

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Blue Ridge Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Yokohama Tire Manufacturing Virginia, LLC
1500 Indiana Street, Salem, Virginia
Permit No. BRRO-20123

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9VAC5 Chapter 80, Yokohama Tire Manufacturing Virginia LLC has applied for a Title V Operating Permit for its Salem, Virginia facility. The Department has reviewed the application and has prepared a DRAFT Title V Operating Permit.

Permit Contact: _____

Lillian J. Alexander
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Date:

Air Permit Manager: _____

David J. Brown

Date:

Regional Director: _____

Robert J. Weld

Date:

FACILITY INFORMATION

Permittee

Yokohama Tire Manufacturing Virginia, LLC
1500 Indiana Street, Salem, Virginia, 24153

Facility

Yokohama Tire Manufacturing Virginia LLC
1500 Indiana Street, Salem, Virginia, 24153

County-Plant Identification Number: 51-775-00026

SOURCE DESCRIPTION

NAICS Code: 326211 – Tire Manufacturing (except retreading) – establishments primarily engaged in manufacturing tires and inner tubes from natural and synthetic rubber.

Yokohama Tire Manufacturing Virginia, LLC (YTMV) manufactures rubber tires for passenger cars and light duty trucks. The tire manufacturing process begins with mixing of raw materials (including synthetic and natural rubber, carbon black, sulfur, accelerators and process oils). Mixed rubber is extruded (formed into predetermined shapes such as tread or sidewall) or calendered (applied to a substrate to form specific gauge rubber sheets). The individual components are then assembled into green (uncured) tires before being cured in steam-heated curing presses. The finished tires are abraded for uniformity and white sidewalls are ground.

The facility is a Title V major source of VOCs and a synthetic minor source of HAPs. This source is located in an attainment area for all pollutants, and is a PSD minor source. The facility is currently permitted under a Minor NSR Permit issued on March 8, 2013 which sets a limit on silane use and its associated VOC emissions, and a combined minor NSR and State Operating Permit last amended on November 7, 2014 which incorporates the manufacturing activities at the facility, minus silane emissions.

Boiler No. 4 (FB-B4) is subject to the requirements of NSPS Subpart Dc. The tread-end cementing (2-TEND) and Division 500 operations (5-GTS, 5-PTP and 5-CP) are subject to the requirements of NSPS Subpart BBB.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility are reflected in the Title V permit on Page 2 (significant units)

and Condition 69 (insignificant units).

EMISSIONS INVENTORY

A copy of the 2012 annual emission update is attached. Emissions are summarized in the following tables.

2012 Actual Emissions

2012 Criteria Pollutant Emission in Tons/Year				
VOC	CO	SO ₂	PM ₁₀	NO _x
71.347	12.264	0.088	38.092	7.665

2012 Facility Hazardous Air Pollutant Emissions

Pollutant	2012 Hazardous Air Pollutant Emission in Tons/Yr
Carbon disulfide	1.392
ethylbenzene	0.657
MIBK	0.824
hexane	0.879
Toluene	0.972
Xylenes	1.980

EMISSION UNIT APPLICABLE REQUIREMENTS

The following section discusses requirements for the emissions units at the facility that are subject to Title V permitting. These requirements come from the underlying state-issued permits (Minor NSR Permit issued on March 8, 2013 and a combined minor NSR and State Operating Permit last amended on November 7, 2014) and applicable federal requirements. The conditions are not repeated verbatim from the permit. The regulatory authority for each condition is listed in parentheses () below each condition in the Title V permit document.

Citations

The following citations denote the underlying authorities to implement the specific conditions in the NSR permits:

9VAC5-50-260, 9VAC5-80-1180, 9VAC5-80-1200, 9VAC5-50-50, 9VAC5-50-20, 9VAC5-50-90, 9VAC5-50-30, 9VAC5-50-410, 9VAC5-60-30, 9VAC5-60-100

REQUIREMENTS

Fuel Burning Limitations, Monitoring Recordkeeping and Reporting

FB-B3 is a Cleaver Brooks DL-60 E boiler rated at 55.1 MMBtu/hr. FB-B4 is an Arco Industries Model 90 101 boiler rated at 79.4 MMBtu/hr. FB-B4 is subject to NSPS Dc, FB-B3 is not as it predates the rule. The approved fuels for each boiler are natural gas and #2 fuel oil. Fuel oil is used as a backup fuel during natural gas curtailment or testing. The permittee has indicated that the boiler is not subject to the Area Source Boiler NESHAP (MACT 6J) since it is primarily burning natural gas with fuel oil as a backup during curtailment and/or testing.

The boilers are included in the SOP/nsr combined permit document dated November 7, 2014. Limitations, monitoring, recordkeeping and reporting requirements consistent with NSPS Subpart Dc are included in the Title 5 permit for FB-B4. The monitoring requirement for visual observation is required only while burning fuel oil since no visible emissions are expected while burning natural gas. Boilers are required to be properly operated and maintained and operators are required to be trained. Records of maintenance, operation and training are required. Proper boiler O&M, operator training, use of natural gas as the primary fuel and additional visible emission observations when burning fuel oil are considered sufficient to assure compliance with the requirements.

“Rubber Solvent, Silane and Printer Limitations and Recordkeeping

SOLV refers to the use of “Rubber Solvent” throughout the plant. “Rubber Solvent” has been identified by the permittee as the sole solvent used for miscellaneous purposes throughout the plant and in the lab. “Rubber Solvent” is 100% light hydrotreated distillate containing no HAPs. SOLV is included in the SOP/nsr combined permit document dated November 7, 2014.

SILANE refers to the use of silane, a rubber compounding agent. While silane itself does not contain VOCs, its addition to the rubber during the mixing process results in ethanol emissions at various stages of the rubber manufacturing process (dependent on temperature). A nsr permit was issued on March 8, 2013 to address silane use and its associated air emissions.

PR-1 refers to 6 printers (inkjet and offset) currently in use at the facility. PR-2 refers to 7 Mathews inkjet printers planned for installation to eventually replace the 6 printers currently in use. These printers are incorporated into the SOP/nsr combined permit document dated November 7, 2014.

The underlying permits contain limitations and record keeping requirements regarding “rubber solvent” throughput, silane use and printer ink use (clarified to indicate records for “each” printing line) which are carried forward to the Title 5 permit. No visible emissions are expected from these processes or from silane use. The emission limits from silane use are based on the potential to emit of 51.29% of its weight as ethanol assuming complete conversion and the enforceable annual throughput limit. Based on the use of material balance the recordkeeping and calculations are considered sufficient to assure compliance with the requirements.

Division 100 and Division 600 Limitations, Monitoring and Recordkeeping

Division 100 is comprised of carbon black storage silos (1-CBS) and 6 internal mixers (1-IM). Division 100 basically comprises the first steps in the rubber making process. This equipment is included in the SOP/nsr combined permit document dated November 7, 2014.

Division 600 consists of tire uniformity optimizers (6-TUO) and sidewall buffers (6-SWB). Both are grinding operations with baghouse controls for particulates. These processes are included in the SOP/nsr combined permit document dated November 7, 2014.

The underlying permit contains limitations, monitoring and record keeping requirements

regarding the equipment and processes of Divisions 100 and 600 which are carried forward to the Title 5 permit. These processes are controlled by baghouses and/or bin vent filters for which daily visual observations and weekly inspections are required. VOC and particulate emissions are derived from AP-42/RMA emission factors and records of throughput are required. Proper baghouse O&M and recordkeeping of material throughput and emissions calculations are considered sufficient to assure compliance with the requirements.

Division 200 and Division 500 Limitations, Monitoring, Recordkeeping and Reporting

Division 200 includes calendaring (2-CAL), extruding (2-EX), warm-up mills (2-WMILL) and tread-end cementing (2-TEND). Tread-end cementing is subject to NSPS BBB. These processes are included in the SOP/nsr combined permit document dated November 7, 2014.

Division 500 consists of Green Tire Spraying (5-GTS), application of Precure Tire Paint (5-PTP) and the tire curing presses (5-CP). Division 500 processes are subject to NSPS BBB. These processes are included in the SOP/nsr combined permit document dated November 7, 2014.

Limitations, monitoring and recordkeeping requirements consistent with NSPS Subpart BBB are included in the Title 5 permit for tread-end cementing (2-TEND), Green Tire Spraying (5-GTS) and Precure Tire Paint (5-PTP). Additional requirements not included in the underlying permit include:

- Tread-end cementing limitation of 10 grams VOC/tire cemented (40 CFR 60.542(a)(3))
- Tread-end cementing recordkeeping of formulation information to verify the 10 grams VOC/tire cemented emission limit (40 CFR 60.543(b)(4) or (d))
- Green Tire Spraying limitation of 0.0026 lb VOC/tire sprayed (40 CFR 60.542(a)(5)(i))
- Green Tire Spraying recordkeeping of formulation information (including VOC content) to verify the 0.0026 lb VOC/tire sprayed emission limit (does not include PTP)¹ (40 CFR 60.543(b)(4) or (d))
- Verification of VOC content and emission limitations for the GTS and PTP operations as specified in 40 CFR 60.542(a)(7)
- Reporting as required in 40 CFR 60.543(b)(4) and 40 CFR 60.546(j) if there is a formulation change or exceedance.

The underlying permit contains limitations, monitoring and record keeping requirements regarding calendaring (2-CAL), extruding (2-EX), warm-up mills (2-WMILL) and the tire curing presses (5-CP) which are carried forward to the Title 5 permit. Daily visual observations are required of the curing press exhaust area to assure compliance with the requirements. No visible emissions are expected from calendaring, extruding or the warm-up mills.

VOC and particulate emissions from the extruding, warm-up mills, calendaring and curing press operations are derived from AP-42/RMA emission factors and records of throughput are required. Recordkeeping of material throughput and emission calculations are considered sufficient to assure compliance with the requirements.

¹ Compliance may be demonstrated per 40 CFR 60.543(b)(4)

Emissions from tread end cementing, green tire spraying and mold release agent operations are based on material balance and limitations on the amount of VOC that these materials can contain. Based on the use of material balance the recordkeeping and calculations are considered sufficient to assure compliance with the requirements.

STREAMLINED REQUIREMENTS

Condition 27 (Requirements by Reference) of the November 7, 2014 SOP is not included in the Title 5 permit because the applicable parts of 40 CFR 60, Subparts Dc and BBB have been included in the Title 5 permit.

Conditions 50 and 52.m of the November 7, 2014 SOP have been streamlined out of the Title 5 permit because daily visual observations of the baghouse emissions and recordkeeping are required in the Title 5 permit. This is more stringent than the weekly visual observation required in the underlying permit.

All processes with visible emission limits are subject to 9VAC5-50-80. More stringent limits are included in the Title 5 permit as appropriate to reflect the limits included in the underlying November 7, 2014 SOP.

Facility Wide Requirements

This section contains a facility wide limitation on VOCs and HAPs and the proper O&M requirement for the permitted equipment.

Records of maintenance and training are required, as well as recordkeeping of the emissions calculations to demonstrate compliance with the facility-wide limit. Considering the monitoring in the permit, this recordkeeping is considered sufficient to assure compliance with the requirements of this section.

The general condition regarding construction to allow for testing is included from the underlying permit.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9VAC5-80-110 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.2-604 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement No. 2-2003”.

Failure/Malfunction Reporting

Section 9VAC5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9VAC5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9VAC5-20-180 is from the general regulations. All affected facilities are subject to section 9VAC5-20-180 including Title V facilities. Section 9VAC5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9VAC5-20-180 and 9VAC5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9VAC5-80-250 and 9VAC5-20-180. The malfunction requirements are listed in General Conditions 100 through 103.

Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40CFR61 Subpart M, National Emission Standards for Asbestos.

STATE ONLY APPLICABLE REQUIREMENTS

Not Applicable

FUTURE APPLICABLE REQUIREMENTS

Not Applicable.

INAPPLICABLE REQUIREMENTS

40 CFR 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants For Industrial, Commercial, and Institutional Boilers Area Sources – The boilers are natural gas fired and burn No. 2 fuel oil only as a backup fuel during curtailment or testing. Natural gas fired boilers are not subject to the area source boiler NESHAP.

40 CFR 63, Subpart DDDDD - National Emission Standards for Hazardous Air Pollutants For Industrial, Commercial, and Institutional Boilers Major Sources – This facility is a synthetic minor source of HAP and is therefore not a major HAP source subject to the major source boiler NESHAP.

40 CFR 63, Subpart XXXX – National Emission Standards for Rubber Tire Manufacturing – This MACT is applicable for major HAP sources. This facility is a synthetic minor source of HAP and is therefore not a major HAP source subject to this major source MACT. There are no area source MACT requirements for rubber tire manufacturing.

Compliance Assurance Monitoring (CAM) – The pre-control particulate emissions for each of the fabric filters and bin vents on site are less than the major source threshold (100 tpy) therefore CAM does not apply. There is no other add-on air pollution control equipment at the facility.

Green House Gases (GHG) - There are no applicable GHG permitting requirements.

The startup, shut down, and malfunction opacity exclusion listed in 9VAC5-40-20 A.4 cannot be included in any Title V permit. This portion of the regulation is not part of the federally approved state implementation plan. The opacity standard applies to existing sources at all times including startup, shutdown, and malfunction. Opacity exceedances during malfunction can be affirmatively defended provided all requirements of the affirmative defense section of this permit are met. Opacity exceedances during startup and shut down will be reviewed with enforcement discretion using the requirements of 9VAC5-40-20 E, which state that "At all times, including periods of startup, shutdown, soot blowing and malfunction, owners shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with air pollution control practices for minimizing emissions."

COMPLIANCE PLAN

Not Applicable

STATE ONLY APPLICABLE REQUIREMENTS

Not applicable

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9VAC5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation¹	Pollutant(s) Emitted (9VAC5-80-720B)	Rated Capacity (9VAC5-80-720C)
3-BEC/T	BEC/BET	9VAC5-80-720B	VOC	
3-Wind	Bead Winders	9VAC5-80-720B	VOC	
3-Tip	Bead Tippers	9VAC5-80-720B	VOC	

¹The citation criteria for insignificant activities are as follows:
 9VAC5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application
 9VAC5-80-720 B - Insignificant due to emission levels
 9VAC5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The draft/proposed permit was placed on public notice in *The Roanoke Times* from January 27, 2015 to February 26, 2015. No comments were received from the public. The EPA 45-day review period ended March 13, 2015 with no comments received.