimum sample volume shall be 25 dry standard cubic feet per run. VE testing shall be conducted for a minimum period of 30 minutes. Compliance testing shall be conducted while processing the minimum percentage of cullet, maximum natural gas heat input rate and maximum electric boost heat input rate used during normal operations.

SO_2 and NO_x compliance testing on the furnace shall be conducted a minimum of 135 days prior to the expiration date of this permit. Compliance testing shall be conducted while processing the minimum percentage of cullet, maximum natural gas heat input rate and maximum electric boost heat input rate used during normal operations.

Record-keeping and Reporting Requirements

The restrictions placed on the following parameters have been retained from previous permits (Permit Nos. 0310005-004-AC and 0310005-006-AV) in order to provide reasonable assurance that applicable PSD significant emission rates are not exceeded with the modification and operation of Glass Melting Furnace No. 4:

a. Process weight rate (including the percentage of cullet processed)
b. Glass pull rate
c. Heat input rate from natural gas and propane
d. Heat input from the electrical boost system

These restrictions are in the Emission Limitations listed above.

The permittee shall maintain records of items a., b., c., and d. above on a daily basis including the type of fuel used (natural gas or propane). The process weight rate shall be calculated and recorded **hourly** during periods when stack testing is being conducted. This information shall be recorded and summarized in a daily log. The permittee shall maintain these records for a minimum period of five (5) years.

The permittee shall submit the records, required above, to the Permitting Authority every six (6) months within 31 days from the end of each six month period (i.e.: on or before July 31 for the period of January 1 through June 30 and on or before January 31 for the period of July 1 through December 31). Note: Records may be submitted electronically.

This permit is based on an analysis that compared baseline actual emissions with projected actual emissions and avoided the requirements of subsection 62-212.400(4) through (12), F.A.C. for several pollutants. Therefore, pursuant to Rule 62-212.300(1)(e), F.A.C., the permittee is subject to the following monitoring, reporting and recordkeeping provisions.

a. The permittee shall monitor the emissions of any PSD pollutant that the Permitting Authority identifies could increase as a result of the modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available (i.e., stack test data), calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change. Annual emissions shall be based on production based emission factors and annual production rates. Emissions shall be computed in accordance with the provisions in Rule 62-210.370, F.A.C. A **Post-Project Emissions Multi-Year Tracking Sheet** is attached for use as a worksheet.

b. The permittee shall complete and submit the attached **Project Emissions Increase Report** (Appendix PEI) to the Permitting Authority within 60 days after the end of each calendar year during the 5-year period setting out the unit's annual emissions during the calendar year that preceded submission of the report. The report shall also include any other information that the permittee wishes to include in the report.

c. For this project, the following are the baseline actual emissions: 579 tons per year (TPY) of NO_x; 45 TPY of PM; 42.25 TPY of PM_{10}; 121 TPY of SO_2; 10 TPY of CO; and 10 TPY of VOC.

d. The information required to be documented and maintained pursuant to subparagraphs 62-212.300(1)(e)1 and 2, F.A.C., shall be submitted to the Permitting Authority, which shall make it available for review to the general public.

For this project, the Permitting Authority requires the annual reporting of actual PM, PM10, SO2 and NOx emissions.

IV. PSD Applicability Review

The facility is located in an area designated as unclassifiable for the air pollutants sulfur dioxide and particulate matter less than or equal to ten (10) micrometers, and in an area of influence of an air quality maintenance area for particulate matter ,and in an air quality maintenance area for ozone pursuant to Rule 62-204.340, FAC, and Rule 2.201, JEPB.

The existing facility is a major stationary source of air pollution for Prevention of Significant Deterioration (PSD) of Air Quality because the potential emissions of PSD air pollutants are greater than 250 tons per year pursuant to Rule 62-210.200(189), FAC, and Rule 2.301, JEPB. New projects at PSD-major facilities must be reviewed for PSD applicability.

The following table compares the baseline actual emissions from the existing emissions unit to the projected actual emission from the emissions unit after completion of the project.

Table 1. Comparison of Baseline Actual to Projected Actual Emissions (Tons Per Year)

Pollutant	Baseline Actual[1]	Projected Actual[2]	Net Increase	PSD Significant Emission Rates	Subject to PSD?
NOx	579	596	17	40	No
SO2	121	124	3	40	No
PM	45	46.3	1.3	25	No
PM10	42.75	44	1.25	15	No
CO	10	10.22	0.22	100	No
VOC	10	10.22	0.22	40	No

Notes:

1. The baseline actual emissions were calculated using a consecutive 24-month period within the last 10 years.

2. The projected actual emissions are based on the maximum annual glass pull rate (production rate) of 102,200 tons and production-based emission factors.

When comparing the net increase (decrease) from the project to the significant net emissions increase levels listed in 40 CFR 52.21(b)(23)(i), Rule 62-204.800, FAC and Rule 2.201, JEPB, it is determined that no significant net increase was triggered. Therefore, this construction project is not subject to the applicable PSD preconstruction review requirements of Rule 62-212.400, FAC for the Prevention of Significant Deterioration of Air Quality.

V. PRELIMINARY DETERMINATION

The Permitting Authority makes a preliminary determination that the proposed modification of Glass Melting Furnace No. 4 and associated appurtenances, as described in this evaluation will comply with all applicable local, state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Gloria Hunter-Barnes is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Environmental and Compliance Department, Environmental Quality Division, 407 North Laura Street, Third Floor, Jacksonville, FL 32202, Telephone: (904) 255-7197.

S:\air quality\permitv\TVCP\draft\0310005-012te2REVISED-AC.doc