



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Wieland Recycling, Granite City, Illinois

FROM: Valeria Apolinario, Environmental Engineer
AECAB (MN/OH)

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

TO: File

BASIC INFORMATION

Facility Name: Wieland Recycling

Facility Location: 2684 Missouri Avenue, Granite City, Illinois (Main Operation) and
3101 Missouri Avenue, Granite City, Illinois (Slag Reclaiming Operation)

Date of Inspection: May 7, 2024

EPA Inspector(s):

1. Valeria Apolinario, Environmental Engineer
2. Carlo Demma, Physical Scientist (Env.)

Other Attendees:

1. Lance Paszkiewicz, Plant Manager
2. Matt Hartin, EHS Manager

Contact Email Address: lancep@tmrusa.com

Purpose of Inspection: to determine compliance with the Facility's Lifetime Operating Permit (LOP) and the Illinois State Implementation Plan (SIP) Part 212 Subpart K: Fugitive Particulate Matter. The two locations are separately permitted. The Main Operation is permitted under the LOP and the Slag Reclaiming Operation is registered under the Illinois Registration of Smaller Source program.

Facility Type: Recyclable Material Merchant Wholesaler

Facility Name: Wieland Recycling
Facility Location: 2684 Missouri Avenue, Granite City, Illinois
Date of Inspection: May 7, 2024

Regulations Central to Inspection: The LOP provides that wire reclamation lines #1, #2, and #4 are controlled by Baghouse #1, wire reclamation line #3 is controlled by Baghouse #2, and the wire chopping line is controlled by Baghouse #3. The LOP provides that there are several transfer points and conveying systems associated with crushing and sorting emissions units on site.

Condition 4b. of the LOP provides that pursuant to 35 Ill.Adm.Code 212.308, crushers, grinding mills, screening operations, bucket elevators, conveyor transfer points, bagging operations, storage bins and fine product truck and railcar loading operations shall be sprayed with water or a surfactant solution, utilize choke-feeding or be treated by an equivalent method in accordance with an operating program.

Condition 5c. of the LOP provides that the permittee shall, in accordance with the manufacturer and or vendor recommendations, perform periodic maintenance on the emission control units associated with emissions units at the source to be kept in proper working condition and not cause a violation of the Environmental Protection Act or regulations promulgated therein.

Condition 10a.E of the LOP provides that the permittee is to maintain records of monthly and annual emissions of PM, PM10, NOx, CO, SO2, VOM, and HAPs with supporting calculations.

Arrival Time: 9:45 AM

Departure Time: 12:18 PM

Inspection Type:

- ☒ Unannounced Inspection
- ☐ Announced Inspection

OPENING CONFERENCE

- ☒ Presented Credentials
- ☒ Stated authority and purpose of inspection
- ☒ Provided Small Business Resource Information Sheet – via email
- ☒ Provided CBI warning to facility

The following information was obtained verbally from Wieland Recycling staff unless otherwise noted.

Company Ownership: Wieland Recycling purchased the Facility from Total Metal Recycling on April 30, 2022.

Process Description:

At both locations, the Facility reclaims metals from scrap. At its Main Operation, the Facility operates four metal reclaiming processes. The first process reclaims precious metals and steel from electronics. These electronics can go through either one of two shredders, one known as the rotogator and the

other known as the hammermill. After shredding, the material moves through optical sorting, eddy current removal, and gravity separators to separate the metals from other materials, such as plastic.

The second process reclaims metal from insulated wire. The wires are sent to the wire chopping line, also known as the pre-chopper, to cut the wire. The cut wires are then sent to one of three wire reclamation lines. Air tables are used to separate the denser metal from the insulation, which is air-lifted to the baghouses. The remaining copper is compressed into a cylindrical form.

At the third reclamation process, brass bullets are heated at the spent shell casing certification unit. These bullets are heated to pop out the primer, also known as the ignition powder. The furnace is heated to about 1000°F, which allows the primer to pop. Once the primer is popped, the bullets can go through the shredding process. The fourth reclamation process reclaims steel and aluminum, which goes through the shredders as well. The main difference is that a larger gravity separator is used to remove aluminum from plastic.

At the Slag Reclaiming Operation, brass skimming and slag are brought in through the docks. A Didion rotary machine is used to crush the material. The crushing chamber is lined with serrated edges. The material enters the crushing chamber via a conveyor where it then rotates at a high speed and breaks apart as it falls onto the serrated edges. The slag can be further ground and screened before being packaged into 25-pound supersacks. A baghouse controls emissions from the rotary machine.

Staff Interview:

- The Facility operates from 7:30 AM to 3:30 PM Monday through Friday, although it can operate overtime on some Saturdays.
- The Facility employs 183 employees at both locations.
- Wire Reclamation Line #4 has not been in operation in the last two years.
- There is no application of water or dust suppressant at the Facility at any location besides the hammermill. A water spray can be operated at the hammermill. There is no water or sweeping truck at the Facility.
- Stack testing had been conducted on the spent shell casing certification unit.
- Air emissions are calculated internally.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

EPA toured the Facility, beginning with the shredders. Facility staff stated that the water spray system was down at the hammermill but that the feed pile was wet. EPA noted visible emissions from the hammermill; Facility staff stated that this was likely steam from the wet material.

EPA noted a separate lead work area with large overhead doors open. Facility staff noted that lead emissions were likely generated from eddy current separation.

EPA then toured the wire reclamation process, which was located indoors. EPA observed that the ductwork to Baghouse #3 from the pre-chopping line was partially plugged. EPA observed that while the wire was sent to the wire reclamation lines, the insulation, mainly plastic, that had initially separated at the pre-chopper was conveyed onto storage piles outside of the building. EPA observed visible emissions from these piles. EPA noted that the differential pressure was 0 psig at Baghouse #3, 0.5 psig at Baghouse #2, and 2 psig at Baghouse #1.

EPA then observed the spent shell casing safety certification unit in operation, in a separate indoor work area. The inlet to the unit, however, was located outside of the building. EPA observed a member of Facility staff in a full body suit shoveling fallen bullets and powder into the unit. EPA asked Facility staff about the purpose of the full body suit and staff responded that it was likely due to exposure to lead from the powder primer.

The Facility also houses an operation to remanufacture bullet shells to be reloadable. Once the primer is popped, the neck of the bullet can be reshaped to form a fresh shell. This is done by the company Top Brass, which Facility Staff stated was owned by Wieland.

EPA then visited the Slag Reclaiming Operation. EPA viewed the baghouse associated with the Didion rotary machine in operation. The pressure drop of this baghouse was at 4.3 inches of water column at the time of the inspection. Grinding operations were noted as enclosed.

Photos and/or Videos: were taken during the inspection and are listed in Appendix A.

Field Measurements: were not taken during this inspection.

CLOSING CONFERENCE

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

Requested documents:

- A copy of the Fugitive Particulate Operating Program and any amendments or revisions to the Fugitive Particulate Operating Program since January 2019.
- Record of activities completed according to the Fugitive Particulate Operating Program since January 2023, required to be maintained by Condition 10a.D. of the LOP
- Monthly and annual emissions of PM, PM10, NOx, CO, SO2, VOM, and HAPs with supporting calculations since January 2023, as required by Condition 10a.E of the LOP
- Quarterly reports submitted to IEPA since April 2019 required by Condition 12.b. of the LOP
- Stack testing report for emissions testing conducted at the Spent Shell Casing Certification Unit
- Manufacturer's guidelines for baghouses associated with Wire Reclamation Lines #1, #2, and #3, the Gravity Separator, and the Wire Chopping Line
- Maintenance records for Baghouses #1, #2, and #3, and the hammermill water spray system since January 2023

Facility Name: Wieland Recycling
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- Throughput of slag, in tons, processed at the Didion emissions unit for the calendar year 2023

Concerns: EPA noted to the Facility that it had concerns with fugitive emissions from the piles of plastic coming from the wire chopping line and that Baghouses #2 and #3 seemed to be operating at a low pressure drop. EPA also noted concern with the large overhead doors open for the lead work area and possible fugitive lead emissions from the inlet to the spent shell casing safety certification unit.

DIGITAL SIGNATURES

Report Author: **VALERIA APOLINARIO**
 Digitally signed by VALERIA APOLINARIO
Date: 2024.06.25 12:42:22 -05'00'

Section Supervisor: **BRIAN DICKENS**
 Digitally signed by BRIAN DICKENS
Date: 2024.06.25 14:21:46 -05'00'

APPENDICES

1. Appendix A: Digital Image Log and Digital Video Log

Facility Name: Wieland Recycling
Facility Location: 2684 Missouri Avenue, Granite City, Illinois
Date of Inspection: May 7, 2024

APPENDIX A: DIGITAL IMAGE LOG AND DIGITAL VIDEO LOG

Inspector Name: Valeria Apolinario **Archival Record Location:** *R5 Electronic Record Center/AECAB Library/Enf_WielandRecycling_IL_24/Enf_WielandReycling_IL_24_InspRep/Photos and Videos*

Image Number	File Name	Date and Time (incl. Time zone and DST)	Description of Image
1	MVI_0622.MP4	5/7/2024 11:01	Hammermill in Operation
2	IMG_0623.JPG	5/7/2024 11:09	Wire Chopping Line
3	IMG_0624.JPG	5/7/2024 11:09	Wire Chopping Line
4	IMG_0625.JPG	5/7/2024 11:13	Outside Area of Wire Reclamation and Chopping Lines
5	MVI_0626.MP4	5/7/2024 11:17	Outside Area of Wire Reclamation and Chopping Lines. Fugitive particulate emissions noted.
6	IMG_0627.JPG	5/7/2024 11:20	Warning of Lead Work Area
7	MVI_0628.MP4	5/7/2024 11:20	Video of Lead Work Area with Large Open Doors.