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

N319930008

FACILITY: JD Norman Industries, Inc.		**SRN / ID:** N3199
LOCATION: 815 RICE, LESLIE		**DISTRICT:** Lansing
CITY: LESLIE		**COUNTY:** INGHAM
CONTACT: Dave Latter , Engineer-Broach/Facilities		**ACTIVITY DATE:** 07/02/2015
STAFF: Daniel McGeen	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT: Scheduled inspection of facility which was last inspected in 2010.		
RESOLVED COMPLAINTS:		

On 7/2/2015, the DEQ, AQD conducted a scheduled inspection of JD Norman Industries, Inc., at their main plant in Leslie. This business was formerly owned and operated by Len Industries.

Facility environmental contact:

Dave Latter; Engineer-Broach/Facilities; 517-589-2224; dave.latter@jdnorman.com

Facility description:

JD Norman Industries, Inc. precision machines metal components for the manufacturing of transmission and differential assemblies which are used in the automotive and other vehicle related industries. Most of the components are heat treated, and some are oil quenched, while others are quenched in aqueous solutions.

Emission units:

Emission units	Description	Permit to Install or rule	Compliance status
Thermal deburring process	Removed process	1041-91	Removed, permit can be voided
Automatic parts washing machine (acid and rinse tanks)	Removed process	1043-91	Removed, permit can be voided
FG-HEAT-TREAT	2 batch processes with oil quench	21-02	Inactive, may operate in future
Metal machining processes	Numerous processes exhausting into in-plant environment, controlled by mist collectors	Rule 285(l)(vi)(B)	Compliance
Electric induction heating machines	Numerous electrically heated machines for heat treating metal parts	Rule 282(a)(i)	Compliance
Cold cleaner 126-7	Cold cleaner with air/vapor interface of approximately 4 to 6 square feet	Rules 281(h) and 707	Compliance
Aqueous pre-wash process	Pre-wash process with natural gas-fired burner and drying oven, exhausts outdoors	Rule 285(l)(iii)	Compliance
Rust proofing process	Heated washer which applies a water-based rust preventative, exhausts outdoors	Rule 285(l)(iii)	Compliance
Parts building area	Building parts to fix and build machines, and build new fixtures	Rules 285(l)(vi)(A) and/or (B)	Compliance
Maintenance area	Processes used for repair, welding, bandsaws, cutting, and vertical milling	Rules 285(l)(vi)(A) and (B), and 285(i)	Compliance

Regulatory overview:

This facility is identified in the Michigan Air Compliance and Enforcement System (MACES) as a true minor source. It performs metal working activities, but does not conduct any heat treating, or any coating of parts. Therefore, the plant's potential to emit (PTE) of criteria air pollutants is likely to be very low. Criteria pollutants are those for which a National Ambient Air Quality Standard exists; carbon monoxide (CO), nitrogen oxides (NOx), sulfur dioxide (SO2), volatile organic compounds (VOCs), lead, particulate matter smaller than 10 microns (PM-10), and particulate matter smaller than 2.5 microns (PM2.5). The PTE for these pollutants is likely to be far below the 100 tons per year (TPY) major source threshold for any one criteria pollutant. Minor sources, unlike major ones, are not subject to the

federally required Renewable Operating Permit (ROP) program. Furthermore, the PTE for hazardous air pollutants (HAPs) is also likely to be well below the thresholds of 10 TPY for a single HAP or 25 TPY for aggregate HAPs for a major HAP source.

This facility has one active air use permit, PTI No. 21-02. Their other processes appear to be exempt from the requirement of Rule 201 to obtain a PTI from the Air Quality Division.

Fee status:

This facility is not considered fee-subject, for the following reasons. Because it is not a major source for criteria pollutants, it is not classified as Category I. Additionally, because it is not a major source for Hazardous Air Pollutants (HAPs), and is not subject to federal New Source Performance Standards, it is not classified as Category II. Finally, because it is not subject to federal Maximum Achievable Control Technology standards, it is not classified as Category III. The facility is not required to submit an annual air emissions report via the Michigan Air Emissions Reporting System (MAERS).

Location:

The facility is located in a small industrial park, to the south and east of a residential area. The nearest residence is located about 100 feet north of the facility's northeast corner. otherwise, the closest residences are about 200 feet to the north of the plant.

Recent history:

I could not find a record of AQD ever having received any air pollution complaints regarding this facility. In 2011, this facility was purchased by JD Norman Industries, Inc. PTI No. 646-93, for a dry filter paint booth, was voided in 2013, as the equipment had been removed. There are two JD Norman plants located in Leslie, to the northwest of this site, I was told, but both are used for storage.

Arrival:

I had recently tried to conduct an unannounced inspection here, but had arrived on a day when the environmental contact, Mr. Dave Latter, was not available. Therefore, I called Mr. Latter in advance, to arrange today's inspection.

Prior to arrival, I drove around the block on which the facility is located, to check for the presence of any industrial odors. I was not able to detect any. Weather conditions were cloudy and 61 degrees F, with winds out of the northeast, at 0-5 miles per hour.

I arrived at 9:01 AM. I met with Mr. Dave Latter, Engineer-Broach/Facilities. Per AQD procedures, I provided Mr. Latter with a copy of the DEQ brochure *Environmental Inspections: Rights and Responsibilities*, and a copy of the Boiler MACT card to help facilities identify any requirements they may be subject to under 40 CFR Part 63, Subpart JJJJJJ, for Area Sources.

Mr. Latter had arranged for a pre-inspection meeting with JD Norman representatives, including Mr. Pat Horsch, Engineer-Heat Treat/Cage, Ms. Cindy Wells, Human Resources Manager, and Larry Keith, Maintenance Manager. I provided a verbal summary of what the inspection process entails.

I was informed that the thermal deburring process covered by PTI No. 1041-91 has been removed, as has been the automated parts washing machine covered by PTI No. 1043-91. Therefore, these permits can be voided.

Inspection:

FG-HEAT-TREAT, PTI No. 21-02:

This process was shut down in April, due to lack of work. They hope to have use for this process again, if work becomes available. I was informed that they have always operated it at a rate of less than 7000 hours per year.

Mr. Horsch e-mailed me a copy of a spreadsheet later this same day (please see attached). This spreadsheet shows hours operated from 2011 through 2015. The recordkeeping showed that the highest rolling 12 month value for hours operated in 2014 was 3,339 hours, on 1/9/2014. The highest 12-month rolling value in 2015 before production ceased was 2,589, on 1/13/2015. These values were below the maximum limit of 7,000 hours, indicating compliance.

Metal machining processes: Rule 285(l)(vi)(b):

Mr. Latter informed me that new equipment for machining connecting rods for engines is coming in. A large section of the plant floor had been cleared, to accommodate the new equipment., which will be used for milling and drilling.

They used to have 50-60 screw machines, I was informed, but are now down to 1-2 dozen. These do not actually manufacture screws, he explained, but the machines utilize a turning action, as they operate. The plant is currently moving towards installing CNC metal machining processes, Mr. Latter indicated.

I was shown all of the currently active lines in the plant. Different lines tended to utilize numerous metal machining processes, heating and tempering processes, and washing processes. I was informed that mist busters are used for any line which would get either a mist or an oil smoke into the air.

Induction electric heat treating machines; Rule 282(a)(i):

The metal parts being heat treated are quenched with water. They appear to be exempt from permitting by Rule 282(a)(i), because they do not utilize fossil fuel, and they do not involve oil quenching. Steam goes to a mist collector. For tempering, metal parts are heated to a lower temperature in a natural gas-fired oven.

After heat treating, parts go to CNC lathes. The next step in production is for broaching machines to broach teeth onto the metal parts. These appear to qualify for the Rule 285(l)(vi)(B) exemption.

Parts are next deburred by a robotic process. They are then washed in an aqueous solution. The parts washer has a mist collector, which exhausts into the general, in-plant environment. The washer would qualify for the exemption of Rule 285(r)(iv), which exempts metal cleaning processes which exhaust only into te general, in-plant environment.

Next, parts are machined in a robotic grinding machine. This also appears to qualify for the exemption criteria of Rule 285(l)(vi)(B).

The next step is final turning in a final CNC machine, which has a mist collector that exhausts into the general in plant atmosphere.

Cold cleaner 126-7; Rules 281(h) and 707:

I was shown a small cold cleaner, which was mentioned in the 2/5/2010 inspection activity report by AQD's Brian Culham as having an air/vapor interface of of approximately 4 to 6 square feet. This unit appears to meet the exemption criteria of Rule 281(h), for cold cleaners having an air/vapor interface of not more than 10 square feet. The lid of the unit was closed, as required by Rule 707(3). Written operational procedures were posted, as required by Rule 707(4). The written procedures were most recently updated on 7/8/2014, the document indicated. The unit appears to be identified by the serial number 126-7.

Aqueous pre-wash process; Rule 285(iii):

They have an aqueous pre-wash process which utilizes a natural gas-fired burner. The burner exhausts through the roof, as does steam from the drying oven. However, steam and mist from the washing chamber exhaust into the plant. The washing solution is alkaline. Rule 285(l)(iii) exempts equipment for surface preparation of metals by use of aqueous solutions (except for acid solutions), and any exhaust system or collector exclusively serving the equipment.

Rust proofing process; Rule 285(l)(iii):

They have a water-based rust proofing process, which applies a rust preventative, in a heated washer. This exhausts to the outside air.

Some lines make transmission parts. I observed metal machining processess which appear to satisfy the criteria for the Rule 285(l)(vi)(B) exemption.

I was shown additional parts lines. One or more lines have an ID broach line, to create teeth on the inside diameter of parts. One line has a subsequent electric parts washer using an aqueous solution, which is vented into the general, in-plant environment. These appear to satisfy the criteria of Rule 285(l)(vi)(B), and Rule 285(r)(iv). The above mentioned electric parts washer is followed by a vibratory deburring machine, and an electrically powered washer with a drying chamber.

Parts building area; Rule 285(l)(vi)(A) and/or (B)

They have an area for building parts to fix and build machinies, and to build new fixtures. The equipment could utilize Rule 285(l)(vi)(A), as it is used on a non-production basis, or Rule 285(0(vi)(B), for exhausting indoors.

Maintenance area, Rule 285(l)(vi)(A) and (B) and 285(i)::

They have a maintenance area, for repair, welding, banding, bandsaws, cutting, and vertical milling. These processes appear to be exempt. Welding is exempt under Rule 285(l).

Service parts machining processes; Rule 285(l)(vi)(B):

They have metal machining processes for making service parts. These are operated only a couple times per year, I was informed, and they exhaust into the general, in-plant environment.

Miscellaneous:

They have a closed loop solvent recovery machine, for used mineral spirits, from their cold cleaner, Mr. Latter explained. He informed me that it is only opened in order to fill it. Vapors are collected, condensed, and go into a storage tank to be reused.

Metal shavings are separated from cooling and lubricating fluids by being spun in a wringer, a clyndrical chamber, I was shown. I was informed that the sludge gets collected and disposed of.

Conclusion:

I did not find any instances of noncompliance. The facility was neat and orderly, and the inside air of the plant was free of any mists or smoke. I left the site at 11:32 AM. I will e-mail AQD Permits Secretary Sue Thelen, to request that PTI Nos. 1041-91 and 1043-91 be voided, because the thermal deburring process and the automatic parts washing machine (acid and rinse tanks), respectively.

NAME _____ DATE 9/24/2015 SUPERVISOR B. M.