



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604**

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Alcast Company, Peoria, Illinois

FROM: Karina Kuc, Environmental Engineer
AECAB (IL/IN)

THRU: Nathan Frank, Section Supervisor
AECAB (IL/IN)

TO: File

BASIC INFORMATION

Facility Name: Alcast Company

Facility Location: 8821 N University St, Peoria, IL 61615

Date of Inspection: Nov 16, 2022

EPA Inspector(s):

1. Karina Kuc, Environmental Engineer
2. Dave Sutlin, Environmental Engineer

Other Attendees:

1. Randy Haley, EHS Manager
2. Josh Kelsey, President
3. Zack Bell, Maintenance Manager

Contact Email Address: haley.randy@alcastcompany.com

Purpose of Inspection: to assess compliance with the Clean Air Act (CAA)

Facility Type: aluminum foundry and metal finishing

Regulations Central to Inspection: Illinois State Implementation Plan (SIP)

Arrival Time: 1:40 PM

Departure Time: 3:10 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet
- ☐ Small Business Resource Information Sheet not provided. Reason:
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Alcast Company staff unless otherwise noted.

Company Ownership: Alcast Company was purchased by Ligon Industries LLC in October 2021, but the sale did not result in any operational changes.

Process Description: Alcast Company (Alcast or the facility) 22 melting furnaces for melting aluminum ingot or bar and five furnaces for heat treating castings. There are no controls on the furnaces. Argon is bubbled through the melted aluminum to remove oxides. The resulting slag is removed once a week. The molten aluminum is poured into a mold. Sometimes a lubricant is sprayed on the mold. Some molds require the use of a sand core which utilizes a binder. A portion of the casts are shipped to a third-party company that removes the core and then ships the cast back to Alcast for final processing. A portion of the casts are then heat treated to harden the metal.

The casts then get machined according to specification. The facility has one steel shot machine and five zinc shot machines that are each controlled by a dedicated dust collector that vents outside. Three grinders are each controlled by a dedicated dust collector that vents outside. Six grinders are each controlled by a dedicated dust collector that vents inside. One glass bead shot station is controlled by a dust collector that vents outside and a second glass bead shot station is controlled by a dust collector that vents inside. One aluminum oxide blaster is controlled by a dust collector that vents inside.

Staff Interview: The facility is in Illinois's Registration of Smaller Sources (ROSS) program. The aluminum melt throughput for 2021 was approximately 8,920,000 pounds. Some of the dust collectors have pressure gauges. Dust collectors without pressure gauges are emptied weekly, however records are not kept of the cleanings. Staff stated that they don't believe that the facility has ever received an odor complaint. Staff stated that their consultant advised that their grinding and shot blasting operations are exempt from emissions calculations.

After the inspection, Alcast provided their emissions calculations for 2022. The emissions calculations included emissions from core production, aluminum pouring and natural gas usage

which totaled 13.98 tons/year of volatile organic material, carbon monoxide, particulate matter, nitrogen oxides and sulfur dioxide, combined. The calculations did not include emissions from the shot blasting and grinding operations and 18 associated dust collectors. They stated that they understand that they need to apply for a lifetime operating permit.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations: EPA observed a burnt metallic odor outside of the facility, as well as inside the facility throughout the tour. EPA observed smoke coming from Furnace #2 when the molten aluminum was poured into a mold (see Video 1). Staff stated that the smoking was due to the binder that is used in the sand core. EPA observed the outlets of the dust collectors that vent outside into an alleyway between two buildings. EPA observed metallic dust in the alleyway that appears to have been deposited by the dust collectors (see Photos 1 and 2). EPA observed a broken pressure gauge on one of the dust collectors.

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

☒ Provided U.S. EPA point of contact to the facility

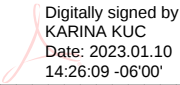
Requested documents:

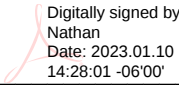
- Safety Data Sheets (SDS) for lubricants, binders, aluminum, additives, shot media
- Emission calculations and throughputs from January 2021 to October 2022
- ROSS program application

Concerns:

- The facility does not appear to be eligible for Illinois EPA's ROSS program.
- The broken gauge on the dust collector should be replaced.
- The dust collectors that vent outside should be monitored more frequently, as it appears they may not be working correctly as demonstrated by the dust collecting in the alleyway.

DIGITAL SIGNATURES

Report Author: **KARINA KUC**  Digitally signed by KARINA KUC
Date: 2023.01.10 14:26:09 -06'00'

Section Supervisor: **Frank, Nathan**  Digitally signed by Frank, Nathan
Date: 2023.01.10 14:28:01 -06'00'

Facility Name: Alcast Company

Facility Location: 8821 N University St, Peoria, IL 61615

Date of Inspection: November 16, 2022

APPENDICES AND ATTACHMENTS

Appendix A: Digital Image and Video Logs

Facility Name: Alcast Company
Facility Location: 8821 N University St, Peoria, IL 61615
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APPENDIX A: DIGITAL IMAGE AND VIDEO LOGS

1. Inspector Name: David Sutlin	2. Archival Record Location: Region 5 Electronic Record Center
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Image Number	File Name	Date and Time	Description of Image
1	PB160030.JPG	2022:11:16 14:56:09 Central time	Metallic dust deposited in alleyway where dust collectors vent
2	PB160031.JPG	2022:11:16 14:57:07 Central time	Metallic dust deposited in alleyway where dust collectors vent

Video Number	File Name	Date and Time	Description of Image
1	PB160029.MOV	11/16/2022 2:37:00 PM Central time	Smoke emanating from Furnace #2 as molten aluminium is poured into mold