West Virginia Department of Environmental Protection
Division of Air Quality

Fact Sheet

For Final Minor Modification Permitting Action Under 45CSR30 and Title V of the Clean Air Act

This Fact Sheet serves to address the changes specific to this Minor Modification, and shall be considered a supplement to the Fact Sheet corresponding with the Title V operating permit issued on January 15, 2019.

Permit Number: **R30-07900072-2019**
Application Received: **May 7, 2019**
Plant Identification Number: **07900072**
Permittee: **Toyota Motor Manufacturing West Virginia**
Facility Name: **Buffalo Plant**
Mailing Address: **1 Sugar Maple Lane, P.O. Box 600, Buffalo, WV 25033**

Permit Action Number: *MM01* Revised: *October 9, 2019*

Physical Location:	Buffalo, Putnam County, West Virginia
UTM Coordinates:	413.518 km Easting • 4,272.153 km Northing • Zone 17
Directions:	The facility lies directly east of WV State Route 62 approximately one (1.0) mile south of Buffalo, WV

Facility Description

Toyota Motor Manufacturing West Virginia (TMMWV) is primarily engaged in the manufacturing of automotive engines and automotive transmissions. As part of this manufacturing process, the plant contains machining, assembly, engine testing, and support operations. To support these operations, the plant is equipped with heating ventilation and air conditioning units, as well as various storage tanks (e.g., gasoline, motor oil, etc.). The SIC code for this facility is 3714.

This modification is to install equipment for one (1) additional line to accomplish laser clad copper coating of certain engine heads. The new block machining line includes a new solvent washer (SW-3) and two (2) new laser cladding machines (LC-5 and LC-6). The proposed modification will allow an increase in the maximum hourly laser cladding rate from 100 heads/hour to 150 heads/hour. The annual rate will remain at 32,400 heads/year. These changes were approved under R13-2062N.

Emissions Summary

The changes made in this modification will result in the following changes to the facilities potential emissions.

Pollutant	Change in Potential Emissions (+ or -), TPY
CO	+0.40
NO_x	+0.48
PM	+0.04
VOCs	+0.03
HAPs	+0.01

Title V Program Applicability Basis

With the proposed changes associated with this modification, this facility maintains the potential to emit 146.38 TPY of CO and 249.46 TPY of VOCs. Due to this facility's potential to emit over 100 tons per year of criteria pollutant, Toyota Motor Manufacturing West Virginia is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

The modification to this facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR6	Open burning prohibited.
	45CSR7	Particulate air pollution from manufacturing.
	45CSR13	NSR Permits.
	45CSR21	To Prevent And Control Air Pollution from The Emission Of Volatile Organic Compounds
	45CSR30	Operating permit requirement.
State Only:	None.	

Each State and Federally-enforceable condition of the Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the Title V permit as such.

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

The Active Permits/Consent Orders affected by this modification are as follows:

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit *(if any)*
R13-2062N	June 27, 2019	

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table," which may be downloaded from DAQ's website.

Determinations and Justifications

The following changes were made as part of this modification:

1.1. Emission Units - Engine Head Copper Coating

- The following emission units were added: Solvent Washer (SW-3) and Laser Clad Machines (LC-5 and LC-6).
- The following control devices were added with the emission units: two baghouses (LC-C5 and LC-C6) and a regenerative thermal oxidizer (SW-C2)
- Changed the designation of control device SW-C to SW-C1 and its Emission Point ID from SW-E to SW-E1, since there are now two RTOs.

4.0 Machining, Welding, and Assembly Operations [Project # 1 to 19] & Surface Coating Operations

- The new block machining line is subject to the same requirements as the two existing lines. The following conditions were updated to reflect changes made to the R13 permit with the issuance of R13-2062N: 4.1.7, 4.1.8, 4.1.21, 4.1.22, 4.1.23, 4.1.24, and 4.4.8.
- The new RTO (SW-C2) is for controlling the VOC/HAP emissions from the new solvent washer. This unit, like the existing RTO, meets the definition of an "incinerator" under 45CSR6 and is, therefore, subject to the requirements therein. The substantive requirements applicable to the unit are discussed below.
    - 45CSR6 Emission Standards for Incinerators - Section 4.1 is condition 4.1.24. Due to the small size of the new RTO (0.51 mmBtu/hr) and the small amount of waste gases consumed (~4 pounds-solvent/hour), the amount of particulate matter generated in the unit is negligible.
    - 45CSR6 Opacity Limits for Incinerators - Sections 4.3 and 4.4. Pursuant to Section 4.3, and subject to the exemptions under 4.4, the new RTO has a 20% limit on opacity during operation. As stated above, particulate matter emissions from the unit are negligible and no substantive opacity is expected.
- 45CSR7 has two substantive requirements potentially applicable to the expanded laser cladding operations proposed for the Buffalo Plant:
    - The opacity requirements under Section 3 included as condition 4.1.4. Section 3.1 sets an opacity limit of 20% on the "particulate matter [emitted] into the open air from any process source operation which is greater than twenty (20) percent opacity." The use of particulate matter filters on the new laser cladding machines should mitigate any substantive opacity problems from these sources.
    - The mass emission standards under Section 4. Section 4.1 of 45CSR7 requires that each manufacturing process source operation or duplicate source operation meet a particulate matter limit based on the weight of material processed through the source operation. The new laser cladding machines are each defined as a type 'a' source type operation under

§45-7-2.38. As the controlled emission rate from these machines are small (<0.01 lbs/hour) and the weight of the engine heads are very heavy, it is reasonable to conclude that the new laser cladding machines will easily meet the Section 4 emission limit.

- 45CSR21: Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds.
  - The solvent washers (new and existing) in the laser cladding operation have been determined to not be subject to Section 30 of 45CSR21 - "Solvent Metal Cleaning" - but will be subject to Section 40 of 45CSR21 - "Other Facilities that Emit Volatile Organic Compound (VOC)." Section 40 applies to "to any facility that has aggregate maximum theoretical emissions of 90.7 megagrams (mg) (100 tons) or more of volatile organic compounds (VOCs) per calendar year in the absence of control devices." Under Section §45-21-40.3(a)(1), the permittee is required to achieve at least a facility-wide 90 percent reduction in VOC emissions below the total (aggregate) maximum theoretical VOC emissions on a twelve (12) month rolling basis of all sources subject to this section. This reduction is achieved through the use of mist collectors, reductions in VOC contents of various used materials, and the use of the existing and new RTO on the solvent washers.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

None.

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date:	Not Applicable for minor modifications.
Ending Date:	N/A

Point of Contact

All written comments should be addressed to the following individual and office:

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Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Response to Comments (Statement of Basis)

Not applicable.