NORTH CAROLINA DIVISION OF **AIR QUALITY**

Application Review

Issue Date: February 6, 2025

Region: Mooresville Regional Office

County: Rowan

NC Facility ID: 8000045

Inspector's Name: Ashley McCreary Date of Last Inspection: 05/22/2024

Compliance Code: 3 / Compliance - inspection

Facility Data

Applicant (Facility's Name): Daimler Trucks North America LLC

Facility Address:

Daimler Trucks North America LLC 11550 Statesville Boulevard Cleveland, NC 27013

SIC: 3711 / Motor Vehicles and Car Bodies

NAICS: 336120 / Heavy Duty Truck Manufacturing

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

Permit Applicability (this application only)

SIP: 02D .0503, .0516, .0521, and .1111

NSPS: N/A

NESHAP: 63 DDDDD

PSD: N/A

PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: N/A

Contact Data Application Data Facility Contact Authorized Contact Technical Contact Application Number: 8000045.24A **Date Received:** 12/18/2024 Garrett Christy Craig Redshaw Garrett Christy **Application Type:** Modification Environmental Engineer Plant Manager Environmental Engineer **Application Schedule:** TV-Minor (336) 488-3409 (704) 645-5100 (336) 488-3409 **Existing Permit Data** PO Box 399 PO Box 399 PO Box 399 Existing Permit Number: 04625/T39 Cleveland, NC 27013 Cleveland, NC 27013 Cleveland, NC 27013 Existing Permit Issue Date: 12/19/2022 **Existing Permit Expiration Date:** 04/30/2026

Total Actual emissions in TONS/YEAR:

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CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2023	0.0800	13.15	328.04	10.14	4.33	8.28	5.07 [Xylene (mixed isomers)]
2022	0.0900	14.84	297.79	11.57	3.40	8.70	5.59 [Xylene (mixed isomers)]
2021	0.0700	11.06	259.68	9.22	3.29	9.40	6.06 [Xylene (mixed isomers)]
2020	0.0600	9.90	232.88	8.28	2.45	6.86	4.24 [Xylene (mixed isomers)]
2019	0.0700	12.56	351.17	10.47	7.85	10.48	6.49 [Xylene (mixed isomers)]

Review Engineer: Conzuela Cogdell **Comments / Recommendations:** Issue 04625/T40

Review Engineer's Signature Ingul B. Capdell Date: 02/06/2025 Permit Issue Date: February 6, 2025

Permit Expiration Date: April 30, 2026

1. Purpose of Application

Daimler Trucks North America LLC (DTNA), Cleveland, Rowan County, NC, holds Air Quality Permit No. 04625T39 from North Carolina DEQ Division of Air Quality. The applicant has applied to make a permit revision pursuant to 15A NCAC 02Q .0515 "Minor Permit Modifications". The requested change is discussed in this document as below.

2. Facility Description

Daimler Trucks North America is a major source for volatile organic compounds (VOCs) and hazardous air pollutants (HAPs) emissions. The facility manufactures Class 6, 7, and 8 diesel trucks. Classes are based on truck weight: Class 6 is between 19,501 and 26,000 pounds, Class 7 is between 26,001 and 33,000 pounds, and Class 8 weighs 33,001 pounds and over.

This facility manufactures heavy-duty diesel trucks. The plant currently produces approximately 85 trucks per day. Various shifts are used at different locations/manufacturing areas of the facility. The facility typically operates 5 days a week with most manufacturing areas utilizing two 8 hr. shifts. The first shift is the main production shift, and the second shift is for painting and cabin building. The plant has approximately 2,200 employees.

3. Application Chronology

December 18, 2024	DAQ Received Permit Modification Application.
December 20, 2024	\$3508 e-payment for Minor Application fee was received.
December 20, 2024	The application is labeled complete.
December 30, 2024 DAQ presented the option to consider ES-BLR-4 boiler replacement as insignificant	
	processed during renewal versus treating it as a Minor Modification.
January 6, 2025	I received an email from DTNA to continue with Minor Modification Option versus insignificant
	activity route during renewal.
January 7, 2025	Completeness letter generated and forwarded for mailing,
January 9, 2025	Completeness letter emailed to Applicant.
January 16, 2025	Draft forwarded to 1st Supervisor, R. Thaker.
January 18, 2025	Received comments from 1 st line supervisor T. Thaker
January 21, 2025	2 nd Draft forward to 1 st Supervisor, R. Thaker. Discussed draft via TEAMS
January 21, 2025	Draft sent to Applicant, Regional Office, and Stationary Source Compliance Branch
January 24, 2025	Stationary Source Compliance Branch replied "No Comment"
February 3, 2025	Comments from Facility received. See Section 11 for details
February 4, 2025	Mooresville Regional office replied they "No Comment"
February 5, 2025	Clean Final Draft forwarded to Section Chief for final approval.

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4. Statement of Compliance

The Mooresville Regional Office Inspector, Ashley McCreary, performed the compliance inspection on May 22, 2024. The existing Boiler No 4 was inspected and the following information was provided:

- Boiler No. 4 (ES-BLR-4) is used to heat the water for the wash tunnel.
- Boiler No. 4 was in operation during this inspection with no visible emissions.
- The observed pressure was 21 psi.
- The National Board Number for Boiler No. 4 is 15972
- Since Boiler 5 requires an annual tune-up then all the boilers receive a tune-up annually.
- All records required by the Title V permit were reviewed and compliance was indicated.

Based on the inspection report, continuous compliance is expected.

5. Permit Modification/TVEE Changes

The following table describes the modifications to the current permit as part of the renewal process. This summary is not meant to be an exact accounting of each change but a summary of those changes.

Page(s)	Section	Description of Changes		
	Throughout	Updated dates, permit number, pages numbers, letterhead		
4	Section 1	 Updated ES-BLR- 4: (5.14 million Btu per hour maximum heat input) to (5.0 million Btu per hour maximum heat input) due to boiler replacement. 		
7	Section 2	 2.1 A: Updated ES-BLR-4 to 5.0 million Btu per hour maximum heat input 2.1 A.1(b) and (c): Removed ES-BLR-4 due to PM potential is now calculated to be 0.40 therefore added ES-BLR-4 to (c). 2.1 A.5(a): Removed ES-BLR-4 due to maximum heat input of new/reconstructed boiler is less than and equal to 5 million Btu and no longer meets condition 2.1 A.5(g): Removed ES-BLR-4 due to maximum heat input of new/reconstructed boiler is less than and equal to 5 million Btu this no longer meets condition 2.1 A.5(h)(v): Removed bullet and updated to state "The Permitteeare not met": 2.1 A.7: Added bullet to address new construction for Hood Paint Center, natural gas -fired (5.0 million Btu per hour maximum heat input) ID No. ES-BLR-4 due to changes in tune-up requirements 		
39	Section 2.3 A.1(a)	Updated Boiler No. 4 -natural gas-fired (5.14 million Btu hour maximum heat input, ID No ES-BLR-4) to (5.0 million Btu hour maximum heat input, ID No. ES-BLR-4)		
42	Section 2.3 B.1(a)	Updated Boiler No. 4 -natural gas-fired (5.14 million Btu hour maximum heat input, ID No ES-BLR-4) to (5.0 million Btu hour maximum heat input, ID No. ES-BLR-4)		
49	Section 4	General Conditions (GC) v6.0 updated to v8.0. Changes include the removal of GC J and modification to GC D.		

This permit is being processed with minor modifications, and changes to the Title V Equipment Editor are needed.

5.1 The facility is requesting to replace the existing Hood Paint Center natural gas-fired boiler (5.14 million Btu per hour heat input capacity, ES-BLR-4) with a new Hood Paint Center natural gas fired boiler (5.0 million Btu per hour heat input capacity, ES-BLR-4). The Potential Emission summary (Table 5-1) provided on Form B is shown below

Table 5-1: Potential to Emit

Pollutant	Potential Emissions TONS/YR		
PM	0.11		
PM-10	0.11		
PM-2.5	.009		
NOx	2.135		
VOC	0.117		
CO	1.793		
SO_2	0.013		
Single largest HAP	3.84E-02 (Hexane)		
Total HAP	4.032E-02		

The boiler is subject to the requirements in 02D .0503, .0516, .0521, and .1111. These applicable requirements are discussed below:

15A NCAC 2D .0503 "Particulates from Fuel Burning Indirect Heat Exchangers"

This regulation applies to particulate matter (PM) emissions from indirect heat exchangers in which fuel is burned for the purpose of producing heat or power. Fuels include those such as coal, coke, lignite, peat, natural gas, and fuel oils, but exclude wood and refuse not burned as a fuel. Emissions of PM from combustion of natural gas that are discharged from the boiler into the atmosphere shall not exceed PM emission rate as derived using 2D .0503(c). Accordingly, allowable emissions of particulate matter (PM) from burning natural gas in the proposed replacement boiler shall be calculated as follows.

 $E = 1.090 \text{ x Q}^{-0.2594}$ Where: E = allowable PM emission rate in lbs./million Btu heat input Q=maximum heat input rate in million Btu/hour at the plant site

The maximum heat input rates of all permitted boilers (in operation, being constructed, etc.), all shut-downed sources, and all unpermitted boiler(s) included in this application have been considered for estimating allowable PM emission rate for each of these unpermitted sources, as per 2D .0503(e).

- Q = (1.02+8.37+5.14+33.16) million Btu/hr. [total heat input rate for all permitted boilers as per the current permit] 5.14 million Btu/hr. [heat input rate for shut-down boiler ES-BLR-4] + 5.0 million Btu/hr. [heat input rate for unpermitted boiler ES-BLR-4]
 - = 47.99 million Btu/hr.

Therefore, $E = 1.090 \text{ x } 47.99^{-0.2594}$ = 0.399 lb./million Btu = 0.40 lb./million Btu

Using the AP-42 emission factors, previously referenced, the PM emission rate for natural gas firing is 0.000507 lb./million Btu, considering both filtrable and condensable portions. Hence, compliance with the above allowable emission standard is expected. Because the potential emission rate is significantly lower than the emission standard, no monitoring / record keeping / reporting will be required for PM emissions from natural gas firing in the proposed boiler.

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

Emission of sulfur dioxide from any source of combustion that is discharged from any vent, stack, or chimney shall not exceed 2.3 pounds of sulfur dioxide per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. Sulfur dioxide formed or reduced as a result of treating flue gases with sulfur trioxide or other materials shall also be

accounted for when determining compliance with this standard. A source subject to an emission standard for sulfur dioxide in Rules 02D .0524, .0527, .1110, .1111, .1206, or .1210 of 15A NCAC shall meet the standard in that particular rule instead of 2.3 lb./million Btu emission standards under 2D .0516.

The proposed boiler is subject to 2D .0516 requirement when firing natural gas. Natural gas contains very negligible sulfur content. As per AP-42, the potential emission rate (factor) when burning natural gas is only 0.000588 lb./million Btu; therefore, compliance with the SO₂ standard of 2D .0516 is expected. The potential emission rate is significantly lower than the emission standard; therefore, monitoring / record-keeping/reporting will not be required for SO₂ emissions from the boilers when burning natural gas.

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

For sources manufactured after July 1, 1971, visible emissions shall not be more than 20 percent opacity when averaged over a six-minute period. However, except for sources required to install COMs, six-minute averaging periods may exceed 20 percent opacity if:

- (1) No six-minute period exceeds 87 percent opacity; and
- (2) No more than one six-minute period exceeds 20 percent opacity in any hour; and
- (3) No more than four six-minute periods exceed 20 percent opacity in any 24-hour period.

A source subject to an emission standard for visible emissions in Rules 02D .0506, .0508, .0524, .1110, .1111, .1206, or .1210 of 15A NCAC shall meet the standard of that particular rule instead of the standard contained in 2D .0521.

The proposed replacement boiler is subject to the 20 percent opacity standard in 2D .0521, because it will be built after July 1, 1971. Compliance with this requirement will be verified upon start-up. But the compliance is expected due to relatively clean fuel (natural gas). Monitoring / record keeping / reporting is not required for opacity emissions from natural gas firing.

15A NCAC 02D .1111 "Maximum Achievable Control Technology"

The proposed new industrial boiler, that burns only natural gas, (5.0 million Btu per hour heat input capacity), where the construction commence date is after June 4, 2010, is subject to this Subpart, because Daimler Trucks North America is a major source of HAP. The applicable requirements are discussed below:

EPA has promulgated Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" for industrial, commercial, or institutional boiler or process heater, that is located at, or is part of, a major source of HAP, with specific exceptions included in this regulation.

This subpart was last promulgated on December 5, 2022, for the following: "This action finalizes amendments to the national emission standards for hazardous air pollutants (NESHAP) at major sources from new and existing industrial, commercial, and institutional (ICI) boilers and process heaters. Certain aspects of these standards were challenged and subsequently remanded to the Agency by the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit). This action finalizes amendments to several numeric emission limits for new and existing boilers and process heaters consistent with the court's opinion and sets compliance dates for these new emission limits. This action also provides further explanation of one aspect of the Agency's use of carbon monoxide (CO) as a surrogate for organic hazardous air pollutants (HAP) and its use of a CO threshold to represent the application of the maximum achievable control technology (MACT) for organic HAP. We are also finalizing several technical clarifications and corrections."

If the boiler is burning only natural gas (i.e., units designed to burn gas 1 fuels subcategory) where the heat input capacity is less than or equal to 5 million Btu per hour, only work practice standards in the form of boiler tune-up (both initial and periodic tune-ups) apply. Each tune-up shall be conducted on five-year intervals. Initial tune-up must be conducted no later than 61 months from the initial start-up of the boiler. Each subsequent tune-up must be completed no later than 61 months from the previous tune-up.

The regulation requires submission of an initial notification no later than 15 days after the actual startup date for new boilers. In addition, the Notification of Compliance Status (NOC) is required to be submitted for initial compliance demonstration within 60 days of start-up. The NOC shall include a description of the affected unit(s) including identification of which subcategories the unit is in, the design heat input capacity of the unit, and description of the fuel(s) burned.

Regarding recordkeeping, the regulation requires keeping a copy of each notification and report submitted to comply with the Subpart. Records are to be kept for five years from each occurrence or measurement, in a form suitable and readily available for expeditious review.

The Subpart requires reporting on a five-year basis. The first report shall cover the period beginning on start-up and ending on the earliest December 31st, less than five years from the start-up. Subsequent 5-year reports shall cover the periods from January 1 to December 31. These compliance reports must be postmarked on or before January 30 for the previous compliance period. The compliance report shall contain the following information: company name and address; process unit information, emissions limitations, and operating parameter limitations; date of report and beginning and ending dates of the reporting period; date of the most recent tune-up, the date of the most recent burner inspection; and statement by a responsible official with that official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report. Finally, the compliance report shall also be submitted electronically via the Compliance and Emissions Data Reporting Interface (CEDRI). CEDRI can be accessed through the EPA's Central Data Exchange (CDX) (https://cdx.epa.gov/). The proposed permit will include all applicable requirements of the subject boiler 4 from the regulation from today.

6. NSPS, NESHAP, PSD, Attainment Status, 112(r), and CAM

NSPS

The new boiler is not subject to any promulgated NSPS.

NESHAP

As stated in Section 5.1 above, the new boiler is subject to NESHAP Subpart DDDDD (Part 63) requirements.

PSD

The facility is an existing major stationary source for Prevention of Significant Deterioration (PSD) under the "250 tons category". Any physical change or change in method of operation, amounting to "significant" emissions (e. g. 40 tons per year for NOx), is deemed a major modification for PSD, presuming there is a significant net emission increase as well (i.e., considering the Step 2 contemporaneous netting).

This facility is currently operating under Plantwide Applicability Limitations (PALs) for several pollutants: NOx (52.5 tons per consecutive 12-months period), VOC (1,406.4 tons per consecutive 12-months period), and GHGs (61,262 tons per consecutive 12-months period). Under the PSD regulation (§51.166(w), as incorporated into 02D .0530), and the existing PAL permits terms, PSD requirements do not apply to the proposed modification, as the owner is allowed to add any new emissions units without triggering PSD, if he/she complies with these existing PALs.

Based on the emissions estimates provided for the modification, per Form D1, the potential emissions of the new boiler ES-BLR-4, along with the actual emissions of all permitted sources, are expected to be less than the approved PALs; therefore, this modification is deemed "minor" for PSD purposes and PSD is not triggered.

In conclusion, a PSD review is not triggered. The new boiler, ES-BLR-4, will be required to comply with the above PALs.

Attainment Status

Rowan County is currently in attainment or unclassifiable/attainment for all promulgated National Ambient Air Quality Standards (NAAQSs). This County has triggered increment tracking for PSD for PM₁₀, SO₂, NO_x, and PM_{2.5}. The emissions are not expected to increase due to modification and may even slightly decrease due to the replacement of existing 5.14 million Btu boiler with a 5.0 million Btu boiler.

Facility Wide Emission are seen below:

Air Pollutant Emitted	Form-D1: Facility-Wide Potential Emissions (tons/year)	Form-B: new ES-BLR-4 Potential Emissions (tons/year)	CY 2023 Facility-Wide Actual Totals (tons/year)
PM_{10}	19.35	.011	4.33
PM _{2.5}	18.92	.009	4.32
SO ₂	0.57	.013	.08
NO_X	52.5 (PAL Limit)	2.135	13.15

112(r)

This facility is not subject to Section 112(r) of the Clean Air Act. The facility does not store any regulated substance above applicable threshold quantities.

CAM

Not applicable. The applicability of CAM (Compliance Assurance Monitoring in 02D .0614, implementing Part 64 of 40 CFR), is generally required to be evaluated during the processing of renewal or significant modification application. The submitted application is not a renewal nor a significant modification of its Title V permit. Thus, CAM applicability does not need to be addressed with this permit revision.

7. Facility Wide Air Toxics

The facility is currently operating under a limitation in 15A NCAC 02Q .0711, requiring the owner to restrict the facility wide actual emissions of acetaldehyde, acrolein, ammonia, benzene, benzo(a)pyrene, formaldehyde, methyl ethyl ketone, manganese, n-hexane, toluene, and xylene, to less than the applicable toxic air pollutant emission rates (TPERs). With the installation of a smaller boiler (natural gas-fired 5.0 million Btu per hour) as compared to the removal of the existing boiler (natural gas-fired 5.14 million Btu per hour), a slight decrease in emissions is expected. Because the new boiler, just like the existing boiler, is subject the Part 63 NESHAP (DDDDD), it is exempt from air toxics permitting, consistent with 02Q .0702(a)(27).

Per May 22, 2024, Facility Inspection Report; "The facility has a log that includes all solvents, paints and thinners. These logs track the pollutants emitted at the facility including these toxic air pollutants. These records were available for review. The facility also submits an annual emissions inventory that contains information that can be used to show the TPER limits for each TAP have not been exceeded". Additionally, DAQ has received and approved the facility's 2023 emissions inventory review report which indicated compliance.

8. Facility Emissions Review

Page 1 of this application review above includes the actual emissions for 2019 through 2023.

9. Public Notice/EPA and Affected State(s) Review

Not Applicable. Application processing under minor modification procedures does not require any public participation. When the permit is issued, it will be "proposed" to EPA for their review. If EPA's review results in a revision to the "proposed" permit, the permit will be revised, as appropriate. Otherwise, the "proposed" permit, as it is, will become effective after 60 days of issuance.

11. Conclusions, Comments, and Recommendations

- The application does not involve a new or modified control device. Thus, the "Applications Requiring Professional Engineer Seal" requirement in 02Q .0112 does not apply.
- Kelly Rodgers, Zoning Administrator, Town of Cleveland, determined on December 13, 2024, that the "proposed operation is consistent with applicable zoning and subdivision ordinances".
- This application requires a fee for a minor Title V permit modification as defined under 15A NCAC 02Q .0203 in the amount of \$3090.00. The applicable fee was received in full electronically on December 20, 2024.
- Daimler Truck submitted comments (02/03/25) for consideration regarding permit conditions for ES-BLR4. DAQ reviewed Daimler Truck's concerns related to permit condition 2.1 A.7.e and its reference to NOCs.
 - The first concern was to classify the minor modification application as the "data of startup notification" however this application **does not** satisfy 40 CFR 63.9(b)(4)(v) that requires the notification of the actual startup of the source, delivered or postmarked within 15 calendar days after that date. This condition is currently noted in the permit and will not be amended.
 - O Daimler Trucks second concern was related to the second paragraph of permit condition 2.1 A.7. e. NCDAQ agrees with their request to remove this condition from ES-BLR-4 because this condition affects "existing" boilers only. ES-BLR-1 cannot be amended at this time since it is not part of the modification. This concern can be addressed during Renewal.
 - o Typo found in Section 2.3 was addressed
- EPA has promulgated a rule (88 FR 47029, July 21, 2023), with an effective date of August 21, 2023, removing the emergency affirmative defense provisions in operating permits programs, codified in both 40 CFR 70.6(g) and 71.6(g). EPA has concluded that these provisions are inconsistent with the EPA's current interpretation of the enforcement structure of the CAA, in light of prior court decisions¹. Moreover, per EPA, the removal of these provisions is also consistent with other recent EPA actions involving affirmative defenses² and will harmonize the EPA's treatment of affirmative defenses across different CAA programs.

As a consequence of this EPA action to remove these provisions from 40 CFR 70.6(g), it will be necessary for states and local agencies that have adopted similar affirmative defense provisions in their Part 70 operating permit programs to revise their Part 70 programs (regulations) to remove these provisions. In addition, individual operating permits that contain Title V affirmative defenses based on 40 CFR 70.6(g) or similar state regulations will need to be revised.

Regarding NCDAQ, it has not adopted these discretionary affirmative defense provisions in its Title V regulations (15A NCAC 02Q .0500). Instead, DAQ has chosen to include them directly in individual Title V permits as General Condition (GC) J.

Per EPA, DAQ is required to promptly remove such impermissible provisions, as stated above, from individual Title V permits, after August 21, 2023, through normal course of permit issuance.

The permit minor modification application for Daimler Trucks North America LLC has been reviewed by DAQ to determine compliance with all procedures and requirements. DAQ has determined this facility is complying or will

¹ NRDC v. EPA, 749 F.3d 1055 (D.C. Cir. 2014).

² In newly issued and revised New Source Performance Standards (NSPS), emission guidelines for existing sources, and NESHAP regulations, the EPA has either omitted new affirmative defense provisions or removed existing affirmative defense provisions. See, e.g., National Emission Standards for Hazardous Air Pollutants for the Portland Cement Manufacturing Industry and Standards of Performance for Portland Cement Plants; Final Rule, 80 FR 44771 (July 27, 2015); National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters; Final Rule, 80 FR 72789 (November 20, 2015); Standards of Performance for New Stationary Sources and Emission Guidelines for Existing Sources: Commercial and Industrial Solid Waste Incineration Units; Final Rule, 81 FR 40956 (June 23, 2016).

achieve compliance, as specified in the permit, with all requirements that are applicable to the affected sources. DAQ recommends the issuance of Air Permit No. 04625T40.