TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Ardagh Glass, Inc.
2121 Huron Street
Jacksonville, FL 32254

Jacksonville Facility
Facility ID No. 0310005

PROJECT

Project No. 0310005-017-AC
Application for Minor Source Air Construction Permit

Nos. 3 and 4 Glass Melting Furnaces

COUNTY

Duval County, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Northeast District Office
Waste and Air Resource Management Program
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

COMPLIANCE AUTHORITY

Florida Department of Environmental Protection
Northeast District Office
Compliance Assurance
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

February 28, 2014

1. GENERAL PROJECT INFORMATION

1.1. Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

1.2. Facility Description and Location

The Jacksonville Facility is an existing container glass manufacturing plant, which is categorized under Standard Industrial Classification Code No. 3221. The existing Jacksonville Facility is located in Duval County at 2121 Huron Street, Jacksonville, Duval County, FL 32254. The UTM coordinates of the existing facility are Zone 17, 431.500 km East and 3357.500 km North. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS). The site is located in an air quality maintenance area for the pollutant ozone and is located in the area of influence of an air quality maintenance area for particulate matter.

1.3. Facility Regulatory Categories

- The facility is a not major source of hazardous air pollutants (HAP).
- The facility does not operate units subject to the acid rain provisions of the Clean Air Act.
- The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

1.4. Project Description

This project involves 1): The installation of continuous emission monitors (CEMS) for the determination of the emissions of the pollutants sulfur dioxide (SO_2) and oxides of nitrogen (NO_x) emitted from the Nos. 3 and 4 Glass Melting furnaces at the Jacksonville facility. The requirement to install the CEMS is part of a supplemental environmental project (SEP) required by a Consent Order with Compliance Plan entered into by Ardagh Glass Inc. and the City of Jacksonville, Neighborhoods Department, Environmental Quality Division (EQD) and approved by the City of Jacksonville Environmental Protection Board (EPB). The Consent Order with Compliance Plan was signed, approved by the EPB, and became effective on December 9, 2013.

2): Installation of an electronic weighed conveyor system (EWCS) to weigh cullet prior to being charged to the Nos. 3 and 4 Glass Melting furnaces and also to weigh the cullet from the return systems from both of the furnaces. The requirement to install the EWCS is part of a supplemental environmental project (SEP) required by a Consent Order with Compliance Plan entered into by Ardagh Glass Inc. and the City of Jacksonville, Neighborhoods Department, Environmental Quality Division (EQD) and approved by the City of Jacksonville Environmental Protection Board (EPB). The Consent Order with Compliance Plan was signed, approved by the EPB, and became effective on December 9, 2013.

Pursuant to Rule 62-212.400, F.A.C., Ardagh Glass, Inc. provided information to show that the project will not exceed the significant emissions rates that requires preconstruction review for the Prevention of Significant Deterioration (PSD) of Air Quality.

1.5. Processing Schedule

- January 24, 2014: Received complete application for a minor source air pollution construction permit.

2. PSD APPLICABILITY

2.1. General PSD Applicability

The Department regulates major stationary sources in accordance with Florida's PSD program pursuant to Rule 62-212.400, F.A.C. PSD preconstruction review is required in areas that are currently in attainment with the state and federal ambient air quality standards (AAQS) or areas designated as "unclassifiable" for these regulated pollutants. Commonly addressed PSD pollutants for container glass furnaces such as the Jacksonville Facility include: nitrogen oxide (NO_X), PM, PM with a mean diameter of 10 microns or less (PM_{10}), PM with a mean diameter of 2.5 microns or less ($PM_{2.5}$), sulfur dioxide (SO_2), and carbon monoxide (CO).

Additional PSD pollutants that are more common to certain other industries include: lead (Pb), mercury (Hg), hydrogen sulfide (H_2S), TRS including H_2S, reduced sulfur compounds (RSC) including H_2S, municipal waste combustor (MWC) organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans (dioxin/furan), MWC metals measured as PM; MWC acid gases measured as SO_2 and HCl, and municipal solid waste (MSW) landfill emissions as non-methane organic compounds (NMOC).

As defined in Rule 62-210.200(Definitions), F.A.C., a stationary source is a "major stationary source" (major PSD source) if it emits or has the potential to emit (PTE):

- 250 tons per year (tons/year) or more of any PSD pollutant; <u>or</u>
- 100 tons/year or more of any PSD pollutant <u>and</u> the facility belongs to one of the 28 listed PSD major facility categories.

The Jacksonville Facility is a major stationary source based on the potential to emit 250 tons/year or more of an individual PSD pollutant.

For major stationary sources such as the Jacksonville Facility, PSD applicability for modification projects is based on thresholds known as the significant emission rates (SER) as defined in Rule 62-210.200(Definitions), F.A.C. Any "net emissions increase" as defined in Rule 62-210.200(Definitions), F.A.C. of a PSD pollutant from the project that equals or exceeds the respective SER is considered "significant". SER also means any emissions rate or any net emissions increase of a PSD pollutant associated with a major stationary source or major modification which would construct within 10 km of a Class I area and have an impact on such area equal to or greater than 1 gram per cubic meter, 24-hour average.

Although a facility may be "major" (i.e. emits or has the potential to emit 100 or 250 TPY as applicable) for only one PSD pollutant, a project must include BACT controls for any PSD pollutant that exceeds the corresponding significant emission rates given in the Table 1 below.

Table 1 - List of SER by PSD-Pollutant.

Pollutant	SER (TPY)	Pollutant	SER (TPY)
CO	100	NO_X	40
$PM/PM_{10}/PM_{2.5}$	25/15/10	Ozone (VOC) [1]	40
$PM_{2.5}$ (NO_X)	40	$PM_{2.5}$ (SO_2)	40
Ozone (NO_X) [1]	40	SAM	7
SO_2	40	Pb	0.6
Hg	0.1	GHG (CO_2e)	75,000 [2]

1. Ozone (O_3) is regulated by its precursors (VOC and NO_X). PSD for $PM_{2.5}$ can be triggered by its precursors (NO_X and SO_2).

Pollutant	SER (TPY)	Pollutant	SER (TPY)
2. Federal SER of 75,000 TPY for GHG (as CO_2e) for PSD sources and has not been incorporated into Department rules.			

According to 40 CFR 52.21, six greenhouse gases (GHG), are also subject to regulation at new stationary sources that will emit or have the potential to emit 100,000 tons/year or more, or a modification at a major GHG facility with a significant Emission Increase (SER) of 75,000 tons/year or more expressed as the carbon dioxide equivalent emissions (CO_2e). At this time the requirement has not been incorporated into Department rules but is a separate requirement of the EPA.

2.2. PSD Applicability for Project

The project is located in Duval County which is in an area that is currently in attainment with the AAQS or is otherwise designated as unclassifiable. According to the applicant, the proposed project is not expected to increase emissions for any PSD pollutant. The Department will address PSD preconstruction review below.

3. DEPARTMENT REVIEW

Nos. 3 and 4 Glass Melting Furnaces: Installation of the CEMS and EWCS will not result in the increase of any PSD emitted pollutant. Reporting of actual annual emissions for this project in accordance with Rule 62-212.400, F.A.C. is not required.

The requirement to install the SO_2 and NOx CEMS and the EWCS is part of a supplemental environmental project (SEP) required by a Consent Order with Compliance Plan entered into by Ardagh Glass Inc. and the City of Jacksonville, Neighborhoods Department, Environmental Quality Division (EQD) and approved by the City of Jacksonville Environmental Protection Board (EPB). The Consent Order with Compliance Plan was signed, approved by the EPB, and became effective on December 9, 2013.

The applicant has requested that the CEMS for SO_2 and NOx be used to determine compliance with applicable SO2 and NOx emission limits. As stated in the SEP the CEMS will provide real-time feedback concerning S02 and NOx emissions ensuring that plant compliance with permit limits is continuously monitored.

The EWCS will ensure that all materials, not just the materials in the batch house (material weighing system already in place), will be weighed before being charged to the furnaces. The weights will be downloaded into the current batch material tracking software system. This will improve plant compliance with permit language that necessitates weighing materials to determine raw material process weight(s).

Although the furnaces are **not subject to New Source Performance Standards (NSPS) for the pollutants SO_2 and NOx** the General Requirements section of 40 Code of Federal Regulation (CFR), Part 60, Subpart A contains generally acceptable monitoring requirements for CEMS which would be appropriate to use as quality assurance, record-keeping, and reporting procedures for the SO_2 and NOx CEMS to be installed at the Ardagh Glass, Inc. facility. In order to provide assurance that the data generated by the CEMS is accurate and relevant the CEMS require Initial Performance Specification Testing, periodic Quarterly auditing procedures, and an annual Relative Accuracy Test Audit (RATA).

Therefore the continuous monitoring systems (CEMS for SO_2 and NOx) and continuous flow monitor installed pursuant to the referenced Consent Order with Compliance Plan shall be subject to the following quality assurance, record-keeping, and reporting procedures:

1. Performance specifications found in 40 CFR 60, Appendix B and Appendix F,
2. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation, and calibration of the device,
3. The CEMS zero and span shall be conducted in accordance with the procedures and frequencies found in 40 CFR 60.13(d),
4. The CEMS shall be in continuous operation and shall meet minimum frequency of operation requirements as specified in 40 CFR 60.13(e),

5. Representative measurements and applicable procedures as specified in 40 CFR 60.13(f) shall be followed,
6. Data shall be reduced in accordance with procedures (as applicable) in accordance with 40 CFR 60.13(h)
7. A notification of the date upon which demonstration of the continuous monitoring system(s) performance commences shall be submitted to the Compliance Authority a minimum of 15 days prior to such date,
8. Maintain records of the occurrence and duration of periods when the continuous monitoring system is inoperative,
9. Submit semi-annually excess emission reports and monitoring system performance reports as described in 40 CFR 60.7(c),
10. The excess emissions report form and the summary report form (Use Figure 1 form) shall be submitted as described in 40 CFR 60.7(d),
11. The permittee shall maintain a file of all measurements, including continuous monitoring system, monitoring device, and performance testing measurements; all continuous monitoring system performance evaluations; all continuous monitoring system or monitoring device calibration checks; adjustments and maintenance performed on these systems or devices in accordance with the procedures in 40 CFR 60.7(f).
12. Furnace No. 3: Determine the SO_2 and NOx pounds per hour emission rate based on the arithmetic average of the hourly emissions data during each furnace operating day.
13. Furnace No. 3: Compliance with the short term SO_2 and NOx emission limits is based on the average emission rates for SO_2 and NOx for 30 successive furnace operating days. A separate performance test is completed at the end of each furnace operating day and a new 30-day average emission rate for SO_2 and NOx is calculated to show compliance with the pound per hour limit.
14. Furnace No. 3: Compliance with the long term (12 month rolling total) SO_2 and NOx emission limits is based on the average emission rates for SO_2 and NOx for 12 successive furnace operating months. A separate performance test is completed at the end of each furnace operating month and a new 12 month rolling total average emission rate for SO_2 and NOx is calculated to show compliance with the tons per year limit.
15. Furnace No. 4: SO2 and NOx emissions shall be determined in the same manner as for Furnace No. 3.

4. PRELIMINARY DETERMINATION

The Department makes a preliminary determination that the proposed project will comply with all applicable local, state, and federal air pollution regulations as conditioned by the draft permit. Jerry Woosley is the project specialist responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting him at 904-256-1700, by email at jerry.woosley@dep.state.fl.us or by mail at the Department's Northeast District Office, Waste and Air Resource Management program, 8800 Baymeadows Way West, Suite 100, Jacksonville, FL 32256.