



**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY**
REGION 5
25063 CENTER RIDGE ROAD
WESTLAKE, OHIO 44145-4114

DATE: November 2, 2021

SUBJECT: CLEAN AIR ACT INSPECTION REPORT
MPC Plating, LLC, Brooklyn, Ohio

FROM: Mark Conti, Environmental Engineer
WECAB, Multimedia Section (ECW-W)

THRU: Brooke Furio, Section Chief
WECAB, Multimedia Section (ECW-W)

TO: Brian Dickens, Section Chief
AECAB, OH/MN Section (ECA-18J)

Natalie Schulz, Environmental Engineer
AECAB, OH/MN Section (ECA-18J)

BASIC INFORMATION

Facility Name: MPC Plating, LLC

Facility Location: 9921 Clinton Road, Brooklyn, OH 44144

Date of Inspection: September 8, 2021

EPA Inspectors:

1. Mark Conti, Environmental Engineer
2. Danny Nguyen, Environmental Engineer

Other Attendees:

1. Daniel Mimis, Project Engineer, MPC Plating
2. Dick Simoneau, Plating Manager, MPC Plating

Contact Email Address: dmimis@mpcplating.com

Purpose of Inspection: evaluate compliance with standards for emissions from chromium electroplating tanks

Facility Type: electroplating

Regulations Central to Inspection: 40 CFR Part 63 Subpart N, Ohio state implementation plan, and Ohio EPA permit number P0111904

Arrival Time: 9:40 a.m.

Departure Time: 12:40 p.m.

Inspection Type:

- Unannounced Inspection
- Announced Inspection

OPENING CONFERENCE

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

The following information was obtained from Mr. Mimis unless otherwise noted.

Company Ownership: On June 1, 2020, MPC Plating closed its facility at 1859 East 63rd Street in Cleveland, Ohio and moved to its current location in Brooklyn, Ohio. MPC Plating sold all process equipment at the Cleveland plant. They currently operate an existing decorative chrome electroplating line at 9921 Clinton Road in Brooklyn, Ohio that was formerly owned by Plastic Platers LLC d.b.a. EG Industries. MPC Plating operates the chrome electroplating line under a permit-to-install and operate (PTIO) that was issued by Ohio EPA to Plastic Platers with an effective date of January 8, 2013 and an expiration date of January 8, 2023.

Process Description:

The facility electroplates plastic parts. It has one electroplating line, and the process is decorative chromium electroplating. There is a single chromium electroplating tank that contains chromic acid solution.

Staff Interview:

- The production schedule is 7:00 a.m. to 2:00 a.m. Monday through Friday or Saturday. The Facility employs 90-110 people.
- 40 CFR 63.342, Table 2 – Parts are processed through the plating line as they are received without degreasing, buffing, grinding, or polishing.
- 40 CFR 63.342, Table 2 – Chromic acid flake is stored in closed, steel, 55-pound containers, which are stored in an enclosed building. When chromic acid flake is added to the decorative chromium electroplating tank, the entire contents of the container is used.
- 40 CFR 63.342(d)(4) – PFOS-based fume suppressants are not added to the decorative chromium electroplating tank.
- 40 CFR 63.342(f)(3) – The Facility does not have an operation and maintenance plan.

- 40 CFR 63.342(g) – A reducing agent is not used to change the form of chromium from hexavalent to trivalent.
- 40 CFR 63.343(c)(5) – Before about August 8, 2021, the surface tension of the decorative chromium electroplating tank was measured with a stalagmometer. The surface tension has been measured with a tensiometer since about August 8, 2021. Measurements are taken a minimum of once each day the tank is in operation. The Facility has never drained the bath solution and added a new solution. This information was provided by Mr. Simoneau.

TOUR INFORMATION

EPA Toured the Facility: Yes

Data Collected and Observations:

- The facility has a composite mesh-pad scrubber for reducing chromium emissions from the chromium electroplating tank. There is a push-pull ventilation system to direct emissions to the scrubber (see photos #2, 5, and 6). The water used for mesh-pad washdown is collected and concentrated in a Chemtrec Systems chrome evaporation unit that also has a mesh-pad scrubber (see photos #7 and 8). Concentrated chromic acid solution is periodically returned to the chromium electroplating tank. Compliance is demonstrated through use of a chemical fume suppressant containing a wetting agent rather than the air pollution control device.
- 40 CFR 63.342, Table 2 – The chromium electroplating tank is followed by a drag-out tank with a drip shield between the tanks (see photo #1). Excess chromic acid is not removed from parts by spraying them. The elevated plating line has a collection system beneath it that drains to an onsite wastewater treatment system (see photo #3).
- EPA permit P0111904, condition C.1.b.1.a. – There were no visible emissions from the composite mesh pad scrubber stack when I observed it. The stack is shown in photo #9.
- Surface tension measurements are taken with a CSC Scientific Company DuNouy Tensiometer No. 70535 (see photo #10).

Photos and/or Videos: were taken during the inspection.

Field Measurements: were not taken during this inspection.

RECORDS REVIEW

- 40 CFR 63.343(c)(5) – The surface tension was measured with a stalagmometer prior to about August 8, 2021. I reviewed records for February 1 through July 26, 2021, and all measurements were at or below 40 dynes/cm. The surface tension has been measured with a tensiometer since about August 8, 2021. I reviewed records for August 9 through September 8, 2021, and all measurements were at or below 33 dynes/cm. Measurements were taken a minimum of once each day the tank was in operation.
- 40 CFR 63.346(b)(8) – Records of surface tension measurements, including date and time, were maintained.

- 40 CFR 63.346(b)(11) – Records of process operating time were maintained. I reviewed records for the first half of 2021.
- 40 CFR 63.346(b)(13) - Records of the date and time that fume suppressant was added to decorative chromium electroplating tank were maintained. The records included the fume suppressant manufacturer and product name (Macuplex STR NPFX by MacDermid Ethone).

DIGITAL SIGNATURES

Report Author:

MARK CONTI Digitally signed by MARK CONTI
Date: 2021.11.02 10:50:17 -04'00'

Mark Conti, Environmental Engineer

Approved by:

BROOKE FURIO Digitally signed by BROOKE FURIO
Date: 2021.11.02 11:08:24 -04'00'

Brooke Furio, Section Chief

ATTACHMENTS

1. Photographs (10 pages)

Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
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Date and Time: 9/8/2021, 10:30 AM	File: MPC Plating IMG_0001	Photo No.: 1
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Direction Taken: indoors

Description: The tank in the center of the photo is the drag out tank. The chromium electroplating tank is to its left. There is a drip shield between the tanks. The composite mesh-pad scrubber is at the far side of the tanks.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:32 AM	File: MPC Plating IMG_0002	Photo No.: 2

Direction Taken: indoors

Description: This is the chromium electroplating tank. Air is blown across the surface of the tank to assist with pushing emissions toward the composite mesh-pad scrubber across from the tank.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:33 AM	File: MPC Plating IMG_0003	Photo No.: 3

Direction Taken: indoors

Description: This is next to the chromium electroplating tank. The elevated plating line has a collection system beneath it that drains to an onsite wastewater treatment system.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:35 AM	File: MPC Plating IMG_0004	Photo No.: 4

Direction Taken: indoors

Description: This is the washdown schedule for the chromium electroplating tank composite mesh-pad scrubber.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:35 AM	File: MPC Plating IMG_0005	Photo No.: 5

Direction Taken: indoors

Description: Magnehelic gauges indicate the pressure drop across the individual chromium electroplating tank composite mesh-pad scrubber stages.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:35 AM	File: MPC Plating IMG_0006	Photo No.: 6

Direction Taken: indoors

Description: Magnehelic gauges indicate the pressure drop across the individual chromium electroplating tank composite mesh-pad scrubber stages.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:36 AM	File: MPC Plating IMG_0007	Photo No.: 7

Direction Taken: indoors

Description: This is the Chemtrec Systems chrome evaporator unit. It has its own mesh-pad scrubber. Concentrated chromic acid solution is periodically returned to the chromium electroplating tank.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:36 AM	File: MPC Plating IMG_0008	Photo No.: 8

Direction Taken: indoors

Description: This is the nameplate on the Chemtrec Systems chrome evaporator unit.



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 10:44 AM	File: MPC Plating IMG_0009	Photo No.: 9
Direction Taken: facing east		
Description: There were no visible emissions from the composite mesh-pad scrubber stack when I observed it.		



Facility Name and Location: MPC Plating, LLC 9921 Clinton Road, Brooklyn, Ohio	Photographed By: Mark Conti	Camera: Canon PowerShot SD1400 IS S/N 212065043406
Date and Time: 9/8/2021, 12:15 PM	File: MPC Plating IMG_0010	Photo No.: 10
Direction Taken: indoors		
Description: Surface tension measurements were taken with a CSC Scientific Company DuNouy Tensiometer No. 70535.		

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