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FY2018 Insp

DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Self Initiated Inspection

N229743684

FACILITY: MacLean Royal Oak, LLC		SRN / ID: N2297
LOCATION: 3200 W 14 MILE RD, ROYAL OAK		DISTRICT: Southeast Michigan
CITY: ROYAL OAK		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 03/02/2018
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2018 inspection of MacLean Royal Oak, LLC ("MacLean")		
RESOLVED COMPLAINTS:		

**MacLean Royal Oak, LLC (N2297)**  
**A MacLean-Fogg Company**  
**3200 W. 14 Mile Road**  
**Royal Oak, Michigan 48073-1699**

**Name Change (Jan 2012): Industrial and Automation Fasteners (N2297) → MacLean Royal Oak, LLC (N2297)**

**DBA Change (Jan 2012): MacLean Vehicle Systems or MVS → MacLean-Fogg Component Solutions**

**Web: [www.MacLeanFogg.com](http://www.MacLeanFogg.com)**

**Not Subject to: NESHAP/ MACT T, area source National Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T; NESHAP/ MACT T); Correction; 29484 Federal Register / Vol. 60, No. 107 / Monday, June 5, 1995 / Rules and Regulations; amended National Air Emission Standards for Hazardous Air Pollutants: Halogenated Solvent Cleaning (40 CFR, Part 63, Subpart T); Final Rule; Page 25138 Federal Register / Vol. 72, No. 85 / Thursday, May 3, 2007 / Rules and Regulations.**

On March 02, 2018, I conducted a level 2 self-initiated **FY 2018 inspection** of MacLean Royal Oak, LLC ("MacLean") dba MacLean-Fogg Component Solutions, A MacLean-Fogg Company, located at 3200 W. 14 Mile Road, Royal Oak, Michigan 48073-1699. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ -AQD) rules.

AQD and Consumer Energy (natural gas plant for pipeline-to-distribution lines) received scores of complaints during the fall of 2017 (October-November 2017) regarding natural gas odor in the neighborhood (Royal Oak, Birmingham, Troy). Many complainants alleged that the odor was emanating from MacLean. Purpose of this inspection is to follow up on those complaints. Based upon the FY 2018 inspection, MacLean has no permit from Great Lakes Water Authority (GLWA) for industrial wastewater discharge. Nor does MacLean discharge industrial wastewater to GLWA sewer. The Royal Oak area has combined sewer system. Based upon the FY 2018 complaint investigations, characteristic natural gas odor is due to sewer gases. Consumer Energy does not have an odorizing unit at this location.

Consumer Energy heats pipeline natural gas to bring its temperature up to the standard using heat exchangers consisting of ethylene glycol heat transfer fluid (HTF) and delivers natural gas to distribution lines.

During the inspection, Mr. John E. McAuley (Phone: NA; Fax: 248-280-3840; Cell: 248-520-9137; E-mail: jMcAuley@MacLeanFogg.com), Environmental Health and Safety Specialist, assisted me.

Mr. Gregory A. Dean (Phone: 248-658-2707; Fax: 248-280-3840; Cell: 248-933-4289; E-mail: gDean@MacLeanFogg.com), Quality Supervisor, was not present due to medical leave. About 2016, Mr. Dean transferred his environmental & safety duties to Mr. McAuley. Ms. Ana Menjak (Phone: 248-280-0880-ext. 82763; Fax: 248-280-3840; Cell: NA; E-mail: aMenjak@MacLeanFogg.com), Quality Manager, did not participate.

About 2013, Ms. Denise Ballanger (Phone: 248-658-2713), HR Manager, separated from MacLean-Fogg. Mr. Ben Ancona (Phone: 248-658-2727; Fax: 248-280-3840; Cell: 586-436-5738; e-mail: bAncona@MacLeanFogg.com), Director of Operations, retired about April 2017.

In 1999, MacLean-Fogg bought Industrial and Automation Fasteners and renamed it as MacLean Vehicle Systems (MVS), DBA; Industrial and Automation Fasteners. In 1925, Messrs. John MacLean and Jack Fogg founded MVS, which is four-hundred-million-dollar company with facilities in North America, Europe, and Asia. MacLean is world leader in supplying high performance fasteners to automotive, truck, aerospace, etc. markets. In January 2012, MVS became MacLean Royal Oak, LLC and dba became MacLean-Fogg Component Solutions

About 2014, MacLean-Fogg started operations at 125 Allen Road, Troy. From Royal Oak, MacLean-Fogg moved deep draw machines (23), assembly machines (4), parts-cleaner (1) to Troy. Royal Oak facility bought one new parts cleaner to replace the loss to Troy facility.

At Royal Oak, MacLean makes lug nuts (under trade name Decorex Wheel Fasteners) for cars' and trucks' wheels and supplies them to automotive assembly plants. Chromium and other coating processes are outsourced to the plating companies. The boilers have been idled and disabled and forced-air circulation system has been installed for space heating. Lubricating and cutting oils are used which may produce odor due to bacterial action if not managed properly.

### **Rule 285(2)(I) Forming, Tapping, Assembly and Press Machines**

Seven (7: added one more machine Formax XXV in 2016) forming machines with Absolent filters to control oil mist are present; oil is used for cooling forming operations. All Smog-hogs have been (by Nov 2014) replaced by Absolent Air Purifiers, which contain Cartridge Filters. Typically, MacLean operates three (3) 8-hour shifts for Monday thru Friday; three (3) 7-hour shifts for Saturday; and one (1) 7-hour shift for Sunday (hit and miss on Sunday). Upon filtration, exhaust will continue to be recycled into the plant. Tapping machines (in all 25; as one machine was added in February 2017; in December 2011, 2 machines were installed), which use cutting oil, put threads into the nuts. Stainless Steel (SS) caps for nuts are made using SS sheet forming machines.

The 7 (one machine was added in 2016) forming, 14 presses and 25 tapping machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(I)(vi) because the

processes are vented internally via air pollution control devices (APCD), five (5) Absolent Air Purifiers. 4 Absolents replaced 3 Smog-Hogs in 2011; one last remaining Smog-Hog has been also replaced by November 2014. The filters are present to control oil mist. In spite of Absolent Air Purifiers, the plant floors are slippery due to oil mist deposition causing slip-and-fall hazard. Each Absolent is equipped with 3 Cartridge Filters. The filters are inspected on an annual basis and replaced as needed based upon pressured drop. Each Absolent is equipped with three pressure drop ( $\Delta P$ ) measurement gauges to facilitate filter replacement decision. Based upon experience, the filters last about two years depending upon usage and quantity of particulate oil mist emissions.

About 2016, roughness is added to the floors to prevent slip-and-fall hazard.

SS caps are washed using soapy water. Some caps are sent out for polishing.

Assembly machines (10) put caps on nuts. Six (6) existing assembly machines were transferred to Troy facility. Six (6) brand new assembly machines were bought and installed (2013 thru 2014).

### **One 3 ft. x 4 ft. parts cold-cleaners**

One 3 ft. x 4 ft. parts cold-cleaner is present (one of two parts cleaners was removed about December 2017). Cold-cleaners are subject rule 336.1611 or 336.1707 (new) depending on if it is existing (611) or new (707). A cold-cleaner is exempt from Rule 336.1201 pursuant to Rule 281(2)(h) or Rule 285(2)(r)(iv). Existing cold cleaners (611) were placed into operation prior to July 1, 1979. New cold cleaners (707) were placed into operation on or after July 1, 1979.

Both FY2006 and FY2011 inspections revealed one of two cold-cleaners had a lid open. I asked Mr. Dean to ensure that lids were kept closed at all times

The cold-cleaner (1 of 2 removed) is soaker tank type. To replace one of two machines transferred to Troy facility, MacLean bought one brand new machine and installed about 2014: Wel-Bilt parts-cleaner machine (No. 141223, 140-gallon capacity). Only one parts cleaner is present at this time (March 2018)

On March 2, 2018, mechanically assisted lid was closed while idling. Also, the operating procedures were posted but soiled. On March 2, 2018, I gave new DEQ's decals for "cold-cleaner operating procedures" for posting and complying with work-practice rules. I asked the company to follow the common-sense work practice in the procedures.

The Cold-cleaners are NOT Subject to: 40 CFR, Part 63, Subpart T, NESHAP/ MACT T, since solvents containing halogenated compounds are not used.

Degreasing solvent used is mineral spirits supplied by Cadillac Oil Corp. of Detroit (313-365-6200).

The solvent contains aliphatic hydrocarbons (98%). 100% VOC. Density ( $\rho$ ) @ 68 °F = 6.560 pounds per gallon (0.790 kg /L). Vapor Pressure (VP)= 2 mm Hg at 60 °F, Specific Gravity (SG, Water = 1.0) = 0.790 at 68 °F, FP = 105 °F. Boiling Point (BP) @ 760 mm Hg. = 315-398 °F. Auto-ignition = 535 °F. Flammability range = 1%v (LEL) – 6%v (UEL).

### **Conclusion**

MacLean-Fogg is in compliance with air quality regulations and conditions of PTI exemptions (Rules 281, 285).

NAME *J. Penninghall*      DATE *03/16/2018*      SUPERVISOR *Joseph B.*