

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

N092364846

FACILITY: Ventra Ionia Main, LLC		SRN / ID: N0923
LOCATION: 14 N BEARDSLEY ROAD, IONIA		DISTRICT: Grand Rapids
CITY: IONIA		COUNTY: IONIA
CONTACT: Chris Outman , Enviromental Manager		ACTIVITY DATE: 09/21/2022
STAFF: Eric Grinstern	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: On-site compliance inspection		
RESOLVED COMPLAINTS:		

Facility Description

Ventra Ionia Main, LLC (Ventra) is located in the city of Ionia, in Ionia County. The facility is an automotive bumper manufacturing facility that produces both metal and plastic bumpers as well as related accessories. The facility conducts chrome plating of both plastic and metal automotive parts. Additionally, the facility has one (1) water-based coating booth, welding operations, buffing, sanding, and stamping operations related to bumper manufacturing. The facility currently employs approximately 1,100 employees and operates two shifts, 6 days a week.

Regulatory Analysis

The facility is a minor source for criterial pollutants and Hazardous Air Pollutants, currently holds one (1) permit, PTI No. 189-90G, and is also subject to the provisions of 40 CFR Part 63 Subpart N, the National Emissions Standard for Hazardous Air Pollutants (NESHAP) for chromium emissions from hard and decorative chromium electroplating and chromium anodizing tanks. Ventra is subject to the area source requirements of the NESHAP, and most of the requirements are written into the permit.

The facility's permit was modified in March 2022, to allow for replacement of a PFAS containing additive with an additive from Atotech USA that does not contain PFAS in EUCRTANK1. If the additive works, Ventra plans to replace the PFAS containing additive in the rest of their chrome plating tanks. The additives are fume suppressants/wetting agents that help to control hexavalent chromium from the plating tanks. The additive is described as a "foam blanket" in the permit conditions. The facility has testing scheduled for November 1, 2022, to evaluate compliance while using the new foam blanket.

Compliance Evaluation

Prior to entering the facility, staff surveyed the perimeter of the facility from the public roadway. No odors or opacity were detected. Upon arrival at the facility, staff met with Mr. Michael Sladewski, Environmental Director, and Chris Outman, Environmental Manager.

Below is an evaluation of compliance based on PTI No. 189-90G.

EUHCLSCRUB

DESCRIPTION

Hydrochloric acid scrubber system that controls tanks M-7, M-10, M-11 and M-15.

PROCESS/OPERATIONAL RESTRICTION(S)

The facility is prohibited from operating any of the tanks in EUHCLSCRUB, unless the scrubber system is installed and operating.

During the inspection the scrubber was observed installed and operating. Roof top observation of the exhaust showed no emissions from the exhaust stack.

DESIGN/EQUIPMENT PARAMETER(S)

The facility is required to equip and maintain the scrubber system in EUHCLSCRUB with a differential pressure monitoring device.

During the inspection a pressure drop monitoring device was observed. The pressure drop reading at the time of the inspection was 3.6".

MONITORING/RECORDKEEPING

The facility is required to maintain weekly records of the pressure drop for EUHCLSCRUB. The facility provided requested records for the most recent 6-month time period. The facility records the pressure drop daily. For the reviewed records the pressure drop ranged from 0.7" to 4.2".

STACK/VENT RESTRICTION(S)

The HCL scrubber is required to have a stack that is a minimum of 40 feet high and a maximum of 72 inches in diameter. The stack was not measured, but visual observation showed that it appeared to meet the restrictions.

EUCRETECH

Chrome etch process (Tanks M-2) controlled by a scrubber

PROCESS/OPERATIONAL RESTRICTION(S)

The facility is prohibited from operating any of the tanks in EUCRETCH, unless the scrubber system is installed and operating.

During the inspection the scrubber was observed installed and operating. Roof top observation of the exhaust showed no emissions from the exhaust stack.

DESIGN/EQUIPMENT PARAMETER(S)

The facility is required to equip and maintain the scrubber system in EUCRETCH with a differential pressure monitoring device.

During the inspection a pressure drop monitoring device was observed. The pressure drop reading at the time of the inspection was: Stage 1: 0.95 Stage 2: 1.2-1.3" Stage 3: 1.6-1.8" Total: 2.8-3.0"

MONITORING/RECORDKEEPING

The facility is required to maintain weekly records of the pressure drop for EUCRETCH. The facility provided requested records for the most recent 6-month time period. The facility records the pressure drop daily. For the reviewed records the pressure drop range from 2.8" to 3.0".

STACK/VENT RESTRICTION(S)

The etch scrubber is required to have a stack that is a minimum of 50 feet high and a maximum of 64 inches in diameter. The stack was not measured, but visual observation showed that it appeared to meet the restrictions.

FGCRTANKS

Five (5) decorative chrome electroplating tanks that use three-stage scrubbers and fume suppressant for control and an evaporator used to recover chromic acid from the spent rinse water produced by the plastic parts plating line.

Emission Units: EUCRTANK1, EUCRTANKS2, EUCRTANKS3, EUEVAPORATOR

POLLUTION CONTROL EQUIPMENT

- EUCRTANK1 - Tank M-39 is controlled by a three-stage wet scrubber (SCB01) and fume suppressant.
- EUCRTANKS2- Tanks 35N and M-36N are controlled by a three-stage composite mesh pad scrubber (SCB02) and fume suppressant.
- EUCRTANKS3 - Tanks M-40 and M-37N are controlled by a three-stage composite mesh pad scrubber (SCB03) and fume suppressant.
- EUEVAPORATOR is controlled by a mist eliminator and is exhausted to a wet scrubber (SCB01).

EMISSION LIMITS/RECORDKEEPING

The permit limits total chromium emissions as follows:

EUCRTANK1 and EUEVAPORATOR:	0.00014 pph
EUCRTANKS2:	0.0003 pph
EUCRTANKS3:	0.00014 pph
EUCRTANK1:	0.006 mg/dscm

Stack testing was conducted in 2011, at which time compliance was demonstrated. Testing for the evaporator in conjunction with EUCRTANK1 was not conducted when the evaporator was installed because the emission limit set for EUCRTANK1, was calculated based upon the uncontrolled emission rate from EUCRTANK1, and with the already established scrubber control efficiency, the total expected emission rate from the tank and the evaporator would not be exceeded, since the intent of the evaporator was to recover chromium prior to exhausting to the scrubber.

PROCESS/OPERATIONAL RESTRICTION(S)

The facility is required to have an operation and maintenance plan for each of the emission units. The facility provided a copy of an O&M Plan dated April 15, 2022.

The facility is prohibited from operating EUCRTANKS2 or EUCRTANKS3 unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of each tank in FGCRTANKS does not exceed, at any time during operation, 40 dynes/cm (2.8×10^{-3} pound-force per foot) as measured by a stalagmometer or does not exceed 33 dynes/cm (2.3×10^{-3} pound-force per foot) as measured by a tensiometer.

Surface tension records were provided by the facility as requested for the most recent 3-month time period. The highest recorded surface tension for Tank 35N was 31 dynes/cm. The highest recorded surface tension for Tank M-36N was 30 dynes/cm. The highest recorded surface tension for Tank M-37N was 31 dynes/cm. The highest recorded surface tension for Tank M-37N was 31 dynes/cm. The highest recorded surface tension for Tank M-40 was 33 dynes/cm.

Unless EUCRTANK1 is using the foam blanket fume suppressant, the permittee shall not operate EUCRTANK1 unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of each tank in FGCRANKS does not exceed, at any time during operation, 40 dynes/cm (2.8×10^{-3} pound-force per foot)) as measured by a stalagmometer or does not exceed 33 dynes/cm (2.3×10^{-3} pound-force per foot) as measured by a tensiometer.

At the time of the inspection the facility had not switched over to using a foam blanket fume suppressant. The facility has stopped adding surfactant to allow the surfactant to be depleted from the tank and for the surface tension to rise in preparation for the addition of a foam blanket fume suppressant. The facility stated that this was planned and discussed with AQD at the time of permitting. Once the surface tension increases and the foam blanket fume suppressant is added, the facility will conduct emission testing. The facility started adding the foam blanket fume suppressant on October 6, 2022 and have scheduled emission testing on November 1, 2022.

Review of the surface tension records showed that from August 30, 2022, through September 26, 2022, the facility documented 30 surface tension readings greater than 33 dynes/cm. While the surface tension increase to greater than 33 dynes was planned as part of the switch to a foam blanket fume suppressant, it is still a deviation from the NESHAP that needs to be documented in the compliance status report.

DESIGN/EQUIPMENT PARAMETER(S)

The permittee shall not operate EUCRTANK1, EUCRTANKS2, EUCRTANKS3, or EUEVAPORATOR unless the respective scrubbers are each installed, maintained, and operated in a satisfactory manner.

The scrubbers are installed and operating. The facility provided copies of the quarterly PM work orders for each of the scrubbers from November 2021 until current.

The permittee shall equip and maintain each of the FGCRANKS scrubbers with a differential pressure monitoring device.

All three (3) scrubbers are three (3) stage composite mesh pad scrubbers, each being equipped with differential pressure gauges. At the time of the inspection the scrubber pressure drop readings were:

	SCB01	SCB02	SCB03
Stage 1	0.3/0.4	0.4	0.2
Stage 2	0.6	1.1/1.2	1.0

Stage 3	0.4	0.3	1.3
Overall	1.1	1.9/2.0	1.6

Roof-top observations of the scrubbers did not indicate any operational issues.

Ventra is required to comply with the area source provisions of 40 CFR Part 63 Subpart N, NESHAP for chromium emissions from hard and decorative chromium electroplating and chromium anodizing tanks. The 2011 compliance status report is attached. The facility reported no deviations for the reporting period. The facility reported the number of days the plating tanks operated instead of total time during the reporting period. The facility was informed of the need to report total operating time.

The facility previously documented that they do not use any PFOS-based fume suppressants in the plating tanks.

Additional Plating Processes

In addition to the above permitted plating processes, the facility has the following exempt processes:

Non-electrolytic nickel-plating tank controlled by a scrubber located inside the facility and vented externally. The facility stated that the nickel-plating tank was permitted along with the plastic plating line. The nickel tank vented uncontrolled and was subsequently controlled by a scrubber.

Copper plating tank controlled by a mist eliminator. The facility stated that the copper plating tanks were originally vented internally and were subsequently vented externally via a mist eliminator in 2011. The facility had ERM evaluate permitting when the tanks were vented externally. ERM determined that the tanks were exempt via Rule 285(2)(b), no meaningful change. In a subsequent call with the facility, staff explained that Rule 285(2)(b) was applicable to minor changes made to permitted processes, not processes that are exempt. Guidance regarding the use of the meaningful change exemption is addressed in an AQD Policy and Procedure (AQD-025) issued on May 9, 2017. Staff informed the facility that since the guidance document was issued after the Rule 285(2)(b) evaluation was done on the copper tanks, the facility could voluntarily submit a permit application to permit the copper tanks. The facility asked if they could evaluate the use of another exemption. Staff agreed that evaluating another exemption is allowable. The facility tentatively plans to evaluate the use of another exemption, however, if an applicable exemption is not available, they would include the copper tanks in the permit application that is planned to be submitted to allow for the conversion to a foam blanket suppressant in the chrome tanks.

Miscellaneous equipment

Ventra has one (1) water-based coating line and uses Rule 290 to show compliance. Currently, Ventra is tracking the amount of coating used in conjunction with the VOC content of the coating to calculate emissions. For the past 12-months, the highest monthly VOC emissions were 455 pounds, which is compliant with the Rule 290 limit of 1,000 pounds.

The facility has two areas that contain stamping presses. The stamping presses are exempt from Rule 201 permitting under Rule 285(2)(I)(i).

The facility has buffing and sanding operations including three (3) automated buffing houses. The buffing/sanding stations exhaust to five (5) baghouses. The baghouses vent internally in the winter and externally in the summer. The facility stated that the baghouses are included in preventive maintenance procedures. The buffing and sanding operations are exempt from Rule 201 permitting under Rule 285(2)(I)(vi)(C).

The facility has welding operations that are ducted to three (3) associated baghouses. The welding baghouses are exhausted internally during the winter and externally during the summer. The welding operations are exempt from Rule 201 permitting under Rule 285(2)(i).

Ventra has twelve (12) plastic injection molding processes. The plastic injection processes are exempt from Rule 201 permitting under Rule 286(2)(b).

Compliance Determination

Based on the information and observations made during this inspection, the facility appears to be in compliance with applicable air quality rules and regulations.

NAME Eric Grinstern

DATE 10/20/2022

SUPERVISOR HH