


**NORTH CAROLINA DIVISION OF
AIR QUALITY**

Air Permit Review

Issue Date: April 9, 2025

Region: Mooresville Regional Office
County: Rowan
NC Facility ID: 8000176
Inspector's Name: Afroze Fatima
Date of Last Inspection: 06/05/2024
Compliance Code: 3 / Compliance - inspection

Facility Data				Permit Applicability (this application only)			
Applicant (Facility's Name): Teijin Automotive Technologies NC Composites, LLC- Salisbury Facility Address: 6701 Statesville Boulevard Salisbury, NC 28147 SIC: 3089 / Plastics Products, Nec NAICS: 326199 / All Other Plastics Product Manufacturing Facility Classification: Before: Title V After: Title V Fee Classification: Before: Title V After: Title V				SIP: 02D .0503, 02D .0516, 02D .0521, 02D .0524, 02D .1111 NSPS: Subpart Dc NESHAP: DDDDD PSD: N/A PSD Avoidance: N/A NC Toxics: N/A 112(r): N/A Other: None			
Contact Data				Application Data			
Facility Contact		Authorized Contact		Technical Contact		Application Number: 8000176.24B Date Received: 12/13/2024 Application Type: Modification Application Schedule: TV-Minor Existing Permit Data Existing Permit Number: 09076/T13 Existing Permit Issue Date: 03/29/2022 Existing Permit Expiration Date: 05/31/2025	
Rodney Hopper EHS Manager (980) 944-2174 6701 Statesville Boulevard Salisbury, NC 28147		Christopher Jones Plant Manager (704) 207-8319 6701 Statesville Boulevard Salisbury, NC 28147		Rodney Hopper EHS Manager (980) 944-2174 6701 Statesville Boulevard Salisbury, NC 28147			
Total Actual emissions in TONS/YEAR:							
CY	SO2	NOX	VOC	CO	PM10	Total HAP	Largest HAP
2023	0.0500	7.72	50.29	6.49	3.38	25.30	24.80 [Styrene]
2022	0.0400	7.12	73.30	5.98	2.45	28.79	27.77 [Styrene]
2021	0.0300	5.58	60.43	4.69	2.13	19.82	18.49 [Styrene]
2020	0.0300	5.15	40.54	4.32	1.53	14.70	13.61 [Styrene]
2019	0.0400	5.92	52.35	4.97	1.56	20.87	19.57 [Styrene]
Review Engineer: Chengqing Xiao Review Engineer's Signature:  Date: April 9, 2025				Comments / Recommendations: Issue 09076/T14 Permit Issue Date: April 9, 2025 Permit Expiration Date: May 31, 2025			

I. Purpose of Application

Teijin Automotive Technologies NC Composites, LLC- Salisbury has submitted a permit application (8000176.24B) for a minor modification to its existing Title V permit 09076/T13, pursuant to 15A NCAC 02Q .0515 - Minor Permit Modifications.

This minor modification application was received on December 13, 2024 and the application fee of \$3508 for this minor mod was paid via ePayment on December 27, 2024. The facility requested to replace a boiler (Source ID: B-1, 12.25 MMBTU) with a new boiler (Source ID: B-1, 13.39 MMBTU). Per the review of the application 8000176.24B by this permit engineer, the application meets the requirements to be processed as a minor modification pursuant to 15A NCAC 02Q .0515.

The application submittal contains the completed forms A, A1, A2, A3, D1, E1 and E5. However, the Zoning Consistency Determination (ZCD) and the required application forms B and B1 were not submitted in the application. Therefore, the application was deemed incomplete. and an email requesting the submittal of ZCD and the required application forms was sent to Mr. Rodney Hopper, EHS Manager, Facility Contact, and Mr. Wayne Meyer, (Acting) Plant Mgr./VP Operations, Authorized Contact, both of Teijin Automotive Technologies NC Composites, LLC- Salisbury on December 23, 2024. An Incomplete Acknowledgement letter was sent to the facility on January 8, 2025.

Separately, the facility submitted a Title V permit renewal application (8000176.24A), which was received by DAQ on October 16, 2024.- Finally, the facility's current permit 09076/T13, issued on March 29, 2022, will be expiring on May 31, 2025.

II. Facility Description

Teijin Automotive Technologies NC Composites, LLC- Salisbury manufactures large press molded body parts for semi-tractor trucks such as hoods, fenders, and cowls for Mack, Freightliner, and Volvo. Other smaller body parts for Club Car golf carts and various customer products are also pressed at this facility. The factory employs about 450 people and operates 24 hours/day, 6 days/week, and 50 weeks per year. The most recent compliance inspection was conducted by Afroze Fatima of DAQ MRO on June 05, 2024, accompanied by Mr. Rodney Hopper.

III. Application Chronology:

December 13, 2024	Received Title V Minor Modification Permit application (8000176.24B).
December 23, 2024	Sent an email to Mr. Rodney Hopper and Mr. Wayne Meyer requesting ZCD and the required application forms.
December 27, 2024	Received permit modification application fees.
January 8, 2025	An Incomplete Acknowledgement letter was sent to the facility; Mr. Hopper emailed forms B, B1, E6, and revised Form A1; the emission data filled out on Form B was incorrect.
January 10, 2025	Phone conversation with Mr. Hopper requesting the facility to revise the required forms and a summary of phone discussion was emailed to Mr. Hopper.
January 28, 2025	Technical additional information request was sent via email to the applicant regarding the new boiler emission calculations and new boiler information.
January 30, 2025	Phone discussions held with Mr. Hopper regarding the technical additional information request addressed in the January 28, 2025 email.
February 5, 2025	Received email response to technical add information request from Mr. Hopper.
February 6, 2025	Emailed Mr. Hopper to confirm whether the new boiler has oxygen trim and the old boiler would be removed before the new boiler is installed.
February 7, 2025	Zoning Consistency Determination (ZCD) along with the Forms A1, B, and D were received by DAQ MRO on January 30, 2025, and forwarded to DAQ RCO on February 7, 2025.
February 11, 2025	Emailed Mr. Hopper with a follow up phone discussion requesting to correct the incorrect emissions data filled out on Forms B and D1.
February 14, 2025	Received email response to technical additional information request and revised Forms B and D1 from Mr. Hopper.
February 19, 2025	Sent acknowledgement letter acknowledging that the application (8000176.24B) was complete as of February 14, 2025.
February 28, 2025	Emailed Mr. Hopper and Mr. Christopher Jones, Plant Manager, who replaced Mr. Wayne Meyer as the facility's Authorized Contact, requesting to revise and resubmit the Forms A and E5 signed by Mr. Jones for the minor modification application

8000176.24B.

March 28, 2025 Draft permit sent to Permittee, DAQ MRO, and DAQ Technical Service Section for comment.

April 4, 2025 Received email response from Mr. Samir Parekh of DAQ Stationary Source Compliance Branch with no comments.

April 7, 2025 Received email response from Mr. Hopper stating “No comments from the team and I at this point.”; received email response from Mounika Kolli of MRO with no comments.

April 9, 2025 Air Permit No. 09076/T14 issued as a Title V permit.

IV. Summary of Changes to the current Permit No. 09481T13 resulting from the minor modification:

Page No.	Section	Description of Changes
Cover Letter	N/A	Modified to reflect current permit number, issue and effective dates and associated source change information.
All	Headers	Amended permit revision number
Page 3	Section 1 Equipment Table	Added source description “One natural gas-fired boilers (13.39 million Btu per hour maximum heat input with oxygen trim)” for the source B-1
Page 10	Section 2.1 D Table Particulate matter Limits/Standards	Added “0.45 pounds per million Btu heat input (ID No. B-1)”
Page 10	Section 2.1 D.1.a	Added “Emissions of particulate matter from the combustion of natural gas that are discharged from the boiler (ID Nos. B-1) into the atmosphere shall not exceed 0.45 pounds per million Btu heat input.”
Page 11	Section 2.1 D.4.d	Added “The Permittee shall submit a notification of the actual date of initial startup of the boiler (ID No. B-1) to the Regional Supervisor, DAQ, postmarked within 15 days after such date. [40 CFR 60.7, 60.48c(a)]” Modified “The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping and notification requirements above are not met.”
Page 13 - 15	Section 2.1 D.6	Added 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY for the new boiler (ID No. B-1)
Page 31	Section 3 Insignificant Activities	Moved Insignificant Activities list on Page 32
Pages 32 – 39	Section 4	Updated General Conditions (version 8.0, 07/10/2024)

Equipment Changes

Per application submittal for this permit modification, the facility proposes to replace an existing small natural gas-fired boiler (Source ID: B-1, 12.25 million Btu/hr) with a new natural gas-fired boiler (Source ID: B-1, 13.39 million Btu/hr). The configuration of the new boiler (ID No. B-1) is presented in the table below:

Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
B-1	natural gas-fired boilers (13.39 million Btu per hour maximum heat input with oxygen trim)	N/A	Low NOx burner

The facility submitted the emissions estimates of the new natural gas-fired boiler (ID No. B-1) calculated using the DAQ NCDENR Natural Gas Combustion Emissions Calculator Revision N 01/05/2017 along with the permit modification. During the technical review, it was noticed that the “TYPE OF BOILER” of the data input was incorrectly chosen to “LARGE WALL-FIRED BOILER (> 100 mm BTU/HR)”. This permit engineer re-ran the spreadsheets of DAQ Natural Gas Combustion

Emissions Calculator under “SMALL BOILER (< 100 million BTU/HR)” to calculate the emissions rates for the new boiler being installed (See Attachment 2). The revised emissions calculations were emailed to Mr. Hopper on January 28, 2025 for the facility review. In his emails sent on February 5 & 14, 2025, respectively, Mr. Hopper provided the following technical additional information:

- I acknowledge the combustion emissions calculations noted for the "small boiler", and agree that the input screen for "Type Of Boiler" should be "Small Boiler (<100 mm BTU/HR)".
- The boiler manufacturer is Cleaver Brooks and the model # is CBLE4D700-400-150-ST, it is a NEW boiler manufactured in 2024.
- The old boiler being replaced does have low NOx burners and actual yearly natural gas usage of 77.22 million scf.
- Updated B1 Form with "Indirect" chosen as the heating mechanism and the Maximum Design and Requested Capacity Limitation.
- Christopher Jones replaced Wayne Meyer as Responsible Official.
- The new boiler, which includes an oxygen trim, is detailed in the manual.
- The facility will proceed with removing the old boiler and installing the new boiler after the older one is removed.

V. Regulatory Review

The estimates of the actual emissions (77.22 million standard cubic feet annual natural gas usage) and potential emissions (8760 hours of operation) for the new natural gas-fired boiler (B-1, 13.39 million Btu per hour maximum heat input) are summarized in the table below. These emissions estimates are based upon the emissions factors (Section 1.4, “Natural Gas Combustion”, July 1998, Compilation of Air Pollutant Emissions Factors from Stationary Sources, AP-42):

Air Pollutants	Actual Emissions (tons/yr)	Maximum Potential Emissions Before Control (tons/yr)	Maximum Potential Emissions After Control (tons/yr)
PM	0.02	0.03	0.03
PM10	0.01	0.01	0.01
PM2.5	0.02	0.02	0.02
SO2	0.02	0.03	0.03
NOx	1.93	5.75	2.87
VOCs	0.21	0.32	0.32
CO	3.24	4.83	4.83
HAPs	0.0725	0.108	0.108

Teijin Automotive Technologies NC Composites, LLC- Salisbury is currently subject to the following regulations:

- 15A NCAC 02D .0503: “Particulates from Fuel Burning Indirect Heat Exchangers”
- 15A NCAC 02D .0515: “Particulates from Miscellaneous Industrial Processes”
- 15A NCAC 02D .0516: “Sulfur Dioxide Emissions from Combustion Sources”
- 15A NCAC 02D .0521: “Control of Visible Emissions “
- 15A NCAC 02D .0524: “New Source Performance Standards” (40 CFR 60, Subpart Dc)
- 15A NCAC 02D .1111: “Maximum Achievable Control Technology” (40 CFR 63, Subpart PPPP)
- 15A NCAC 02D .1111: “Maximum Achievable Control Technology” (40 CFR 63, Subpart WWWW)
- 15A NCAC 02D .1111: “Maximum Achievable Control Technology” (40 CFR 63, Subpart DDDDD)
- 15A NCAC 02D .1806: “Control of Odorous Emissions” (*State-Enforceable Only*)

The facility has shown a history of complying with these existing rules. Only the rules affected by this minor modification application request will be discussed below. As previously mentioned, a Title V permit renewal application 8000176.24A was received by DAQ on October 16, 2024. The full regulation review will be performed in the process of permit renewal application 8000176.24A.

2D .0503 - “Particulates from Fuel Burning Indirect Heat Exchangers”

This rule limits particulate emissions from heat exchangers (i.e. boilers). The limit is calculated using the following equation:

$$E = 0.60 \text{ lbs PM/million Btu} \quad \text{if } Q \leq 10 \text{ million Btu/hr}$$

$$E = 1.09 (Q)^{-0.2594} \text{ lbs PM/million Btu} \quad \text{if } Q > 10 \text{ million Btu/hr}$$

Where E is the emission limit in pounds per million Btu and Q is the facility-wide heat input rate for fuel burned in heat exchangers.

The new, natural gas-fired replacement boiler (ID Nos. B-1, 13.39 million Btu/hr) and the other existing natural gas-fired boiler (ID No. ES-B2, 16.33 million Btu/hr) are subject to 02D .0503.

Thus, consistent with 02D .0503(c), the total maximum heat input is:

13.39 million Btu/hr (new replacement boiler B-1) + 16.33 million Btu/hr (existing boiler B-2) = 29.72 million Btu/hr.
As such Q = 29.72 million Btu/hr and E = 0.45 lbs PM/million Btu for the new replacement boiler (ID No. B-1)

Therefore, emissions of particulate matter discharged from the new natural gas-fired boiler (ID No. B-1) into the atmosphere shall not exceed 0.45 pounds per million Btu heat input. The replacement of boiler B-1 shall not change the allowable emission limit of any other fuel burning indirect heat exchanger whose allowable emission limit has previously been established. Therefore, the limit of emissions of particulate matter discharged from the natural gas-fired boiler (ID No. B-2) remains 0.50 pounds per million Btu heat input.

Using AP-42 emission factors (Natural Gas – Table 1.4-2, rev. 7/98), the actual emissions rates are calculated as follows and compliance is demonstrated:

$$E_{\text{actual, (natural gas)}} = 7.6 \text{ lb PM}/10^6 \text{ scf} \div 1020 \text{ million Btu}/10^6 \text{ scf} = \underline{0.007 \text{ lb PM}/ \text{million Btu}}$$

Since the PM emission rate (based on emission factor from AP-42) indicates that the emissions would be well below the 02D .0503 allowable particulate emission rate, no monitoring/recordkeeping/reporting is required for particulate emissions from the boilers (ID Nos. B-1 and B-2). Compliance is expected.

2D .0516 – Sulfur Dioxide Emissions from Combustion Sources

This rule limits SO₂ emissions from any source of combustion that is discharged from any vent, stack, or chimney to 2.3 lb of SO₂ per million Btu input. In this facility's case, it applies to the new replacement boiler (ID No. B-1).

The following calculation shows that the SO₂ emission rate is equal to 0.00059 pounds per million Btu when combusting natural gas and the calculations are based on AP-42 emission factor. The equation assumes the sulfur content of natural gas is 2,000 grains/10⁶ scf, and the average heating value of natural gas is 1,020 Btu/scf.

Natural Gas (AP-42, Table 1.4-2)

$$\text{SO}_2 = 0.6 \text{ lbs} / 10^6 \text{ scf} \times (10^6 \text{ scf} / 1,020 \text{ million Btu}) = 0.00059 \text{ lbs} / \text{million Btu} < 2.3 \text{ lbs} / \text{million Btu}$$

Natural gas is inherently low in sulfur; thus, SO₂ emission rate is estimated to be well below the allowable SO₂ emission rate, demonstrating compliance with this rule. Thus, no monitoring, recordkeeping, or reporting is required for the replacement B-1 boiler. The minor modification of boiler replacement does not change this status. Compliance is expected.

15A NCAC 02D .0521 – Control of Visible Emissions

This rule applies to all fuel burning operations and industrial processes where VE can reasonably be expected to occur and limits VE to 40% opacity for sources manufactured as of July 1, 1971 and to 20% opacity for sources manufactured after July 1, 1971. Visible emissions from the new replacement boiler (ID Nos. B-1) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. As previously discussed under 02D .0503, the emissions of PM (visible emissions) are low, therefore, no monitoring, recordkeeping, and reporting are required for visible emissions from the new replacement boilers (ID Nos. B-1). Compliance is expected.

15A NCAC 02D .0524 – New Source Performance Standards

This subpart is applicable to each steam generating unit for which construction, modification or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units

per hour (million Btu/hr)) or less, but greater than or equal to 2.9 MW (10 million Btu/hr). This facility is subject to New Source Performance Standards (NSPS), 40 CFR 60, Subpart Dc for the new replacement natural gas-fired boiler (ID No. B-1).

The facility is NOT required to submit a semi-annual report demonstrating compliance with the sulfur limit as only natural gas is being combusted. The facility is just required to keep monthly records of fuel consumption. The facility shall send notifications for both construction and initial startup, required by this Subpart, for the new replacement boiler (ID No. B-1, 13.39 million Btu/hr). Compliance is expected.

15A NCAC 02D .1111: "Maximum Achievable Control Technology" (40 CFR 63, Subpart DDDDD)

This facility is subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63 Subparts DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters. The Subpart DDDDD requirements with respect to emission standards, work practice standards, operating limits, notification, initial compliance, subsequent compliance, energy assessment, recordkeeping, and reporting apply to the new replacement boiler (ID Nos. B-1).

Notification Requirement

The Permittee shall submit a Notice of Compliance Status (NOCS) NESHAP DDDDD for the being installed natural gas-fired boiler (ID No. B-1). The notification must be signed by a responsible official and submitted to the DAQ not later than 15 days after the actual date of startup of this boiler (ID No. B-1). Compliance is expected.

Tune-up Requirements

Per Mr. Hopper's email received on February 14, 2025, "The new boiler, which includes an oxygen trim, is detailed in the manual." Therefore, for the new being installed natural gas-fired boiler (ID No. B-1), the permittee shall conduct a tune-up every 5 years while burning gas 1 fuels with oxygen trim that provided the majority of the heat input to the boiler over the 12 months prior to the tune-up. Each 5-year tune-up shall be conducted no more than 61 months after the previous tune-up. The initial tune-up shall be conducted no later than 61 months after the initial startup of the source. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. The Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled or unscheduled unit shutdown, but the burner must be inspected at least once every 72 months. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if these work practice requirements as specified in Section 2.1 D.6.f for boiler B-1 are not met.

For the natural gas-fired boiler (ID No. B-1), the Permittee shall conduct a tune-up annually with each annual tune-up being conducted no more than 13 months after the previous tune-up. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

Recordkeeping Requirements

The Permittee shall keep a copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status, or compliance report that has been submitted. The Permittee shall maintain on-site and submit, if requested by the Administrator, a report contain the concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the source, a description of any corrective actions taken as a part of the tune-up; and the type and amount of fuel used over the 12 months prior to the tune-up, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

Reporting Requirements

The Permittee shall submit compliance reports to the DAQ on an annual basis for boiler B-1 on a 5-year basis . This report must 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 facility only burns natural gas in the boilers and is not permitted to burn fuel oil. The permittee must submit a permit modification prior to combusting anything other than natural gas.

State enforceable only

15A NCAC 02Q .0700: TOXIC AIR POLLUTANT PROCEDURES 15A NCAC 02D .1100: CONTROL OF TOXIC AIR POLLUTANTS

The regulations at 15A NCAC 02Q .0700 require, with some exceptions, a permit to emit any toxic air pollutant (TAP) at levels greater than the TAP permitted emission rate (TPER) specified in 15A NCAC 02Q .0711. These regulations include the procedural rules used to comply with the TAP control requirements found at 15A NCAC 02D .1100. 15A NCAC 02D .1104 contains Acceptable Ambient Levels (AALs) for each TAP. Generally, a facility must conduct a dispersion modeling analysis to demonstrate that each TAP emitted above its respective TPER will not result in the respective AAL being exceeded beyond the facility's premises. Collectively, these "toxics" rules are state-enforceable only and are not subject to the TV requirements found at 15A NCAC 02Q .0500.

The facility is not currently subject to any NC Air Toxics programs (02Q .0700 and 02D .1100). The new replacement boiler B-1 is subject to 40 CFR 63, Subpart DDDDD, so it is exempt from NC Air Toxics programs pursuant to 02Q .0702(a)(27)(B). However, it is indicated in 15A NCAC 02Q .0706 (d) "sources meeting the exemption set forth in 15A NCAC 02Q .0702(a)(27) shall be reviewed by the Division pursuant to G.S.143-215.107(a)(5)b". Therefore, air toxic evaluation was conducted for the pollutants expected to be emitted from the new boiler on a facility-wide basis. This minor modification for boiler replacement - removing the old boiler (B-1, 12.25 million Btu/hr) and then installing the new replacement boiler (B-1, 13.39 million Btu/hr) - will result in slight increases of emissions for the TAPs emitted from the combustion of natural gas.

According to Mr. Hopper's email received on February 5, 2025, "The old boiler being replaced does have low NO_x burners and actual yearly natural gas usage of 77.22 million scf." This permit engineer calculated the emissions of the being replaced boiler (12.25 million BTU/HR) using spreadsheets of DAQ Natural Gas Combustion Emissions Calculator (See Attachment 2). As previously discussed in this review, the emissions for the being installed new natural gas-fired boiler (13.39 mm BTU/HR) have been estimated using the DAQ Natural Gas Combustion Emissions Calculator (See Attachment 2).

The facility-wide emissions of the TAPs affected by the boiler replacement have been estimated below based on the latest CY2023 Emissions Inventory and the calculations of TAPs emissions from the old and new boilers (See Attachment 2).

TAPs	CY2023 Emissions Inventory ⁽¹⁾	Old Boiler B-1	New Boiler B-1	Expected Facility-Wide Emissions ⁽²⁾	TPER
Acetaldehyde	2.68E-07 lb/hr	1.83E-07 lb/hr	2.0E-07 lb/hr	2.85E-07 lb/hr	6.8 lb/hr
Acrolein	3.17E-07 lb/hr	2.16E-07 lb/hr	2.36E-07 lb/hr	3.37E-07 lb/hr	0.02 lb/hr
Ammonia (as NH ₃)	0.0564 lb/hr	0.0384 lb/hr	0.042 lb/hr	0.060 lb/hr	0.68 lb/hr
Benzo(a)pyrene	0.00019 lb/yr	9.27E-05 lb/yr	9.27E-05 lb/yr	1.90E-04 lb/yr	2.2 lb/yr
Benzene	0.324 lb/yr	0.162 lb/yr	0.162 lb/yr	0.324 lb/yr	8.1 lb/yr
Formaldehyde	0.00132 lb/hr	9.01E-04 lb/hr	9.85E-04 lb/hr	1.40E-03 lb/hr	0.04 lb/hr
Hexane, n-	0.762 lb/day	0.519 lb/day	0.567 lb/day	0.81 lb/day	23 lb/day
Toluene	5.99E-05 lb/hr 1.44E-03 lb/day	4.08E-05 lb/hr 9.8E-04 lb/day	4.46E-5 lb/hr 1.07E-03 lb/day	3.80E-06 lb/hr 1.53E-03 lb/day	14.4 lb/hr 98 lb/day

⁽¹⁾ Emission rates were reported as lb/yr in the CY2023 Emissions Inventory. The unites of lb/day and lb/hr were converted from: lb/yr divided by 365 days/yr. to lb/day; and lb/yr divided by 8760 hr./yr. to lb/hr., respectively.

⁽²⁾ Expected Facility-Wide Emissions = CY2023 Emissions Inventory - Old Boiler B-1 + New Boiler B-1

The results in the above table show that the expected facility-wide TAP emissions are all below the applicable TPERs; so, the new replacement boiler B-1 does not trigger an air toxics review.

State Enforceable Only

15A NCAC 02D .1806: CONTROL AND PROHIBITION OF ODOROUS EMISSIONS

This rule requires that the Permittee shall not operate the facility without implementing management practices or installing and operating odor control equipment sufficient to prevent odorous emissions from the facility from causing or contributing to objectionable odors beyond the facility's boundary.

The new replacement boiler B-1 is not expected to cause an increase in odors. No changes will be made to the existing permit condition. Continued compliance with this rule is expected.

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

NSPS

The facility's new replacement natural gas-fired boiler (ID Nos. B-1) is subject to NSPS, 40 CFR 60, Subpart Dc. See discussion in Section IV above under 15A NCAC 02D .0524 – New Source Performance Standards for the replacement natural gas-fired boiler (ID No. ES-B1).

NESHAP/MACT

The facility's new replacement natural gas-fired boiler (ID Nos. B-1) is subject to the National Emission Standards for Hazardous Air Pollutants, 40 CFR 63 for the Subpart DDDDD for Industrial, Commercial, and Institutional Boilers and Process Heaters. See discussion in Section IV above under 15A NCAC 02D .1111: "Maximum Achievable Control Technology" (40 CFR 63, Subpart DDDDD) for the replacement natural gas-fired boiler (ID No. ES-B1).

NSR/PSD

The facility is in Rowan County which is currently designated as attainment or unclassified for all PSD regulated pollutants.

As shown in the table to Section V above, the potential emissions from the new natural gas-fired boiler (B-1) are below the applicable significant emissions rates (SERs) under PSD for all pollutants. Therefore, this modification to an existing major stationary source (i.e., Teijin Automotive facility) is considered a minor modification under PSD.

PSD increment tracking has been triggered in Rowan County for PM₁₀, SO₂, and NO_x with a baseline date of July 3, 1978, June 4, 1981, and June 19, 1998, respectively. Based on the calculations of the emissions rates from the old and new boilers (See Attachment 2), the actual emissions changes affected by the boiler replacement requested in the permit application 8000176.24B have been estimated for the following air pollutants:

An increase of PM₁₀ = 0.00 lb/hr

An increase of SO₂ = 0.00 lb/hr

An increase of NO_x = 0.66 - 0.60 lb/hr = 0.06 lb/hr

Increment tracking will be required for NO_x.

112(r)

The facility is not subject to Section 112(r) because it does not store any of the regulated substances in quantities above the applicable thresholds. But the facility is subject to the General Duty requirements of 112(r).

CAM

DAQ does not necessarily need to address compliance with CAM (02D .0614) during minor modification. CAM compliance will be addressed during the next permit renewal.

VII. Compliance History

As previously mentioned, the most recent compliance inspection was conducted by Afroze Fatima of DAQ MRO on June 05, 2024. The inspector found that the monthly inspection and maintenance requirements for the spray booths (ID Nos. PSB 1-7) and the bagfilter (ID No. C-2) were not performed within a 30-day period following the last inspection. This facility appeared to be in compliance with other applicable air quality rules at the time of the inspection.

The following NOV letters were issued to this facility within the past 5 years.

- DAQ MRO issued a Notice of Violation (NOV) letter on June 17, 2024 for failure to comply with Air Permit No. 09076T13, specific Condition Nos. 2.1. B.1.c.d and 2.1.C.1.c.d. A response was received on July 10, 2024 and the violation has been resolved.

- A Notice of Violation (NOV) letter was issued on March 11, 2022 for failure to submit the required report within the required timeframe in violation of Air Permit No. 09076X12, General Condition P. A response was received on March 21, 2022 and the violation has been resolved.
- A Notice of Violation (NOV) letter was issued on July 29, 2021 for failure to submit the required report within the required timeframe in violation of Air Permit No. 09076T12, General Condition No. X. A response was received on August 2, 2021 and the violation has been resolved.

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

The application is being processed pursuant to the minor modification procedures at 15A NCAC 02Q .0515. As such no public participation is required. Pursuant to 02Q .0515, the permit revision will be “proposed” to EPA for their 45-days review and the changes made to the current permit will become effective on the 60th day from the issuance date if no EPA comment is received. If the EPA does comment on the “proposed” permit within the 45-days review, it will be reissued with the changes as appropriate.

IX. PE Seal

The new replacement boiler B-1 is not to be fitted with any air pollution control device. The 02Q .0112 - Application requiring a Professional Engineering Seal - is not applicable. Therefore, a PE Seal was not required for this minor modification application.

X. Zoning

A zoning consistency determination per 02Q .0507(d)(1) was required for this permitting action as it involved the expansion for the different size boiler at an existing facility. The zoning determination was mailed to DAQ MRO on January 30, 2025 and forwarded to DAQ RCO on February 7, 2025. A completed ZCD, signed by Aaron Poplin, Planner of Rowan County Planning and Development, dated January 9, 2025, states that the proposed operation IS consistent with applicable zoning ordinances.

XI. Recommendations

This permit minor modification application has been reviewed by NC DAQ to determine compliance with all procedures and requirements. NC DAQ has determined that this facility appears to be complying with all applicable requirements. DAQ MRO has received a copy of this permit and had no comments.

Recommend Issuance of Permit No. 09076T14.

XII. Summary of Attachment

1. Email Correspondence with the Facility Contact, Mr. Rodney Hopper.
2. Emissions estimates for the new being installed boiler and the old being replaced boiler.

8000176.24B Attachment 1

From: [Rodney Hopper](#)
To: [Xiao, Chengqing](#); [Christopher Jones](#)
Subject: [External] Re: External: RE: Permit draft review - Air Permit Minor Modification Application 8000176.24B - TAT Salisbury, North Carolina USA
Date: Monday, April 7, 2025 11:14:41 AM
Attachments: [image001.png](#)

CAUTION: External email. Do not click links or open attachments unless verified. Report suspicious emails with the Report Message button located on your Outlook menu bar on the Home tab.

Hello Chengqing,

Hope you are doing well.

No comments from the team and I at this point.

Thanks for following up.

Rodney

Rodney Hopper, REM
Plant EHS Manager (Salisbury)

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(m) +1 980-944-2174

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Sent: Monday, April 7, 2025 11:11 AM
To: Christopher Jones <Christopher.Jones@teijinautomotive.com>; Rodney Hopper <Rodney.Hopper@teijinautomotive.com>
Subject: External: RE: Permit draft review - Air Permit Minor Modification Application 8000176.24B - TAT Salisbury, North Carolina USA

CAUTION: Originated from outside of the Teijin Auto. Do not click links or open attachments unless you recognize the sender.

Good morning Mr. Jones and Mr. Hopper,

I want to follow up on my previous email below sent on Friday, March 28, 2025 and see if you all have had a chance to review the permit draft and the supporting legal basis for Title V air permit minor modification application 8000176.24B. Please let me know if you

have any comments.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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From: Xiao, Chengqing
Sent: Friday, March 28, 2025 2:39 PM
To: Christopher Jones <Christopher.Jones@teijinautomotive.com>; Rodney Hopper <Rodney.Hopper@teijinautomotive.com>
Cc: Kolli, Mounika <mounika.kolli@deq.nc.gov>; Wolanin, Melinda <melinda.wolanin@deq.nc.gov>; Parekh, Samir <samir.parekh@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: Permit draft review - Air Permit Minor Modification Application 8000176.24B - TAT
Salisbury, North Carolina USA

Good afternoon Mr. Jones,

Please find the attached draft of Air Quality Permit No. 09076T14 and the supporting legal basis for Title V air permit minor modification application 8000176.24B for Teijin Automotive Technologies NC Composites, LLC - Salisbury. Please review these documents carefully and email me any comments or changes you may have by the close of Friday, April 4, 2025.

DAQ looks forward to hearing from you on the above draft documents.

Thank you all for the help!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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Email correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties by an authorized state official.

From: [Rodney Hopper](#)
To: [Xiao, Chengqing](#)
Cc: [Thaker, Rahul](#)
Subject: [External] Emission Source Information for Permit Minor Modification Application 8000176.24B - TAT Salisbury, North Carolina USA
Date: Friday, February 14, 2025 4:23:53 PM
Attachments: [FORM 2025 0211 NCDEO D1 FacilityWideEmissions.pdf](#)
[FORM 2025 0108 NCDEO B Updated.pdf](#)

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Hello Chengqing,

I hope this message finds you well.

Please find attached the updated boiler-specific emission source information on Form B as requested for the minor modification application 8000176.24B. The new boiler, which includes an oxygen trim, is detailed in the manual. See cover image attached.

The facility will proceed with removing the old boiler and installing the new boiler after the older one is removed. Additionally, I have attached the facility-wide potential emissions rates as filled out on Form D1 for the facility permit renewal application 8000176.24A.

Should you require any further information, please do not hesitate to reach out.

Thanks,

Rodney

Rodney Hopper, REM
Plant EHS Manager (Salisbury)

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02 TRIM

Hawk ICS
Operation and Maintenance Manual



750-224
03/2010

From: [Xiao, Chengqing](#)
To: [Rodney Hopper](#)
Cc: [Christopher Jones](#); [Thaker, Rahul](#)
Subject: RE: [External] Re: External: RE: Air Permit Minor Modification Application. ID#8000176.24B
Date: Tuesday, February 11, 2025 3:24:00 PM
Attachments: [image001.png](#)
[Incorrect Forms D1 & B.pdf](#)
[Boiler B-1 Emission Calculations nqrevN20170105.xls](#)

Good afternoon Rodney,

I received the documents forwarded from DAQ MRO regional office, including the Zoning Consistency Determination (ZCD), Forms A1, B, and D1. I reviewed the forms and noticed that the emissions rates filled out on Form B and Form D1 are incorrect. Please help to provide the technical additional information summarized below.

Regarding permit minor modifications application **8000176.24B** received by DAQ on 12/13/2024:

- The emissions rates filled out on the Form B were the facility-wide emissions from the CY2023 Emissions Inventory submitted by the facility (See yellow highlighted areas on the attached file). They are incorrect. Please be advised that Form B asks the emissions estimates from the new boiler B-1 (13.39 mm BTU/HR). The emissions estimates are calculations by the Natural Gas Combustion Emissions Calculator (DAQ spreadsheets) for "Small Boiler (<100 mm BTU/HR)". Please correct the emissions rates on Form B based on the attached spreadsheets (DAQ Natural Gas Combustion Emissions Calculator) and resubmit Form B.
- Please verify whether the new boiler (model # CBLE4D700-400-150-ST, 13.39 MM BTU/HR) has oxygen trim, or not.
- Please confirm that the facility will remove the old boiler (12.25 MM BTU/HR) first, and then install the new boiler.

Please respond on the above technical requests by February 18, 2025. Once the above documents are received by DAQ, a complete acknowledgement letter for the application 8000176.24B will be sent to the facility.

Regarding permit renewal application **8000176.24A** received by DAQ on 10/16/2024:

- The facility-wide potential emissions rates filled out on the submitted Form D1 are incorrect (See yellow highlighted areas on the attached file). The numbers were the facility-wide actual emissions rates reported in the CY2023 Emissions Inventory. Please check the facility's records for the potential emissions rates, revise and resubmit Form D1.

Please be advised that the permit renewal application 8000176.24A will be on hold until the above technical additional information has been received.

Please feel free to contact me if you have any questions. Thank you for your assistance in this matter.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
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Chengqing.xiao@deq.nc.gov



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From: Xiao, Chengqing
Sent: Friday, February 7, 2025 1:28 PM
To: Rodney Hopper <Rodney.Hopper@tejinautomotive.com>
Cc: Christopher Jones <Christopher.Jones@tejinautomotive.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] Re: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

Good afternoon Rodney,

I just got an email telling me that the documents you mailed last week arrived today from MRO regional office. Please just verify the first two items in my email below and ignore the last one.

Thank you and have a good weekend!

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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From: Xiao, Chengqing

Sent: Thursday, February 6, 2025 4:48 PM

To: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>

Cc: Christopher Jones <Christopher.Jones@teijinautomotive.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>

Subject: RE: [External] Re: External: RE: Air Permit Minor Modification Application. ID#8000176.24B

Hello Rodney,

I received the technical additional information emailed below. Please verify the following questions.

- Does the new boiler (model # CBLE4D700-400-150-ST, 13.39 MM BTU/HR) have oxygen trim? I can't find the boiler manual on CleaverBrooks website.
- Per our phone conversation last week, the facility will remove the old boiler (12.25 MM BTU/HR) first, and then install the new boiler. Please confirm it.
- In the phone call, you said that the letter of Zoning Consistency Determination (ZCD) along with revised Forms A1 and B were mailed last week. We haven't seen them yet. Please verify you mailed them to DAQ Raleigh Central Office or DAQ MRO regional office.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)

Environmental Engineer, Division of Air Quality

North Carolina Department of Environmental Quality

Office: (919) 707-8476

Chengqing.xiao@deq.nc.gov



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From: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>
Sent: Wednesday, February 5, 2025 2:28 PM
To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>
Cc: Christopher Jones <Christopher.Jones@teijinautomotive.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: Re: [External] Re: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

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Hello Chengqing,

1. I acknowledge the combustion emissions calculations noted for the "small boiler", and agree that the input screen for "Type Of Boiler" should be "Small Boiler (<100 mm BTU/HR)".
2. The boiler manufacturer is Cleaver Brooks and the model # is CBLE4D700-400-150-ST, its a NEW boiler manufactured in 2024.
3. The old boiler being replaced does have low NOx burners and actual yearly natural gas usage of 77.22 million scf.
4. See updated B1 Form with "Indirect" chosen as the heating mechanism and the Maximum Design and Requested Capacity Limitation.
5. Christopher Jones replaced Wayne Meyer as Responsible Official.

Let me know if you have any questions.

Thanks,

Rodney

Rodney Hopper, REM

Plant EHS Manager (Salisbury)

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(m) +1 980-944-2174

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Sent: Tuesday, January 28, 2025 4:53 PM

To: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>

Cc: Christopher Jones <Christopher.Jones@teijinautomotive.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>

Subject: RE: [External] Re: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

Good afternoon Rodney,

I hope that this email finds you well. I'm following up on the previous email sent on January 10, 2025 below and wondering if there is any update on this.

In addition, I have more questions below raised from my technical review.

1. The emissions estimates of the new natural gas-fired boiler (ID No. B-1, 13.39 MM BTU/HR) calculated using the DAQ NCDENR Natural Gas Combustion Emissions Calculator Revision N 01/05/2017 were submitted along with the permit minor modification application ID# 8000176.24B. Please see the attached file, which the "TYPE OF BOILER" on the page of "INPUT" was incorrectly chosen to "LARGE WALL-FIRED BOILER (> 100 mm BTU/HR)". I re-ran the spreadsheets of DAQ Natural Gas Combustion Emissions Calculator by choosing "SMALL BOILER (< 100 mm BTU/HR)" and got the different output of emissions rates. Please review the attached spreadsheet and let me know whether you agree with me on the calculations.
2. For the being installed new boiler B-1 (13.39 MM BTU/HR). Please provide the following information.
 - Boiler's manufacturer (CleaverBrooks?) and model #
 - Is it a new or reconstructed boiler? What are the commenced construction date and year?
 - Does the boiler have (1) low Nox burners, (2) oxygen trim?
3. For the being replaced old boiler B-1 (12.25 MM BTU/HR), please provide the following information.
 - Does the boiler have low NOx burners?

- What are the actual yearly natural gas usage (million scf)?
4. Please see the attached Form B1 and correct the highlighted areas. Please check “INDIRECT” box for the HEATING MECHANISM. The number of “115.00” filled out for the “Fuel Usage (INCLUDE STARTUP/BACKUP FUELS)” Section does not look correct. Please specify the Maximum Design Capacity and the REQUESTED CAPACITY LIMITATION if these parameters are available from the boiler manufacturer.
 5. I noticed that Mr. Christopher Jones, Plant Manager is listed as the Authorized Contact for Teijin Automotive Technologies NC Composites, LLC- Salisbury in DAQ IBEAM system. I don’t find a letter of Responsible Official Delegation in Laserfiche and assume that it was sent to DAQ MRO regional office recently. Please confirm that Mr. Jones replaced Mr. Wayne Meyer.

Please feel free to contact me if you have any questions. Thank you for your assistance in this matter.

Chengqing

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From: Xiao, Chengqing
Sent: Friday, January 10, 2025 11:59 AM
To: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>
Cc: Wayne Meyer <Wayne.Meyer@teijinautomotive.com>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: RE: [External] Re: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

Hello Rodney,

Per our phone conversation this morning, I have the summary of our phone discussions below.

Regarding permit minor modifications application 8000176.24B:

- You will forward the letter of zoning consistency determination to DAQ.
- Revise Form A1: enter applicable regulations to each row of the table (See attached file with orange highlighted areas).
- Fill out the emissions rates on Form B based on the calculations by the Natural Gas Combustion Emissions Calculator (DAQ spreadsheets) for the new boiler B-1 (13.39 mm BTU/HR)

Once the above documents are received by DAQ, a complete acknowledgement letter for the application 8000176.24B will be sent to the facility.

Regarding permit renewal application 8000176.24A received by DAQ on 10/16/2024:

The facility-wide emissions rates on Form D1 are incorrect. You will check the facility's records, revise, and resubmit Form D1.

Please be advised that the permit renewal application 8000176.24A will be on hold until the above technical additional information has been received.

Please feel free to contact me if you have any questions.

Thank you for your assistance in this matter.

Chengqing

Chengqing Xiao (he/him/his)
Environmental Engineer, Division of Air Quality
North Carolina Department of Environmental Quality
Office: (919) 707-8476
Chengqing.xiao@deq.nc.gov



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From: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>

Sent: Wednesday, January 8, 2025 3:08 PM

To: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>; Wayne Meyer <Wayne.Meyer@teijinautomotive.com>

Cc: Horne, Connie <connie.horne@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>

Subject: [External] Re: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

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Hello Chengqing,

Please see attached the original submittal package sent to DEQ in December 2024.

In a previous email you mentioned the compliance certification had not been signed and that forms A1, B, B1, E6 and a zoning consistency determination was needed.

During a call earlier this week, we spoke about completing forms B and B1 as a summary of emissions calculations in the submittal.

All needed forms have been updated or completed for review. Hard copies of the attached forms will be sent to DEQ via postal mail.

Let me know if you have any questions.

Thanks,

Rodney

Rodney Hopper, REM

Plant EHS Manager (Salisbury)

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(o) +1 704-645-4677

(m) +1 980-944-2174

From: Xiao, Chengqing <chengqing.xiao@deq.nc.gov>

Sent: Wednesday, January 8, 2025 9:32 AM

To: Rodney Hopper <Rodney.Hopper@teijinautomotive.com>; Wayne Meyer
<Wayne.Meyer@teijinautomotive.com>

Cc: Horne, Connie <connie.horne@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>

Subject: External: RE: Air Permit Minor Modificaiton Application. ID#8000176.24B

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Good morning Mr. Meyer,

Your air permit application (8000176.24B) for Teijin Automotive Technologies NC Composites, LLC Salisbury, was received by this division on December 13, 2024. This application has been deemed incomplete. Please find the attached Acknowledgement letter for this application.

Thanks,

Chengqing

Chengqing Xiao (he/him/his)

Environmental Engineer, Division of Air Quality

North Carolina Department of Environmental Quality

Office: (919) 707-8476

Chengqing.xiao@deq.nc.gov



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From: Xiao, Chengqing
Sent: Monday, December 23, 2024 4:54 PM
To: Rodney.Hopper@teijinautomotive.com
Cc: Wayne.Meyer@teijinautomotive.com; Horne, Connie <connie.horne@deq.nc.gov>; Thaker, Rahul <rahul.thaker@deq.nc.gov>
Subject: Air Permit Minor Modificaiton Application. ID#8000176.24B

Good afternoon Mr. Rodney,

The Title V air permit Minor Modification application for Teijin Automotive Technologies NC Composites, LLC- Salisbury (Appl. ID#8000176.24B) is assigned to me. I did a cursory review on the application and noticed the following items have not been received.

- The facility chose ePay for the permit modification application fee, which is due on 12/28/2024
- A zoning consistency determination
- Form B and Form B1 (see attached files)
- Please fill in the applicable regulations 15A NCAC 02D .0503, 02D .0516, 02D .0521, 02D .0524 (40 CFR 60, Subpart Dc), 02D .1111 (40 CFR 63, Subpart DDDDD) on the table under MINOR MODIFICATION DESCRIPTION of Form A and resubmit the revised Form A.

Please be advised to prepare and submit the above items to DAQ. An acknowledgement letter for this Title V air permit Minor Modification application will be sent to the facility after New Year holiday.

Please feel free to contact me if you have any questions.

Thank you for the help. Merry Christmas!

Chengqing

Chengqing Xiao (he/him/his)

Environmental Engineer, Division of Air Quality

North Carolina Department of Environmental Quality

Office: (919) 707-8476

Chengqing.xiao@deq.nc.gov



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8000176.24B Attachment 2

NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION N 01/05/2017 - INPUT SCREEN



Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. NCDEQ does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. NCDEQ is not responsible for errors or omissions that may be contained herein.

Directions: Enter and select information in the boxes in the column on the right:

FIELDS

COMPANY NAME:
FACILITY ID NUMBER:
PERMIT NUMBER
FACILITY CITY:
FACILITY COUNTY:
SPREADSHEET PREPARED BY:

SELECTIONS

Teijin Automotive Technologies NC Composites, LLC -
8000176
09076T13
Salisbury
Rowan
C Xiao

EMISSION SOURCE ID NO.: B-1
MAXIMUM HEAT INPUT (MILLION BTU PER HOUR): 13.39 mmBTU/HR

TYPE OF BOILER: SMALL BOILER (<100 mmBTU/HR) ▼

DOES THE SOURCE ALSO BURN COAL OR FUEL OIL? No ▼

DATE OF CONSTRUCTION: 5/1/2000
(mm/dd/yyyy)

ADDITIONAL INFORMATION FOR GREENHOUSE GAS (GHG) EMISSIONS

ENTER Calculation Tier from EPA Mandatory Reporting Rule (MRR)* Subpart C
* See <http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>

TIER 1: DEFAULT HHV AND DEFAULT EF ▼

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER FUEL CARBON CONTENT

SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER MOLECULAR WEIGHT

kg/kg-mole

FUEL HEATING VALUE

ANNUAL AVG MEASURED FUEL HEATING VALUE (BTU/SCF): 1,020 BTU/SCF

DEFAULT FUEL HEATING VALUE (BTU/SCF) -- will be used for GHG calculations under TIER 1 approach

1,028 BTU/SCF default value is from EPA's mandatory reporting rule, Table C-1, "Natural Gas Pipeline (Weighted U.S. Average)"


USAGE AND OTHER SOURCE-SPECIFIC DATA

ACTUAL YEARLY FUEL USAGE (MILLION SCF): 77.22 MILLION SCF
CALCULATED POTENTIAL YEARLY USAGE (MILLION SCF) 115.00 MILLION SCF
REQUESTED ANNUAL LIMITATION (MILLION SCF) 115.00 MILLION SCF (TYPEOVER IF NECESSARY - DEFAULT IS POTENTIAL)

DAILY HOURS OF OPERATION: 24 HOURS

TYPE OF EMISSION CONTROL: LOW NOx BURNERS ▼

IS SNCR APPLIED TO THE BOILER? NO ▼



NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION N 01/05/2017 - OUTPUT SCREEN

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. NCDEQ does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. NCDEQ is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	Teijin Automotive Technologies NC Composites, LLC - Salisbury	FACILITY ID NO.:	8000176
EMISSION SOURCE DESCRIPTION:	13.39 MMBTU/HR NATURAL GAS-FIRED BOILER	PERMIT NUMBER:	09076T13
EMISSION SOURCE ID NO.:	B-1	FACILITY CITY:	Salisbury
CONTROL DEVICE:	LOW NOx BURNERS	FACILITY COUNTY:	Rowan
SPREADSHEET PREPARED BY:	C Xiao	POLLUTANT	CONTROL EFF.
ACTUAL FUEL THROUGHPUT:	77.22 10 ⁶ SCF/YR	FUEL HEAT VALUE:	1,020 BTU/SCF
POTENTIAL FUEL THROUGHPUT:	115.00 10 ⁶ SCF/YR	BOILER TYPE:	SMALL BOILER (<100 mmBTU/HR)
REQUESTED MAX. FUEL THRPT:	115.00 10 ⁶ SCF/YR	HOURS OF OPERATIONS:	24

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

AIR POLLUTANT EMITTED	ACTUAL EMISSIONS		POTENTIAL EMISSIONS				EMISSION FACTOR	
	(BEFORE CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)		lb/mmBtu	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	uncontrolled	controlled
PARTICULATE MATTER (Total)	0.01	0.02	0.01	0.03	0.01	0.03	0.001	0.001
PARTICULATE MATTER (Filterable)	0.00	0.01	0.00	0.01	0.00	0.01	0.000	0.000
PARTICULATE MATTER (Condensable)	0.00	0.01	0.00	0.02	0.00	0.02	0.000	0.000
PM 2.5 (Total)	0.01	0.02	0.01	0.02	0.01	0.02	0.000	0.000
PM 2.5 (Filterable)	0.00	0.00	0.00	0.01	0.00	0.01	0.000	0.000
SULFUR DIOXIDE (SO ₂)	0.01	0.02	0.01	0.03	0.01	0.03	0.001	0.001
NITROGEN OXIDES (NO _x)	0.66	1.93	1.31	5.75	0.66	2.87	0.098	0.049
CARBON MONOXIDE (CO)	1.10	3.24	1.10	4.83	1.10	4.83	0.082	0.082
VOLATILE ORGANIC COMPOUNDS (VOC)	0.07	0.21	0.07	0.32	0.07	0.32	0.005	0.005

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

TOXIC / HAZARDOUS AIR POLLUTANT	CAS NUMBER	ACTUAL EMISSIONS		POTENTIAL EMISSIONS				EMISSION FACTOR	
		(AFTER CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)		lb/mmBtu	
		lb/hr	lbs/yr	lb/hr	lbs/yr	lb/hr	lbs/yr	uncontrolled	controlled
Acetaldehyde (TH)	75070	2.00E-07	1.17E-03	2.00E-07	1.75E-03	2.00E-07	1.75E-03	1.49E-08	1.49E-08
Acrolein (TH)	107028	2.36E-07	1.39E-03	2.36E-07	2.07E-03	2.36E-07	2.07E-03	1.76E-08	1.76E-08
Ammonia (T)	7664417	4.20E-02	2.47E+02	4.20E-02	3.68E+02	4.20E-02	3.68E+02	3.14E-03	3.14E-03
Arsenic unlisted compounds (TH)	ASC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene (TH)	71432	2.76E-05	1.62E-01	2.76E-05	2.41E-01	2.76E-05	2.41E-01	2.06E-06	2.06E-06
Benzo(a)pyrene (TH)	50328	1.58E-08	9.27E-05	1.58E-08	1.38E-04	1.58E-08	1.38E-04	1.18E-09	1.18E-09
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium metal (elemental unreacted) (TH)	7440439	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromic acid (VI) (TH)	7738945	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt unlisted compounds (H)	COC-other	1.10E-06	6.49E-03	1.10E-06	9.66E-03	1.10E-06	9.66E-03	8.24E-08	8.24E-08
Formaldehyde (TH)	50000	9.85E-04	5.79E+00	9.85E-04	8.62E+00	9.85E-04	8.62E+00	7.35E-05	7.35E-05
Hexane, n- (TH)	110543	2.36E-02	1.39E+02	2.36E-02	2.07E+02	2.36E-02	2.07E+02	1.76E-03	1.76E-03
Lead unlisted compounds (H)	PBC-other	6.56E-06	3.86E-02	6.56E-06	5.75E-02	6.56E-06	5.75E-02	4.90E-07	4.90E-07
Manganese unlisted compounds (TH)	MNC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury vapor (TH)	7439976	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Napthalene (H)	91203	8.01E-06	4.71E-02	8.01E-06	7.01E-02	8.01E-06	7.01E-02	5.98E-07	5.98E-07
Nickel metal (TH)	7440020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium compounds (H)	SEC	3.15E-07	1.85E-03	3.15E-07	2.76E-03	3.15E-07	2.76E-03	2.35E-08	2.35E-08
Toluene (TH)	108883	4.46E-05	2.63E-01	4.46E-05	3.91E-01	4.46E-05	3.91E-01	3.33E-06	3.33E-06
Total HAPs		2.47E-02	1.45E+02	2.47E-02	2.16E+02	2.47E-02	2.16E+02	1.84E-03	1.84E-03
Highest HAP	Hexane	2.36E-02	1.39E+02	2.36E-02	2.07E+02	2.36E-02	2.07E+02	1.76E-03	1.76E-03

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS					EMISSION FACTOR	
TOXIC AIR POLLUTANT	CAS Num.	lb/hr	lb/day	lb/yr	uncontrolled	controlled
Acetaldehyde (TH)	75070	2.00E-07	4.79E-06	1.17E-03	1.49E-08	1.49E-08
Acrolein (TH)	107028	2.36E-07	5.67E-06	1.39E-03	1.76E-08	1.76E-08
Ammonia (T)	7664417	4.20E-02	1.01E+00	2.47E+02	3.14E-03	3.14E-03
Arsenic unlisted compounds (TH)	ASC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene (TH)	71432	2.76E-05	6.62E-04	1.62E-01	2.06E-06	2.06E-06
Benzo(a)pyrene (TH)	50328	1.58E-08	3.78E-07	9.27E-05	1.18E-09	1.18E-09
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium metal (elemental unreacted) (TH)	7440439	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Soluble chromate compounds, as chromium (VI) equivalent	SoICR6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde (TH)	50000	9.85E-04	2.36E-02	5.79E+00	7.35E-05	7.35E-05
Hexane, n- (TH)	110543	2.36E-02	5.67E-01	1.39E+02	1.76E-03	1.76E-03
Manganese unlisted compounds (TH)	MNC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury vapor (TH)	7439976	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel metal (TH)	7440020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene (TH)	108883	4.46E-05	1.07E-03	2.63E-01	3.33E-06	3.33E-06


GREENHOUSE GAS EMISSIONS INFORMATION (FOR EMISSIONS INVENTORY PURPOSES) - CONSISTENT WITH EPA MANDATORY REPORTING RULE (MRR) METHOD

GREENHOUSE GAS POLLUTANT	ACTUAL EMISSIONS			POTENTIAL EMISSIONS	
	EPA MRR CALCULATION METHOD: TIER 1				
	metric tons/yr	metric tons/yr, CO ₂ e	short tons/yr	short tons/yr	short tons/yr, CO ₂ e
CARBON DIOXIDE (CO ₂)	4208.84	4,208.84	4,639.45	6,855.33	6855.33
METHANE (CH ₄)	7.94E-02	1.98E+00	8.75E-02	1.29E-01	3.23E+00
NITROUS OXIDE (N ₂ O)	7.94E-03	2.37E+00	8.75E-03	1.29E-02	3.85E+00
		TOTAL CO ₂ e (metric tons)	4,213.19		TOTAL CO ₂ e (short tons)
					6,862.41

NOTE: CO₂e means CO₂ equivalent

NOTE: The DAQ Air Emissions Reporting Online (AERO) system requires short tons be reported. The EPA MRR requires metric tons be reported.

NOTE: Do not use greenhouse gas emission estimates from this spreadsheet for PSD (Prevention of Significant Deterioration) purposes.

NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION N 01/05/2017 - INPUT SCREEN	
 <p>Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.</p> <p>This spreadsheet is for your use only and should be used with caution. NCDEQ does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. NCDEQ is not responsible for errors or omissions that may be contained herein.</p>	
<p><i>Directions: Enter and select information in the boxes in the column on the right:</i></p>	
<p>FIELDS</p> <p>COMPANY NAME: FACILITY ID NUMBER: PERMIT NUMBER: FACILITY CITY: FACILITY COUNTY: SPREADSHEET PREPARED BY:</p> <p>EMISSION SOURCE ID NO.: MAXIMUM HEAT INPUT (MILLION BTU PER HOUR): TYPE OF BOILER: DOES THE SOURCE ALSO BURN COAL OR FUEL OIL? DATE OF CONSTRUCTION:</p>	<p>SELECTIONS</p> <p>Tejin Automotive Technologies NC Composites, LLC. 6000776 09076113 Salisbury Rowan C Xiao</p> <p>Old boiler B-1 12.25 mmBTUHR</p> <p>SMALL BOILER (<100 mmBTU/HR)</p> <p>No</p> <p>5/12/2000 (mm/dd/yyyy)</p> <p>ENTER Calculation Tier from EPA Mandatory Reporting Rule (MRR)? Subpart C TIER 1: DEFAULT HHV AND DEFAULT EF * See http://www.epa.gov/climatechange/emissions/ghgrulemaking.html</p> <p>SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER FUEL CARBON CONTENT</p> <p>SINCE TIER 3 IS NOT BEING USED, DO NOT ENTER MOLECULAR WEIGHT</p> <p>FUEL HEATING VALUE ANNUAL AVG MEASURED FUEL HEATING VALUE (BTU/SCF): 1.020 BTU/SCF DEFAULT FUEL HEATING VALUE (BTU/SCF) -- will be used for GHG calculations under TIER 1 approach 1.028 BTU/SCF [default value is from EPA's mandatory reporting rule, Table C-1, "Natural Gas Pipeline (Weighted U.S. Average)"]</p> <p>USAGE AND OTHER SOURCE SPECIFIC DATA</p> <p>ACTUAL YEARLY FUEL USAGE (MILLION SCF): 77.22 MILLION SCF CALCULATED POTENTIAL YEARLY USAGE (MILLION SCF): 105.21 MILLION SCF REQUESTED ANNUAL LIMITATION (MILLION SCF): 105.21 MILLION SCF (TYPEOVER IF NECESSARY - DEFAULT IS POTENTIAL)</p> <p>DAILY HOURS OF OPERATION: 24 HOURS</p> <p>TYPE OF EMISSION CONTROL: LOW NOx BURNERS</p> <p>IS SNCR APPLIED TO THE BOILER? NO</p>

*** The area below is for calculation purposes to the left

SELECTION SUMMARY AND SOME BTU CALCULATIONS

TYPE SELECTION = 2 SMALL BOILER (<100 mmBTU/HR)
1 = LARGE WALL-FIRED BOILER (> 100 mmBTU/HR)
2 = SMALL BOILER (<100 mmBTU/HR)
3 = TANGENTIAL FIRED BOILER (ALL SIZES)
4 = RESIDENTIAL FURNACE (<0.3 mmBTU/HR)

NSPS >250MMBtu/hr? FALSE
After 8/17/1971 ? TRUE 0
If both 0, then Pre-NSPS OR
>100MMBtu/hr? FALSE
After 6/19/1984 ? TRUE 0

dual fuel boiler?
1 2 No
1= Yes
2= No

CONTROL SELECT = 2 LOW NOx BURNERS
1 = NO CONTROL
2 = LOW NOx BURNERS
3 = *****
4 = LOW NOx BURNERS/FGR

TIER SELECTED for Greenhouse Gas Calculation Method
HHV is higher heating value of fuel (mmBTU per quantity of fuel); EF is Emission factor (kg GHG per Million Btu)
TIER SELECT = 1
TIER 1: DEFAULT HHV AND DEFAULT EF
TIER 2: MEASURED HHV (ANNUAL AVG) AND DEFAULT EF
TIER 3: MEASURED CARBON CONTENT (ANNUAL AVG)


NOTE: For TIER 3, Carbon content and MW must be measured (and the annual avgs must be computed).
Reasonable value for Carbon content (<http://www.epa.gov/epaospp/data/pdf/brochure.pdf>) for natural gas is 0.0149 kg Carbon / scf
Reasonable value for MW is 19 kg / kg-mole

FUEL HEATING VALUE: 1.020 BTU/SCF

HOURLY mmBTU: 12.25
DAILY mmBTU: 294
YEARLY ACTUAL mmBTU: 78764.4
YEARLY POTENTIAL mmBTU: 107310

YEARLY LIMITED POTENTIAL mmBTU: 107310
NO

SNCR= 2
1= YES
2= NO



NATURAL GAS COMBUSTION EMISSIONS CALCULATOR REVISION N 01/05/2017 - OUTPUT SCREEN

Instructions: Enter emission source / facility data on the "INPUT" tab/screen. The air emission results and summary of input data are viewed / printed on the "OUTPUT" tab/screen. The different tabs are on the bottom of this screen.

This spreadsheet is for your use only and should be used with caution. NCDEQ does not guarantee the accuracy of the information contained. This spreadsheet is subject to continual revision and updating. It is your responsibility to be aware of the most current information available. NCDEQ is not responsible for errors or omissions that may be contained herein.

SOURCE / FACILITY / USER INPUT SUMMARY (FROM INPUT SCREEN)

COMPANY:	Teijin Automotive Technologies NC Composites, LLC - Salisbury	FACILITY ID NO.:	8000176
EMISSION SOURCE DESCRIPTION:	12.25 MMBTU/HR NATURAL GAS-FIRED BOILER	PERMIT NUMBER:	09076T13
EMISSION SOURCE ID NO.:	B-1	FACILITY CITY:	Salisbury
CONTROL DEVICE:	LOW NOx BURNERS	FACILITY COUNTY:	Rowan
SPREADSHEET PREPARED BY:	C Xiao	POLLUTANT	CONTROL EFF.
ACTUAL FUEL THROUGHPUT:	77.22 10 ⁶ SCF/YR	FUEL HEAT VALUE:	1,020 BTU/SCF
POTENTIAL FUEL THROUGHPUT:	105.21 10 ⁶ SCF/YR	BOILER TYPE:	SMALL BOILER (<100 mmBTU/HR)
REQUESTED MAX. FUEL THRPT:	105.21 10 ⁶ SCF/YR	HOURS OF OPERATIONS:	24

CRITERIA AIR POLLUTANT EMISSIONS INFORMATION

AIR POLLUTANT EMITTED	ACTUAL EMISSIONS		POTENTIAL EMISSIONS				EMISSION FACTOR	
	(BEFORE CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)		lb/mmBtu	
	lb/hr	tons/yr	lb/hr	tons/yr	lb/hr	tons/yr	uncontrolled	controlled
PARTICULATE MATTER (Total)	0.01	0.02	0.01	0.03	0.01	0.03	0.001	0.001
PARTICULATE MATTER (Filterable)	0.00	0.01	0.00	0.01	0.00	0.01	0.000	0.000
PARTICULATE MATTER (Condensable)	0.00	0.01	0.00	0.02	0.00	0.02	0.000	0.000
PM 2.5 (Total)	0.01	0.02	0.01	0.02	0.01	0.02	0.000	0.000
PM 2.5 (Filterable)	0.00	0.00	0.00	0.01	0.00	0.01	0.000	0.000
SULFUR DIOXIDE (SO ₂)	0.01	0.02	0.01	0.03	0.01	0.03	0.001	0.001
NITROGEN OXIDES (NO _x)	0.60	1.93	1.20	5.26	0.60	2.63	0.098	0.049
CARBON MONOXIDE (CO)	1.01	3.24	1.01	4.42	1.01	4.42	0.082	0.082
VOLATILE ORGANIC COMPOUNDS (VOC)	0.07	0.21	0.07	0.29	0.07	0.29	0.005	0.005

TOXIC / HAZARDOUS AIR POLLUTANT EMISSIONS INFORMATION

TOXIC / HAZARDOUS AIR POLLUTANT	CAS NUMBER	ACTUAL EMISSIONS		POTENTIAL EMISSIONS				EMISSION FACTOR	
		(AFTER CONTROLS / LIMITS)		(BEFORE CONTROLS / LIMITS)		(AFTER CONTROLS / LIMITS)		lb/mmBtu	
		lb/hr	lbs/yr	lb/hr	lbs/yr	lb/hr	lbs/yr	uncontrolled	controlled
Acetaldehyde (TH)	75070	1.83E-07	1.17E-03	1.83E-07	1.60E-03	1.83E-07	1.60E-03	1.49E-08	1.49E-08
Acrolein (TH)	107028	2.16E-07	1.39E-03	2.16E-07	1.89E-03	2.16E-07	1.89E-03	1.76E-08	1.76E-08
Ammonia (T)	7664417	3.84E-02	2.47E+02	3.84E-02	3.37E+02	3.84E-02	3.37E+02	3.14E-03	3.14E-03
Arsenic unlisted compounds (TH)	ASC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene (TH)	71432	2.52E-05	1.62E-01	2.52E-05	2.21E-01	2.52E-05	2.21E-01	2.06E-06	2.06E-06
Benzo(a)pyrene (TH)	50328	1.44E-08	9.27E-05	1.44E-08	1.26E-04	1.44E-08	1.26E-04	1.18E-09	1.18E-09
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium metal (elemental unreacted) (TH)	7440439	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Chromic acid (VI) (TH)	7738945	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cobalt unlisted compounds (H)	COC-other	1.01E-06	6.49E-03	1.01E-06	8.84E-03	1.01E-06	8.84E-03	8.24E-08	8.24E-08
Formaldehyde (TH)	50000	9.01E-04	5.79E+00	9.01E-04	7.89E+00	9.01E-04	7.89E+00	7.35E-05	7.35E-05
Hexane, n- (TH)	110543	2.16E-02	1.39E+02	2.16E-02	1.89E+02	2.16E-02	1.89E+02	1.76E-03	1.76E-03
Lead unlisted compounds (H)	PBC-other	6.00E-06	3.86E-02	6.00E-06	5.26E-02	6.00E-06	5.26E-02	4.90E-07	4.90E-07
Manganese unlisted compounds (TH)	MNC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury vapor (TH)	7439976	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Napthalene (H)	91203	7.33E-06	4.71E-02	7.33E-06	6.42E-02	7.33E-06	6.42E-02	5.98E-07	5.98E-07
Nickel metal (TH)	7440020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Selenium compounds (H)	SEC	2.88E-07	1.85E-03	2.88E-07	2.52E-03	2.88E-07	2.52E-03	2.35E-08	2.35E-08
Toluene (TH)	108883	4.08E-05	2.63E-01	4.08E-05	3.58E-01	4.08E-05	3.58E-01	3.33E-06	3.33E-06
Total HAPs		2.26E-02	1.45E+02	2.26E-02	1.98E+02	2.26E-02	1.98E+02	1.84E-03	1.84E-03
Highest HAP	Hexane	2.16E-02	1.39E+02	2.16E-02	1.89E+02	2.16E-02	1.89E+02	1.76E-03	1.76E-03

TOXIC AIR POLLUTANT EMISSIONS INFORMATION (FOR PERMITTING PURPOSES)

TOXIC AIR POLLUTANT	CAS Num.	EXPECTED ACTUAL EMISSIONS AFTER CONTROLS / LIMITATIONS			EMISSION FACTOR	
		lb/hr	lb/day	lb/yr	uncontrolled	controlled
Acetaldehyde (TH)	75070	1.83E-07	4.38E-06	1.17E-03	1.49E-08	1.49E-08
Acrolein (TH)	107028	2.16E-07	5.19E-06	1.39E-03	1.76E-08	1.76E-08
Ammonia (T)	7664417	3.84E-02	9.22E-01	2.47E+02	3.14E-03	3.14E-03
Arsenic unlisted compounds (TH)	ASC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Benzene (TH)	71432	2.52E-05	6.05E-04	1.62E-01	2.06E-06	2.06E-06
Benzo(a)pyrene (TH)	50328	1.44E-08	3.46E-07	9.27E-05	1.18E-09	1.18E-09
Beryllium metal (unreacted) (TH)	7440417	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Cadmium metal (elemental unreacted) (TH)	7440439	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Soluble chromate compounds, as chromium (VI) equivalent	SoICR6	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Formaldehyde (TH)	50000	9.01E-04	2.16E-02	5.79E+00	7.35E-05	7.35E-05
Hexane, n- (TH)	110543	2.16E-02	5.19E-01	1.39E+02	1.76E-03	1.76E-03
Manganese unlisted compounds (TH)	MNC-other	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mercury vapor (TH)	7439976	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Nickel metal (TH)	7440020	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Toluene (TH)	108883	4.08E-05	9.80E-04	2.63E-01	3.33E-06	3.33E-06

GREENHOUSE GAS EMISSIONS INFORMATION (FOR EMISSIONS INVENTORY PURPOSES) - CONSISTENT WITH EPA MANDATORY REPORTING RULE (MRR) METHOD

GREENHOUSE GAS POLLUTANT	ACTUAL EMISSIONS			POTENTIAL EMISSIONS	
	EPA MRR CALCULATION METHOD: TIER 1				
	metric tons/yr	metric tons/yr, CO ₂ e	short tons/yr	short tons/yr	short tons/yr, CO ₂ e
CARBON DIOXIDE (CO ₂)	4208.84	4,208.84	4,639.45	6,271.68	6271.68
METHANE (CH ₄)	7.94E-02	1.98E+00	8.75E-02	1.18E-01	2.96E+00
NITROUS OXIDE (N ₂ O)	7.94E-03	2.37E+00	8.75E-03	1.18E-02	3.53E+00
		TOTAL CO ₂ e (metric tons)	4,213.19		TOTAL CO ₂ e (short tons)
					6,278.16

NOTE: CO₂e means CO₂ equivalent

NOTE: The DAQ Air Emissions Reporting Online (AERO) system requires short tons be reported. The EPA MRR requires metric tons be reported.

NOTE: Do not use greenhouse gas emission estimates from this spreadsheet for PSD (Prevention of Significant Deterioration) purposes.