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

U4413226523473

FACILITY: ZF Lemforder		SRN / ID: U44132265
LOCATION: 3300 John Conley Dr, Lapeer		DISTRICT: Lansing
CITY: Lapeer		COUNTY: LAPEER
CONTACT: Nancy Webb , Document Control Coordinator		ACTIVITY DATE: 10/03/2013
STAFF: Brian Culham	COMPLIANCE STATUS: Compliance	SOURCE CLASS:
SUBJECT: Determine compliance, make initial contact, and to further investigate odor complaints in the area.		
RESOLVED COMPLAINTS: C-14-00069		

Nancy Webb - Document Control Coordinator - nancy.webb@zf.com

George Roesner – Manufacturing Manager – george.roesner@zf.com

This was a Scheduled Inspection. The source was chosen for inspection because there was no pre-existing file in the Lansing District Office (LDO) and therefore no record of an air quality inspection. The inspection was unannounced. It was also an initial contact with ZF Lemforder staff.

ZF Lemforder is located in an industrial park southwest of the city of Lapeer. The area surrounding the industrial park is primarily agricultural and recreational land. A residential area exists about 1 mile to the northwest and a school about 1 mile to the north northeast. Immediately to the north is a corn field. The Interstate, I-69, is to the south.

ZF Lemforder is a large machine shop that bores, grinds, turns, and mills steel and aluminum steering and suspension components for the automotive industry.

ZF Lemforder is considered a Minor Source of criteria air pollutants because the potential to emit any of these pollutants is below the corresponding Clean Air Act Title V threshold. Fine Particulate Matter is the pollutant that would be expected to be emitted in the greatest quantity. Although the machining of some metal alloys can produce air born Hazardous Air Pollutants (HAPs) as fine particulate, this facility is not expected to have a potential to emit great enough to be considered a Major Source of HAP. Therefore, ZF Lemforder is considered an Area Source of HAP.

Although ZF Lemforder is considered an Area Source of HAP, the metal fabrication processes located there are specific to steering and suspension components for the automotive industry. It is not expected that these specific processes would be one of the categories subject to 40 CFR 63 Subpart XXXXXX, the National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories.

This facility has not been required to report to the Michigan Air Emissions Reporting System (MAERS).

I arrived unannounced at 11:00 am. I met with four people from ZF Lemforder including Nancy Webb and George Roesner. It is my understanding that N. Webb will be the day to day environmental contact for this source. G. Roesner is the Manufacturing Manager. I shared the Rights and Responsibility Brochure with the group and quickly explained my entry authority and a little about air regulatory law. I stated that Rule 201 requires processes that may emit an air contaminant to obtain an Air Use Permit to install prior to installation of the process. I continued stating that there are many rules that conditionally exempt processes from the Rule 201 requirement.

I stated that the city of Lapeer is an area sensitive to odors and that recently many citizens have submitted complaints to the AQD about odors from industrial activities. One complaint has specifically alleged that ZF Lemforder is a possible odor source.

The complaint was received in an e-mail on 9/24/2013 and contained a specific description of the source of odor. I asked that during the inspection that I be taken to this area. Complaints have also alleged that the odor can occur in the evenings and into the night. ZF Lemforder operates multiple shifts 5 days a week including the time periods when the alleged odors occur.

10/23/2013

No.	Emission Unit or Flexible Group	Description	Permit Number or Exemption	Comp. Status
1	EUMachineWork	A combination of 50+ CNC and other metal milling machines	Rule 285(l)(vi)	C
2	EUNitrogenTank	Pressurized storage of Nitrogen gas used as a refrigerant.	Rule 284(j)	C
3	EGMetal/OilSeparation	Centrifugal oil separator. For cleaning oil from metal shavings.	Rule 285(r)(vi)	C

1. EUMachineWork

The plant is filled with Computer Numerical Control (CNC) Milling Machines. Many of the machines were in operation. I looked for a common exhaust system, but did not identify one. The machines that I saw were enclosed with individual particulate control systems emitting into the general in-plant environment. The in-plant environment did not exhibit excessive oil mist which is usually indicated by a haze throughout the work area.

I asked if any testing had been done recently, and was shown a worker safety study completed for the Michigan Occupational Safety and Health Administration (MIOSHA). The study included worker inhalation exposures. There was no indication in the report of any inhalation risks at this source.

Coolants/lubricants are required on most milling machines. Certain oil based coolants can be subject to bacterial activity that can cause "moldy" odors. I did not experience any odors during my inspection. I asked if ZF Lemforder had ever had problems of this nature. The response was no, because they were aware of the possibility of the problem and were using coolants that safeguarded against it.

Rule 285(l)(vi) exempts equipment used for carving, cutting, routing, turning, drilling, machining, sawing, surface grinding, sanding, planing, buffing, sand blast cleaning, shot blasting, shot peening, or polishing ceramic artwork, leather, metals, graphite, plastics, concrete, rubber, paper stock, wood, or wood products that has emissions that are released only into the general in-plant environment from the Rule 201 requirement to obtain an air use permit. Rule 285(l)(vi) does not restrict emission rates or operating periods.

2. EUNitrogenTank

I identified a liquid nitrogen storage tank on the west end of the plant. The nitrogen is used as a refrigerant. Pressurized storage of acetylene, hydrogen, oxygen, nitrogen, helium, and other substances, excluding chlorine and anhydrous ammonia in a quantity of more than 500 gallons, that have a boiling point of 0 degrees Celsius or lower, are exempt from the Rule 201 requirement to obtain an air use permit.

3. EGMetal/OilSeparation

ZF Lemforder recycles metal turnings. Two roll-offs were identified on the north side of the plant, one containing aluminum and the other containing steel. The aluminum recycle was identified by a complainant as a possible source of odor. During my inspection there were no odors from either roll-off.

The metal turnings, chips, and other recycled forms from the machining processes contain residual coolants/lubricants. A centrifugal type of oil separator is used to spin the oil out of the chips. It is my understanding that the reclaimed oils are processed and reused at the facility.

Rule 285(r)(vi), exempts from the Rule 201 permit requirement, any equipment used for the cleaning of metal if the process emissions are only released into the general in-plant environment

Odor

The complaint identified a fan on the north side of the building as a possible source of odor. Most of the fans on that side of the building are intake fans for air make up. I did identify one fan about 24" in diameter that was an exhaust fan. There was some black or dark grey discoloration around the fan. There was no duct work connected to the fan. The fan itself was for comfort ventilation. Comfort air conditioning or comfort ventilating systems not designed or used to remove air contaminants generated by, or released from, specific units of equipment are exempted from Rule 201 by Rule 280(b).

I did not experience any solvent odors during the inspection at ZF Lemforder. They do not apply any surface coatings other than those from the coolants/lubricants used during machining.

Imp. Status
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It should be noted that an odor was experienced in the area at approximately 8:30 a.m. and again at approximately 10:00 a.m. The odor was solventy and was experienced at the corner of Lake Neppessing Rd. and Genessee Rd. This is about ¾ miles north of the plant. The impact area at that time was very small less than a ¼ mile in any direction. At the times of odor detection the prevailing wind was from the east south east and southeast (KD95). The two closest properties in that general direction were a church and a restaurant. The odor was not strong in intensity and I was not able to track the odor to its source. After leaving ZF Lemforder at about 12:15, I proceeded back to this odor impact area once again, but the odor was not detected.


The odor that I experienced was not of a range, duration, frequency, or intensity, nor did it cause impact, that would unreasonably interfere with the comfortable enjoyment of life and property as required to be in violation of Rule 901.

I did not identify any violations as a result of my inspection of ZF Lemforder.

NAME *Bob Lulla*


DATE 10-23-2013

SUPERVISOR *Nigel McE...*



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