DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: On-site Inspection

U63151043759025

FACILITY: Toyota Boshoku America, Inc.		**SRN / ID:** U631510437
LOCATION: 28000 West Park Dr., Novi		**DISTRICT:** Warren
CITY: Novi		**COUNTY:** OAKLAND
CONTACT:		**ACTIVITY DATE:** 06/24/2021
STAFF: Iranna Konanahalli	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:**
SUBJECT: FY 2021 inspection (on-site) of Toyota Boshoku ("Boshoku"), located at 28000 West Park Drive, Novi, Michigan 48377-1386		
RESOLVED COMPLAINTS:		

Toyota Boshoku America, Inc. (U-63-15-10437)
28000 West Park Dr.
Novi, Michigan 48377-1386

Rules: 336.1285, 336.1287

Subject to existing Area source NESHAP / MACT ZZZZ / MACT 4Z / RICE MACT, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines and National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines / Final rule (Page 3568, Federal Register / Vol. 73, No. 13 / Friday, January 18, 2008 / Rules and Regulations / Final rule; Page 51570 Federal Register / Vol. 75, No. 161 / Friday, August 20, 2010 / Rules and Regulations / Final rule; Page 12863 Federal Register /Vol. 76, No. 46 /Wednesday, March 9, 2011 /Rules and Regulations / Direct final rule; amendments for August 20, 2010, final rule; Page 6674 Federal Register / Vol. 78, No. 20 / Wednesday, January 30, 2013 / Rules and Regulations / Final rule. Page 48072 Federal Register / Vol. 79, No. 158 / Friday, August 15, 2014 / Rules and Regulations / Notice of final decision on reconsideration. etc.). AQD has no delegation of these standards and therefore no attempt has been made evaluate Toyota Boshoku's compliance with NESHAP / MACT 4Z. Besides, SI RICE produces only 20 kW of power. Compliance with NSPS 4J is deemed compliance with MACT 4Z.

Emergency generator is subject to (73 FR 3591, January 18, 2008, 76 FR 37972 June 28, 2011, 78 FR 6697 January 30, 2013): NSPS 4J, 40 CFR, Part 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (natural gas fired Spark Ignition). The provisions of NSPS 4J are applicable to owners and operators and manufacturers. Owners or operators of Emergency SI RICE are subject to this NSPS 4J if engine is manufactured after January 1, 2009, emergency engines greater than 19 kW (25 HP) engine power. GENRAC SG060 96.67: Manufactured in 2015. 96.67 BHP (> 19 kW / 25 HP) - Natural Gas. This engine is subject to NSPS 4J.

On June 24, 2021, I conducted a level 2 self-initiated FY 2021 inspection (on-site) of Toyota Boshoku ("Boshoku"), located at 28000 West Park Drive, Novi, Michigan 48377-1386. 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 Environment, Great Lakes and Energy, Air Quality Division (EGLE-AQD) administrative rules.

During the inspection, Mr. R. Drew Stockwell (Phone: 859-962-4772; Cell: 513-805-5871; Fax: 859-525-1268; E-mail: Drew.Stockwell@tbAmerica.com), MPH, Corporate Safety Specialist, and Mr. Charles Sams (Phone: 248-295-6310; Cell: 248-378-3437; Fax: 859-525-1268; E-mail: Charles.Sams@tbAmerica.com or Charles.Sams@Toyota-Boshoku.com), Manager Technical Administration Technical Center, assisted me.

Mr. Thomas Mayer (Phone: 248-295-6817; Cell: 248-672-7120; Fax: 248-349-4535; E-mail: Tom.Mayer@tbAmerica.com), Lab Manager, Tech Center, was on site, available if necessary. Mr. Randy Craig (Phone: 248-295-6775; Cell: 248-924-1315; Fax: 248-449-8981; E-mail: Randy.Craig@tbAmerica.com), Prototype Sr. Manager, Tech Center, was not in this building.

Ken Peabody (Phone: 248-295-6481; Cell: 248-766-1753; Fax: 248-295-6482; E-mail: Ken.Peabody@tbAmerica.com), Sr. Manager, Evaluation Dept., Tech Center, did not participate in the inspection.

The Toyota Boshoku America (TBA) Technical Center was established in 2002. Due to TBA's rapid expansion, in 2005 the Technical Center moved to its current location in Novi, Michigan. In 2011, the TBA Technical Center added a second facility in Novi to house its Prototype and Pattern Engineering groups. The Novi operations are conducted in two buildings. TBA focuses on the principle of kaizen (continuous improvement).

Global Toyota Boshoku makes variety of products:

1. Filtration and powertrain: air, oil, transmission oil, cabin filters, intake manifolds, etc.

2. Interior components: seats, doors, molded headliners, floor carpets, instrument panels, etc.

3. Exterior components: bumpers, etc.

4. Textile products: air bags, seat belts, seat fabrics, etc.

At Novi, concerning interior systems such as seat, door, trim, headliner, substrate, carpet, air & oil filters, etc. engineering, R & D, testing, prototyping is accomplished in two (2) buildings:

1. Building 1: 28000 West Park Dr., Novi, Michigan – engineering, R & D, testing

2. Building 2: 45875 Dylan Dr., Novi, Michigan – prototyping

Building 1 (TBA Technical Center), 28000 West Park Dr., Novi

Ten (10: one more added about 2016) environmental chambers (Nos. 1-10) are present: cold (-68 ºC) and hot (80 ºC); LED light; humidity; anechoic (NVH: Noise, Vibration, Harshness). Concerning interior parts, the chambers are used to test parts for extreme temperatures (cold and hot). These chambers emit practically nil air contaminants. In addition, one materials analysis laboratory is present.

Spray can booth and cabinet

One hand-held spray can spray booth cabinet is present. The booth is equipped with a backdraft filter system exhausting overspray laden exhaust gas to outside ambient air. Almost always the cabinet is kept closed as the booth is hardly used.

The booth is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.287(2)(b) (only hand-held aerosol spray cans).

Building 2 (Prototype and Pattern Engineering), 45875 Dylan Dr., Novi

While spot welding equipment has been removed about 2018, the repair MIG welding machines are present. Two computer-controlled Gerber Cutters are present. The cutters cut fabric, leather, vinyl, etc. Tailoring machines are also present.

As all emissions are released to in-plant environment, the machines are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(2)(l).

Glue / adhesive booth

One solvent-based glue spray booth (8 ft. W x 4 ft. D * 4 ft. H) with a back-draft dry filter system, consisting of a pleated filter system and inexpensive and sacrificial cheese cloth filter to prolong life of the pleated filter, is present. Based upon purchase records Glue / adhesive usage records are kept; Mr. Stockwell stated that about 1-5 (CY 2019 usage: 24 gallons per year) gallons of glue / adhesive coatings per month was used; only intermittent use for prototyping (non-production). All adhesives are solvent-based at this time although water-based adhesives may be used depending on ongoing engineering and testing. Pleated filters (secondary) are covered with cheese cloth (primary), which is replaced once per day as needed. The cheese cloth saves expensive pleated filters. All adhesive use is for prototyping and not for production.

I asked Mr. Stockwell to install and inspect the filters such that they fit, at all times, snugly without gaps and holes. I also asked him, based upon inventories and purchases, to keep records of paint and solvent usage according to Rule 336.287(2)(c). This is non-production booth; used only for prototyping.

HVLP guns are used and are tested with test caps. All adhesives are solvent based. One oven is present that heats the parts to 65 ºC for 3 minutes.

The booth is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.287(2)(c). For adhesive coatings, Rule 336.287(2)(a) with 2 gallons per day limit may also be used if proper booth is not present and the emissions are released only to in-plant environment. However, in this case, exhaust gases are discharged to outside ambient air upon filtration.

Audit Report

Based upon March 31, 2020, Report, Environmental Resources Management (ERM, (317) 706-2000) of Indianapolis, IN 46240, determined that neither Rule 201 Permit-to-Install (PTI) nor Rule 210 Renewable Operating Permit (ROP) was applicable.

Based upon ERM's calculations, facility-wide Uncontrolled Potential-to-Emit (PTE) Vs Actual were (tons per year, CY 2019):

PM = 0.253 Vs 0.014
PM10 = 0.255 Vs 0.014
PM2.5 = 0.255 Vs 0.014
NOx = 3.142 Vs 0.126
SOx = 0.557 Vs 0.039
VOC = 0.602 Vs 0.357
CO = 2.683 Vs 0.109
Pb = 0.000 Vs 0.000
Total HAPs = 0.077 Vs 0.005

Generac Emergency Generator (NG)

One GENERAC (Model: SG 0060GG036.8N 18HPSYA, S/I No.: 9955863, Prod: Sept 24, 2015, Alternator No.: 21031780200) 96 HP, 60 kW, 75 kVA, 3 PHASE, 60 Hertz 0.8 PF, natural gas (NG) fired Spark Ignition (SI) Reciprocating Internal Combustion (IC) Engine Emergency Generator is present. The engine is US EPA, Ann Arbor, certified as below:

US EPA Certificate Issued To: Generac Power Systems, Inc. (U.S. Manufacturer or Importer) of Waukesha, WI 53187 (Phone: 262-544-4811). Certificate Number: FGNXB06.82NN-011. Effective Date: 11/12/2014. Issue Date: 11/12/2014. Expiration Date: 12/31/2015.

Manufacturer: Generac Power Systems, Inc.
Engine Family: FGNXB06.82NN
Certification Type: Stationary (Part 60)
Fuel : Natural Gas (CNG/LNG)
Emission Standards : CO (g/kW-hr) : 519
HC + NOx (g/kW-hr) : 13.4
NMHC + NOx (g/kW-hr) : 13.4
Emergency Use Only : Y

Periodic (biannual or 1/6 months) maintenance is performed by Wolverine Power Systems (800-485-8968). Hours meter reading, hours, when maintenance performed: **181** (04/17/2020) **187** (10/30/2020), **194.9** (04/05/2021)

Conclusion

The machines / processes, adhesive booth are exempt from Rule 336.1201 pursuant to Rules 336.1285 and, 336.1287, respectively. Toyota Boshoku is in compliance with exemption conditions. ERM performed Air Rules applicability determinations. SI RICIE engine is in compliance with NSPS 4J.

NAME J Sillmanahall. DATE July 26, 2021 SUPERVISOR Joyce