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

P072768457

FACILITY: Tribar Technologies Inc (Plant 5)		**SRN / ID:** P0727
LOCATION: 48668 Alpha Drive, WIXOM		**DISTRICT:** Warren
CITY: WIXOM		**COUNTY:** OAKLAND
CONTACT: Alexandria Muench , Environmental Manager		**ACTIVITY DATE:** 07/12/2023
STAFF: Mark Dziadosz	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY 23 Inspection		
RESOLVED COMPLAINTS:		

On Wednesday, July 12, 2023, I, Michigan Department of Environment Great Lakes and Energy-Air Quality Division staff Mark Dziadosz along with Marie Reid, conducted an announced scheduled inspection of Tribar Technologies, Inc. Plant 5 (P0727), located at 48668 Alpha Drive Wixom, MI. The purpose of this inspection was to determine the facility's compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, the National Emission Standards for Hazardous Air Pollutants (NESHAP), 40 CFR 63, Subpart N National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks and Permits to Install (PTI) No. 121-16.

I arrived at Tribar Technologies, Inc. Plant 5 at 11:00 AM and met with Alex Muench, Environmental Manager. Keith Dromowicz of Tribar and Scott Venman of Barr Engineering were also present for the inspection. Prior to the inspection, records were requested on 6/26/2023 and were received on 7/7/23. Upon arrival, Alex and I discussed the electronic records and discussed operations. I was then taken on a tour of the facility.

Tribar Technologies Inc. Plant 5 Tribar Manufacturing is a producer of metal plated plastic parts for the automotive industry. Plant 5 has approximately 150 employees and operates 24 hours a day, Monday-Friday. This location has several different plating tanks including: semi bright nickel, bright nickel, micro porous nickel, high sulfur, spray cleaner, PC ABS (Polycarbonate/Acrylonitrile Butadiene Styrene) etch, ABS etch, etch drag out, electroless nickel, tri-chrome, decorative chrome, chrome drag out, chrome strip and nitric strip. There is also a pre-plating process consisting of neutralizer, activator predip, activator, accelerator, copper strike, and acid copper tanks. EUSYSTEM1 (semi bright nickel, bright nickel, micro porous nickel, high sulfur) is controlled by a packed bed wet scrubber and mist eliminator. EUSYSTEM2 (spray cleaner, PC ABS etch, ABS etch, etch drag out) is controlled by a two-stage composite mesh pad and a two-stage in-line mist eliminator. EUSYSTEM3 (neutralizer, activator pre-dip, activator, accelerator, copper strike, and acid copper tanks) is controlled by a packed wet bed scrubber. EUSYSTEM4 (electroless nickel) is controlled by a packed wet bed scrubber. EUCHROME5 (tri-chrome, decorative chrome,

chrome drag out) is controlled by composite mesh pad (CMP) and fume suppressant. EUSYSTEM6 (chrome strip and nitric strip) is controlled by a packed bed wet scrubber. There is also a lab that tests the surface tension (dynes/cm) of the tanks making use of the fume suppressant. The rest of the space in the building is used for storage and offices.

Compliance

On September 9 ,2021, as a result of an inspection, the facility received a Violation Notice (VN) for failure to maintain a surface tension of 35 dynes/cm for Tanks 5 and 6 in EUSYSTEM2 as well as not maintaining pressure drops of the control system within a set range. These issues were ongoing during the inspection on 7/21/2022 and a VN was issued on 8/9/2022 with a response date of August 30, 2022. Additionally, during the inspection of Plant 5, records to be reviewed were requested to be e-mailed by the facility after the inspection. As of 9/1/22, a response to the 8/9/2022 VN was not received, so a 2nd VN was issued. A VN was issued on February 8, 2023, with a response due by March 31, 2023, for non-submittal of requested records from the Plant 5 inspection and after not receiving the data, a 2nd VN was issued on April 4, 2023. The requested pressure drop readings and inspection records were received 4/17/2023. Additionally, a VN was issued on 4/18/23 to Tribar Plant 5 for non-submittal of the RY 2021 MAERS report. On May 1, 2023, the RY2021 MAERS reports for Plant 5 was received. Any provided documents can be found in: S:\Air Quality Division\Staff\Mark Dziadosz\P0727 Tribar Plant 5 FY23 Inspection or the facility plant file.

PTI No. 121-16

EUSYSTEM2

Acid etch process (four tanks) and chrome recovery system. The tanks are Tank 3 (spray cleaner), Tank 5 (PC ABS etch), Tank 6 (ABS etch) and tank 7 (etch dragout). The chrome recovery process consists of a porous pot tank that works as a closed loop with Tanks 5 and 6 and an evaporator that tank 7 overflows to.

SC I.1 A total chromium emission limit of 1.50E-4 lbs/hr. Confirmed via stack test on 11/09/2017. The total chromium emission rate for EUSYSTEM2 was less than 2.42E-05 lbs/hr.

SC III.1 The permittee shall retain on-site an operation and maintenance plan for each scrubber, mesh pad, and mist eliminator. A copy of the plan is in the AQD file. Some of the contacts listed in the plan are no longer employed by Tribar and I asked the facility to update the plan.

SC III.2 The permittee shall not operate Tanks 5 and 6 unless the chemical fume suppressant is applied in quantities to ensure the surface tension does not exceed 35 dynes/cm when measured by a tensiometer. Tribar monitors the dynes of all their baths multiple times per operating period. Following the VN from 7/26/2021, the facility lowered the set parameter to 33 dynes/cm.

I reviewed records for Tanks 5 and 6. Both tanks had surface tension exceedances during the period reviewed. According to the Alec Marler, Lab Manager of Plant 5, as the solution is cooled, the surface tension will go up. The facility has begun taking surface tension measurements immediately after a sample is taken. The facility adds fume suppressant as needed to maintain the 35 dynes/cm surface tension limit. According to Alec, if the surface tension reading exceeds 29 dynes/cm, the system adds more surfactant to the bath to maintain the value below the 35 dynes/cm limit. There is 1 hour between the addition of chemical fume suppressant being out of range and a retest of the system to give the system an opportunity to mix. According to Alec, it would take approximately 1.5 L of suppressant to reduce the dynes by 10. The suppressant is added in .1 liter increments. During the time period reviewed, (8/1/22-5/31/23), there were multiple exceedances. A VN will be sent for the exceedances.

Note: 40 CFR 63 Subpart N has a limit of 33 dynes/cm. I notified the facility that going forward, they would have to show compliance with the limit of 33 dynes/cm.

SC IV.1 The permittee shall not operate any process tank in EUSYSTEM2 unless the associated control equipment is installed and properly maintained and operated. The process tanks are equipped with scrubbers and maintain a pressure drop determined during compliance testing.

SC IV.2 The packed bed scrubbers and composite mesh pads in EUSYSTEM2 must be equipped with pressure differential monitors. Each piece of control equipment in EUSYSTEM2 was equipped with a pressure differential monitor.

SC V.1- Within 180 days of initial startup, verification of the total chromium emission rates from EUSYSTEM2 must be performed via testing at the owner's expense. The chromium emission rates were confirmed via stack test in 11/09/2017.

SC VI. 1 The permittee must monitor the surface tension in Tanks 5 and 6 in EUSYSTEM2 once every 40 hours. The facility satisfactorily monitors and records the surface tension of EUSYSTEM2 every 4 hours but tries to get readings approximately every 2 operating hours.

SC VI.2 The permittee shall perform inspections of the packed bed scrubber including: checking the pressure drop, if it exceeds +/- 1 in of water column from the pressure determined during compliance testing the variation and any corrective action must be documented; visually inspect the scrubber quarterly to ensure proper drainage, no chromic acid build-up, or damage to the structural integrity; and add fresh make-up water as needed. The facility provided records of maintenance and inspections for all control equipment at the facility.

SC VI.3 The permittee shall perform inspections of the Composite Mesh Pad system including: checking the pressure drop, if it exceeds +/- 2 in of water column from the pressure determined during compliance testing the variation and any corrective action must be documented; visually inspect the mesh pad quarterly to ensure proper drainage, no chromic acid build-up, or damage to the structural integrity; perform wash-down of the mesh pads at a minimum of once a week; and add fresh make-up water as needed. The facility provided records of maintenance and inspections for all control equipment at the facility.

SC VI.4 The permittee shall maintain records of the inspections as required by SC VI.2 and VI.3. Each inspection record shall identify the device inspected, the date, approximate time of inspection, and a brief description of the working condition of the device during the inspection. The permittee shall also record any actions taken to correct the deficiencies found during the inspection. The facility provided records of maintenance and inspections for all control equipment in EUSYSTEM2.

SC VI.5 The permittee shall keep records of the surface tension of Tanks 5 and 6 in EUSYSTEM2, the amount of chemical fume suppressant added to each tank 5 and 6 in EUSYSTEM2 and the date and time of each addition. I reviewed records from 8/1/22 to 5/1/23.

SC VIII.1 The exhaust for EUSYSTEM2 discharges unobstructed vertically. Stack dimensions not confirmed during this inspection.

EUCHROME5

Decorative chrome process. This process consists of three tanks: Tank 45 (tri-chrome-not in use), Tank 49 (decorative chrome plating), and Tank 50 (chrome dragout).

SC I.1 A chromium emission limit of 0.006 mg per dry standard cubic foot. Confirmed via stack test on November 9, 2017, the chromium emissions of EUCHROME5 were <1.74E-04.

SC I.2 A chromium emission limit of 4.20E-5 lbs/hr. Confirmed via stack test on November 9, 2017, the chromium emissions of EUCHROME5 were less than 6.02E-06 lbs/hr.

SC III.1 The permittee shall retain on-site an operation and maintenance plan for each scrubber, mesh pad, and mist eliminator. A copy of the operation and maintenance plan is in the AQD file. The plan appears to contain the necessary information. Including the directions for inspecting the composite mesh pad systems.

SC III.2 The permittee shall not operate EUCHROME5 unless the chemical fume suppressant is applied in quantities to ensure the surface tension does not exceed 35 dynes/cm when measured by a tensiometer. Tribar monitors the dynes of all their baths approximately every 4 hours during operation.

Following the VN from 7/26/2021, the facility lowered the set parameter to 33 dynes/cm.

I reviewed records for Tank 49 Tank 49 had surface tension exceedances during the period reviewed. According to the Alec Marler, Lab Manager of Plant 5, as the solution is cooled, the surface tension will go up. The facility has begun taking surface tension measurements immediately after a sample is taken. According to Alec, if the surface tension reading exceeds 29 dynes/cm, the system adds more surfactant to the bath to maintain the value below the 35 dynes/cm limit. There is 1 hour between the addition of chemical fume suppressant being out of range and a retest of the system to give the system an opportunity to mix. According to Alec, it would take approximately 1.5 L of suppressant to reduce the dynes by 10. The suppressant is added in .1 liter increments. During the time period reviewed, (8/1/22-5/31/23), there were multiple exceedances between 12/9/22 and 12/15/22. A VN will be sent for the exceedances.

Note: 40 CFR 63 Subpart N has a limit of 33 dynes/cm. I notified the facility that going forward, they would have to show compliance with the limit of 33 dynes/cm.

SC IV.1 The permittee shall not operate EUCHROME5 unless the Composite mesh pad is installed and properly maintained and operated.

The CMP system appears to be operating and maintained properly, visual inspections and maintenance are recorded. Pressure drop is maintained as determined during compliance testing.

SC IV.2 The composite mesh pad in EUCHROME5 must be equipped with pressure differential monitors. The facility equips the EUCHROME5, and all, control technology with pressure monitors.

SC V.1- Within 180 days of initial startup, verification of the total chromium emission rates from EUCHROME5 must be performed via testing at the owner's expense. The chromium emission rates were confirmed via stack test on 11/09/2017.

SC VI. 1 The permittee must monitor the surface tension EUCHROME5 once every 40 hours. The facility satisfactorily monitors and records the surface tension of EUCHROME5 every 4 hours but tries to get readings approximately every 2 operating hours.

SC VI.2 The permittee shall perform inspections of the Composite Mesh Pad system including: checking the pressure drop, if it exceeds +/- 2 in of water column from the pressure determined during compliance testing the variation and any corrective action must be documented; visually inspect the mesh pad quarterly to ensure proper drainage, no chromic acid build-up, or damage to the structural integrity; perform wash-down of the mesh pads at a minimum of once a week; and add fresh make-up water as needed. Pressure drops are maintained as determined during compliance testing. The facility provided records of maintenance and quarterly and daily inspections for the control system of tank 49 and 50. There were no quarterly inspections done on tank 49 control system between 2/13/21 and 6/20/22. A violation notice will be sent.

SC VI.3 The permittee ensures compliance with the emission limit via suppressant and scrubber/CMP systems. A copy of the operation and maintenance plan is in the AQD file.

SC VI.4 The permittee shall maintain records of the inspections as required by 40 CFR 63.342(f). Each inspection record shall identify the device inspected, the date, approximate time of inspection, and a brief description of the working condition of the device during the inspection. The permittee shall also record any actions taken to correct the deficiencies found during the inspection. The facility provided records of maintenance and inspections for the control system of tanks 49 and 50. There were no quarterly inspections done on tank 49 control system between 2/13/21 and 6/20/22. The permittee keeps records of the date, working condition, and any deficiencies and action taken to correct the deficiencies for the equipment in EUCHROME5.

SC VI.5 The permittee monitors and keeps records of operation and maintenance information to show compliance with the chrome emission limit, as specified in 40 CFR 63 Subparts A and C.

SC VI.6 The permittee shall keep records of surface tension readings for EUCHROME5, and records of additions of fume suppressant. The permittee provided records for these requirements.

SC VII.1 Permittee has submitted notification for performance tests and the post-performance test notification of compliance.

SC VIII.1 The exhaust for EUCHROME5 discharges unobstructed vertically. Stack dimensions not confirmed during this inspection.

SC IX.1 The permittee does not appear to have complied with the provisions of the NESHAP as specified in 40 CFR 63 Subparts A and N by complying with the emissions, operating, design, recordkeeping and reporting requirements of EUCHROME5.

FGSYSTEMS

Various metal treating tanks, including plating and stripping tanks, that do not contain chromium.

Emission Units: EUSYSTEM1, EUSYSTEM3, EUSYSTEM4, EUSYSTEM6

SC I.1 A nickel emission limit of 0.0029 lbs/hr for EUSYSTEM1. The AQD has not yet requested testing for the nickel emission limit.

SC I.2 A nickel emission limit of 1.96x10-5 lbs/hr for EUSYSTEM4. The AQD has not yet requested testing for the nickel emission limit.

SC III.1 The permittee shall retain on-site an operation and maintenance plan for each scrubber, mesh pad, and mist eliminator. AQD has a copy of the Operations and Maintenance Plan for Plant 5. However, it does not contain information about FGSYSTEMS. I notified the facility to update the plan with the required information for the nickel scrubbers. A violation notice will not be sent if the updated plan is received within the next 3 months.

SC IV.1 The permittee shall not operate any process tank in FGSYSTEMS unless the associated scrubber system and mist eliminator is installed, maintained, and operated in a satisfactory manner. Satisfactory operation shall include, but is not limited to, maintaining the pressure drop across each scrubber system per manufacturer specifications. The scrubber system and mist eliminator for FGSYSTEMS was installed and operating. The facility keeps pressure drop reading records for FGSYSTEMS. At the time of inspection, the pressure drops appear to be within the appropriate range. I asked Alex to provide further information relating to the manufacturer specifications for FGSYSTEMS.

SC IV.2 The permittee shall equip and maintain each scrubber system in FGSYSTEMS with a pressure differential monitoring device. The permittee has each scrubber system in FGSYSTEMS equipped with a pressure differential monitor.

SC VI.1-2 The permittee shall monitor and record the pressure drop across each scrubber system in FGSYSTEMS on a daily basis. The permittee monitors and records the pressure drop for each scrubber system daily. Before the inspection, records were provided and reviewed.

SC VIII. 1-4 The exhaust stacks of FGSYSTEMS discharge unobstructed vertically. Stack dimensions not verified during this inspection.

Based on the information gathered during the inspection, Tribar Technologies Inc. Plant 5 appears to be out of compliance with the Federal Clean Air Act Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act of 1994, PA 451, as amended, and PTI No. 121 -16. A violation notice will be sent.

NAME _____ DATE August 3, 2023 SUPERVISOR _____