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

SUBJECT:	CLEAN AIR ACT INSPECTION REPORT TC Industries, Crystal Lake, Illinois
FROM:	Jason Schenandoah, Environmental Engineer AECAB (IL/IN)
THRU:	Nathan Frank, Section Supervisor AECAB (IL/IN)
TO:	File

BASIC INFORMATION

Facility Name: TC Industries

Facility Location: 3703 State Rte 31, Crystal Lake, IL 60012

Date of Inspection: July 5, 2022

EPA Inspector(s):
1. Jason Schenandoah, Environmental Engineer
2. Emma Leeds, Environmental Engineer

Other Attendees:
1. Erich Hoffman, HR and EHS Director, TC Industries

Contact Email Address: erich@tcindustries.com

Purpose of Inspection: To ensure compliance with the Clean Air Act

Facility Type: Commercial steel heat treating, steel parts manufacturing, and fabrication facility

Regulations Central to Inspection: The Illinois State Implementation Plan

Arrival Time: 9:45 am
Departure Time: 12:10 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 Erich Hoffman unless otherwise noted.

Process Description:
TC Industries' Crystal Lake facility (the Facility) has two sides to the facility associated with a different mode of operation: the mill products and the process steel sides. On the mill products side, steel material is received from customers and will undergo a heat-treating process at the Facility to strengthen the steel. For the heat-treating process, steel is sent through a high heat furnace and is quickly cooled using oil or water quench, depending on the material and final product needs. After the quench, the steel is sent through a second, cooler, furnace to temper the steel. For oil quenches, a Biorem rinse is conducted before sending the steel into the second furnace, in order to remove excess oil from the steel. Straightening is sometimes needed following the heat-treating process, especially for thinner material. Material in need of straightening is sent through an additional furnace to relieve stresses on the steel. Products from the mill products side will then be sent back to the customers. On the process steel side, bulk steel is brought in to be formed, welded, heat-treated, cut, burned to shape, machined, straightened, or painted depending on final products needed. The process steel side produces cutting edges and wear parts, as well as steel fabrications. Painting is completed by a flow coater or in one of two spray booths.

Staff Interview: In case of fire, carbon dioxide and water suppression systems are used at the oil quench. There has been no recent fire at the oil quench. Filters are used to control particulate emissions from coating operations.

TOUR INFORMATION

EPA Tour of the Facility: Yes

Data Collected and Observations:
The oil quench was not operational at the time of the inspection. In the process side of the Facility, one torch cutting operation seemed to be emitting particulate matter. Steam is normally associated with the torch cutting; on a second pass by the same torch cutting operation, there were no emissions that looked like particulate matter.

RECORDS REVIEW

1. Safety Data Sheet for Aquaspar 120
2. 2020 and 2021 air emissions reports

CLOSING CONFERENCE

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

Requested documents:

- Copy of current federally enforceable state operating permit
- 2020 and 2021 air emissions reports
- Volatile organic compounds, NOx, and particulate matter emission factors used by consultants for reporting purposes, with supporting documentation
- Technical data sheets for the three paints in use at the Facility
- Paint usage for 2020 and 2021
- Site overview map
- Biorem technical data sheets and brief explanation of purpose at Facility

DIGITAL SIGNATURES

Report Author: JASON SCHENANDOAH Digitally signed by JASON SCHENANDOAH Date: 2022.08.23 13:35:53 -05'00'

Section Supervisor: Frank, Nathan Digitally signed by Frank, Nathan Date: 2022.08.23 16:35:41 -05'00'