



REGION 5

CHICAGO, IL 60604

MEMORANDUM

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
Materion, Milwaukee, Wisconsin

FROM: Sophie Steckel, Environmental Engineer
AECAB (MI/WI)

THRU: Sarah Marshall, Section Supervisor
AECAB (MI/WI)

TO: File

BASIC INFORMATION

Facility Name: Materion Advanced Chemicals Inc.

Facility Location: 407 N. 13th St., Milwaukee, Wisconsin

Date of Inspection: May 21, 2025

EPA Inspector(s):

1. Sophie Steckel, Environmental Engineer
2. Gunnar Brown, Environmental Engineer

Other Attendees:

1. Noreen Atkinson, Materion, EHS Manager
2. Scott Ulfig, Materion, Process Engineer

Contact Email Address: Noreen Atkinson, noreen.atkinson@materion.com
Scott Ulfig, scott.ulfig@materion.com

Purpose of Inspection: Determine compliance with applicable federal regulations and synthetic minor limits included in the facility's operating permit

Facility Type: Chemical manufacturer

Facility Name: Materion
Facility Location: 407 N. 13th St., Milwaukee, Wisconsin
Date of Inspection: May 21, 2025

Regulations Central to Inspection: National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources at 40 C.F.R. Part 63 Subpart VVVVVV (NESHAP VVVVVV) and the facility's operating permit

Arrival Time: 1:00 PM

Departure Time: 2:25 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: Not a Small Business
- ☒ Provided CBI warning to facility

Was any information collected during the inspection claimed as CBI?

☒ Yes ☐ No.

Information Claimed as CBI: Batch sizes and specifics

The following information was obtained verbally from Materion attendees unless otherwise noted.

Process Description:

The Facility produces hundreds of different materials including specialty inorganic products, chlorides, and intermediate materials for phones and batteries. Production begins with the delivery of ingots, powders, and pieces by truck. The Facility reacts, blends, mixes, mills, and/or dries these bags and drums of solid raw materials in various production areas, some of which require the use of furnaces and ovens.

Staff Interview:

Materion operates the Milwaukee facility 24 hours per day Monday through Friday with occasional weekend overtime and has approximately 110 employees. The facility runs some processes regularly, but many assets are utilized as needed to fulfill customer orders. Production is almost entirely batch processes which vary in size. Due to the number of different small processes that are utilized irregularly, there can be large variation in HAP emissions. Zinc arsenide and hydrofluoric acid processes are run frequently. Cadmium and lead use has decreased significantly in recent years. The arsenic production room is kept under negative pressure and controlled by two dust collectors and redundant HEPA filters. The facility also has a HEPA filter for small batch processes subject to NESHAP VVVVVV.

The Facility receives 49% concentration hydrofluoric acid via tanker truck approximately monthly to refill the storage tank on-site. Hydrogen chloride and chlorine gases used in the furnaces are contained in 60-pound cylinders, and aqueous hydrochloric acid for production is stored onsite in 55-gallon drums. The facility has increased use of isopropyl alcohol and no longer stores methanol drums onsite.

Acid chemistry from reactive gas processing is routed to a single scrubber C108. The Facility controls other emissions with a central scrubber C101. The Facility records parameters for each scrubber once every eight hours in a paper binder on-site. The scrubber parameter records are stored on-site for five years.

EPA Toured the Facility: Yes

Data Collected and Observations:

EPA observed production areas including the pilot plant, reactive gas processing, hydrofluoric acid tank, and scrubbers and monitoring logs. EPA Inspectors noted that HF-001 detector had a cartridge failure at the time of inspection. EPA Inspectors noted that HEPA filter 0006 and 0007 had pressure drops of 0.75 and 0.87 inches of water respectively at the time of inspection. EPA Inspectors noted that the main scrubber in building 1 on the second floor was operating at 360 gallons per minute, 5.2 SPWC, 2.6 PPWC, and 10.6 pH. EPA Inspectors noted that scrubber C101 was operating at 32.67 gallons per minute, 2.2 inches of pressure in the water column, and 10.7 pH.

Photos and/or Videos: were not 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:

- Process-level chlorine emission calculations for RY2020-RY2024;
- Process-level HAP emission calculations for RY2020-RY2024 (P20, P42, P44);
- Monitoring data for scrubber and HEPA air controls as required by permit for the months of February and August for each year between 2022 and 2024;
- Supporting documentation for the C108 wet scrubber's 98.9% control efficiency for chlorine;
- Monthly emissions and hours of operation from each furnace P27b, P27d, P100 (RY2023-RY2024); and
- SDS for HF storage tank.

Facility Name: Materion
Facility Location: 407 N. 13th St., Milwaukee, Wisconsin
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DIGITAL SIGNATURES

Report Author: **SOPHIE
STECKEL**



Digitally signed by
SOPHIE STECKEL
Date: 2025.07.14
08:29:15 -05'00'

Section Supervisor: **SARAH
MARSHALL**



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SARAH MARSHALL
Date: 2025.07.14
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