2. FACILITY DESCRIPTION

Arglass is planning a project to construct a new glass manufacturing facility at the F1 Facility in Valdosta, Georgia. Arglass must commence construction of equipment, such as the glass melting furnace by November 2023 to ensure furnace startup by February 2025. This section provides a description of the glassmaking process and technical information for the air emission sources planned for the F2 Facility.

2.1 GLASSMAKING PROCESS OVERVIEW

Generally, glass manufacturing consists of three processes:

- Raw material handling and batch preparation;
- Hot end processing; and
- Cold end processing, packaging, and storage.

A simplified process flow diagram is provided as Figure A-1. These processes are briefly described as follows:

- Raw Material Handling and Batch Preparation (Batch House):

  Raw materials (sand, limestone, soda ash, and other solid mineral products) are delivered to the facility by rail car and by truck and unloaded in bulk into a bucket elevator or with a pneumatic transport system that transfers the different raw materials into storage silos. Crushed waste glass (cullet) is also stored as a raw material. The materials are weighed and blended to make a “batch” for transfer to the glass-melting furnace.

- Hot End Processing:

  The batch prepared in the Batch House is conveyed to the furnace for melting. The furnace melts the materials into molten glass, which is cooled to forming temperatures in the refiner, alcoves, and forehearth.

  The glass product passes through a hot end coating hood, where a coating is applied for surface preparation. The purpose of the application is so that the cold end coating that is applied at the tail end of the process properly adheres to the surface of the finished product.

  The coated glass is conveyed on a belt to an annealing oven, commonly referred to as a lehr, to remove residual stresses caused by the forming process and to prevent cracks by allowing the glass to cool evenly and gradually.

- Cold End Processing:

  A spray coater applies a low emission dispersion wax, which makes the glass slippery to prevent scratches and to prevent products from sticking together as they are conveyed for inspection and packaging.

2.2 Sources of Air Emissions

The emission sources associated with the new F2 Facility include:

- Material handling equipment supporting the Batch House;