

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

P028926043

FACILITY: AMERICAN METAL PROCESSING		SRN / ID: P0289
LOCATION: 22720 NAGEL STREET, WARREN		DISTRICT: Southeast Michigan
CITY: WARREN		COUNTY: MACOMB
CONTACT: Jason Fettig , president		ACTIVITY DATE: 06/17/2014
STAFF: Joyce Zhu	COMPLIANCE STATUS: Compliance	SOURCE CLASS: Minor
SUBJECT: Annual inspection.		
RESOLVED COMPLAINTS:		

On 6/17/2014, I conducted an annual air quality inspection at American Metal Processing. The company is located at 22720 Nagel St., Warren. Sam Liveson from Air Quality Division (AQD) accompanied me during the inspection. Arriving at the facility around 10:00 AM, we met with Mr. Pinkos, the facility chief financial officer at first. I briefly explained the purpose of the inspection. Mr. Pinkos said Mr. Jason Fettig, the president of the company, was out & would be back soon. As we first entered the company, I noticed a slight natural gas odor at the lobby. When Mr. Fettig came back, I told him about the natural gas odor. He said that's not unusual because of large amount of natural gas consumption as required through out of the operation. Afterwards, he took us to see the process.

### Inspection

American Metal Processing is a heat treat facility. There are five metal hardening lines in the facility. Two of the lines consist of double hardening furnaces; & three, a single furnace. They have employed rotary retort furnaces to provide even balanced heat to the metal parts. In addition to the hardening process, there are five tempering lines.

### Permit # 157-11

The permit covers an anhydrous ammonia storage tank, the heat treatment process, & the tempering furnaces. The hardening process is computer-controlled. Metal parts are fed by a two stage electromagnetic vibratory feeder & scale to ensure accurate feed rate as well as gentle handing of the parts. The hardening takes place in the rotary retort furnaces which have radiant tubes provide even balance heat to minimize hot spots & heat variation. The spiral rotary retort slowly revolves, conveying the parts through the different heat zones of the furnace. At the end of the furnace, parts drop into the quench chute through a discharge hole. Oil or water is used in the quenching process. Afterwards, the parts are sent to washer before tempering takes place. The part washer uses citrus soap solution. Oil is separate from the water by a skimmer. The waste oil will be sold later. During the inspection, the water temperature in the washer was about 154 F. I didn't see any oil on the metal parts after washing. Jason said it's critical to make sure that all metal parts were cleaned before tempering. As a result, if they see smears on the parts, they will clean the nozzles in the washer. The ammonia is used in the heat treat for carbonitrinding process. The company has developed an emergency response plan for the anhydrous ammonia tank. The plan was approved by the local fire department. However, they have not reviewed the plan with the department at the time of the inspection. I told Jason that permit condition III.2 of the table EU-AmTank1 required the company to review the plan with the local fire department annually. On 6/24, Jason emailed me that he has reviewed such plan with the department. Three years ago, AQD received fall out complaints against the company by a neighbor adjacent to the company. As a result, the company has disconnected the exhausts that used to face the direction of the neighbor's back yard.

The company keeps MSDS for the quench oil they used. In addition, as required by the permit, they keep the quench oil usage as well as calculate VOC emissions. According to the company's record, they have consumed less than 1000 gallons of the oil in a 12-month rolling time period since June 2013 (the permit limit is 1830 gal/[12-month rolling time period]). The resulted VOC emission has been less than 3 tons for the same time period (the permit limit is 6.8 tons/[12-month rolling time period]).

In conclusion, the facility appeared to operate in compliance with the permit and Air Quality Regulations during the inspection.

NAME



DATE

7/23

SUPERVISOR

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