

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

N786430664

FACILITY: Umicore Autocat USA Inc.		SRN / ID: N7864
LOCATION: 2347 COMMERCIAL DR, AUBURN HILLS		DISTRICT: Southeast Michigan
CITY: AUBURN HILLS		COUNTY: OAKLAND
CONTACT: Brandy Werner , Environmental, Health & Safety Specialist		ACTIVITY DATE: 08/07/2015
STAFF: Kerry Kelly	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On August 7, 2015, I conducted a scheduled inspection at Umicore Automotive Catalyts located at 2347 Commercial Drive, Auburn Hills, Michigan. This facility is identified by the Air Quality Division with the State Registration Number (SRN) of N7864. The purpose of this inspection was to determine the facility's compliance with the requirements of the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); Michigan's Air Pollution Control Rules; and the conditions of Permit to Install (PTI) No. 300-07A.

### INSPECTION

I entered the site, presented my DEQ employee photo identification, explained the purpose of the inspection, and gave a copy of the pamphlet "Environmental Inspections: Rights and Responsibilities" to Mr. Richard Jefferies, Operations Manager and Ms. Brandy Werner, Environmental, Health & Safety Specialist. Mr. Jefferies and Ms. Werner accompanied me on the inspection.

### FACILITY DESCRIPTION

Umicore Automotive Catalyst in Auburn Hills is a research and development facility where automotive catalysts, manufactured at Umicore locations world-wide, are tested. There are 45 employees working at this facility. Regular hours of operation are 24 hours a day, seven days a week, 365 days a year.

### EMISSION UNITS

#### *Burner-based exhaust gas generation unit*

The Burner-based exhaust gas generation unit (test cell 4) was reported as being installed 10/06/2011 and is used to prematurely age catalysts for testing. This system is designed to simulate exhaust gas from internal combustion engines. Burner-based exhaust generation units typically consist of a main flow line, a forced air device, a burner, a fuel injector with an atomizing fuel sprayer where the burner combusts a mixture of air and fuel providing exhaust gas, and a heat exchanger for controlling the temperature of exhaust gas delivered to the emissions control device. Umicore submitted that this device is exempt from R 336.1201 according to R 336.1285(g). This exemption applies to internal combustion engines. The burner-based aging system is not an internal combustion engine and therefore this exemption does not apply. The burner-based exhaust gas generation unit appears to be in violation of R.336.1201.

#### *Engine Dynamometers*

I inspected three spark ignition internal combustion engine dynamometers (test cell 1, test cell 2, and test cell 3). The installation dates reported for each of the test cells are; test cell 1:

09/01/1997, test cell 2: 06/08/1998, and test cell 3: 04/12/1999. EPA performance testing is performed on test cell 1. Test cells 2 and 3 are used to prematurely age catalysts. During my inspection, test cells 1 and 3 were running. I was informed by Mr. Jefferies that both of these engines are 6 liter, large truck engines running at 337 horsepower. The rated heat input capacity reported for each engine is 2.36 MMbtu/h. These engines appear to be exempt from R 336.1201 per R336.1285(g) because the maximum rated heat input is less than 10 MMbtu/h. These engines do not appear to be subject to the Standards of Performance for New Stationary Sources (40 CFR 60 Subpart JJJJ) based on the installation dates. Michigan Department of Environmental Quality, Air Quality Division (MDEQ, AQD) has not accepted delegation from the U.S. Environmental Protection Agency (USEPA) for enforcing the National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (40 CFR 63 Subpart ZZZZ) at area sources of hazardous air pollutants.

#### *Chassis Dynamometers*

Two chassis dynamometer booths were inspected at this facility. The dynamometers were not in operation during my inspection. One of the booths was under construction. This booth, which originally contained one dynamometer, will have two dynamometers when construction is complete. Though this facility will have a total of three chassis dynamometers, only two will be able to run simultaneously. Chassis dynamometers were considered to be internal combustion engines for transportation purposes within the meaning of Section 302(z) of the Clean Air Act and are not subject to stationary source requirements. MDEQ, AQD regulates stationary sources of air emissions.

#### *Storage Tanks*

##### *Gasoline Storage Tanks*

I inspected three, permitted (PTI 300-07A), above-ground gasoline storage tanks containing BP Ultimate, EEE rated, and phosphate-doped gasoline. Each tank has a total capacity of 4,000 gallons. Two of the tanks are partitioned, one into 1,000 & 3,000 gallon sections and one into two 2,000 gallon sections. A Veeder-Root monitoring system is used to measure the temperature, gasoline volume, and water volume in the storage tanks. PTI 300-07A limits the 12-month rolling average gasoline throughput to 315,000 gallons per year. Ms. Werner provided gasoline throughput records for August 2008 to July 2015. The reported 12-month rolling average for each month was less than 315,000 gallons. Based on the information provided, this facility is in compliance with the conditions of PTI 300-07A. These storage tanks do not appear to be subject to 40 CFR 60 Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) because each tank is less than 75 cubic meters (19812.9 gallons).

##### *E85 Storage Tanks*

April 2013 to December 2014

According to Umicore's 2014 MAERS report, there are two, unpermitted, 350 gallon totes that were used to store E85 fuel at this facility. I observed these totes during my inspection. Umicore reported the E85 storage tanks are exempt per R336.1290. I received records to demonstrate compliance with R336.1290 from Ms. Werner on August 20, 2015. R336.1290 limits the volatile organic compounds (VOC) emissions of only noncarcinogenic VOC's or noncarcinogenic materials contaminants to not more than 1,000 pounds per month (lbs/mo), the VOC emissions of carcinogenic air

contaminants with initial risk screening levels greater than or equal to 0.04 micrograms per cubic meter ( $\text{ug}/\text{m}^3$ ) to 20 lbs/mo, and prohibits any air contaminants with an initial threshold screening level (ITSL) or initial risk screening level (IRSL) less than 0.04  $\text{ug}/\text{m}^3$  from being emitted. According to the submitted records, Umicore stored E85 in these tanks from April 2013 to December 2014. E85 is a blend of ethanol, which is noncarcinogenic, and gasoline, which is carcinogenic. The highest reported total monthly VOC emissions from ethanol and gasoline combined was 6.19 lbs/mo from the E85 tanks. The IRSL for gasoline (CAS 8006619) is 2  $\text{ug}/\text{m}^3$ .

#### January 2015 to present

On August 17, 2015, Ms. Werner stated that one of the E85 tanks was empty and the other tank contained diesel fuel. I received a purchase record from Ms. Werner on August 17, 2015 for 303.9 gallons of #2 Ultra L/S Clear Diesel fuel purchased from Spencer Oil Company on May 15, 2015. According to a memorandum sent with the records on August 20, 2015; Umicore plans to store gasoline in the tank that is currently empty. Umicore submitted that these tanks are exempt from R 336.1201 per R 336.1284 (d) for the tank storing diesel fuel and R 336.1290 for the tank that will be storing gasoline. These storage tanks appear to be exempt from R336.1201 per R336.1284(d) and R336.290.

#### Boilers

There are three identical Cleaver-Brooks flexible watertube boilers and one Ajax Inclined water tube hot water heater located at this facility. The boilers and hot water heater are natural gas fired. The Cleaver-Brooks boilers are used to cool the supply air for the vehicle test cells, reducing moisture. Each boiler has a heat input capacity of 2.5 MMBtu/h. The Ajax hot water heater, with a heat input capacity of 0.9 MMBtu/h and water volume of 45 gallons, is used as a humidifier from October to April. These units appear to be exempt from R 336.1201 in accordance with R 336.1283(b)(i) because the rated heat input capacity for each unit is not more than 50,000,000 Btu/h (50 MMBtu/h). These units do not appear to be subject to 40 CFR 60 Subpart Dc because the rated heat input capacity is not between 10 MMBtu/h and 100 MMBtu/h. MDEQ, AQD has not accepted delegation from the USEPA for enforcing the National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters Area Sources (40 CFR 63 Subpart JJJJJ).

#### Parts Washer

Umicore has one parts washer that uses a water-based cleaning solution provided by Safety Kleen. The SDS for the part cleaning solution was provided by Ms. Werner. This unit does not appear to be subject to Michigan's Air Pollution Control Rules because it does not contain volatile organic solvents (VOC's).

#### CONCLUSION

Umicore Automotive Catalysts appears to be in violation of R 336.1201 for installing a burner-based exhaust generation unit. A violation notice will be issued.

NAME Kerry Kelly DATE 8/25/15 SUPERVISOR CJE

