



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

Report Title: Clean Air Act Inspection of Montgomery Scrap Corporation
Inspection Date(s): March 17, 2022
Regulatory Program(s): NESHAP and SIP
Company Name: Montgomery Scrap Corporation
Facility Name: Montgomery Scrap Corporation
Facility Location: 15000 Southlawn Lane
Rockville, MD 20850
Latitude: 39.1029 **Longitude:** -77.13553
County/Parish: Montgomery County
AFS Number: MD0000002403100933
Permit Number: 031-0933
NAICS Code: 423930 **SIC:** 5093
Unique Project #: 3E22CA074A

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EPA Inspector _____
Carly Joseph **Date**
1650 Arch Street (3ED21)
Philadelphia, PA 19103-2029

Supervisor _____
Signature **Kristen Hall** **Date**

Table of Contents

<u>Section</u>		<u>Page</u>
I	Introduction.....	3
A	Summary of the Facility.....	3
B	Inspection Opening Conference.....	3
II	Site Activity/Process Information.....	3
III	Observations.....	5
III	Records Review.....	6
V	Closing Conference.....	7
VI	List of Attachments.....	8

I. Introduction

The United States Environmental Protection Agency (EPA) conducted a Clean Air Act (CAA) inspection at Montgomery Scrap Corporation (Montgomery Scrap or Facility) to verify compliance with applicable State and Federal regulations. The Maryland Department of the Environment (MDE) was notified of the inspection on March 10, 2022 via email. On March 15, 2022, EPA notified the Facility of the planned inspection via phone and email. EPA emailed a list of records for review to Cristal Cole at Montgomery Scrap prior to the inspection (see Attachment 1). These records are listed in the Records Review section of the report.

A. Summary of the Facility

The Facility is located at 15000 Southlawn Lane, Rockville, MD 20850, and processes scrap metal for recycling. MDE issued the Facility a State Only Operating Permit (#031-0933) on March 1, 2018. Montgomery Scrap Corporation is classified as minor source for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs). The Facility is subject to 40 CFR Part 63, Subpart RRR: National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production

B. Inspection Opening Conference

At 8:25 AM on March 17, 2022, EPA inspectors arrived at the Facility for a CAA Inspection and conducted a brief opening conference. Montgomery Scrap was represented by Troy Simms, Operation Manager; Aaron Hill, General Manager; Eric Helders, Environmental and Health and Safety Engineer; and Cristal Cole, Director of Compliance. Roland Gorschboth of MDE was present. EPA Region III inspectors Erin Willard, Stewart Stafford, and Carly Joseph was present. In addition to the EPA Region III inspectors, Shaun Burke of EPA's Office of Enforcement and Compliance Assurance (OECA) was also present. All EPA inspectors presented their credentials and explained that the purpose of the visit was to conduct an inspection to determine compliance with the permit and any applicable regulations. EPA explained that they planned to take photos during the inspection. Stewart Stafford took photos during this inspection. Additionally, EPA informed the facility representatives of their right to claim any confidential business information (CBI). At that time, Troy Simms did not claim any photos or documentation as CBI.

II. Site Activity/Process Description

EPA requested that facility personnel provide an overview of the history of the facility, and current operations. Montgomery Scrap is owned by the parent company SIMS Metal Management ("SIMS") and has existed at this site since 1971. There is also a "sister" scrap shredding site owned by SIMS that has been located in Baltimore since 1912. Historically, those two sites acted as sister facilities, buying and selling raw and intermediary materials with each other before merging in 2006, under the name Atlantic Recycling. In January 2022 SIMS ARG, Inc. acquired Atlantic Recycling. Montgomery Scrap holds an Auto Dismantler and Recycler ("AD&R") license issued by the Maryland Department of Transportation Motor Vehicle Administration that allows the Facility to purchase end-of-life vehicles (EOLs). The Facility also operates a Storm Water permit issued by MDE.

In addition to EOLs, Montgomery Scrap purchases post-consumer scrap metal, including aluminum, copper, brass, and stainless steel. All ferrous materials purchased by the Facility are shipped to the Baltimore site by truck. The Facility also has a feeder yard located in East Baltimore, that accepts scrap, but does no

processing other than sorting for shipment to other processing locations. Montgomery Scrap accepts raw material from the public and industrial providers, including scrap yards, metal industries, garages, repair shops and more. On average, the Facility accepts 1-3 EOLs daily, with each vehicle being “de-polluted” prior to acceptance by the Facility. De-polluting includes removing batteries, gas tanks, refrigerants, mercury switches, and other engine fluids like oil and transmission fluid. Motors that come into the Facility may contain some residual oil. Motors with residual oil are placed into a bin to catch any small amounts of fluids that may drip out of the units. The Facility does not own or operate a draining rack and will not accept any vehicle that has not already had these removal activities completed. The Facility stores its own hydraulic oil and other unused oils onsite but does not accept used oil from the public. Mercury switches that are not removed from vehicles prior to arrival are removed by the Facility and recycled by End-of-Life Vehicle Solutions Corporation (ELVS). Refrigerators and air conditioning units are not accepted unless the refrigerants have been removed offsite.

The Facility installed a new aluminum sweat furnace in 2020 to replace an outdated furnace. The new sweat furnace has a smaller holding/secondary chamber than the previously existing unit. Even though the new furnace is smaller in size, it is more efficient, so the Facility production capacity was not reduced. The new furnace’s holding/secondary chamber can hold 3,000-4,000 pounds of aluminum melt and the old furnace’s holding/secondary chamber could hold up to 10,000 pounds of aluminum melt. The Facility operates the sweat furnace four to five days a week during day light hours.

Montgomery Scrap has 40 employees, and only works one shift per day. Operating days and hours may vary depending on maintenance requirements, feed stock, and weather conditions. The Facility shuts the sweat furnace down for routine maintenance once a week. Refractory repairs are conducted weekly and total rebricking of the sweat furnace is completed every 1-1.5 years, typically in December. During rebricking, the sweat furnace is down for two weeks. Maintenance also includes re-mudding edges, packing and sealing cracks, and checking/replacing hydraulics for furnace door. On colder days, or days with high humidity, the Facility does not operate the sweat furnace because these conditions can reduce the efficiency of the furnace by up to 20%. The most recent MDE inspection took place on December 14, 2021, when the Facility was rebricking the furnace.

The primary/charging chamber of the aluminum sweat furnace is located at a higher gradient than the secondary/holding chamber creating a positive slope. Raw materials are hand sorted and closely inspected before being charged to the sweat furnace. The Facility uses acid test and x-ray fluoroscopy to determine what metals are present in the raw materials. Raw materials are closely inspected before charging in order to ensure that the finished product meets customer specifications. Contaminants such as magnesium can create unsafe conditions if they enter the furnace.

Raw material such as transmissions and motors are charged using a forklift to the primary chamber. Three natural gas fired burners are located in the primary chamber over the melt and heat the chamber to 1400°Fahrenheit, which is the melting point of aluminum. Most of the aluminum sweats off the feed stock in approximately 15-20 minutes.

Next, the melted aluminum enters the secondary/holding chamber which can hold up to 3,000 pounds of molten aluminum. When the operator taps the furnace, molten aluminum is poured into a 1500 pound capacity mold. These ingots are called “sows” and after cooling (which takes a day or two) the molds are flipped with a forklift, releasing the ingot. Once all the aluminum has been melted, the remaining iron parts are raked out of the receiving chamber of the furnace and transported to the Baltimore location for shredding. The ingots are sold back to engine manufacturers.

The air emissions controls on the sweat furnace include a natural gas fired afterburner and induced draft fan. The afterburner temperature is set at 1650°F to maintain a minimum temperature of 1600°F. Temperatures of the furnace and afterburner are hand recorded by operator and digitally recorded by a data logger in the stack. All gases from the furnace during a heat cycle are vented into the afterburner, with a required residence time of 0.8 seconds, in order to fully destruct the dioxin/furans (D/F) generated during the aluminum melting process.

There is an induced draft fan attached to the afterburner that vents dust and particulate matter to the afterburner using positive pressure when the sweat furnace's doors open. The sweat furnace is also hooded, with a small room over the furnace acting as a settling chamber. Residual dusts is cleaned from the room during maintenance. No performance testing has been completed on this furnace and is not required by the permit. The Facility demonstrates compliance with 40 C.F.R Part 63, Subpart RRR by operating the after burner at a residence time of 0.8 seconds or greater and temperature of 1600°F or greater. The Facility can produce 8-10 sows maximum in an 8 to 9-hour workday; however, on average the Facility produces 6-8 sows a day.

The opening conference concluded at 9:20 AM.

III. Observations

EPA inspectors were led on a walkthrough of the Facility at 9:30 AM by Aaron Hill and Eric Helders of Montgomery Scrap. Inspector Roland Gorschboth from MDE and EPA inspectors Shaun Burke, Erin Willard, Stafford Stewart, and Carly Joseph were also present for the walkthrough. EPA inspectors noted photos would be taken by Stafford Stewart during the Facility walkthrough (Attachment 2), and that the team would ask prior to taking a photo. Eric Helders of Montgomery Scrap indicated he would take a photo for the company's records alongside Stafford Stewart.

The inspection team began their walkthrough by exiting the conference room and walking to the back of the Facility where a scale house and shear was observed. The shears were not in operation during the time of the inspection. Mr. Hill indicated that the shears do not operate for months at a time but are used to cut larger pieces of steel into smaller pieces for further processing off site. Adjacent to the shearing area, the team observed a sorting area, where various pieces of post-consumer metal objects (refrigerators, stove parts, tire rims, shelving, and more) were being unloaded and sorted into piles by material type. The team continued towards the back of the Facility to another sorting area that consisted of aluminum and stainless-steel materials, located under a roofed concrete pad. This sorting area is feed stock for the sweat furnace, and as discussed above mostly consists of engine blocks and other engine components that contain aluminum. Sandbags were observed surrounding feed stock, and Montgomery Scrap staff indicated that the sandbags prevented water from running under the feed stock.

Next the team observed the afterburner for the sweat furnace. The after burner was installed at the same time as the sweat furnace. Mr. Hill indicated that during regular operation of the furnace, the after burner operates using negative pressure and the damper operates on demand from the Programmable Logic Controller (PLC). When the doors of the sweat furnace open, the fan in the after burner pulls pollutants through the furnace creating a negative pressure. The after burner is the control device to destroy D/F and is required by 40 C.F.R Part 63, Subpart RRR.

The team then entered the building where the sweat furnace is located. At the time of the inspection, the furnace was not operating due to a door seal issue; however, residual heat was still coming from the furnace. Mr. Hill explained how staff load raw material into the primary chamber. There are three natural gas-fired

burners in the primary chamber heating the feedstock material to 1400°F; this process causes the molten aluminum to “sweat” in droplets off the iron substrate. The melted aluminum drips down through holes and runs to the secondary chamber due to the primary chamber being constructed at a slight angle above the secondary chamber. The secondary chamber or “bath” consists of two burners to maintain the melted aluminum at its melting point. The melted aluminum sits in the bath until there is enough weight to tap the furnace directly into the ingot molds. The molds are slid along rails and lined up with the tapping spout for filling. Sows are stored inside the furnace building until they are cool enough to unmold and sell to customers. Mr. Hill opened the door of the furnace to allow team to view the inside; this door operates hydraulically and reportedly was having seal maintenance performed on the day of the inspection.

Mr. Hill indicated that the furnace temperature interlocks at 2000°F (the temperature at which metals other than aluminum begin to melt) and that there’s a draft control that keeps the pressure steady in the chamber. When the doors of the chamber open, an extra fan turns on to pull dust into the after burner, thereby reducing emissions coming from the furnace. The team entered the control room and observed four temperature gauges for the furnace. Even though the furnace was not in operation, the temperature gauge was active.

The team observed a natural gas fired emergency generator. Mr. Hill indicated the emergency generator has not operated in over five years. The Facility utilizes centralized HVAC for comfort heating, so there are no boilers at the site. Then, the team observed the Facility’s above-ground diesel tank, used to fuel various pieces of heavy equipment across the site. Mr. Hill indicated the Facility has an underground diesel tank as well.

Next, the team observed two metal balers. Mr. Hill indicated nonferrous scraps are dropped onto the conveyor and transferred up to the baler that compacts the scraps into a cube for easy transport to consumer. The two balers operate using electricity. The team walked to a hooded building and observed where the Facility stores its universal waste. At the universal storage area, the team observed a bin of batteries. The team walked into the building and observed a 300-gallon waste oil tank where the Facility dumps oil from an oil change. A small waste oil burner that burns waste oil for comfort heat is also located in this building. Erin Willard walked up a ladder to closely observe the waste oil burner. Lastly, the team observed the Facility’s sink-type degreaser. The degreaser’s lid was open during the time of the inspection teams walk through.

The walkthrough concluded at 10:32 AM.

IV. Records Review

The records review commenced immediately after the plant walkthrough at 10:33 AM. EPA inspectors reviewed documents requested in the March 15, 2022 email to Cristal Cole (see Attachment 1). Some of the records were able to be viewed at the time of the inspection, but other records related to the furnace operation are maintained in hard copy format and may take longer to provide to the EPA. Below are the records requested and an indication of the status of the record at the time of this inspection report. Records requested relating to the shredder were not provided since the Facility does not operate or own a shredder.

- *The size in tons per hour and hp/kW for each shredder*
No documentation was provided during records review because Facility does not own/operate a shredder.
- *Shredder feed tons, on a daily or monthly basis, broken down by material type (auto, white goods, light iron, etc) for the past 3 years:*

No documentation was provided during records review because Facility does not own/operate a shredder.

- *Information on any controls at each facility:*

No records were provided during records review. Cristal Cole verbally agreed to provide the past 3 years of records for afterburner temperature and residence time on March 25, 2022.

- *Hours of operation for the shredder from January 1, 2019 to present:*

No documentation was provided during records review because Facility does not own/operate a shredder.

- *A list of all combustion sources at the site:*

The facility did not provide a list during records review but stated that they do not currently operate an emergency generator.

V. Closing Conference

After the records review, EPA inspectors, Troy Simms, Aaron Hill, Cristal Cole, and Roland Gorschboth held a brief closing conference to ask additional questions and discuss observations. The EPA inspectors 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. The inspection concluded at 11:05 AM.

No Areas of Concern were noted at the closing conference; however, EPA did state that the furnace operating parameter record review would be the main compliance check for this facility to gauge compliance with 40 C.F.R Part 63, Subpart RRR. EPA verbally requested the Facility provide the following documents by March 25, 2022¹:

- Excel spread sheets of the Sweat Furnace's feed tons (throughput), on a daily or monthly basis, broken down by material type over the past 3 years.
- Records of the Sweat Furnace's and afterburners last 3 years of fuel usage.
- Records of residence time and afterburner temperature during operation to show compliance with 40 C.F.R Part 63, Subpart RRR.

EPA will conduct a review of to determine Montgomery Scrap's compliance with Subpart RRR, its permit and any other relevant rules.

¹ EPA received documents through EPA GoAnywhere Site on April 4 2022

VI. List of Attachments

Attachment 1: Email Correspondence with Facility

Attachment 2: Photolog

Feil, Kathryn

From: Willard, Erin
Sent: Wednesday, May 11, 2022 1:09 PM
To: Joseph, Carly
Subject: FW: EPA R3 CAA Inspection on March 17, 2022 at Montgomery Scrap

Erin Willard
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From: Willard, Erin
Sent: Tuesday, March 15, 2022 11:32 PM
To: cristal.cole@simsmm.com
Cc: Roland Gorschboth -MDE- <roland.gorschboth@maryland.gov>; Burke, Shaun <Burke.Shaun@epa.gov>; Joseph, Carly <Joseph.Carly@epa.gov>; Stewart, Stafford <Stewart.Stafford@epa.gov>
Subject: EPA R3 CAA Inspection on March 17, 2022 at Montgomery Scrap

Ms. Cole,

Thank you for speaking with me earlier today about the planned CAA inspection at the Montgomery Scrap Facility in Rockville, MD. As discussed, we'll plan to arrive at the site around 8:15am on March 17. EPA will have four inspectors (two of which are in training), and MDE will also be in attendance. We will have our own safety gear.

We will be reviewing all air emissions sources at the facility, so please plan to have records available as related to your emission units, including but not limited to the following:

- A list of each combustion source at the site
- Fuel usage and raw material throughputs
- Information on any controls the furnace utilizes, including afterburner info and monitoring data (residence times, operating temperatures in block averages etc.)
- Each performance test report completed on the furnace
- Operation and maintenance records
- Records of deviations, corrective actions and startup shutdown events

We look forward to seeing you on Thursday.

Erin Willard
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ATTACHMENT 2: PHOTO LOG

Facility: Montgomery Scrap Corporation

Location: 15000 Southlawn Ln, Rockville, MD 20850

Inspection Date: 3/17/2022

EPA Inspector(s): Erin Willard, Stafford Stewart, and Carly Joseph

Photographer: Stafford Stewart



Photo Number: 1

Photo Description: Sorting and Shear Area



Photo Number: 2

Photo Description: Feed for Furnace

Montgomery Scrap 3/17/2022



Photo Number: 3

Photo Description: afterburner for furnace

Montgomery Scrap 3/17/2022

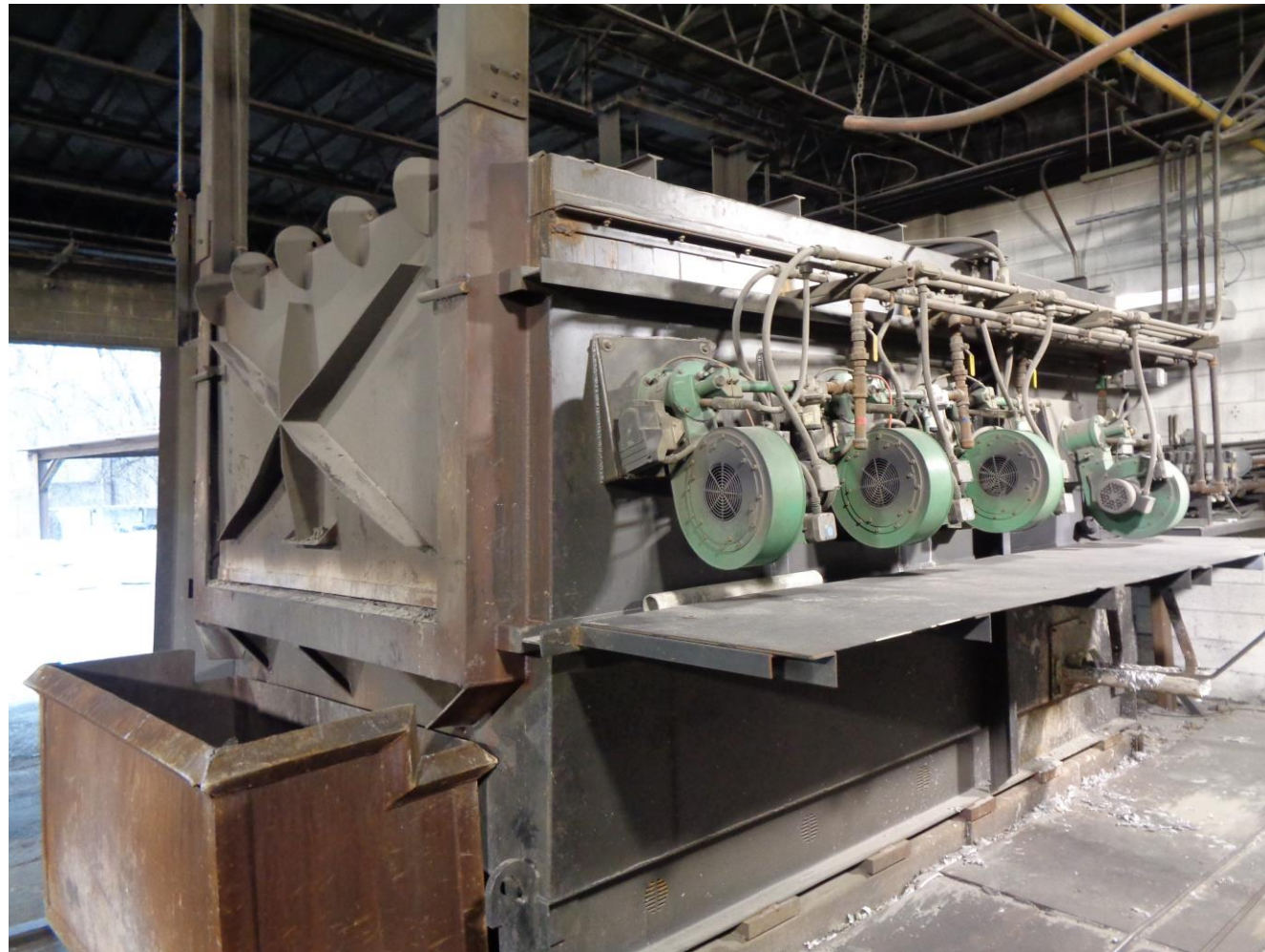


Photo Number: 4

Photo Description: sweat aluminum furnace



Photo Number: 5

Photo Description: inside aluminum furnace



Photo Number: 6

Photo Description: aluminum sow



Photo Number: 8

Photo Description: universal waste storage



Photo Number: 9

Photo Description: waste oil burner