



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029**

Report Title: Clean Air Act Inspection of Chromaglass
Inspection Date(s): 10/6/2020
Regulatory Program(s): SIP
Company Name: Chromaglass, Inc.
Facility Name: Chromaglass, Inc.
Facility Location: 1201 Randall Court
Export, PA 15632
Latitude: 40.396760 **Longitude:** -79.610650
County/Parish: Westmoreland
AFS Number: N/A
Permit Number: N/A – No CAA Permit
NAICS Code: 327212 **SIC:** 3229
Unique Project #: N/A

Facility Representatives:	Point of Contact
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State/Local Inspectors:
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EPA Lead Inspector

Signature

Bruce Augustine
1650 Arch Street (3ED21)
Philadelphia, PA 19103-2029

Date

Supervisor

Signature

Kristen Hall

Date

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I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Chromaglass Inc. (Chromaglass or Facility) to verify compliance with applicable State and Federal regulations. The Pennsylvania Department of Environmental Protection (PADEP) was notified of the inspection on September 29, 2020 via email. On October 5, 2020, EPA notified the Facility of the planned inspection via phone.

A. Summary of the Facility

The Facility is located at 1201 Randall Court, Export, PA. The company began operation in 2001 while the current location was constructed in 2012. This is the only location for the company. The Facility has 11 full-time employees and operates single shift/5 days per week. Chromaglass utilizes four furnaces to melt and mold glass parts for the aircraft industry. They provide products for private companies and the military.

The Facility does not have a permit to operate from the Pennsylvania Department of Environmental Protection. The Facility stated that they were deemed too small to need a permit.

Chromaglass is classified as minor source for all criteria pollutants and hazardous air pollutants. The purpose of the inspection was to determine the applicability of the following federal regulations:

- 40 C.F.R. Part 63, Subpart SSSSSS – National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources

B. Inspection Opening Conference

At 11:10AM on October 6, 2020, EPA arrived at the Facility for a CAA Inspection and conducted a brief opening conference. Chromaglass was represented by Bruce Stephens, David Dutt, and Luke Stephens. Also, Thomas Norris, from PADEP Southwest Office was present. Bruce Augustine presented his credentials and explained the purpose of the visit was to conduct a full compliance evaluation (FCE) to determine applicability and compliance with any applicable regulations. Additionally, EPA informed the facility representatives of their right to claim any confidential business information (CBI). At that time, Bruce Stephens did not claim any photos or documentation as CBI.

II. Site Activity/Process Description

Representatives of Chromaglass indicated that the facility manufactures molded glass parts for the aircraft industry. Approximately 90% of their parts are clear glass while the remainder are colored. Chromaglass uses raw materials, including metal hazardous air pollutants (metal HAP), to create a borosilicate batch that is melted in one of four pot furnaces. The molten glass is formed in molds as it removed from the furnace. Mr. Stephens indicated that the facility does not use Arsenic, Magnesium, Chromium, or Nickel. Chromaglass does occasionally use Cadmium

and Copper as a raw material. However, the facility last used Cadmium in late 2091. The facility can use up to 2/3 cullet per batch. The four pot glass furnaces are fired using natural gas.

III. Observations

EPA inspectors were led on a walkthrough of the Facility at approximately 12:00PM by Bruce Stephens, David Dutt, and Luke Stephens of Chromaglass and Thomas Norris of PADEP was also present for the walkthrough. EPA inspectors noted photos would be taken during the Facility walkthrough and all photographs were taken by Bruce Augustine (Attachment 1).

The walkthrough began in the raw material area. Chromaglass receives all raw material by bag and does not receive any raw material via rail. The largest raw material in batches is sand which is stored in bags. Smaller raw materials are stored in totes. A raw material batch is approximately 2500lbs and is mixed in an electric drum to make the batch homogenous. The batch is dumped into a hopper and then transferred to the furnace where it is hand fed into the pot. Chromaglass uses ceramic pots to melt the raw material batch within a refractory lined furnace. Natural gas is fired into the furnace using two burners. The burners are rated at 1.5 MMBtu/hr. Mr. Stephens stated that the pots are replaced about every six months as they wear out. The furnaces are not shut down when they are not charged with batch. They furnaces are kept in hot standby and are always firing natural gas unless they are taken offline for a rebuild or to replace a pot. The furnaces are brought back up to temperature and raw material is charged to the pot when the temperature reaches 2350°F. The batch is melted in the furnace for several days before being removed by hand and placed in molds. The molded glass parts are then placed into the annealing lehr for controlled cooling. The lehr is natural gas fired in several zones to control the cooling of the parts as they move through on a conveyor belt. Parts take approximately two hours to move through the lehr. Cooled parts are then stored prior to shipping.

Each of the four furnaces were observed during the walkthrough. Furnace 1 was not in operation and could not operate. Chromaglass indicated that this furnace was out of service due to a lack of production demand. Furnace 2 was operating at a temperature of 2315°F. This furnace was being brought back up to temperature and would be charged with raw material once the temperature reaches 2350°F. The pot on Furnace 2 had just recently been changed. Furnace 3 was operating and had molten glass in the pot. The furnace temperature was 2621°F. EPA did not observe glass being pulled from this furnace. Furnace 4 was also firing natural gas and was being brought back up to temperature. It can take several days to slowly heat a furnace up to temperature to prevent damage to the pot and the refractory. Each of the furnaces vent outside through a single stack in the roof. Each stack was observed from outside of the building. The furnaces operate with no emission controls to reduce the amount of criteria pollutants or HAP to the atmosphere. The pots vent directly into the furnace space or the building itself. This completed the walkthrough and a brief closing meeting was held.

IV. Records Review

Since no records were requested prior to the inspection, a records review was not conducted while onsite. On October 6, 2020, Bruce Augustine sent an email (Attachment 2) to Mr. Bruce Stephens requesting records for facility operations. Mr. Stephens provided the requested information via email on October 12, 2020.

V. Closing Conference

After the facility walkthrough, EPA, Thomas Norris, of PADEP, and Bruce Stephens and David Dutt, of Chromaglass, had a brief closing conference to ask additional questions and discuss observations. The closing meeting was held in the facility production area. EPA noted that the investigation is on-going, and any areas of concern identified in the final reports do not necessarily reflect a violation or deviation, rather, they are areas that will require further investigation. EPA also noted that they would issue an inspection report within in 60 days, with a copy to the State. Simultaneously, EPA will perform a detailed review of records and may have additional questions. Mr. Stephens produced purchase orders for sand and cadmium for 2018 and 2019. They indicated that Chromaglass purchased 50lbs of cadmium in 2018 and 2019. He agreed to provide copies of these purchase orders. He also indicated that cadmium makes up <1% by weight of each batch and that they only use cadmium a couple of weeks each year to make red glass. Chromaglass is currently making two batches per week of glass and the batches are about 600 lbs. A full batch can be 2500lbs, however, the pot isn't fully empty when new batch is added. Chromaglass indicated that they do not have a permit to operate from the PADEP and they have not requested a permit determination from PADEP. In addition, Chromaglass has not calculated their potential to emit for criteria pollutants and HAP's. Mr. Norris stated that this is something that is typically done by facilities of their size and that PADEP would respond with a determination as to whether an air permit was necessary to operate. Mr. Norris further indicated that it might be a good idea for Chromaglass to investigate whether they need an air permit from PADEP since they are emitting HAP. The inspection concluded at approximately 1:00PM and EPA exited the building.

The following have been identified as *potential* issues during the inspection. They are issues that require either further investigation by EPA or additional information or explanation by Chromaglass.

- **Chromaglass is operating without a permit of any type from the PADEP –** Chromaglass has never calculated their potential to emit for criteria pollutants or HAP. Therefore, it is not clear whether they are a major or minor source. Also, they have not been issued a determination from PADEP that no permit is required. The facility emits criteria pollutants (NO_x, CO, PM) from four glass furnaces and an annealing lehr. They also emit metal HAP, including cadmium and copper, from the furnaces. A review of the

potential emissions from the facility along with a permit determination request should be completed to determine if the facility needs a permit.

- **40 C.F.R. Part 63, Subpart SSSSSS** – This regulation applies to area (minor) sources of HAP that use metal HAP in their glass production. Chromaglass appears to meet these criteria. The regulation has an emission limit for either PM or metal HAP from the furnaceⁱ. There is an exemption from this regulation if the furnace does not melt glass containing metal HAP in batches less than 50 tons/yr. Chromaglass has indicated that their production is less than 50 ton/yr from each furnace. However, there are a limited number of records available and there are no operating or production limits in any permit to limit their production.

VI. List of Attachments

Attachment 1: Photo Log

Attachment 2: 10/6/20 Email from Bruce Augustine to Bruce Stephens

ⁱ The affected source is each glass furnace and the facility as a whole.