west virginia department of environmental protection

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Evaluation Memo

Application Number:	R13-2062L
Facility ID Number:	079-00072
Name of Applicant:	Toyota Motor Manufacturing West Virginia (TMMWV)
Name of Facility:	Buffalo Plant
Application Type:	Class II Administrative Update
Submission Date:	December 22, 2015
Applicant Ad Date:	December 24, 2015
Applicant Ad Newspaper:	*Hurricane Breeze*
Complete Date:	January 6, 2016
Due Date:	March 6, 2016
Engineer:	Joseph Kessler

The TMMWV facility has been the subject of many permitting actions. The following table provides a brief description of each of the previous actions:

Table 1: Previous Permitting Actions - Buffalo Plant

Permit #	Date Issued	Description
R13-2062	3/21/1997	Construction Permit for original facility.
R13-2062A	7/10/1998	Modification to increase production and authorization to use materials not originally permitted.
R13-2273	3/29/1999	Construction Permit for a collocated Automatic Transmission (A/T) Production Facility.
R13-2062B	2/25/2000	Administrative Update (A/U) to incorporate "as-built" changes to the permit.
R13-2062C	4/3/2002	Modification permit to consolidate R13-2273 and R13-2062B into one permit and reconfigure compliance determination methodology from a materials tracking basis to an actual emissions reporting basis.

Permit #	Date Issued	Description
R13-2062D	1/13/2004	Class I A/U to reorganize PM/PM-HAP emission limits on a Project Activity basis.
R13-2062E	1/21/2005	Class II A/U to add Heat Treatment activities to A/T production.
R13-2062F	10/28/2005	Class I A/U to add additional heat treatment combustion sources and remove unconstructed HVAC units from Appendix D.
R13-2062G	5/23/2006	Class II A/U to add HVAC units.
R13-2062H	9/14/2006	Class I A/U to increase production limits under Appendix A.
R13-2062I	12/21/2006	Class I A/U to add/modify HVAC units and eliminate unused Project Activities.
R13-2062J	7/8/2008	Class I A/U to streamline permit: consolidate Project Activities into three large groups and remove individual HVAC Unit permit limits.
R13-2062K	10/12/2008	Modification permit to address the following: (1) after-the-fact increase of emissions from the Engine Test Cells and Test Firing Benches and (2) retrofit of Catalytic Converters on the Engine Test Cells for control of CO/VOC/NO_x emissions. Additional substantive changes include the addition of updated emission limits and compliance language for all combustion sources mistakenly omitted from R13-2062J, the installation of two new storage tanks, and the removal of Project Activity 13 from the permit. The Permit Application was submitted pursuant to Item 9 of Consent Order CO-R13-E-2010-14.
G60-C005C	7/14/15	Revision of General Permit to authorize use of none (9) diesel-fired emergency generators.

Description of Proposed Changes

On December 22, 2015,TMMWV submitted a Class II Administrative Update (A/U) to permit number R13-2062K to:

- Increase the Project #1 (4-Cylinder Machining and Shipping) and Project #2 (4-Cylinder Assembly) annual production limits from 550,000 to 900,000 units/yr as given under Appendix A;

- Clarify various process types in Appendix A to better represent the production/assembly activities on site. The increase will allow TMMWV to accommodate an automatic transmission model change and a new 4-cylinder engine assembly line; and

- Construct one additional engine firing bench (ES3). The role of the firing benches is one of QA/QC. On average, 1 in 125 engines is pulled from the production line and tested to determine the quality of the production. These engine tests typically last for only a few minutes per test. The engines tested in the firing benches are subsequently used in production vehicles. The new firing bench is direct vented to the atmosphere through a roof stack (FB-3) and is uncontrolled. No increase is requested in the aggregate fuel usage limit for all firing benches.

Estimate of Emissions

TMMWV is not requesting any increase in emissions as a result of the proposed changes discussed above. Permit R13-2062L requires TMMWV to use an actual emissions reporting process to show compliance with VOC/particulate matter emission limits set by TMMWV based on previous expectations of worst-case emissions at the Buffalo plant. These limits are at a level that will be able to accommodate the production changes described above. Additionally, as noted above, the new firing bench will not require an increase in the existing aggregate fuel usage limit so there will be no increase in emissions associated with the new unit. Although there are no changes to the facility-wide emissions as a result of the changes discussed herein, the facility-wide potential-to-emit (PTE) is included as Attachment A.

Regulatory Applicability

The changes requested herein do not affect the regulatory applicability of any source.

Changes to Permit R13-2062I

Substantive changes to the permit are limited to revising the annual production levels in Projects #1 and #2, clarifying the process type names in Projects #18 and #19, and adding the new firing bench (ES3) to Table A.2(d)(1).

Recommendation

The information provided in the permit application indicates that compliance with all applicable state and federal air quality regulations will continue to be achieved. Therefore, I recommend the issuance of the Class II Administrative Update R13-2062L to Toyota Motor Manufacturing West Virginia for the changes outlined above.

Joe Kessler, PE
Engineer

1/21/16
Date

Attachment A
R13-2062L
TMMWV
Buffalo Plant

Facility-Wide PTE Summary (2062K)

R13-2062K PTE

Description	CO		NOx		VOCs		SO_2		$PM_{10}/PM_{2.5}$		PM		PM-HAPs		VOC-HAPs		CO_2e
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	TPY
Mach, Assm, & Weld	0.00	0.00	0.00	0.00	202.48	227.66	0.00	0.00	6.74	29.73	6.74	29.73	0.40	0.46	n/a	0.43	0.00
Exhaust Vents	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.02	35.13	8.02	35.13	0.00	0.00	0.00	0.00	0.00
Combustion Sources	14.91	43.03	19.09	52.76	0.98	2.85	3.14	3.41	1.55	4.10	1.55	4.10	0.00	0.00	0.00	0.00	63,047.53
Storage Tanks	0.00	0.00	0.00	0.00	1.03	4.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Engine Testing	156.31	99.10	29.95	34.75	27.06	12.86	1.10	0.20	2.98	1.52	2.98	1.52	0.00	0.00	0.00	0.00	1,455.00
TOTALS	**171.22**	**142.13**	**49.04**	**87.51**	**231.55**	**247.88**	**4.34**	**3.71**	**19.29**	**70.48**	**19.29**	**70.48**	**0.40**	**0.46**	**0.00**	**0.43**	**64,502.53**

Post-Modification Facility-Wide PTE Summary (2062L)

R13-2062L PTE

Description	CO		NOx		VOCs		SO_2		$PM_{10}/PM_{2.5}$		PM		PM-HAPs		VOC-HAPs		CO_2e
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	TPY
Mach, Assm, & Weld	0.00	0.00	0.00	0.00	202.48	227.66	0.00	0.00	6.74	29.73	6.74	29.73	0.40	0.46	n/a	0.43	0.00
Exhaust Vents	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8.02	35.13	8.02	35.13	0.00	0.00	0.00	0.00	0.00
Combustion Sources	14.91	43.03	19.09	52.76	0.98	2.85	3.14	3.41	1.55	4.10	1.55	4.10	0.00	0.00	0.00	0.00	63,047.53
Storage Tanks	0.00	0.00	0.00	0.00	1.03	4.51	0.10	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Engine Testing	156.31	99.10	29.95	34.75	27.06	12.86	1.10	0.20	2.98	1.52	2.98	1.52	0.00	0.00	0.00	0.00	1,455.00
TOTALS	**171.22**	**142.13**	**49.04**	**87.51**	**231.55**	**247.88**	**4.34**	**3.71**	**19.29**	**70.48**	**19.29**	**70.48**	**0.40**	**0.46**	**0.00**	**0.43**	**64,502.53**

Facility-Wide PTE Change From 2062K to 2062L

Change between 2062K and 2062L

Description	CO		NOx		VOCs		SO_2		$PM_{10}/PM_{2.5}$		PM		PM-HAPs		VOC-HAPs		CO_2e
	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	lbs/hr	TPY	TPY
Mach, Assm, & Weld	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	n/a	0.00	0.00
Exhaust Vents	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Combustion Sources	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Storage Tanks	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Engine Testing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**