

DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N544228768

FACILITY: CHOR INDUSTRIES INC		SRN / ID: N5442
LOCATION: 500 ROBBINS, TROY		DISTRICT: Southeast Michigan
CITY: TROY		COUNTY: OAKLAND
CONTACT: David Chor , President		ACTIVITY DATE: 03/09/2015
STAFF: Rem Pinga	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT: Unannounced Level 2 Target Inspection		
RESOLVED COMPLAINTS:		

On 3/09/2015, I conducted a level 2 unannounced target inspection at Chor Industries, Inc., located at 500 Robbins Drive, Troy, Michigan 48083-4514. The purpose of the inspection was to determine the facility's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451), the administrative rules, and the facility's Permit to Install No. 519-94. During the pre-inspection meeting, I initially showed my credential (ID Badge), stated the purpose of my visit, and gave a copy of the pamphlet "Environmental Inspections: Rights and Responsibilities", to Ms. Ellen Chor, Vice President. Mr. David Chor was, President and contact person, was not at the facility.

Chor Industries conducts electroless nickel plating primarily for the automotive industry. During the inspection, I observed drive shafts and other miscellaneous metal parts being plated. The purpose of nickel plating is for corrosion and wear resistance.

As discussed by the previous AQD staff inspector, electroless nickel plating is a plating process to deposit nickel to a metal without the use of an electric current. The coating is deposited by an autocatalytic chemical reduction of nickel ions by hypophosphite, aminoborane, or borohydride compounds. Hypophosphite is used at this facility. The plating bath contains a salt of the metal (nickel) to be deposited, a reducing agent (hypophosphite) capable of reducing metal ions to the metal in the presence of a catalyst. Other chemicals in the bath include a chelating agent (organic acids) to maintain the metal in solution and ammonia for pH adjustment. Before performing electroless nickel plating, the metal to be plated goes through a pretreatment process. The metal is soaked in an alkaline (deoxidizer) tank, rinse tanks, high alkaline tank, rinse tanks, mild acid tank (hydrochloric acid, for mild pickling), rinse tanks and back to the alkaline tank. The metal to be plated has to be rinsed thoroughly to remove the chemicals from the metal. A nickel stripper bath is used to remove nickel plating if the parts need to be reworked.

During the pre-walkthrough meeting, I requested to look at recordkeeping requirements per PTI. No. 519-94, special condition no. 21. I was informed that the facility has purchase records but did not have monthly records for addition of additives (ammonia and ethylenediamine) based on 12 month rolling period. I requested to obtain copies of the purchase records but also inform Ms. Chor that the facility is not in compliance with the above permit condition and I will be sending the company a Violation Notice.

Ms. Chor mentioned to me that Ethylenediamine bath has not been used for a couple of years now. The nickel bath and other chemical baths are covered by plastic covers when the baths are not in use.

Jeremy Major, maintenance, accompanied me during the facility walkthrough inspection. Per

PTI No. 519-94, special condition no. 15, I did not observe visible emissions while inside and outside the facility. Per PTI No. 519-94, special condition no. 19, the facility operated two scrubbers for emissions control from the plating processes. The larger scrubber controls the electroless nickel plating bath and nickel stripper bath. The smaller scrubber controls the acid pickling bath. Each scrubber has a scrubber fluid tank. The facility monitors pH and temperature from each scrubber but was not required to monitor flow rates and pressure drops. I was informed that the pH monitor will show that the scrubbers are operating. During the inspection, the pH readings were 9.07 and 7.70 respectively. I observed the pH fluctuating instantaneously possibly resulting from the neutralization process during scrubbing. The scrubbers were located at the roof top and I did not feel safe climbing a regular step ladder twice to reach the roof top during freezing rain weather conditions. From the monitoring gauges, the scrubbers appeared to be operating properly.

The electroless nickel plating is subject to 40 CFR 63, Subpart WWWW: National Emission Standards for Hazardous Air Pollutants for Area Source Plating and Polishing Operations. Since AQD does not have delegation of authority to enforce this regulation, I took discretion to defer compliance determination for this subpart to USEPA.

I also observed 7 electric ovens for drying off parts after plating. These ovens are exempt under R336.1282 (a)(i).

As a result of my inspection, I will be sending the company a Violation Notice for noncompliance of PTI No. 519-94, special condition no. 21.

NAME

 Jim Ji

DATE

 3/12/2015

SUPERVISOR

 CJE