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

N780971020

FACILITY: Tribar Technologies Inc (Plant 4)		**SRN / ID:** N7809
LOCATION: 30540 BECK RD, WIXOM		**DISTRICT:** Warren
CITY: WIXOM		**COUNTY:** OAKLAND
CONTACT: Alexandria Muench , Environmental Manager		**ACTIVITY DATE:** 12/13/2023
STAFF: Mark Dziadosz	**COMPLIANCE STATUS:** Non Compliance	**SOURCE CLASS:** MINOR
SUBJECT: FY 2024 inspection		
RESOLVED COMPLAINTS:		

On Tuesday, December 13, 2023, I, Michigan Department of Environment Great Lakes and Energy-Air Quality Division (AQD) staff Mark Dziadosz, conducted an announced scheduled inspection of Tribar Manufacturing Plant 4, State Registration Number (SRN): N7809, located at 30540 Beck Rd, 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, Michigan's Air Pollution Control Rules, 40 CFR Part 63, Subpart N, the National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks (Chrome NESHAP) and Permit to Install (PTI) No. 115-17B.

I arrived at Tribar Plant 4 at 11:00 am and met with Alex Muench, Environmental Health and Safety Manager, Scott Venman, Jack Gifford, Keith Dromowicz, and Mike Gragg. Prior to the inspection, records were requested electronically. I was then taken on a tour of the facility. The plant has been idle since December 2, 2023. The facility does not wish to void the PTI currently in case business needs change. Upon arrival, Alex and I discussed the records and operations.

Facility Description

Tribar Plant 4, Inc. is a plastic parts coating company. At this plant the major process is metal plating of plastic parts, including chrome plating. Plant #4 operates 24 hours a day, Monday through Friday. This plant has approximately 50 employees. The tanks at the facility include: electroless nickel, acid copper, decorative chrome, acid etch, and several other varieties of nickel finishes. The electroless nickel line is controlled by a packed bed wet scrubber. The acid copper tanks and decorative nickel lines are controlled by packed bed mist eliminators. A cross flow packed bed wet scrubber is used to control the nitric strip tanks. The chrome and acid etch processes are controlled by composite mesh pad systems.

The chrome tanks at the facility make use of fume suppressants to reduce emissions from the baths. The current fume suppressant used by the facility is Macuplex STR NPFX, which is a PFOS free product. However, from approximately 2008-2015 the facility was using Macuplex STR, which

is a PFOS containing product in its chrome tanks. Water Resources Division (WRD) is working with the company respond to and resolve the PFOS contamination that has been linked to this plant.

The facility does not have any generators or cold cleaners. There is a boiler, however it is exempt per R 336.1282(2)(b)(i) as its max heat input is only 6,276,000 BTU/hr. The facility disposes of its hazardous waste by having ERG Environmental Services remove it from the site.

The facility was issued PTI 115-07B in November 2018 for updates to the control system for EUSYSTEM5, EUCHROME1, and EUSYSTEM4. EUSYSTEM5 and EUCHROME1 are controlled by the same composite mesh pad system which is located on the roof of the facility. EUSYSTEM5 is also controlled by a mist eliminator system. The cross flow packed bed wet scrubber used to control the nitric strip tanks was also moved to the roof. In the November 26, 2019 inspection report, previous AQD inspector, Joe Forth misidentified that stack testing needed to be performed on the new control equipment in order to establish the pressure drop range. Stack testing on EUCHROME1 and EUSYSTEM5 occurred in April 2019.

Compliance

PTI No. 115-07B

FGSYSTEMS Special Conditions:

III.1 The facility shall retain on-site, and update as necessary, an operation and maintenance plan approved by the AQD District Supervisor. The plan shall contain all of the following:

a) Operation and maintenance criteria for each scrubber system in FGSYSTEMS and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment;

b) The work practice standards for the add-on control device(s) and monitoring equipment;

c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and

d) A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.

I reviewed the Operation and Maintenance (O & M) Plan on-site and it contained all necessary information. However, the plan is out of date and references PTI 117-07 (current PTI is 117-07B). Changes to the control

equipment occurred in 2019 and the plan was never updated. An updated plan was requested after the 2022 inspection. An updated plan was not received, however, according to the facility, the plan has been updated and will be received by the end of January 2024. If the plan is not received, a violation notice will be issued.

IV.1 The facility shall not operate any process tank in FGSYSTEMS unless the associated scrubber system 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 facility maintains the pressure drop across each scrubber system in FGSYSTEMS.

IV.2 The facility shall equip and maintain each scrubber system in FGSYSTEMS with a pressure differential monitoring device. The facility has pressure drop monitors on all the scrubber systems in FGSYSTEMS.

VI.1 The facility shall monitor the pressure drop across each scrubber system in FGSYSTEMS on a daily basis. The facility has pressure drop monitors on all the scrubber systems in FGSYSTEMS and monitors pressure drop on a daily basis.

VI.2 The facility shall keep, in a satisfactory manner, daily records of the pressure drop readings for each scrubber system in FGSYSTEMS, as required by SC VI.1. The facility keeps pressure drop readings for the scrubber systems in FGSYSTEMS.

FGCHROME Special Conditions:

I.1 A total chromium emission limit of 0.01 milligram per dry standard cubic meter (mg/dscm), corrected to 70°F and 29.92 inches Hg. Confirmed via April 2019 stack test. The total chromium emissions were 0.0007 mg/dscm.

I.2 A total chromium emission limit of 0.0000651 pounds per hour. Confirmed via April 2019 stack test. The total chromium emissions were 0.0000624 pounds per hour. The use of the fume suppressant and proper operation and maintenance of the scrubber confirms compliance with the emission limit.

III.1 The facility shall keep, on-site, an up-to-date operation and maintenance plan. The plan shall contain all information required by 40 CFR 63.342(f)(3)(i), which includes the following:

a) Operation and maintenance criteria for FGCHROME, add-on control device(s), and for the process and control device(s) monitoring equipment as well as a standardized checklist to document the operation and maintenance of the equipment;

b) The work practice standards for the add-on control device(s) and monitoring equipment;

c) Procedures to be followed to ensure that equipment or process malfunctions due to poor maintenance or other preventable conditions do not occur; and

d) A systematic procedure for identifying process equipment, add-on control device(s) and monitoring equipment malfunctions and for implementing corrective actions to address such malfunctions.

I reviewed the Operation and Maintenance Plan on-site and it contained all necessary information. However, the plan is out of date and references PTI 117-07 (current PTI is 117-07B). Changes to the control equipment occurred in 2019 and the plan was never updated. An updated plan was requested after the 2022 inspection. An updated plan was not received, however, according to the facility, the plan has been updated and will be received by the end of January 2024. If the plan is not received, a violation notice will be issued.

III.2 The facility shall not operate EUCHROME1 unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of EUCHROME1 does not exceed 33 dynes/cm (2.4x10-3 lbf/ft), when measured using a tensiometer, at any time during operation. The surface tension records reviewed have multiple time frames above the 33 dynes/cm limit. A Violation notice (VN) will be issued.

III.3 The facility shall not operate tank 5 or 6 in EUSYSTEM5 unless the chemical fume suppressant is applied in quantities and at a frequency to ensure the surface tension of tank 5 and 6 does not exceed 33 dynes/cm (2.4x10-3 lbf/ft), when measured using a tensiometer, at any time during operation. The surface tension records reviewed have multiple time frames above the 33 dynes/cm limit. A Violation notice (VN) will be issued.

IV.1 The permittee shall not operate any process tank in FGCHROME unless the associated packed bed scrubber system is installed, maintained, and operated in a satisfactory manner. Satisfactory operation shall include but is not limited to maintaining the pressure drop across the scrubber system per manufacturer specifications or as determined during compliance testing. The facility is maintaining the pressure drop as determined during compliance testing in April 2019.

IV.2 The facility shall equip and maintain the FGCHROME composite mesh pad system with a differential pressure monitoring device. Each piece of control equipment in FGCHROME was equipped with a pressure differential device. During inspection, FGCHROME was being cleaned and the pressure drop could not be verified. After inspection, Alex provided the updated

pressure drops, which were in line with the pressure drop measured during the stack test.

V.1 Within 180 days after permit issuance, the facility shall verify total chromium emission rates from Tank 50 of EUCHROME1, by testing at owner's expense, in accordance with 40 CFR Part 63 Subparts A and N. Compliance testing performed in April 2019 confirmed the chromium emissions rates were within the NESHAP limits. The total chromium emissions from EUCHROME1 were 28 mg/hr which are within the NESHAP limit of 184 mg/hr (based on the NESHAP standard 0.006 mg/dscm and the ratio of affected and unaffected sources).

VI.1 The facility shall monitor the surface tension of tanks 5 and 6 in EUSYSTEM5 and Tank 50 in EUCHROME1 every once every four (4) hours during tank operation for the first 40 hours of tank operation. If there are no exceedances during the first 40 hours of tank operation, then surface tension measurements may be conducted once every eight (8) hours of tank operation for the next 40 hours of tank operation. If there are no exceedances during the 40 hours of tank operation when surface tension measurements are being conducted every eight (8) hours, then surface tension measurements may be conducted once every 40 hours of tank operation on an ongoing basis, until an exceedance occurs. Once an exceedance occurs as indicated through surface tension monitoring, the original monitoring schedule of once every four hours must be resumed and the subsequent decrease in frequency shall follow the schedule as laid out above. The minimum frequency of monitoring allowed is once every 40 hours of tank operation. The surface tension shall be monitored with a stalagmometer or tensiometer as specified in Method 306B, appendix A of 40 CFR Part 63, except as allowed in 40 CFR 63.343(c)(5). Tribar monitors the surface tension every 4 hours.

VI.2 The facility shall perform inspections of the composite mesh pad (CMP) system for Tanks 5, 6, and 50 as follows:

a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than ±2 inch of water column, from the pressure drop determined during compliance testing, the facility shall document the variation, and review the operation and maintenance procedures. The facility shall document any corrective action.

b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.

c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.

d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.

e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations (at a minimum of once per week).

The facility performs inspections pertaining to the previously stated requirements. Inspection logs show the tasks the facility completes for their daily checks and weekly maintenance.

VI.3 The facility shall perform inspections of the composite mesh pad (CMP) system for Tanks 3 and 7 as follows:

a) Determine pressure drop across the CMP system on a daily basis. If the pressure drop across the control varies by more than ±2 inch of water column, from the pressure drop determined during compliance testing, the facility shall document the variation, and review the operation and maintenance procedures. The facility shall document any corrective action.

b) Visually inspect the CMP system, on a quarterly basis, to ensure there is proper drainage, no chromic acid build up on the pads, and no evidence of chemical attack on the structural integrity of the control device.

c) Visually inspect the back portion of the mesh pad closest to the fan, on a quarterly basis, to ensure there is no breakthrough of chromic acid mist.

d) Visually inspect ductwork from tanks to the CMP system, on a quarterly basis, to ensure there are no leaks.

e) Perform wash-down of composite mesh pads in accordance with manufacturer's recommendations (at a minimum of once per week).

The facility performs inspections pertaining to the previously stated requirements. Inspection logs show the tasks the facility completes for their daily checks and weekly maintenance.

VI.4 The facility shall monitor emissions and operating and maintenance information in accordance with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and N. The facility records their daily operational checklist and weekly maintenance.

VI.5 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 facility is satisfactorily keeping records of equipment maintenance/inspections.

VI.6 The facility shall maintain records of inspections required to comply with applicable work practice standards of 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 facility shall also record any actions taken to correct the deficiencies found during the inspection. The facility is satisfactorily keeping records of equipment maintenance/inspections.

VI.7 The facility shall keep records of emission information and operating and maintenance information to comply with the National Emission Standards for Hazardous Air Pollutants as specified in 40 CFR Part 63 Subparts A and N. The facility records their daily operational checklist and weekly maintenance.

VI.8 The facility shall keep records of the surface tension of EUCHROME1, the amount of chemical fume suppressant added to EUCHROME1 and the date and time of each addition. The facility is keeping records of the surface tension, measured by tensiometer, and tracks the additions of the fume suppressant.

VI.9 The facility shall keep records of the surface tension of tanks 5 and 6 in EUSYSTEM5, the amount of chemical fume suppressant added to tanks 5 and 6 in EUSYSTEM5, and the date and time of each addition. The facility is keeping records of the surface tension, measured by tensiometer, and tracks the additions of the fume suppressant.

VII.1 Facility shall submit the following notifications to the Department in accordance with 40 CFR Part 63.347:

a) A notification of the performance test at least 60 calendar days before the test is scheduled to begin.

b) A notification of compliance status after the performance test has been completed.

c) Ongoing compliance status reports as required by 40 CFR 63.347(h).

The facility has followed the requirements relating to performance tests, the paperwork for the 2019 test is in the facility file. The facility submits Ongoing Compliance Status Reports every six months.

VIII. Exhaust gases shall be discharged unobstructed vertically upwards to the ambient air. Max exhaust diameter of 19.3 in, and a minimum height above ground of 39 ft. Stack parameters were not confirmed during the inspection, but the stacks were exhausting unobstructed vertically.

IX.1 The facility shall comply with all provisions of the Chrome NESHAP as specified in Subparts A and N, as they apply to EUCHROME1. The facility

appears to be in compliance with all applicable reporting and recordkeeping provisions of subparts A and N however, the facility has exceeded the 33 dynes/cm limit of the NESHAP multiple times.

Conclusion

Based on the information gathered during the inspection, Tribar Technologies Plant 4 appears to be out of compliance with permit No. 115-07B, the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451, 40 CFR 63, Subpart N- National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks. A violation notice will be issued for the exceedances of the 33 dynes/cm NESHAP limit.

NAME _____ DATE 03/11/2024 SUPERVISOR _____