



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

**DATE:** See Date of Section Chief Signature Below

**SUBJECT:** CLEAN AIR ACT INSPECTION REPORT  
Allied Metal Company, Chicago, IL 60651

**FROM:** Karyn DeFranco, Inspector  
AECAB (MN/OH)

**THRU:** Brian Dickens, Section Chief  
AECAB (MN/OH)

**TO:** File

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**BASIC INFORMATION**

**Facility Name:** Allied Metal Company

**Facility Location:** 4528 West Division Street, Chicago, IL 60651

**Date of Inspection:** 08/11/2021

**EPA Inspector(s):**

1. Karyn DeFranco, Inspector
2. Karina Kuc, Inspector

**Other Attendees:**

1. Gilbert Escudero, Plant Manager, Allied Metal Company

**Contact Email Address:** gescudero@alliedmetalcompany.com

**Purpose of Inspection:** To investigate compliance with the FESOP permit and investigate compliance with the NESHAP for Secondary Aluminum Production.

**Facility Type:** Aluminum Smelting Furnaces

**Regulations Central to Inspection:** 40 C.F.R. Part 63 Subpart RRR

**Arrival Time:** August 11th, 2021, 9:47 AM

**Departure Time:** August 11th, 2021, 11:32 AM

**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 Allied Metal Company unless otherwise noted.

**Process Description:**

Allied Metal Company (Allied Metal) operates a secondary aluminum smelting facility. Scrap aluminum is trucked into the facility and scraps are fed to the furnace(s) in batches where they are demagged using flux and aluminum flouride ( $AlF_3$ ) when the furnace is full, then cast into ingots (25-30 lbs) or sows (1200 lbs).

**Staff Interview:**

Allied Metal has approximately 60 employees and typically operates 24 hours per day, six days per week. Allied Metal has three reveratory furnaces (#2, #3, and #4) and operate two furnaces at all times, rotating the other furnace as a backup. The furnaces have a capacity of 210,00 lbs each. A batch consists of approximately 90,000 lb of heel metal, 10,000-20,000 lbs of flux, and 110,000 lbs of scrap metal. Allied Metal runs one batch per operating furnace per day, resulting in 10-12 total batches per week. Two furnaces are heated at all times. On days when Allied Metal is not operating, the furnace temperatures are turned down slightly, making sure metal remains molten, and the baghouse is turned off.

All three reveratory furnaces are vented to a baghouse. The baghouse gages are monitored daily. The baghouse is cleaned when the differential pressure is 10-15" water column, which is approximately every 5-7 days. The baghouse has a bag leak detection system with alarm set point at 100 mA and a shutoff set point at 14 mA. The baghouse has a fresh air damper that opens if temperature exceeds 240°F to add fresh air.

Most of the scrap purchased is furnace ready. Allied Metal operates a scrap shredder for the scrap that is not furnace ready and operates the scrap shredder infrequently, estimating one or two days in operation in 2021. Allied metal also operates molten pot preheaters relatively infrequently, estimating approximately two-weeks of use in 2021.

## TOUR INFORMATION

**EPA Tour of the Facility:** Yes

### **Data Collected and Observations:**

EPA toured the facility. EPA inspected process areas, emission vents from units, and the baghouse. EPA saw fugitive emissions into the process area room from Furnace #4 at approximately 10:55 AM. Allied Metal stated that emissions were a result of wind blowing through the open door in the process area. Allied Metal closed the door to the outside, which appeared to lessen the fugitive emissions.

**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:**

- 2020 Records for the baghouse including:
- Maintenance and cleanouts;
- Baghouse computer records (including fresh air damper opening);
- Bag leak detection alarms and actions;
- Annual emissions reports (AER) and internal calculation spreadsheets for 2019 and 2020;
- SDS sheets and 2020 throughput for fluxes and components;
- List of final product alloys

**Concerns:** EPA raised concerns about the fugitive emissions seen from Furnace #4 during the inspection.

## DIGITAL SIGNATURES

Report Author: **KARYN DEFRANCO**  
Digitally signed by KARYN DEFRANCO  
Date: 2021.09.08 13:30:08 -05'00'

Section Chief: **Brian Dickens**  
Digitally signed by Brian Dickens  
Date: 2021.09.09 07:09:03 -05'00'

**APPENDICES AND ATTACHMENTS**

- I.* Appendix A: Digital Image Log

**Contains Items Claimed as CBI – Non-Releasable**

**Facility Name:** Allied Metal Company

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**CONFIDENTIAL BUSINESS INFORMATION ATTACHMENT**

NONE

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**Date of Inspection:** August 11, 2021

**APPENDIX A: DIGITAL IMAGE LOG**

<b>1. Inspector Name:</b> Karina Kuc	<b>2. Archival Record Location:</b> <i>C:\Users\kdefranc\OneDrive - Environmental Protection Agency (EPA)\Community Group\SE Chicago 2021\081021 Inspections\Allied Metals\081121 Inspection Photos</i>
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<b>Image Number</b>	<b>File Name</b>	<b>Date and Time (incl. Time zone and DST)</b>	<b>Description of Image</b>
1	IMG_0005.JPG	2021:08:11 10:59:46	Process Area and Furnace #3
2	IMG_0006.JPG	2021:08:11 12:05:38	Fugitive emissions from Furnace #4 inside process area
3	IMG_0008.JPG	2021:08:11 12:06:38	Fugitive emissions from Furnace #4 inside process area
4	IMG_0009.JPG	2021:08:11 12:06:59	Fugitive Emissions from Furnace #4
5	IMG_0010.JPG	2021:08:11 12:37:45	Group 1 Furnace Label for Furnace #2