A7469
MANUAL

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

A746926922

FACILITY: ADVANCE ENGINEERING CO		SRN / ID: A7469
LOCATION: 12025 DIXIE AVE, REDFORD TWP		DISTRICT: Detroit
CITY: REDFORD TWP		COUNTY: WAYNE
CONTACT: Paul Ekstrom , Quality Manager		ACTIVITY DATE: 09/15/2014
STAFF: C. Nazaret Sandoval	COMPLIANCE STATUS: Compliance	SOURCE CLASS: SM 208A
SUBJECT: FY 2014 TARGETED INSPECTION		
RESOLVED COMPLAINTS:		

SRN: **A7469 - Advance Engineering, Co.**

FACILITY ADDRESS 12025 Dixie Ave., Redford, MI 48239

Contacts:

Bill Hicks, Maintenance Manager / whicks@adveng.net
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INSPECTION NARRATIVE

On September 15, 2014 I conducted an inspection of a facility located at 12025 Dixie Ave, Redford Township. The address is the location of Advance Engineering Company, (AEC) formerly known as Advance Stamping Company of Redford.

The purpose of the inspection was to determine the facility's compliance with the state and federal air pollution regulations

I met Mr. Paul Ekstrom, the Quality Manager of the facility. I showed him my credentials and explained the purpose of the visit. I also handed out the Department of Environmental Quality (DEQ) pamphlet "Environmental Inspections: Rights and Responsibilities".

After the introductions, Mr. Ekstrom indicated that Mr.Hicks, who has been the person dealing with the DEQ for the Air Quality Division (AQD) permit issues, was not there at the time of my visit. During the opening discussion Mr. Ekstrom notified me that the company was in the process of moving their equipment from the Redford location to a new facility in Canton. The current building location had to be emptied by mid to late October of 2014.

The operations of three AEC existing facilities (Redford, MI; Northwood, OH, and Oregon, OH) will be consolidated and relocated to a new building in Canton, MI. The facility located at 7505 Baron Drive, Canton, MI 48187 will house AEC Corporate Headquarters in a 168,000 Sq. Ft. building. This new facility will be dedicated to their precision deep draw metal stamping, progressive die stamping, and line die stamping, including Progressive, Transfer, and Eyelet Stamping processes. Additionally, the plant will house a range of industrial presses with capabilities ranging from 50 to 400 tons of force, combined with robotic spot and Metal Inert Gas welding operations.

I was informed that the move from the Redford and Northwood facilities was approximately 50

percent complete out of both locations. The Oregon facility is scheduled to be fully moved to Canton by the end of the first quarter of 2015.

This source legally limits its potential to emit based on actual emissions and it is registered pursuant to the Michigan Air Pollution Control Rule R336.1208a (Rule 208a).
The Air Quality Division (AQD) sent a letter dated 06/27/14 to all R208a sources notifying them about the rescinding of Rule. The letter indicated that a follow up action from the responsible official was required. I reminded Mr. Ekstrom that we have not received a response from AEC. Mr. Ekstrom said that a consultant had been hired to evaluate the emissions impact due to the merge of the stamping operations. During our pre-inspection discussion, Mr. Ekstrom contacted Mr. Hicks via phone line and asked him for an update with respect to that issue. Mr. Hicks indicated that they are working on it. He agreed on sending us a response which will include the alternative selected from the list of options cited on the AQD letter.

At the end of our conversation Mr. Ekstrom walked me through the facility and explained the process operations.

FACILITY BACKGROUND
According to the information in our records, the former Advanced Stamping Company (ASC) was founded in 1922 and was family owned and operated until 1987. At that time the company was sold to the Anderson Group; they held the company until August 1991 when L & W Engineering Company purchased ASC. The ASC name remained throughout this time period. In 1999, the company name was changed to Advanced Engineering Company (AEC), but the ownership remained the same. The product line has not changed much through the years. The company produces small deep-drawn stampings and small precision stampings from both ferrous and non-ferrous metals.

During the visit I was informed that there were about 58 employees working at the Redford location. They have two shifts working five days per week; Monday through Friday from 7 AM to 3:30 PM and from 3:00 PM to 11:30 PM. An overtime 5-hour shift has been implemented on Saturdays from 6 AM to 11 AM and from 11 AM to 4:00 PM, when needed.

PROCESS EQUIPMENT AND CONTROLS
During the walk-through Mr. Ekstrom explained their operations:
AEC mechanically stamps out small metal parts. About 60% of their product line is for the home building and construction industry and 40% of their business serves the automotive industry. The fabrication of small parts is accomplished by the use of the eyelet machines. Grinders at the facility are used to polish fabricated metal parts and to remove rough edges from the parts. The particulates from the grinding operation are collected using a hood system and vacuum blower and are fed to a fabric dust collector. The dust collector vents inside the facility. The waste collected from the dust collector is recycled. Cutting oils are utilized in order to facilitate the stamping process. Oil on the finished product is removed either by a detergent wash or a solvent wash.

I noticed that the building was fairly empty. There were only 12 stamping machines out of the 75 machines that were reported to be there during the 2010 site inspection.
No visible emissions were seen from the stamping units that were in operation. The grinding units were inspected next. The dust collector appeared in good working order, and no visible emissions were observed from the grinding units.

Next, we inspected the parts-washers. One parts-washer line operates with the STAR 142 Flash Solvent. The solvent is stored outside the facility, and it is stored covered. The parts are loaded into a drum, and a small amount of solvent is added to the drum. The spent solvent is pumped out of a 30-gallon container into a large holding tank. The pumped out spent solvent is disposed of as "used oil and mineral spirits" and the sludge remaining in the 30-gallon containers is disposed of as "other oil, used oil, water and sludge". The spent solvent not disposed of as "used oil and mineral spirits" is assumed to be air emissions and 100% VOC in weight. They keep track of the solvent purchased and the spent solvent. During this inspection I did not review the records on site, but according to the MAERS report the net usage of solvent for 2013 was 1,870 gallons, which translates into 6.26 tons/year of VOC emissions. The VOC emissions are far below the 50% major source threshold of 50 tons/year.

I requested a copy of the Material Safety Data Sheet (MSDS) for the STAR 142 Flash Solvent, which they have been using for several years. The MSDS will be filed with the hard copy of this report. The solvent is a mix of Petroleum Hydrocarbon (hydrotreated light distillate and solvent naphtha medium aliphatic).

The facility also uses a sonic parts washer. The metal parts are placed in a hopper, which vibrates the parts against one another to clean the parts. No chemicals are used in this process; therefore, no emissions are reported from this operation.

The Smith Boiler was operating properly at the facility. According to the manufacturer's plate, the boiler was built in 1989. The boiler operates on natural gas at a rated capacity of 0.42 MMBTU per hour.This equipment is used to generate the hot water supply for the entire Redford facility South Building, the kitchen sink, wash basin, as well as hot water supply to the tumbling parts washer. According to MAERS 2013, the gas natural throughput for the years 2013 was 1 MMCF. This is an estimated value which has been reported every year in MAERS. The emissions of pollutants (CO, NOx, PM, and SO2) generated from burning 1 MMCF are insignificant when compared with the 50% Major Source emission threshold

The majority of the emissions resulting from the facility are a consequence of the solvent parts cleaning operations whereas only a small part of the total emissions are contributed to the grinding operations and from the gas fired boiler.

COMPLAINCE WITH APPLICABLE RULES/PERMIT CONDITIONS

AEC has been a 208a registered facility since April 16, 1997. Their registration number is WC-023-97. Rule 208a allows sources with actual emissions less than 50% of major thresholds to accept the 50% thresholds as legal limits on their potential to emit.

Our records indicate that certification required by Rule 208a has been renewed annually by the timely submittal of the registration form in conjunction with the annual emissions reporting (MAERS). The last registration on file, up to the day of the inspection, is for calendar year 2013 and it was received on February 24, 2014.

The following is a list of equipment (still located at the facility in Redford) exempt from permitting and / or not subject to "potential" applicable regulations:

- The dust collector is exempt from permitting based on Rule 285(l) (vi) (B) because the unit vents inside the plant. This exemption does not require recordkeeping.

- The Smith Boiler is exempt from permitting based on Rule282 (b) (i) because the boiler operates on natural gas at less than 50 MMBTU per hour. This exemption does not require recordkeeping. The regulatory requirements specified for Area Source Industrial, Commercial and Institutional Boilers NESHAP (40 CFR Part 63 Subpart 6J) do not apply to boilers exclusively fired with natural gas. NSPS (40 CFR Part 60, Subpart Dc) applies to steam generating units from small commercial, industrial, and municipal buildings. However, this equipment is not subject to the cited NSPS regulation because the maximum design heat input capacity for the boiler (0.42 MMBTU per hour) is less than the lower limit specified by NSPS Subpart Dc (10 MMBTU per hour).
- The parts-washers using STAR 142 Flash Solvent is exempt from permitting based on Rule 285 (r) (iv) because the emissions from the cleaning process are released into the in-plant environment. The facility keeps the purchase records and the solvent reclaimed as waste to estimate the total annual throughput of solvent. The facility reports the annual estimated VOC emissions into MAERS. NESHAP (40 CFR Part 63, Subpart T) is not applicable because the facility does not use halogenated solvents.

As indicated earlier, Rule 208a will be rescinded next year (2015). A response from AEC to the ADQ notification letter of the rescinding of Rule 208a had not been received when the site visit was completed. We will follow-up on this issue to assure that AEC remains in compliance with the Federal and State regulations.

COMPLAINT/COMPLIANCE HISTORY

Our records show that there have not been letters of violations issued to this facility within the last five years and no complaints have been received regarding this facility during the same period of time.

MAERS REPORT REVIEW

MAERS submission is required based on Rule 208a requirements. MAERS for the emission period from 1/1/2013 to 12/1/13 2013 was received on 02/24/14. The report was reviewed by Jill Zimmerman, the previous inspector for this source. According to her recollection the emissions appeared to have been accurately reported and there was a significant increase in the parts washer throughput.

FINAL COMPLIANCE DETERMINATION

Advance Engineering Company appears to be operating in compliance with all state and federal regulations. Rule 208a registration forms are accurately completed and have always been received on time. During the past five years air pollution violations have not been issued to this facility and AQD has not received any complaints

AQD will be visiting the facility at the new location in Canton after the company merging operations is fully completed. This is to assure that the company will be implementing some type of action prior to the Rule 208a rescinding date to remain in compliance with the Air Pollution Federal and State regulations.

NAME Abandoval DATE 5/19/15 SUPERVISOR JK