NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review with Attachment 1

Issue Date: xx/x/2023

Region: Raleigh Office
County: Wilson
NC Facility ID: 9800043
Inspector's Name: Jeff Harris
Date of Last Inspection: 05/25/2022
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Bridgestone Americas Tire Operations, LLC

Facility Address:
Bridgestone Americas Tire Operations, LLC
3001 Firestone Parkway NE
Wilson, NC 27893

SIC: 3011 / Tires And Inner Tubes
NAICS: 326211 / Tire Manufacturing (except Retreading)

Facility Classification: Before: Title V **After:** Title V
Fee Classification: Before: Title V **After:** Title V

Permit Applicability (this application only)

SIP: 15A NCAC 02D .0524, .1806, .1100, .0530; 15A NCAC 02Q .0711, .0317, .0515, .0521, .0503, .0516, and .1111, 15A NCAC 02Q .0504, .0307, .0521, and .0522 and .0317
NSPS: Subpart BBB
NESHAP: MACT Subpart JJJJJJ and Subpart ZZZZ
PSD: NA
PSD Avoidance: NA
NC Toxics: Air Toxics (NCGS) 143-215.107(a)(5) (House Bill 952)
112(r): NA
Other: CAM

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Jerray Battle Environmental Engineer (252) 246-7485 PO Box 1139 Wilson, NC 27893+1139	Lino Beltrami Plant Manager (252) 246-7766 PO Box 1139 Wilson, NC 27893+1139	Jerray Battle Environmental Engineer (252) 246-7485 PO Box 1139 Wilson, NC 27893+1139

Application Data

Application Numbers: 9800043.21A, .18B, .19A, .20B, & .23A, .23B
Date Received: 11/22/2021, 10/17/2018, 01/14/2019, 08/06/2020, 12/29/2022, & 01/19/2023
Application Type: Renewal, 502(b)(10)s, Part II signif.
Application Schedule: TV-Renewal

Existing Permit Data

Existing Permit Number: 01660/T73
Existing Permit Issue Date: 05/08/2020
Existing Permit Expiration Date: 05/31/2022

Total Actual emissions in TONS/YEAR:

CY	SO_2	NO_X	VOC	CO	PM_{10}	Total HAP	Largest HAP
2020	0.2400	104.30	280.11	31.90	21.94	10.34	3.72 [MIBK (methyl isobutyl ketone)]
2019	0.2700	119.40	324.20	36.68	29.70	14.61	5.31 [MIBK (methyl isobutyl ketone)]
2018	0.7100	117.99	312.47	35.68	31.08	14.44	5.05 [MIBK (methyl isobutyl ketone)]
2017	11.73	116.78	340.37	34.39	33.86	14.26	4.89 [MIBK (methyl isobutyl ketone)]
2016	1.63	117.09	363.63	34.80	32.57	14.56	4.99 [MIBK (methyl isobutyl ketone)]

Review Engineer: Gautam Patnaik **Review Engineer's Signature:** **Date:** xx/xx/2023	**Comments / Recommendations:** **Issue:** 01660T74 **Permit Issue Date:** xx/xx/2023 **Permit Expiration Date:** xx/xx/2028

I. Facility Description.

Bridgestone Americas Tire Operations, LLC (BATO) is a tire manufacturing plant producing tires for passenger vehicles. The process begins with conversion of raw materials such as carbon black, raw rubber, synthetic rubber and additives into tire components.

II. Purpose of Applications

Application No. 9800043.21A (Received 11/22/2021)

(Note - Application 9800043.21A was received in the Raleigh Regional Office on November 22, 2021. Refer to the stamped date on the front of the application which is 11/22/2021.)

This application is for the renewal of the current permit, and there are several applications incorporated into this application as follows:

Application No. 9800043.19A - TV-Sign-501(b)(2) Part II (received 01/14/2019)

This application is a 02Q .0504 (Part II) application covering several sources listed in Section "2.6 - Filing a Title V application and Notification Requirement," of the current permit.

This application also incorporates four TV-502(b)(10) applications:

- 9800043.18B (Received on 10/17/2018):

  Sources added:
  Sidewall cementing operation (SW-4);
  and Rubber Mill (RM-12)

  Sources removed by this application:
  Emergency diesel compressor (49 hp) (IES-4.9);
  Emergency diesel compressor (49 hp) (IS-4.5); and
  Side wall cementing operation (SW-3)

- 9800043.20B (received on 08/06/2020)

  Sources added:
  One Extrution Line (TU-5) and Sidewall Cementing Operation (SW-5)

- 9800043.23A (Received 12/29/2022)

(Note - Note - This application was received in late December 2022, but was not put into IBEAM until 2023. That's why the application number is .23A.)

Replacing an existing extrusion line (Tuber 3) and an old sidewall cementing operation (SW-3) with a new extrusion line (Tuber 12).

- 9800043.23B (Received 01/19/2023)

Change the gear drive and the rubber mill that from rubber sheets form the rubber that exits the Banbury 621 mixer.

All the applications listed above will be consolidated into the Renewal permit No. 9800043.19A and will be processed in accordance with 15A NCAC 02Q .0513. The current Air Quality Permit No. 01660T73 was issued on May 8, 2020 and expires on May 31, 2022. The renewal application was received on December 3, 2021, or at least nine months prior to the expiration this date. Therefore, the existing permit shall not expire until the renewal permit has been issued or denied. All terms and conditions of the existing permit shall remain in effect until the renewal permit has been issued or denied.

III. Application Chronology

Table 1 below outlines the modifications to the Title V permit starting from the last permit renewal (Air Quality Permit No. 01660T70 issued on June 19, 2017):

Table 1:

Application #	Air Quality Permit #	Sources Added
9800043.17A	01660T71	Tandem mixer (TM-1) and a slab cooling and dip tank area (RM-5). To support the Tandem mixing line added a material storage and handling system. Consisting of six identical silos (SI-1 to SI-6).
9800043.18A	01660T72	three peak shaving generators: diesel-fired peak shaving generators (2,145 kilowatts, each, EGDD-3, EGDD-4 and EGDD-5)
9800043.19B	01660T73	Renewal of their existing Actuals Plant-wide Applicability Limitation (PAL) for Volatile Organic Compounds

III. Regulatory Review

These regulations apply to the applications and sources listed above:

- 9800043.19A - TV-Sign-501(b)(2) Part II

02Q .0504 requires the applicant to file an application under Section .0300 of this Subchapter of which 02Q .0307 requires "public participation procedures" and allows for "public and EPA comments." The "public participation" and review by "EPA and affected states" as per the requirements of 02Q .0521 and 02Q .0522, as mentioned above also satisfy the

requirements of 02Q .0504 and 02Q .0307. Thus, this application will be subject to the public and EPA review as per procedures outlined above and the above sources will be shielded.

The current permit source table footnote referring to the above sources will be removed since this application will be subject to "public participation" and review by EPA, thus, effectively shielding these sources.

TV-502(b)(10) applications:

- 9800043.18B (Received on 10/17/2018):

  Sources added:
  Sidewall cementing operation (SW-4);
  and Rubber Mill (RM-12)

  Sources removed by this application:
  Emergency diesel compressor (49 hp) (IES-4.9);
  Emergency diesel compressor (49 hp) (IS-4.5); and
  Side wall cementing operation (SW-3)

  Applicable Regulations

  1) Sidewall cementing operation (SW-4): This source is subject to the following regulations: 15A NCAC 02D .0524, .1806, .1100, .0530; 15A NCAC 02Q .0711, .0317 and VOC Emission covered under the PAL (under 505 tpy VOC).

  2) Rubber Mill (RM-12): This source is subject to the following regulations: 15A NCAC 02D .1806, .1100, .0530; 15A NCAC 02Q .0711, .0317 and VOC Emission covered under the PAL (under 505 tpy VOC).

- 9800043.20B (received on 08/06/2020)

  Sources added:
  One Extrution Line (TU-5) and Sidewall Cementing Operation (SW-5)

  Applicable Regulations

  1) One Extrution Line (TU-5): This source is subject to the following regulations: 15A NCAC 02D.0515, .0521, .1806, and VOC Emission covered under the PAL (under 505 tpy VOC).

  2) Sidewall Cementing Operation (SW-5): This source is subject to the following regulations: 15 A NCAC 20 .0515, .0521, .1806, NSPS Subpart BBB, and VOC Emission covered under the PAL (under 505 tpy VOC).

The emissions from the Sidewall Cementing Operations (SW-4 and SW-5) are identical to source SW-3 that is currently in the permit. While SW-3 has been replaced by SW-4 and SW-5, all of the permit conditions in 2.1 L., apply to these units and will demonstrate compliance with the referenced regulations. VOC emissions are subject to the emission limits in Section 2.2 of the permit and to the VOC PAL conditions in Section 2.4. (Specific applicable PAL conditions are addressed below).

NSPS Subpart BBB – "Standards of Performance for the Rubber Tire Manufacturing Industry", 40 CFR 60.542(a)(2)(ii), maintain total (uncontrolled) VOC use less than or equal to the levels specified below, depending upon the duration of the compliance period as specified in 40 CFR 60.542(a)(2)(ii)(A) through 40 CFR 60.542(a)(2)(ii)C and specified in Section 2.1 L.1. a., of the modified permit.

There are no changes in the monitoring, record keeping, and reporting requirements for these sources (SW-4 and SW-5) to comply with NSPS Subpart BBB.

The emissions of PM are **only** from **SW-5**, they are very small and should always comply with 15A NCAC 02D .0515, and .0521.

The current permit has no citation for 15A NCAC 02D .0515, and .0521, thus the modified permit has these citations for source (SW-5) only, in Section 2.1 L.2 and Section 2.1 L.2 of the permit.

The Sidewall Cementing Operations (SW-4 and SW-5) will comply with air toxics 15A NCAC 02D .1100 - "control of air toxics" by complying with the annual Benzene emissions limit per 2.2 A. 4 of the modified permit.

<u>Emission Equations for SW-4 and SW-5</u>

SW-4 and SW-5 are sidewall cementing operations. The emissions for these units are based on the amount of cement that is used in the process and the VOC content of the cement. The emissions are calculated using mass balance procedures in Condition 2.1 A.4.s. The cement contains 90.5% VOC material, and all VOC is assumed emitted.

VOC emissions (Cement Usage) lb/yr = Throughput of Cement (lb/yr) x 0.905 lb VOC/lb cement used

The Extrution Line (TU-5) is similar in function to TUC-3 and TU-4 (Note TUC-3 corrected to TU-3, in the modified permit). The permit conditions in 2.1 M., apply to TU-5 and will demonstrate compliance with the referenced regulations. VOC emissions are subject to the emission limits in Section 2.2 of the permit and to the VOC PAL conditions in Section 2.4. (Specific applicable PAL conditions are addressed below).

Also, as per the applicant "TU-5 also has a de minimis amount of particulate emission, but this unit is not vented outdoors. These projects also do not debottleneck the plant so there are no increases or decreases from ancillary equipment like boilers." Thus, this source should always comply with 15A NCAC 02D .0515, and .0521.

Emission Equations for TU-5

Extruders can process 3 types of Rubber material. These are listed as Compound #4, Compound #5 and Compound #6 in the permit under condition 2.4. A. m. These emission factors come from AP-42 Section 4.12, Manufacture of Rubber Products.

VOC emissions (Compound #4) lb/yr = Throughput of Rubber (lb/yr) x 5.67×10^{-6} lb VOC/lb Rubber
VOC emissions (Compound #5) lb/yr = Throughput of Rubber (lb/yr) x 5.15×10^{-5} lb VOC/lb Rubber
VOC emissions (Compound #6) lb/yr = Throughput of Rubber (lb/yr) x 1.23×10^{-5} lb VOC/lb Rubber

The emissions from the Rubber Mill (RM-12) are the same as the Rubber Mills that are found in Section 2.1 G., of the current permit. These current 20 rubber mills (ID Nos. RMT1 through RMT3, RMT6 through RMT11, and RMC1 through RMC11) (Note - These current 20 sources were not in the "PERMITTED EMISSION SOURCES" table in the current permit and added in the modified permit). This Rubber Mill (RM-12) is added to the above list in Section 2.1 G. of the modified permit.

The facility will track throughputs and emissions monthly for these units. The emissions of these sources are subject to the emission limits in Section 2.2 4., (toxics limit) of the permit and to the VOC PAL conditions in Section 2.4. (Specific applicable PAL conditions are addressed below).

Emission Equations for RM-12

RM-12 is a milling process and can process 5 types of Rubber material. These are listed as Compound #1, Compound #2, Compound #3, Compound #4, and Compound #6 in the permit under condition 2.4. A. k. These emission factors come from AP-42 Section 4.12, Manufacture of Rubber Products.

VOC emissions (Compound #1) lb/yr = Throughput of Rubber (lb/yr) x 8.99×10^{-5} lb VOC/lb Rubber
VOC emissions (Compound #2) lb/yr = Throughput of Rubber (lb/yr) x 1.10×10^{-4} lb VOC/lb Rubber
VOC emissions (Compound #3) lb/yr = Throughput of Rubber (lb/yr) x 1.13×10^{-4} lb VOC/lb Rubber
VOC emissions (Compound #4) lb/yr = Throughput of Rubber (lb/yr) x 8.37×10^{-5} lb VOC/lb Rubber
VOC emissions (Compound #6) lb/yr = Throughput of Rubber (lb/yr) x 5.64×10^{-5} lb VOC/lb Rubber

Actuals PAL Permit Requirements

Section 2.4 of the permit has the "Actuals PAL Permit Requirements" which limits the emissions of VOC from the facility to no more than 505 tpy.

VOC emissions limits

Sources RM-12, SW-4, TU-5, and SW-5 emit VOCs and are covered under the existing VOC PAL conditions found in section 2.4 of the current permit. The first condition of the PAL conditions allows for the addition of new emission units that fall under the PAL provisions

without triggering the need for a permit modification as long as the facility remains under the PAL total of 505 tpy of VOC.

TU-5 is also a source of particulate emissions. While the facility tracks a small amount of particulate from this source for emission inventory purposes, particulate emissions from this source are vented indoors. The PTE for all the extrusion machines at the facility is 0.0045 tons/yr.

Monitoring, Record-keeping, and Reporting

These emission units will be subject to the existing PAL conditions in the permit. However, a sample of potential emission calculations is given below:

RM-12:
2.4.A. f – Rubber throughput records,
2.4.A. k – VOC Emission calculation and emission factors for Milling,
2.4.A. u – Facility-wide calculation of VOC emission,
2.4.A. v – Retention of records used to calculate and determine VOC emissions, and
2.4.A. x – Semi-annual reporting of facility VOC emissions.
RM-12 is a milling process and can process 5 types of Rubber material. These are listed as Compound #1, Compound #2, Compound #3, Compound #4, and Compound #6 in the permit under condition 2.5.A.k. Compound #3 is the most emitting compound. The emission factors come from AP-42 Section 4.12, Manufacture of Rubber Products. The rated capacity of this mill is 3,000 lb rubber/hr.

VOC emissions (Compound #3) lb/yr = 3,000 (lb/hr) x 1.13 x 10-4 lb VOC/lb Rubber x 8,760 hr/yr = 2970 lb VOC/yr or 1.48 tons VOC/yr

TU-5:
2.4.A. f – Rubber throughput records,
2.4.A.m – VOC Emission calculation and emission factors for extrusion,
2.4.A.u – Facility-wide calculation of VOC emission,
2.4.A.v – Retention of records used to calculate and determine VOC emissions, and
2.4.A.x – Semi-annual reporting of facility VOC emissions.
SW-4 and SW-5:
2.4.A.f – Cement throughput records,
2.4.A.s – VOC Emission calculation using mass balance for cements, coatings and solvents,
2.4.A.u – Facility-wide calculation of VOC emission,
2.4.A.v – Retention of records used to calculate and determine VOC emissions, and
2.4.A.x – Semi-annual reporting of facility VOC emissions.

Extruders can process 3 types of Rubber material. These are listed as Compound #4, Compound #5 and Compound #6 in the permit under condition 2.5.A.m. Compound #5 is the most emitting compound. The emission factor came from AP-42 Section 4.12, Manufacture of Rubber Products. The rated capacity of this extruder is 10,000 lb rubber/hr.

VOC emissions (Compound #5) lb/yr = 10,000 lb/hr x 5.15 x 10^{-5} lb VOC/lb Rubber x 8,760 hours/yr = 4,511 lb VOC/yr or 2.26 tons VOC/yr

SW-4 and SW-5:

SW-4 and SW-5 are sidewall cementing operations. The emissions for these units are based on the amount of cement that is used in the process and the VOC content of the cement. The emissions are calculated using mass balance procedures in Condition 2.5.A.s. The cement contains 90.5% VOC material, and all VOC is assumed emitted. The maximum throughput of cement is 8,453 lb/month or 6 lb/hr of cement application per sidewall operation.

VOC emissions (Cement Usage) lb/yr for SW-4 and SW-5 (each)= 6 lb/hr x 0.905 lb VOC/lb cement used x 8,760 hr/yr = 23.78 tons VOC/yr for SW-4 and SW-5

- 9800043.23A (received on 12/29/2022)

(Note - This application was received in late December 2022, but was not put into IBEAM until 2023. That's why the application number is .23A.)

- 9800043.23B (received on 1/19/2023)

This project involves changing the gear drive and the rubber mill that from rubber sheets form the rubber that exits the Banbury 621 mixer. This project does not involve changes to the mixer itself the facility will also be updating the exhaust system for the sheet fanning and slab dip area for the 621 mixer (RM-2). The exhaust system change will pull additional air from the process area from hoods this will provide additional worker comfort in the area. The new exhaust system will have a new stack that will replace the old stack FF.

Emissions from stack FF will now vent out of Stack B2. The rated capacity of the mixer will not change with this project and there is no expected emissions increase. The new stack will only emit Volatile Organic Compounds (VOC). The emission from RM-2 is limited to the facility wide emission covered under the PAL (under 505 tpy VOC).

<u>Project Aggregation</u>

Performing several small projects in an attempt to avoid PSD permitting is not allowed under PSD regulations.

All of these new emission units are covered under the PAL provisions. According to 40 CFR 51.166(w)(1)(ii), modification of a source is not subject to PSD review provided the facility complies with the PAL conditions and remains under the established PAL limit. With these projects the facility is not seeking to change any of the existing PAL conditions and remains under the current PAL limitation.

Wilson County has triggered increment tracking under PSD for PM10, SO_2, and NOx.

None of these projects will increase or decrease the hourly emissions of PM10, SO_2 or NOx. All of these new units are VOC only emitting units. TU-5 also has a de minimis amount of particulate emission, but this unit is not vented outdoors. These projects also do not debottleneck the plant so there are no increases or decreases from ancillary equipment like boilers.

- **9800043.21A (Renewal Application)**

  Section 2.1 N., of the current permit lists two diesel-fired emergency fire pump engines (ID Nos. ES-4.5 and ES-4.6). Unit ES-4.5 is being removed by this renewal. The remaining engine (ES-4.6) will remain and the associate regulations will be updated.

  The most significant changes were to the NSPS language in the modified permit. The notable changes are listed below:

  - The most significant change was removing emergency demand response language,
  - Changed the fire pump citations,
  - The facility shall comply with the emission standards in Section 2.1 N.4. d., by purchasing an engine certified to the emission standards in Section 2.1 N.4. d., the engine shall be installed and configured according to the manufacturer's specifications as per 40 CFR 60.4211(c).

- 15A NCAC 2D .1111: MACT Subpart JJJJJJ, " National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers", for (ID Nos. UA-1 and UA-2)

  The two natural gas/No. 2 fuel oil/No. 6 fuel oil-fired boilers (ID Nos. UA-1 and UA-2) in Section 2.1 H. 4., of the permit are subject to the above MACT. These boilers do not have oxygen trim systems. Also, the facility requested the removal of No. 6 fuel burning capability in the boilers and therefore the regulations will be updated accordingly. These boilers will be described as follows:

  The two natural gas/No. 2 fuel oil-fired boilers (ID Nos. UA-1 and UA-2).

  The applicant also requested to remove two No. 6 fuel oil storage tanks (100,000 gallon capacity, ES-11 and ES-12)

  <u>Section Compliance Dates</u>

  2.1 H. 4. d., of the permit requires the applicant achieve compliance with the initial tune up requirement no later than March 21, 2014. As per the applicant “Initial Tune-up for the Boilers to comply with boiler MACT (this should have been in 2014): Completed January 2014, before the required 3/24/2014 date”.

  2.1 H. 4. e., the “Notification of Compliance Status” has been submitted as per the applicant

"Notification of Compliance Status for Boiler MACT (this should have been in 2014): Submitted July 2014, before the 7/19/2014 compliance date."

2.1 H. 4. h., the one-time energy assessment as per the applicant "One time energy assessment for the boiler (most likely completed on same date as initial tune-up): Completed 10/12/2012"

Section 2.1 I., - Two diesel engine driven peak shaving generators (ID Nos. EGDD-1 and EGDD-2), five diesel engine driven air compressors (ID Nos. ACDD-1 through ACDD-5), and three diesel-fired peak shaving generators, 2,145 kilowatts each (ID Nos. EGDD-3 through EGDD-5) are currently subject to BACT in Section 2.1 I. 3. a., of the permit.

The applicant requested that the five diesel engine driven air compressors (ID Nos. ACDD-1 through ACDD-5) be removed from the facility as part of the Title V Renewal Application. As per the applicant, these units (ID Nos. ACDD-1 through ACDD-5) are non-operational and have not been run in more than five years.

Thus, Section 2.1 I. 3. a., will have five diesel engine driven air compressors (ID Nos. ACDD-1 through ACDD-5) removed from the list of sources subject to BACT.

- 2.1 I. 4. a., engines (ID Nos. EGDD-1, EGDD-2, and EGDD-3 through EGDD-5) updated the MACT for "existing stationary RICE located at an area source of HAP emissions," regulatory requirements.

Compliance Date

- 2.1 I. 4. c., DEQ granted a one-year extension for Initial performance testing, these testing requirements have been done as per applicant "Final compliance with RICE MACT (site was given one year extension from 5/2014 compliance date): Letter to DEQ dated 12/10/2015 resolving last issues with ZZZZ compliance.

  The Initial Performance Test for the RICE MACT was performed on September 15-17, 2014. Two engines failed the initial compliance test and required catalyst replacement. A one-year extension for MACT ZZZZ compliance was granted. Retesting was needed for 2 units and completed on 3/11/2015 after catalyst replacement."

Testing Requirements

- 2.1 I. 4. i. ii., The applicant should have conducted an initial performance test by October 30, 2013 and according to 40 CFR 63 Subpart ZZZZ, Tables 4 & 5 and the provisions in 40 CFR 63.7(a)(2). This initial testing was done on March 11, 2015 (see comments on the Compliance date above).

- Section 2.1 J., - Temporary back-up natural gas/No. 2 fuel oil-fired boiler with a maximum permitted heat input rating of no greater than 100 million Btu per hour, total (ID No. UA-T1).

- Section 2.1 J 4., updated NSPS Subpart Dc avoidance conditions for the temporary back-up natural gas/No. 2 fuel oil-fired boiler (ID No. UA-T1) when the heat input rating is less than 10 million Btu per hour.

- Other applicable regulations

  - 15A NCAC 2D .0515: "Particulates from Miscellaneous Industrial Processes"

    Sources (ID Nos. RCS-1, CW-1, RCS-2, BU-1, BT-1, BT-2, and SI-1 through SI-6, BC-1 through BC-4, BC-4FM, BD-1 through BD-4, BD-4FM, BT-4, RM-2, RM-3, RM-6, PB-1 through PB-7, TM-1, RM-5, GT-10, TU-3, TU-4, and TU-5) are subject to this regulation.

    Particulate emissions from these sources (ID Nos. RCS-1, CW-1, RCS-2, BU-1, BT-1, and BT-2 and SI-1 through SI-6, BC-1 through BC-4, BC-4FM, BD-1, BD-2, BD-4, BD-4FM, BT-4, and TM-1) shall be controlled by twelve fabric filters (ID Nos. DC-5, DC-6, DC-3, DC-11, DC-8, DC-2 and FR-1 through FR-6, DC-9, N-14, and DC-2, two cartridge filters (N-1 and N-2) and a fabric filters (DC-12), respectively.

    Updated reporting requirements in section 2.1 A.1.f., and 2.1 B.1.i, of the permit. There are no changes to the emission limits, monitoring, recordkeeping requirement for the above sources.

  - 15A NCAC 2D .0521: "Control of Visible Emission"

    Visible emissions from these sources (ID Nos. RCS-1, CW-1, RCS-2, BU-1, BT-1, and BT-2, SI-1 through SI-6, BC-1 through BC-4, BC-4FM, BD-1 through BD-4, BD-4FM, BT-4, RM-2, RM-3, RM-6, and PB-1 through PB-7, TM-1 and RM-5, GT-10, UA-1, UA-2, EGDD-3 through EGDD-5, UA-T1, TU-3, TU-4, TU-5, ES-4.6 shall not be more than 20 percent opacity when averaged over a six-minute period and Visible emissions from these sources (EGDD-1 and EGDD-2) shall not be more than 40 percent opacity when averaged over a six-minute period.

    Updated reporting requirements in Sections 2.1 A.2.e., 2.1 B.2.e., 2.1 F.2.e., 2.1 H.3.d., 2.1 H.3.c., 2.1 G.2.d., and 2.1 G.2.e., of the permit. There are no changes to the emission limits, monitoring, or recordkeeping requirements for the sources listed above in this section.

  - 15A NCAC 2D .1806: "Control and Prohibition of Odorous Emissions"

    This rule applies to the entire facility to help prevent odorous emissions and there are no changes to this regulation.

  - 15ANCAC 2D .0503: "Particulates from Fuel Burning Indirect Heat Exchangers"

    Section 2.1 H. 1. a. of the permit limits the emissions of particulate matter from the combustion of natural gas, No. 2 fuel oil, and No. 6 fuel oil that are discharged from

sources ID Nos. UA-1 and UA-2 into the atmosphere. The emissions shall not exceed 0.262 pounds per million Btu heat input. Section 2.1 J. 1. a. of the permit limits the emissions of particulate matter from the temporary, back-up natural gas/No. 2 fuel oil-fired boiler with a maximum permitted heat input rating of no greater than 100 million Btu per hour total (ID No. UA-T1). The emissions shall not exceed 0.242 pounds per million Btu heat input.

There is no monitoring, record keeping, and reporting requirements required for particulate emissions from the firing of natural gas, No. 2, and No. 6 fuel oil in these sources (ID Nos. UA-1, UA-2, and UA-T1). There are no changes to these requirements.

- 15A NCAC 2D .0516: "Sulfur Dioxide Emissions from Combustion Sources"

  Emissions of sulfur dioxide from sources (ID Nos. UA-1, UA-2, EGDD-1, EGDD-2, EGDD-1, EGDD-2, and EGDD-3 through EGDD-5) shall not exceed 2.3 pounds per million Btu heat input. There is no monitoring, record keeping, or reporting required for sulfur dioxide emissions from the firing of natural gas and No. 2 fuel oil in these sources.

  The supplier certification requirement for the maximum sulfur content of any No. 6 fuel oil received and fired in these sources (ID Nos. UA-1 and UA-2) has been removed.

- 15A NCAC 02Q. 0317: "Avoidance Conditions"
  for 15A NCAC 02D .1111: "Maximum Achievable Control Technology"

  Section 2.2 A.5. of the permit limits the emissions of hazardous air pollutants (HAPs) to less than:
  i. 10 tons per year of each hazardous air pollutant, and
  ii. 25 tons per year of all hazardous air pollutants combined.

  The facility will remain an area source of HAP emissions and avoids the applicability of MACT Subpart XXXX "National Emission Standards for Hazardous Air Pollutants for Rubber Tire Manufacturing."

- 15A NCAC 02D .0524: NSPS Subpart BBB for the "Rubber Tire Manufacturing Industry."

  The bead cementing operation (ID No. BCO-1), No. 4 extrusion line undertread cementing (ID No. UT-2), No. 5 extrusion line undertread cementing (ID No. UT-3) with associated optional thermal oxidizer (ID No. FI-T), green tire doping operations (ID No. GT-10), Green tire dopers Nos. 11 through 22 (ID Nos. GT-11 through GT-22) and green tire dopers No. 23 and No. 24 (ID Nos. GT-23 and GT-24), and Side wall cementing operation (ID Nos. SW-4 and SW-5) are subject to the above regulations.

  There are no changes to the emission limits, monitoring, record keeping, or reporting requirements required for the above sources to comply with this regulation.

- 15A NCAC 02Q. 0317: "Avoidance Conditions" for

15A NCAC 02D .0524: "New Source Performance Standards"

The applicant shall operate the emission source (ID No. UA-T1) as a temporary boiler as defined in 40 CFR 60.41c.

The latest DAQ regulatory language for temporary boiler to avoid NSPS is incorporated for this temporary boiler.

As per 40 CFR 60.40c, 60.41c, some of the requirements are:
The steam generating unit is not a temporary boiler if any one of the following conditions exists:

i. the equipment is attached to a foundation,
ii. the steam generating unit or a replacement remains at a location for more than 180 consecutive days. Any temporary boiler that replaces a temporary boiler at a location and performs the same or similar function will be included in calculating the consecutive time period,
iii. the equipment is located at a seasonal facility and operates during the full annual operating period of the seasonal facility, remains at the facility for at least 2 years, and operates at that facility for at least 3 months each year, and
iv. the equipment is moved from one location to another in an attempt to circumvent the residence time requirements of this definition.

The record keeping, notifications, and reporting requirements are per Section 2.1 J.4 of the modified permit.

- 15A NCAC 02Q .0317: "Avoidance Conditions"
for 15A NCAC 02D .0530: "Prevention of Significant Deterioration;"

The temporary, back-up natural gas/No. 2 fuel oil-fired boiler with a maximum permitted heat input rating of no greater than 100 million Btu per hour (ID No. UA-T1) avoids being subject to PSD by taking an emission limit for the emissions of particulate (TSP), PM10, nitrogen oxides, sulfur dioxide, and carbon monoxide.

There are no changes to the emission limits, testing, monitoring, record keeping and reporting requirements for the above regulation.

(See Section 2.1 J.5 of the current permit).

- 15A NCAC 02Q. 0317: "Avoidance Conditions" for
15A NCAC 02D .1111: "Maximum Available Control Technology"

The latest DAQ regulatory language for temporary boiler to avoid MACT Subpart DDDDD is incorporated for this temporary boiler.

The requirements to remain a temporary boiler is as specified in Section 2.1 J.6.a of the modified permit and the record keeping requirements are as specified in Section 2.1 J.6.b of the modified permit

State-enforceable only

- 15A NCAC 02D .1100: "Control of Air Toxics"

To ensure compliance with the above regulations Section 2.2 A. 4., restricts the emission of toxics air pollutants (TAPs) from various sources for several toxics. Due to the above modifications, and the removal of No. 6 fuel oil, the emission limits for the sources are lowered. The facility did an air dispersion modeling which was verified by Nancy Jones, Meteorologist, Air Quality Analysis Branch (AQAB) and her memo on June 23, 2022, stated: "I have reviewed the dispersion modeling analysis, received May 24, 2022, for Bridgestone Americas, Inc. Wilson Plant, Wayne County, North Carolina. The modeling was conducted to address the source and emission updates since the last Title V renewal application. This action triggers modeling requirements to evaluate those toxics whose rates are expected to exceed the levels outlined in 15A NCAC 2Q .0700. The modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled.

Nine air toxics, arsenic, benzene, beryllium, 1,3-butadiene, cadmium, carbon disulfide, DEHP, methylene chloride and nickel, were evaluated facility wide in the modeling."

The details of her analysis are presented in the table below:

Maximum Impacts – Bridgestone Americas
Wilson Plant, Wilson County, NC

TAP	**Averaging Period**	**Max. Conc. ($\mu g/m^3$)**	**AAL ($\mu g/m^3$)**	**% of AAL**
Arsenic	Annual	0.115	0.0021	96
Benzene	Annual	0.00095	0.12	45
1,3-Butadiene	Annual	0.196	0.44	45
Beryllium	Annual	0.0015	0.0041	37
Cadmium	Annual	0.00255	0.0055	46
Carbon Disulfide	24-hour	84.3	186	45
DEHP	1-hour	13.6	500	45
Methylene Chloride	1-hour	456	1,700	27
Methylene Chloride	Annual	10.8	24	45
Nickel	24-hour	2.73	6	45

All the TAPs modeled were below 50% of the Acceptable Ambient Levels (AALs), except arsenic (96%). Thus, compliance with AAL was demonstrated. The emission of arsenic is from boilers (UA-1 and UA-2) and the annual emission of arsenic is restricted to 17.56 lb/yr to prevent it from going over 100% of AAL.

The monitoring, record keeping, and reporting are modified in Section 2.2 A.4.a to record the fuel oil burned in each boiler (ID Nos. UA-1 and UA-2).

The table in Section 2.2 A.4 is updated to reflect the modeled rates.

IV. NSPS, NESHAPS/MACT, PSD avoidance, Attainment Status, 12(r), Air Toxics (NCGS) 143-215.107(a)(5) (House Bill 952), CAM and Compliance Status:

NSPS

Sources at this facility are subject to NSPS Subpart BBB "The Rubber Tire Manufacturing Industry," NSPS Subpart IIII "Stationary Compression Ignition Engines," and avoidance for NSPS by the temporary boiler (UA-T1).

These issues are addressed in the regulatory review above.

NESHAP/MACT

The facility has taken a federally enforceable limit as per the current permit to become a minor source for HAP emissions and thus exempted from the "Rubber Tire Manufacturing" MACT.

The boilers (ID Nos. UA-1 and UA-2) are Subpart JJJJJJ, " National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers."

The engines (ID Nos. EGDD-1 and EGDD-2) are subject to MACT Subpart ZZZZ, "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

The temporary boiler (UA-T1) has a MACT avoidance requirement.

These issues are addressed in the regulatory review above.

Attainment Status

This facility is located in Wilson County, which is currently designated as an attainment area. The minor source baseline dates for this County have been triggered for PM10, SO_2 and NOx emissions. The emissions of very small amount of PM is only from the side wall cementing operations (SW-5).

PSD avoidance

To avoid the applicability of 15A NCAC 02D .0530, "Prevention of Significant Deterioration," the temporary, back-up natural gas/No. 2 fuel oil-fired boiler, with a maximum permitted heat input

rating of no greater than 100 million Btu per hour (ID No. UA-T1), is subject to the annual emissions limits for the pollutants as mentioned in the table below:

Table 2:

Pollutant	Emission Limit (tons per year)
Particulate (TSP)	25
PM_{10}	15
Sulfur dioxide	40
Carbon monoxide	100
Nitrogen oxides	40

This renewal does not change the emissions limit for the above source.

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in this rule.

CAM

The Compliance Assurance Monitoring (CAM) Rule (40 CFR Part 64) applies to pollutant-specific emissions units (PSEU) that are pre-control major sources and use a control device to comply with an emissions limit. None of the sources at this facility are currently subject to a CAM plan. This renewal does not change the pre-control emission from any sources to be qualified for a CAM plan.

CAM – 40 CFR 64 requires that a compliance assurance monitoring plan be developed for all equipment located at a major facility, that have pre-controlled emissions above the major source threshold of Title V and use a control device to meet an applicable standard. CAM is not applicable for this facility.

Compliance with Toxics - (NCGS) 143-215.107(a)(5) (House Bill 952)

The current permit will subject individual sources to certain emission limits for compliance with toxic air pollutant (Section 2.2 A. 4., of the current permit) emissions. In this renewal, the toxic air pollutant emissions were adjusted to account for sources that were added and for the removal of No. 6 fuel oil as a fuel (see "15A NCAC 2D .1100: "Control of Air Toxics" under III. Regulatory Review, above.)
Since all affected sources modeled were less than 100% of AAL, the toxics emissions will not present an unacceptable risk to human health in accordance with North Carolina General Statute (NCGS) 143-215.107(a)(5) (House Bill 952).

Compliance Status

Mr. Jeff Harris, of the Raleigh Regional Office did an inspection on 05/25/2022. In his report he concluded that "Based on observations made during this inspection, Bridgestone appeared to be

operating in compliance with all permit requirements. It is recommended that the facility be re-inspected in one year."

His report also stated "The permit is currently in-house at RCO for renewal, which will reflect removal of some equipment which is no longer used, most notably thermal oxidizer FI-T. I was informed that longer term plans include replacement/modernization of some of the curing lines, and addition of several small stelastics mill/extruders."

The natural gas-fired thermal oxidizer (5.0 million Btu per hour maximum heat input capacity) controls emission from the No. 5 extrusion line undertread cementing process (UT-3) which is subject to NSPS BBB. The foot note for the source table states that "The thermal oxidizer may be used to control VOC emissions as an alternative compliance option of NSPS Subpart BBB."

The applicant did not request the removal for the above source or the thermal oxidizer in their application. They will have an opportunity to review the draft permit before public notice and can make this request.

V. Consistency Determination, Comments, and Recommendations

- A zoning consistency determination is not required for this renewal.
- A professional engineer's seal is not required for this renewal.
- On 9/19/2022 the regional office, the applicant, and the Stationary Source Compliance Branch (SSCB) were provided a copy of the draft permit and review for this application for their comments. All comments will be taken into consideration.

  On 9/23/2022 SSCB responded that they did not have any comments.

  On 9/22/2022 the applicant responded:

  Please find the draft permit and review with comments attached.
  Summary of permit comments:
  - BATO is requesting that the optional thermal oxidizer (FI-T) be removed in Section 2.1.E. This was a suggestion from last facility inspection. With this change there is no longer a need for the Alternative Compliance Scenario in Section 2.1.E.
  - Removed a few remaining references to No. 6 Fuel Oil
  - Added a few chemicals to the compound below TPER table. These are compounds that are still emitted by the source but are below the TPER for applicability for modeling.
  - After the Modeling Limits Table in Section 2.2A.4 there is a requirement to track fuel oil use daily and monthly. The daily tracking of fuel oil use was for No. 6 oil in the last permit. BATO would request only monthly tracking of No. 2 fuel oil for the boilers.
  - The emergency diesel fire-water pump (ES-4.5) was removed from the permit, but this unit is still at the facility. BATO requested the removal of IS-4.5 which was a 49 hp emergency air compressor which is no longer at the facility. This unit was on the insignificant activity list.
  - Filled in the date on the initial performance test for the peak shaving generators as 9/16/2014 and 9/17/2014.

  All of the above issues were addressed.

On 2/27/2023 the applicant also commented as below:

"We have compiled just a few comments on this draft permit. Below is a summary of the comments:

1. Equipment Table. Emergency fire water pump engine, ES-4.5, is still operational at the site. The renewal application requested removal of IS-4.5 which was a 49 hp compressor engine that was on the insignificant activity list.
2. Spelling correction in the header for Section 2.1B
3. Wording correction in 2.1.L.1.a. The NSPS applies the emission standard to each sidewall cementing operation.
4. Corrections in 2.1.N to put engine ES-4.5 back in the permit."

All the above issues were addressed.

On 1/5/2023 Mr. Jeff Harris of the regional office responded "Copying Taylor Hartsfield since she is back as RRO supervisor now. I had no comments on this when I reviewed it in September."

On 1/19/2023 DAQ received a 502(b)(10) application (9800043.23B) for a project that involves changing the gear drive and the rubber mill that from rubber sheets form the rubber that exits the Banbury 621 mixer. This application was addressed above and the modifications suggested by Joe Voelker are addressed below.

<u>TV Permit Revisions with respect to Boiler MACT Revisions</u>

With regards to "TV Permit Revisions with respect to Boiler MACT Revisions" email from Joe Voelker on 10/10/2022

Several following sources at this facility are subject to GACT:
- (UA-1 and UA-2) two natural gas/No. 2 fuel oil fuel oil-fired boilers (subject to GACT JJJJJJ)
- (EGDD-1and EGDD-2) two diesel-fired peak shaving generators (GACT ZZZZ)
- (ES-4.6) One diesel-fired emergency fire pump engine (GACT ZZZZ)
- (EGDD-3, EGDD-4, and EGDD-5) three diesel-fired peak shaving generators (GACT ZZZZ)

The facility also has a facility wide MACT avoidance condition (Section 2.2 A.5 of the permit)

The permitted temporary, back-up natural gas/No. 2 fuel oil-fired boiler (UA-T1) has a MACT avoidance condition 2.1 J.6 of the permit.

This permit for the renewal is very likely going to be issued after December 5, 2022.

As per Joe's instructions these regulations were updated:

MACT Subpart JJJJJJ " National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers" for sources (ID Nos. UA-1 and UA-2) were updated (Section 2.1 H.4).

MACT Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines," for two diesel engine driven peak shaving generators (ID Nos. EGDD-1 and EGDD-2) and three diesel-fired peak shaving generators, 2,145 kilowatts each (ID Nos. EGDD-3 through EGDD-5) (Section 2.1 I.4), including completion of compliance date (Section 2.1 I.4.c)

Avoidance of NSPS Subpart Dc "Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units," for temporary boiler (ID No. UA-T1) (Section 2.1 J.4.)

Avoidance of MACT Subpart JJJJJJ "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers," for temporary boiler (ID No. UA-T1) (Section 2.1 J.6.)

NSPS Subpart IIII "Standards of Performance for Stationary Compression Ignition Internal Combustion Engines," for emergency fire pump engine (ID No. ES-4.6) (Section 2.1 N.4).

Section 2.2 A.5 for MACT avoidance was modified to include:
Subpart JJJJJJ "National Emission Standards for Hazardous Air Pollutants for Area Sources: Industrial, Commercial, and Institutional Boilers"), and
Subpart ZZZZ "National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines."

Monitoring/Recordkeeping

To comply with MACT avoidance the facility has to comply with the record keeping in Section 2.1 H.i, monitoring and record keeping in Section 2.1 I.j and k, and record keeping in Section 2.1 J.c respectively.

VI. Miscellaneous

- The responsible official in the draft permit matches the information on IBEAM.
- The facility address matches the information on IBEAM.
- There are no new insignificant activities being added with this renewal.
- One instance of the word "assure" has been changed to "ensure" in the modified permit.
- Removed word "Subpart" from the permit sources table (i.e., NSPS Subpart IIII, etc.,).
- All old testing requirements have been deleted.
- Updated language from the shell for regulations (example 15A NCAC 02D .0515, .0521, .0516, etc., where required).
- Updated General Conditions.

- Format/check reference to Section in the permit: (Sample examples as follows: "is required under Section 2.1 A.8.f below," "opacity standard in Section 2.1 A.8.c above," "limit in Section

2.1 A.8.c above," "according to Section 2.1 A.8.g below." "performance testing in Section 2.1 A.8.f.i above,").

VIII. Permit Modification/Changes

Table of changes made in Air Quality Permit No. 01660T73

Page No.	Section	Description of Changes
Page 1	Cover letter	Added revised cover page, updated letterhead, changed Permit revision number and date
Page 3	Cover letter	Added page containing "Notice Regarding The Right to Contest A Division Of Air Quality Permit".
Page 4	Cover letter	Revised the Summary Of "Changes To The Permits" table.
Cover Page	Permit	Changed Permit number Changed "Replaces Permit" number Revised effective date of Permit Revised application numbers Revised complete applications date
2	Table of Contents	Changed Insignificant Activities list to Section 3 of the permit and the General Conditions as Section 4 of the permit
3	List of Acronyms	Added list of acronyms
5	Permitted source table	Removed (SW-3) side wall cementing operation
5	Permitted source table	Added (SW-4 and SW-5) side wall cementing operations
5	Permitted source table	Corrected TUC-3 to TU-3 "one extrusion line"
5	Permitted source table	Added (TU-5) one extrusion line
5	Permitted source table	Removed No. 6 fuel oil as fuel from Two boilers UA-1 and UA-2
6	Permitted source table	Removed diesel engine driven air compressors (ACDD-1 through ACDD-5)
6	Permitted source table	Removed diesel-fired emergency fire pump engine (ES-4.5)
6	Permitted source table	Removed two No. 6 fuel oil storage tanks (ES-11 and ES-12)
9	2.1 A.2.c	Remove establish "normal" for the source (ID Nos. SI-1 through SI-6)
12	2.1 B.2.c	Remove establish "normal" for the source (ID Nos. TM-1 and RM-5)
22	2.1 F.2.e	Establish semi-annual reporting requirement for green tire doping operations (ID No. GT-10)
25	2.1 G	Add rubber mill RM-12
25	2.1 H	Remove No. 6 fuel oil from boilers (ID Nos. UA-1 and UA-2)
26	2.1 H.2.d and e	Remove No. 6 fuel oil monitoring from boilers (ID Nos. UA-1 and UA-2)
27	2.1 H.3.c	Remove opacity monitoring due to firing of No. 6 fuel oil monitoring from boilers (ID Nos. UA-1 and UA-2)
30	2.1 I.	Remove five diesel engine driven air compressors (ID Nos. ACDD-1 through ACDD-5)

Page No.	Section	Description of Changes
32	2.1 I.4	Update existing stationary RICE located at an area source of HAP emissions for diesel engine driven peak shaving generators (ID Nos. EGDD-1 and EGDD-2, and EGDD-3 through EGDD-5)
34	2.1 I.4.i. ii	Place holder language "This initial testing was done on xx/xx/2022" – Note - The site was given a one-year extension on this date.
36	2.1 I.5	Removed MACT language for diesel engine driven air compressor (ID Nos. ACDD-3)
41	2.1 J.4	Incorporated NSPS avoidance for temporary, back-up natural gas/No. 2 fuel oil-fired boiler (ID No. UA-T1)
43	2.1 J.6	Incorporated MACT avoidance for temporary, back-up natural gas/No. 2 fuel oil-fired boiler (ID No. UA-T1)
47	2.1 L.1	Incorporate NSPS standards for side wall cementing operation (ID Nos. SW-4 and SW-5)
48	2.1 L.2	Incorporate PM standard only for side wall cementing operation (ID No. SW-5)
49	2.1 L.3	Incorporate opacity standard only for side wall cementing operation (ID No. SW-5)
50	2.1 M.1	Incorporate PM standard for new extrusion line (ID No. TU-5)
51	2.1 M.2	Incorporate Opacity standard for new extrusion line (ID No. TU-5)
58 through 61	2.2 A.4	Updated new toxics emission limits for the entire facility
64	2.4 A.4	Updated Actuals PAL VOC emissions limits for TU-3, TU-4, TU-5, SW-4, and SW-5
71	SECTION 3	Insignificant activities per 15A NCAC 02Q .0503(8)
72 through 80	SECTION 4	GENERAL CONDITIONS – Updated

Attachment 1 – Review from Step 1 of this two-step process:

NORTH CAROLINA DIVISION OF AIR QUALITY

Application Review

Issue Date: 7/6/2018

Region: Raleigh Regional Office
County: Wilson
NC Facility ID: 9800043
Inspector's Name: Stanley Williams
Date of Last Inspection: 08/11/2017
Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Bridgestone Americas Tire Operations, LLC

Facility Address:
Bridgestone Americas Tire Operations, LLC
3001 Firestone Parkway NE
Wilson, NC 27893

SIC: 3011 / Tires and Inner Tubes
NAICS: 326211 / Tire Manufacturing (except Retreading)

Facility Classification: **Before:** Title V **After:** Title V
Fee Classification: **Before:** Title V **After:** Title V

Permit Applicability (this application only)

SIP: 2D .0516, 2D .0521, 2D .1111
NSPS: N/A
NESHAP: GACT Subpart ZZZZ
PSD: N/A
PSD Avoidance: 02Q. 0317 for 02D. 0530
NC Toxics: 2D .1100
112(r): N/A
Other: N/A

Note: the engines that are being added to this permit were constructed prior to the NSPS Subpart IIII applicability date.

Contact Data

Facility Contact	Authorized Contact	Technical Contact
Tausha Fanslau Environmental Coordinator (252) 246-7485 PO Box 1139 Wilson, NC 27894+1139 FanslauTausha@bfusa.com	Mitch Burke BATO Wilson Plant Manager (252) 246-7766 PO Box 1139 Wilson, NC 27894+1139	Tausha Fanslau Environmental Coordinator (252) 246-7485 PO Box 1139 Wilson, NC 27894+1139 FanslauTausha@bfusa.com

Application Data

Application Number: 9800043.18A
Date Received: 04/17/2018
Application Type: Modification
Application Schedule: TV-Sign-501(c)(2) Part I

Existing Permit Data
Existing Permit Number: 01660/T71
Existing Permit Issue Date: 12/06/2017
Existing Permit Expiration Date: 05/31/2022

Total Actual emissions in TONS/YEAR:

CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2016	1.63	117.09	363.63	34.80	32.57	14.56	4.99 [MIBK (methyl isobutyl ketone)]
2015	10.24	119.54	345.01	35.30	32.75	14.56	4.93 [MIBK (methyl isobutyl ketone)]
2014	2.24	136.10	373.22	40.53	33.53	14.98	5.10 [MIBK (methyl isobutyl ketone)]
2013	2.10	120.13	339.92	35.87	35.97	15.12	5.05 [MIBK (methyl isobutyl ketone)]
2012	1.73	119.34	341.96	35.62	35.30	14.94	5.04 [MIBK (methyl isobutyl ketone)]

Consultant: Arcadis U.S., Inc Contact: Ryan Watkins Email: Ryan.Watkins@arcadis.com Phone: 757-873-4424	
Review Engineer: Gautam Patnaik/Booker T. Pullen **Review Engineer's Signature:** **Date:** 7/6/2018	**Comments / Recommendations:** **Issue:** 01660T72 **Permit Issue Date:** July 6, 2018 **Permit Expiration Date:** May 31, 2022

I. Facility Description.

Bridgestone Americas Tire Operations, LLC (BATO) is a tire manufacturing plant. The facility mixes raw material like carbon black, silica, bulk natural and synthetic rubber, pigments and extrudes into various tire pieces and sidewalls.

Layers of rubber are extruded onto layers of steel belting and polyester by a process called calendaring. In the tire room, the pieces are put together into what is called a green tire. The green tires are cured by putting it into a mold. Through a combination of compression and pressurizing, an internal bladder is filled with hot water, the tire is cured and the tread is formed. The tires then go to the final finish and final inspection where the tires are buffed, ground, painted, and labeled.

II. Purpose of Application

The applicant is requesting approval for the inclusion of three existing peak shaving generators into the facility's air permit. These generators have been located on the BATO's property since 2003 but were previously permitted under a City of Wilson air permit. BATO still owned the engines.

The Air Permit No. 08398R06 lists the owner as "City of Wilson - Bridgestone/Firestone Genset" and lists the generators as "three diesel-fired peak shaving generators, 2,000 kilowatts each" (ID Nos. EGDD-3, EGDD-4 and EGDD-5). However, the applicant requested that these generators be rated at 2,145 kW, each. In an e-mail dated 6/1/2018, BATO verified this discrepancy stating that they are not sure of the reason for the discrepancy but verified that 2,145 kW is the rating listed on the boilerplate that is physically on the generators.

Air Permit No. 08398R06 lists these generators as having no control devices and per the application "The engines are equipped with timing retard to control NO_x emissions and a catalytic oxidizer for the control of CO and VOC HAP emissions. These generators are not being physically modified as part of this permit action." Per information from the applicant, the catalytic oxidizers are present to comply with GACT Subpart ZZZZ which requires a 70% reduction in CO emissions. EGDD-3, EGDD-4 and EGDD-5 were added at a similar time as the currently permitted diesel-fired peak shavers EGDD-1 and EGDD-2. BATO requested that they be listed similarly in the permit as the listing for EGDD-1 and EGDD-2. They believe that the catalytic oxidizer sits inside the current housing of the generators but are not sure if they were added after installation of the units. It is likely that they were part of the initial installation because they are bolted onto the exhausts of the units.

These generators are listed in the proposed permit as follows:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description

EGDD-3 **(GACT ZZZZ)**	diesel-fired peak shaving generator (2,145 kilowatts)	CD-3	Catalytic Oxidizer
EGDD-4 **(GACT ZZZZ)**	diesel-fired peak shaving generator (2,145 kilowatts)	CD-4	Catalytic Oxidizer
EGDD-5 **(GACT ZZZZ)**	diesel-fired peak shaving generator (2,145 kilowatts)	CD-5	Catalytic Oxidizer

III. Regulatory Review

Regulatory review for the three diesel-fired peak shaving generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5). This facility is a minor source of hazardous air pollutant (HAP) emissions.

1. 15A NCAC 2D .0516: "Sulfur Dioxide Emissions from Combustion Sources"

   These engine/generator units (ID Nos. EGDD-3, EGDD-4 and EGDD-5) are subject to this regulation which limits SO_2 emissions to no greater than 2.3 lbs/MMBtu of heat input. The emissions of SO_2 from these generators burning diesel will be small and each of the engine/generator units is expected to be in compliance.

   Monitoring/Recordkeeping/Reporting

   No monitoring, record keeping, or reporting requirements are required to demonstrate compliance with this regulation while burning diesel in the engine/generator units.

2. 15A NCAC 2D .0521: "Control of Visible Emissions"

   The diesel engine/generator units (ID Nos. EGDD-3, EGDD-4 and EGDD-5) are currently subject to a visible emission standard of no more than 20 percent opacity when averaged over a six-minute period. With the addition of these sources to this facility, the generators will continue to be subject to a 20 percent opacity. The overall opacity from these sources are small and the sources are expected to be in compliance with this regulation while burning diesel fuel.

   Monitoring/Recordkeeping/Reporting
   No monitoring, record keeping, or reporting requirements are required to demonstrate compliance with this regulation while burning diesel fuel.

3. GACT Subpart ZZZZ - National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE) GACT located at a minor source of HAPs.

   The existing three diesel-fired peak shaving generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5) will comply with the existing GACT Subpart ZZZZ regulation stipulated in Section 2.1 I. 4., of the existing permit. Listed below are the regulatory applicability and the current permit section it is located.

   Applicability

As per the requirements of 40 CFR §63.6585 and 40 CFR § 63.6590(a)(1)(iii) for an existing stationary RICE located at an area source of HAP emissions, which commenced construction or reconstruction of the stationary RICE before June 12, 2006 are subject to this GACT. All the definitions and nomenclature contained in 40 CFR § 63.6675 shall apply (Section 2.1 I. 4. a., of the permit).

Applicability Date

According to 40 CFR § 63.6595(a)(1) the applicant shall comply with the applicable emission limitations, operating limitations, and other requirements no later than May 3, 2013. Since the sources are already complying with the requirements of this regulation this date is removed from the permit (Section 2.1 I. 4. c., of the permit).

Notifications

The notification requirements as per 40 CFR § 63.6645(a)(2) are:
The applicant shall:

i. submit all of the notifications in the following regulations that apply by the dates specified:
   (A) 40 CFR 63.7(b) [performance testing] and (c) [quality assurance program];
   (B) 40 CFR 63.8(e) [performance evaluation of CPMS], (f)(4) and (f)(6) [alternative monitoring methods]; and
   (C) 40 CFR 63.9(b) through (e), and (g) and (h) [initial notifications].

ii. 40 CFR §63.6645(g) - if required to conduct a performance test, applicant must submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin as required in 40 CFR §63.7(b)(1).

iii. for each performance test:

   40 CFR §63.6630(c) - must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 CFR §63.6645.

   40 CFR §63.6645(h) - if required to conduct a performance test or other initial compliance demonstration as specified in Tables 4 and 5 GACT Subpart ZZZZ, must submit a Notification of Compliance Status according to 40 CFR §63.9(h)(2)(ii).

   40 CFR § 63.6645(h)(1) - for each initial compliance demonstration required in Table 5 GACT Subpart ZZZZ that does not include a performance test, applicant must submit the Notification of Compliance Status before the close of business on the 30th day following the completion of the initial compliance demonstration.

40 CFR § 63.6645(h)(2) - for each initial compliance demonstration required in Table 5 GACT Subpart ZZZZ that includes a performance test conducted according to the requirements in Table 3 GACT Subpart ZZZZ, must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th day following the completion of the performance test according to 40 CFR §63.10(d)(2).

The applicant shall be deemed in noncompliance with 15A NCAC 2D .1111 if these notification requirements are not met (Section 2.1 I. 4. e., through g., of the permit).

General Compliance Requirements

The applicant shall:

i. 40 CFR §63.6605(a) - must be in compliance with the emission limitations, operating limitations, and other requirements in this subpart that apply to applicant at all times.

ii. 40 CFR §63.6605(b) - operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if these general compliance requirements are not met (Section 2.1 I. 4. h., through i., of the permit).

Fuel Requirements

As per 40 CFR §63.6604(a) and 40 CFR §80.510(b) the applicant shall use diesel fuel in the engine with:

i. a maximum sulfur content of 15 ppm; and
ii. a minimum cetane index of 40 or a maximum aromatic content of 35 volume percent.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above fuel conditions are not met (Section 2.1 I. 4. j., of the permit).

Emissions and Operating Limitations

40 CFR §63.6603(a) – sources at an existing stationary RICE located at an area source of HAP emissions, applicant must comply with the requirements in Table 2d GACT Subpart ZZZZ and the operating limitations in Table 2b GACT Subpart ZZZZ that apply.

a. using an oxidation catalyst:
   i. limit the concentration of CO in the stationary RICE exhaust to 23 ppmvd at 15 percent O_2; or
   ii. Reduce CO emissions by 70 percent or more.
   [Table 2d to GACT Subpart ZZZZ (For Non-Emergency, non-black start CI stationary RICE >500 HP)]

b. Except during periods of start-up, maintain the temperature of the stationary RICE exhaust so that the catalyst inlet temperature is greater than or equal to 450 °F and less than or equal to 1350 °F.
[Table 2b of GACT ZZZZ (for Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst)]

c. Except during periods of start-up, maintain the catalyst so that the pressure drop across the catalyst does not change by more than 2 inches of water from the pressure drop across the catalyst that was measured during the most recent performance test.
[Table 2b of GACT ZZZZ (for Existing CI stationary RICE >500 HP complying with the requirement to limit or reduce the concentration of CO in the stationary RICE exhaust and using an oxidation catalyst)]

d. 40 CFR §.6625(h) – for existing stationary engine, must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times.
[Table 2d of GACT ZZZZ]

e. 40 CFR §63.6625(g) - If the engines are not equipped with a closed crankcase ventilation system, the applicant shall comply with either subparagraph i or ii., below. The applicant must follow the manufacturer's specified maintenance requirements for operating and maintaining the open or closed crankcase ventilation systems and replacing the crankcase filters, or can request DAQ to approve different maintenance requirements that are as protective as manufacturer requirements.
    i. Install a closed crankcase ventilation system that prevents crankcase emissions from being emitted to the atmosphere, or
    ii. Install an open crankcase filtration emission control system that reduces emissions from the crankcase by filtering the exhaust stream to remove oil mist, particulates and metals.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above conditions are not met (Section 2.1 I. 4. k., through o., of the permit).

Testing Requirements

40 CFR §63.6620 – the applicant shall conduct initial and subsequent performance tests to demonstrate compliance with the limitations above.

Initial Performance Test

40 CFR §63.6612(a) – As per this regulation the initial performance test must have been completed by October 30, 2013. Thus, the stipulation in the permit requiring this has been removed (Section 2.1 I. 4. q., of the permit).

40 CFR §63.6615 – the applicant shall conduct subsequent performance tests every 8,760 hours or 3 years, whichever comes first. The current permit has a testing requirement for every 5-year in Section 2.1 I. 4. r., of the permit. This has been corrected to every 3 years. [Table 3 of GACT Subpart ZZZZ (for Existing non-emergency, non-black start CI stationary RICE >500 HP that are not limited use stationary RICE, engines that comply with limit or reduce CO emissions and not using a CEMS)]

40 CFR §63.6620(a)&(b) - must conduct each performance test in Table 4 of this GACT Subpart ZZZZ. For non-operational stationary RICE that is subject to performance testing, applicant need not start up the engine solely to conduct the performance test. Applicant can conduct the performance test when the engine is started up again.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above testing conditions are not met (Section 2.1 I. 4. p., through s., of the permit).

Monitoring

40 CFR §63.6625(b) – to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of this GACT Subpart ZZZZ, applicant must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section.

40 CFR § 63.6640(a) – applicant must demonstrate continuous compliance with each emission limitation, operating limitation, and other requirements in Table 6 of GACT Subpart ZZZZ.

Table 6 of GACT Subpart ZZZZ - for existing stationary CI RICE greater than 500 HP that are not limited use stationary RICE and reduce CO emissions, or limit the concentration of CO in the stationary RICE exhaust and is using oxidation catalyst, the applicant shall install, operate, and maintain continuous parameter monitoring systems (CPMS) to monitor the catalyst inlet temperature for each catalyst and reduce the temperature data to 4- hour rolling averages. Shall maintain the 4-hour rolling averages within the operating limitations for the catalyst inlet temperature as required by 40 CFR §63.6625(b). The applicant shall also measure the pressure drop across the catalyst once per month and demonstrate that the pressure drop across the catalyst is within the operating limitation established during the performance test.

40 CFR §63.6625(b) - to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of GACT Subpart ZZZZ, applicant must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) through (6) of this section.

40 CFR §63.6635 - except for monitor malfunctions, associated repairs, required performance evaluations, and required quality assurance or control activities, the applicant shall monitor continuously at all times that the stationary RICE is operating.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above monitoring conditions are not met (Section 2.1 I. 4. t., through w., of the permit).

Recordkeeping

As per 40 CFR §63.6655(d) and Table 6 of GACT Subpart ZZZZ the applicant shall keep records of the catalysts inlet temperature data including the 4-hour rolling averages and the monthly measurements of the pressure drop across the catalysts.

As per 40 CFR §63.6655(a) – the applicant shall keep a copy of each notification and report that was submitted to comply with this regulation, records of the occurrence and duration of each malfunction of operation, records of performance tests and performance evaluations, records of all required maintenance performed and records of actions taken during periods of malfunction.

40 CFR §63.6655(b) - for each inlet catalyst temperature CPMS, the applicant shall keep the following: records described in 40 CFR 63.10(b)(2)(vi) through (xi), previous versions of the performance evaluation plan and any requests for alternatives to the relative accuracy test for CPMS as required in 40 CFR §63.8(f)(6)(i).

40 CFR §63.6660 – the applicant shall keep each suitable records for at least 5 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above record keeping conditions are not met (Section 2.1 I. 4. x., through aa., of the permit).

Reporting

40 CFR §63.6650(a),(b)(5) and 40 CFR §63.6650(f) - the applicant shall submit a semiannually compliance report all instances of noncompliance with the requirements of the permit must be clearly identified.

40 CFR §63.6650(c) - the compliance report must contain the information in paragraphs (c)(1) through (6) of this section including the facility name and address, statement by a responsible official, date of report, number and duration of malfunctions, etc.,

40 CFR §63.6650(d) - for each deviation from an emission or operating limitation that occurs for a stationary RICE when not using a CMS to comply with the emission or operating limitations in this subpart, the compliance report must contain the information in paragraphs (c)(1) through (4) of this section and the information in paragraphs (d)(1) and (2) of this section.

40 CFR §63.6650(e) - for each deviation from an emission or operating limitation occurring for a stationary RICE while using a CMS to comply with the emission and operating limitations in this subpart, the applicant must include information in paragraphs (c)(1) through (4) and (e)(1) through (12) of this section.

The applicant shall be in noncompliance with 15A NCAC 2D .1111 if above reporting conditions are not met (Section 2.1 I. 4. bb., through ff., of the permit).

4. 15A NCAC 2D .0530: Prevention of Significant Deterioration - Actuals PAL

Section 2.4 of the permit is for "Actuals PAL Permit Requirements" which limits the emissions of VOC from various sources at this facility to less than 505 tpy on a 12-Month rolling average. These new generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5) will also be subject to the above PAL.

Please note that the applicant is taking a PSD avoidance limit to avoid the applicability of PSD for NO_x emissions (See Section III. 5., of this review below).

5. 15A NCAC 02Q. 0317: Avoidance Conditions
for 15A NCAC 02D. 0530: Prevention of Significant Deterioration

Based on the latest Ap-42 emission factors and the ratings of the three diesel-fired peak shaving generators, 2,145 kilowatts each (ID Nos. EGDD-3, EGDD-4 and EGDD-5) the NO_x emissions would exceed 40 tpy. The applicant requested a limit of 2,100 hours per year (combined) operation for the three generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5) to avoid PSD applicability. Based on rating of the boiler and the limited hours of operation per year (2,100 hours per year) the annual emissions of criteria pollutants are as follows:

Criteria Pollutant	tpy
PM/TSP	1.29
PM_{10}	1.17
$PM_{2.5}$	1.17
SO_2	0.03
NO_x	39.12
CO	5.25
VOC	0.51

The total emissions of criteria pollutants Thus, in order to avoid the applicability of PSD these sources (ID Nos. EGDD-3, EGDD-4 and EGDD-5) shall discharge into the atmosphere less than 40 tons of NO_x emissions per consecutive 12-month period and the total combined hours of operation of these sources (ID Nos. EGDD-3, EGDD-4 and EGDD-5) shall not exceed 2,100 hours per consecutive 12-month period, stipulated in section 2.1 I. 7. a., of the modified permit. The engines are equipped with ignition timing retard, so the applicant use the emission factor for controlled NOx (1.9 mmBtu) which was taken from AP-42 Section 3.4, Table 3.4-1. In general, peak shaving units will not operate for 8760 hour per year, but will only operate when there is a high demand or "peak demand" for electricity.

Data for example calculation of NO_x:
Engines (EGDD-3, 4 and 5) maximum firing rate = 19,606,287 Btu/hr each (19.61 mmBtu/hr)
Controlled AP-42 emission factor (ignition timing retard) = 1.9 lbs NOx/mmBtu
The total sum of hours of operation from all three engines = 2,100 hours per year

$$\frac{19.61\ mmBtu}{hour}\ x\ \frac{1.9\ lbs\ NOx}{1\ mmBtu}\ x\ \frac{2{,}100\ hours}{year}\ x\ \frac{1\ ton\ NOx}{2000\ lbs\ NOx} = \frac{39.12\ tons}{year}$$

A limit will be placed in the permit for NOx, PM10, PM2.5 = 2,100 total hours of operation per year for all three generators. [Note: As stated earlier in this review, peak shavers generally will not operate at 8760 hours/year, however, at hours much less than 8760, PM-10 and PM2.5 would be greater than their respective significance levels]

Monitoring/Recordkeeping

The applicant shall keep daily records of the hours of operations of the three diesel-fired peak shaving generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5). Based on the latest AP-42 emissions factors, the monthly hours of operation and the maximum kilowatt rating of these sources the applicant shall calculate to determine the monthly NO_x emissions.

Reporting

The applicant shall submit a semi-annual summary report of monitoring and recordkeeping activities of the monthly NOx emissions and the monthly total combined hours of operation of these sources (ID Nos. EGDD-3, EGDD-4 and EGDD-5).

State Only

6. 15A NCAC 2D .1100 – Control of Toxic Air Pollutants.

For toxics compliance the application states “The facility emits Toxic Air Pollutants (TAPs) that have the potential to be emitted in excess of the Toxic Pollutant Exemption Rate (TPER). The potential TAP emissions have been compared to the TPER to identify which pollutants exceed the exemption rate. A facility-wide modeling analysis has been completed including with the three requested generators. Emission limits for benzene and formaldehyde are currently listed in condition 2.2.A.4 and is on page 62 of the permit. BATO will comply with the emission limits as they are listed currently in the permit. Since these engines were included in previous modeling assessments and no changes are planned, a new modeling analysis has not been completed for this application.”

As per our record the last modeling was analyzed by the Air Quality Analysis Branch (AQAB) of this Section and Ms. Nancy Jones, Meteorologist at AQAB in a memo dated January 29, 2016, concluded twelve air toxics were evaluated facility wide in the modeling. The maximum impact for each toxic potential emission rate was well below the AAL except Benzene which was at 96.7 % of AAL. Since then the facility has added and removed several sources.

The applicant verified in an e-mail “past modeling for the facility has included EGDD-3, EGDD-4 and EGDD-5 they were listed as sources HH3, HH4, and HH5 in a past model. The modeling that was completed in 2016 did not have these sources because BATO was not tracking emissions for these engines and they were not listed in the permit. They were included in modeling sometime in the past to obtain limits on page 62 of the permit. In the 2016 model,

benzene emissions that were modelled were 2 times the PTE to obtain the result of 96.7% of AAL."

The applicant further elaborated "the modeling that was referenced in question 3 below that was approved by DEQ on January 29, 2016 included modeling for benzene. The benzene PTE for the facility with this application was 429.77 lbs/yr but the model used a safety factor of 2 for benzene emissions so the modeled benzene emissions were 859.54 lbs/yr for the facility. The 859.54 lbs/yr emissions had a modelled result of 97.2% of the AAL. This modeling result did not include emissions from the three engines in this application, however these engines have been modeled in the past and have emission limits in the current permit. For this application, to remain under the site total 859.54 lb/yr and include the emissions from the three engines in the application, Bridgestone would propose to change the benzene emission limits for the non-emergency engines on site to reduce the safety factor of 2 that was included in the last model to 1.25. Please see the table below for the new emission limits that should be include in section 2.2.A.3 of the permit."

Engine Unit Number	Modelled Source Number	Benzene Emissions from 1/29/16 model (lb/yr)	New Emission Limits (lb/yr)
EGDD-1	HH1	18.28	11.42
EGDD-2	HH2	18.28	11.42
EGDD-3		Not Modelled	13.31
EGDD-4		Not Modelled	13.31
EGDD-5		Not Modelled	13.31
ACDD-1	II1	19.05	11.90
ACDD-2	II2	19.05	11.90
ACDD-3	II3	19.05	11.90
ACDD-4	II4	19.05	11.90
Total Benzene Emissions for Non-emergency engines (lb/yr)		**112.73**	**110.40**

Section 2.2 4., of the permit has been modified to reflect the above rates.
Also, see Regional Office comments in Section VII., of this review.

VII. **Conclusions, Comments, Application Processing, and Recommendations**

7. 15A NCAC 2Q. 0317: Avoidance Conditions
for 15A NCAC 2D .1111: Maximum Achievable Control Technology

   The facility has taken a federally enforceable limit as per the current permit to become a minor source for HAP emissions and thus exempted from the "Rubber Tire Manufacturing" MACT.

8. NSPS Subpart IIII

   These generators are currently not subject to any NSPS standards. NSPS Subpart IIII does not apply to these three peak shaving generators as they were manufactured in the year 2000. The NSPS rule has applicability to RICE engines that commenced construction after July 11, 2005.

IV. NSPS, NESHAPS, PSD, Attainment Status, 112(r) and CAM

NSPS

Sources at this facility are subject to NSPS Subpart BBB "The Rubber Tire Manufacturing Industry," NSPS Subpart Dc, and NSPS Subpart IIII "Stationary Compression Ignition Engines."

NESHAP/MACT

The facility has taken a federally enforceable limit as per the current permit to become a minor source for HAP emissions and thus exempted from the "Rubber Tire Manufacturing" MACT.

Attainment Status and PSD

This facility is located in Wilson County, which is currently designated as an attainment area. The minor baseline dates for this County has been triggered for PM_{10}, SO_2 and NO_x emissions increases. Based on the rating of the boilers and the latest AP-42 emission factors the hourly emissions rate from the three diesel-fired peak shaving generators (ID Nos. EGDD-3, EGDD-4 and EGDD-5) will be at a rate of 3.37 lbs/hr of PM_{10}, 0.09 lbs/hr of SO_2 and 111.76 lbs/hr of NO_x. However, these generators are not new and have been at this facility. Thus, for reporting purpose no hourly emissions increase is being reported for these pollutants.
Wilson County is in attainment for all criteria pollutants. The facility is operating under the Actuals PAL of 505 tons of VOCs per year

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act requirements because it does not store any of the regulated substances in quantities above the thresholds in this rule.

CAM

The Compliance Assurance Monitoring (CAM) Rule (40 CFR Part 64) applies to pollutant-specific emissions units (PSEU) that are pre-control major sources and use a control device to comply with an emissions limit. None of the sources being added by this modification are equipped with a control device, thus, none of the sources being added are subject to the CAM plan.

The engines are equipped with timing retard as a means of preventing the formation of NOx in the combustion chamber of the engine. 40 CFR §64.2(a)(2) requires CAM applicability if a control device is used to meet an applicable emission standard.

As per the applicant "However, timing retard does not meet the definition of a control device in the CAM regulations…

40 CFR 64.1 defines what is not a control device. In this definition "For purposes of this part, a control device does not include passive control measures that act to prevent pollutants from forming, such as the use of seals, lids, or roofs to prevent the release of pollutants, use of low-polluting fuel or

feedstocks, or the use of combustion or other process design features or characteristics." Timing retard is a passive control measure meant to prevent the formation of NOx emissions by use of a "combustion or other process design feature." CAM for NO_X does not apply to the engines

CO CAM:
The three engines use a catalytic oxidizer to control CO emissions and to meet an emission standard or limitation. The CO emission standard that is required is from the 40 CFR 63 Subpart ZZZZ, specifically the CO standard in item 3 of Table 2d of the rule. 40 CFR 64.2(b)(1)(i) provides an exemption from CAM requirements if "Emission limitations or standards proposed by the Administrator after November 15, 1990 pursuant to section 111 or 112 of the Act." Since the CO standard is from a MACT Rule (Section 112 of the Clean Air Act and the MACT rule was proposed after 11/15/1990) these engines are exempt from CAM requirements for CO emissions.

VOC CAM:
The three engines use a catalytic oxidizer to control VOC emissions and to meet the requested emission limitation for the permit. The uncontrolled emissions for VOC with the requested hours of operation limitation for each engine is 0.56 tons per year (See Appendix B, Table 1 of the application for calculation of annual uncontrolled emissions). This falls below the required 100 tons per year (40 CFR 64.2(a)(3)) that would trigger applicability of the CAM provisions. CAM does not apply for VOC emissions from each engine."

DAQ agrees with the above assertion and thus CAM does not apply to the new sources.

V. Facility Wide Air Toxics & Compliance with House Bill 952

As per Section III. 6., of the review, above, there is no expected increase in toxics from the addition of these generators. Also, there is a decrease in the annual limit for the emissions of benzene from 112.73 lbs/yr to 110.4 lobs/yr. Thus, the addition of these peak shaving generators will not present an unacceptable risk to human health and thus comply with House Bill 952.

VI. Statement of Compliance

The facility was last inspected by Mr. Stanley Williams of the Raleigh Regional Office on 08/16/2017 and his notes mentioned "Based on observations made during this inspection, Bridgestone appeared to be operating in compliance with all permit requirements."

VII. Conclusions, Comments, Application Processing, and Recommendations

PE seal was not required.

Local zoning consistency was not required for the addition of generators to the permit.

The applicant and the Regional Office were provided a draft of the permit and their comments taken into account.

The applicant had some comments in an e-mail dated 6/21/2018, and their response are mentioned below:

"Comment on 2.1.I.7.c (Page 42) BATO would request that the hour meter for the engines (EGDD-3, EGDD-4, EGDD-5) be monitored monthly for hours of operation. This would be consistent with the requirement for EGDD-1 and EGDD-2. These engines are in the same physical location and would make the monitoring consistent among the 5 engines. Also, the City of Wilson turns the generators on and off remotely without the assistance of BATO personnel.

Also we had a question about the Notification of Compliance Status Report for MACT Subpart ZZZZ. Originally, the Notification of Compliance Status Report was submitted to DEQ and contained information on all five engines. DEQ requested that the report be split into a report for the two engines in the BATO permit and the three engines in the City of Wilson Permit. Would it be required that BATO re-submit a notification of Compliance Status for MACT ZZZZ with all five engines included?"

The response to the above comments given to them by Booker Pullen, supervisor in the Permits Section of DAQ in an e-mail dated 6/21/2018 are:
"The hour meters for the engines (EGDD-3 through 5) can be monitored monthly as currently being performed for engines EGDD-1 and 2 for the PSD avoidance condition" and "BATO does not have to resubmit initial notifications for any the five engines (EGDD-1 through 5)."

Charles M. McEachern of the Reginal Office addressed his comments in an e-mail dated 6/27/2018:

"In your review I understand the big picture view of why a new toxics modeling analysis was not required, but am uncomfortable with the fact that the most recent source specific modeling analysis does not include these 3 engines. The fact that facility-wide allowable benzene emissions decrease with this application does not preclude the necessity to show compliance with 2D .1100 since the modeling was performed on a source specific basis and not on a facility-wide basis. At the very least, we need AQAB to state specifically, in writing, that a former modeling analysis (date and application number need to be listed in your review) that did include these engines is still valid and that AQAB concurs that an update to the most recent modeling analysis is not necessary."

In consultation with Mr. Tom Anderson supervisor of the AQAB, a modeling demonstration was done for the emissions of benzene and the new sources (EGDD-3 through 5) were included. The modeling was done by the applicant and verified by Ms. Nancy Jones, Meteorologist at AQAB. In a memo dated July 5, 2018, she stated "I have reviewed the dispersion modeling analysis, received July 3, 2018, for Bridgestone Americas, Inc. Wilson Plant, Wilson County, North Carolina. This analysis is an update to the previous analysis, received on December 15, 2015 and described in the January 29, 2016 memo, and adds three peak shaver generators, two emergency generators and a new Tandem Mixer and account for their benzene emissions. The previous action triggered modeling requirements to evaluate those toxics whose rates are expected to exceed the levels outlined in 15A NCAC 2Q .0700. The modeling adequately demonstrates compliance, on a source-by-source basis, for all toxics modeled. Potential benzene emissions with a safety factor of 1.9 was evaluated in the updated facility wide modeling."

The maximum impact for benzene was at 96.0 % of AAL, thus demonstrating compliance with toxics and House Bill 952 (NCGS 143-215.107(a)(5)).

VIII. Permit Modification/Changes

Table of changes made in Air Quality Permit No. 01660T72

Page(s)	Section	Description of Change(s)
	Source table	Added three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
30	2.1 I	Added three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
30	2.1 I 1.	2D .0516 applicability for three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
30	2.1 I 2.	2D .0521 applicability for three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
32 through 37	2.1 I 4.	GACT Subpart ZZZZ applicability for three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
40 through 41	2.1 I 7.	02Q. 0317: avoidance conditions for 2D. 0530 for three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
58 through 64	2.2 4	Updated emission limits for Benzene for various sources
67	2.4	Included in the three diesel-fired peak shaving generators (EGDD-3 through EGDD-5) in the Actuals PAL Requirements
73	2.6	Added language for filing a Title V application for three diesel-fired peak shaving generators (2,145 kilowatts) (EGDD-3 through EGDD-5)
74 through 83	General Conditions	Updated to current revision