FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

NORTHEAST DISTRICT
8800 BAYMEADOWS WAY WEST, SUITE 100
JACKSONVILLE, FLORIDA 32256

RICK SCOTT
GOVERNOR

HERSCHEL T. VINYARD JR.
SECRETARY

PERMITTEE

Ardagh Glass, Inc.
Jacksonville Plant 07
2121 Huron St.
Jacksonville, Florida 32254

Authorized Representative:
Carl Czekanski, General Manager

Air Permit No. 0310005-015-AC
Permit Expires: xx/xx/xxxx
Minor Air Construction Permit Revision
Jacksonville Facility
Nos. 3 and 4 Glass Melting Furnaces

PROJECT

This is the final air construction permit, which authorizes the reconfiguration of the burner tips (after the fact) for the No. 4 Glass Melting Furnace through revision of Permit No. 0310005-012-AC; and authorizes reconfiguration of the burner tips (after the fact) for the No. 3 Glass Melting Furnace through the terms and conditions of this permit (Permit No. 0310005-015-AC). The proposed work was conducted at the existing Jacksonville Facility, which is a container glass manufacturing plant categorized under Standard Industrial Classification 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 final permit is organized by the following sections.

Section 1. General Information

Section 2. Administrative Requirements

Section 3. Emissions Unit Specific Conditions

Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

STATEMENT OF BASIS

This air pollution construction permit is issued under the provisions of: Chapter 403 of the Florida Statutes (F.S.) and Chapters 62-4, 62-204, 62-210, 62-212, 62-296 and 62-297 of the Florida Administrative Code (F.A.C.). The permittee is authorized to conduct the proposed work in accordance with the conditions of this permit. This project is subject to the general preconstruction review requirements in Rule 62-212.300, F.A.C. and is not subject to the preconstruction review requirements for major stationary sources in Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

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Richard S. Rachal III, P.G.
Program Administrator
Waste and Air Resource Management Program

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on _____ to the persons listed below.

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), Florida Statutes, with the designated agency clerk, receipt of which is hereby acknowledged.

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_____ _____
(Clerk) (Date)

FACILITY DESCRIPTION

The existing facility consists of the following emissions units (EU). The EU affected by this permitting action is highlighted.

Facility ID No. 0310005	
EU ID No.	**Emission Unit Description**
003	No. 3 Glass Melting Furnace
004	No. 4 Glass Melting Furnace

FACILITY REGULATORY CLASSIFICATION

(1) The facility is not a major source of hazardous air pollutants (HAP).

(2) The facility does not operate units subject to the acid rain provisions of the Clean Air Act (CAA).

(3) The facility is a Title V major source of air pollution in accordance with Chapter 213, F.A.C.

(4) 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.

(5) The proposed project **does not** trigger a PSD review and a requirement to conduct a Best Available Control Technology (BACT) pursuant to Department Rule 62-212.400, F.A.C.

PROPOSED PROJECT

This project involves 1): The revision of existing Air Construction Permit No. 0310005-012-AC for the No. 4 Glass Melting Furnace at the Jacksonville Facility. Permit No. 0310005-012-AC was issued on August 5, 2011 as an after the fact permit for modifications made to the No. 4 Glass Melting Furnace in 2009. The project included 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. Not disclosed to the City of Jacksonville (Permitting Authority at that time) in the application for permit No. 0310005-012-AC and additional information submitted regarding that application was that the burner tips configuration were changed from four burner tips (two per side) rated at 21 MMBtu per hour each to six burner tips (three per side) rated at 11 MMBtu per hour each. This project will modify permit No. 0310005-012-AC authorizing (after the fact) the installation of the alternate burner tip configuration for the No. 4 Glass Melting Furnace and;

2): After the fact permitting for the No. 3 Glass Melting Furnace at the Jacksonville Facility. Ardagh Glass, Inc. notified the City of Jacksonville in October 2012 of the intention to replace/repair the regenerator crown and forehearth in the No. 3 Glass Melting Furnace in November 2012. This action itself did not require an air construction permit since the air pollutant emissions would not change and the change is considered rebricking which is not considered a modification itself. Not disclosed to the City of Jacksonville (Permitting Authority at that time) in the notification was the change to the burner tip configuration on the No. 3 Glass Melting Furnace coinciding with the construction activity repairing/replacing the regenerator crown and the forehearths in the No. 3 Glass Melting Furnace. The change of the burner tips configuration is a physical change which requires an air construction permit.

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1. Permitting Authority & Compliance Authority: The permitting authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Waste and Air Resource Management, 8800 Baymeadows Way West, Suite 100, Jacksonville, FL 32256. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District Office, Waste and Air Resource Management Program.

   The compliance authority for this project is the Florida Department of Environmental Protection (Department), Northeast District Office, Compliance Assurance, 8800 Baymeadows Way West, Suite 100, Jacksonville, FL 32256. All documents related to compliance for an emissions unit shall be submitted to the Northeast District Office, Compliance Assurance.

   The Permitting Authority and Compliance Authority phone number is 904-256-1700.

2. Appendices: The following Appendices are attached as part of this permit:

   (a) Appendix A. Citation Formats and Glossary of Common Terms;

   (b) Appendix B. General Conditions;

   (c) Appendix C. Common Conditions; and

   (d) Appendix D. Common Testing Requirements.

   (e) Appendix TP. Test Plan

3. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

4. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time. [Rule 62-4.080, F.A.C.]

5. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification. [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

6. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification. [Rule 62-212.400(12), F.A.C.]

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7. Application for Title V Permit: This permit authorizes (after the fact) construction of the permitted emissions unit(s) and initial operation to determine compliance with Department rules. A Title V air operation permit is required for regular operation of the permitted emissions unit. The permittee shall apply for a Title V air operation permit at least 90 days prior to expiration of this permit. To apply for a Title V operation permit, the applicant shall submit the appropriate application form, compliance test results, and such additional information as the Department may by law require. The application shall be submitted to the appropriate Permitting Authority with copies to the Compliance Authority.

   [Rules 62-4.030, 62-4.050, 62-4.220 and Chapter 62-213, F.A.C.]

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The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.

Permit Being Modified: Permit No. 0310005-012-AC

Affected Emissions Unit: EU 004

Subsection A. Project and Facility Description (Paragraph 1) This section is revised as follows.

This permit is for the modification of Glass Melting Furnace No. 4. 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~~.~~, and the reconfiguration of the burner tips from four burner tips (two per side) rated at 21 MMBtu per hour each to six burner tips (three per side) rated at 11 MMBtu per hour each. Either burner configuration may be used depending upon operational needs of the facility.

Record-keeping and Reporting Requirements has added a new condition 16. as follows:

16. Notify the Permitting Authority in writing (or email at john.d.phillips@dep.state.fl.us) a minimum of seven days prior to reconfiguration of the burner tips. It is noted that the burner tip reconfiguration may be changed to either configuration described in **Subsection A. Project and Facility Description (Paragraph 1).** [Rule 62-4.070(3), FAC, and Rule 2.1401, JEPB]

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The following permit conditions are revised as indicated. ~~Strikethrough~~ is used to denote the deletion of text. Double-underlines are used to denote the addition of text. All changes are emphasized with yellow highlight.

Emissions Unit No. 003-Glass Melting Furnace No. 3

Emission Unit Description: An end port regenerative glass melting furnace fired by natural gas or propane. The burner tip configuration may be configured as four burner tips (two per side) rated at 21 MMBtu per hour each or six burner tips (three per side) rated at 15 MMBtu per hour each. It is noted that firing alternates periodically from side to side of the furnace. It is noted that there is a potential heat capacity difference of three MMBtu per hour (45 MMBtu - 42 MMBtu) (approximately 7.1% difference) between the two configurations.

Additional heat may be obtained from an electric boost with a maximum heat input of 8.6 X 10^6 Btu per hour.

Essential Potential to Emit (PTE) Parameters

A.1. This emissions unit shall be allowed to operate continuously, i.e., 8760 hours per year.

[Rule 62-210.300(2)(a), FAC, and Rule 2.301, JEPB]

Emission Limitations and Standards

A.2. The maximum process weight rate shall be limited to 14.70 tons per hour and 128,772 tons per year of raw materials, cullet, and additives for glass production. The glass pull rate shall be limited to a maximum of 312.26 tons per day (TPD) and 113,976.1 tons per year (TPY).

[Rule 62-212.400(4)(g), FAC, and Rule 2.401, JEPB]

A.3. 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 51.86 X 10^6 Btu per hour and 454,293.6 X 10^6 Btu per year (445.39 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 8.6 X 10^6 Btu per hour (2500 KVA) and 75,336 X 10^6 Btu per year.

[Rule 62-212.400(4)(g), FAC, and Rule 2.401, JEPB]

Particulate Matter (PM) and PM_{10}

A.4. 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 10.09 tons per hour, E = emissions in pounds per hour and P = process weight rate in tons per hour. For process weight rates in excess of 10.09 tons per hour the maximum allowable PM emissions shall not exceed 15.05 pounds per hour. PM emissions shall not exceed 65.90 tons per year.

[Rule 62-296.320(4)(a), FAC, Rule 62-212.400(g)(4), FAC, Rule 2.1101, JEPB, and Rule 2.401, JEPB]

A.5. Maximum allowable PM_{10} emissions shall not exceed 14.29 pounds per hour and 62.61 tons per year. Compliance with the PM limit indicates compliance with the PM_{10} limit.

[Rule 62-296.320(4)(a), FAC, Rule 62-212.400(g)(4), FAC, Rule 2.1101, JEPB, and Rule 2.401, JEPB]

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Visible Emissions

A.6. 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]

Sulfur Dioxide (SO_2)

A.7. SO_2 emissions shall not exceed 44.24 pounds per hour and 193.76 tons per year.
[Rule 62-212.400(g)(4), FAC, and Rule 2.401, JEPB]

Oxides of Nitrogen (NO_x)

A.8. NO_x emissions shall not exceed 106.26 pounds per hour and 465.43 tons per year.

[Rule 62-212.400(g)(4), FAC, and Rule 2.401, JEPB]

Test Methods and Procedures

A.9. 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.

[Rule 62-296.320(4)(a)3., FAC, and Rule 2.1101, JEPB]

A.10. 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.

[Rule 62-296.320(4)(b), FAC, and Rule 2.1101, JEPB]

A.11. 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 sulfur dioxide emissions.

[Rule 62-4.070(3), FAC and Rule 2.1401, JEPB]

A.12. 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 oxides of nitrogen emissions.

[Rule 62-4.070(3), FAC and Rule 2.1401, JEPB]

A.13. PM testing and VE testing shall be conducted concurrently and each ~~calendar year (with a target date of March 1st)~~ federal fiscal year. VE testing shall be conducted for a minimum period of 30 minutes. PM testing minimum sample volume shall be 25 dry standard cubic feet per run. Compliance testing for this emissions unit shall be conducted in accordance with the approved Test Plan on file with the Permitting Authority, Appendix TP. PM testing and VE testing conducted as required by the Title V Air Operating Permit No. 0310005-013-AV satisfies the PM and VE testing requirements of this permit.

[Rule 62-212.400(g)(4), FAC, Rule 62.297.310(7)(a)1., FAC, Rule 2.401, JEPB, and Rule 2.1201, JEPB]

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A.14. SO_2 and NO_x compliance testing on the furnace shall be conducted 270 days prior to the expiration date of the Title V Air Operating Permit No. 0310005-013-AV. Compliance testing for this emissions unit shall be conducted in accordance with the approved Test Plan on file with the Permitting Authority, Appendix TP.

[Rule 62-212.400(g)(4), FAC, Rule 62-297.310(7)(a)1, FAC, Rule 2.401, JEPB, and Rule 2.1201, JEPB]

Record-keeping and Reporting Requirements

A.15. In order to provide reasonable assurance that applicable PSD significant levels are not exceeded with the modification and operation of glass melting furnace No. 3, restrictions have been placed on the following parameters:

a. Process weight rate (including the daily average percentage of cullet processed)
b. Glass pull rate
c. Fuel firing rate
d. Heat input from the electrical boost system
e. PM, PM_{10}, sulfur dioxide, and oxides of nitrogen emissions

These restrictions are in the Emission Limitations specific conditions 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). During periods when stack testing is being conducted, the operating conditions during testing shall be recorded as set forth in the approved Test Plan on file with the Permitting Authority, Appendix TP. This information shall be recorded and summarized in a daily log. Owners or operators shall maintain these records for a minimum period of five (5) years.

[Rule 62-212.400(g)(4), FAC, Rule 62-4.070(3), FAC, Rule 2.401, JEPB, and Rule 2.1401, JEPB]

A.16. The permittee shall submit the records, required by Specific Condition (SC) No. A.15. above, to the Permitting Authority every six (6) months. The reports shall cover the period of January through June (report due on or before September 1) and July through December (report due on or before March 1). [Rule 62-212.400(g)(4), FAC, Rule 62-4.070(3), FAC, Rule 62-213.440(1)(b), FAC, Rule 2.501, JEPB, Rule 2.401, JEPB, and Rule 2.1401, JEPB]

{Permitting Note: Records may be submitted electronically with prior approval of the Permitting Authority.}

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