FEDERAL OPERATING PERMIT

A FEDERAL OPERATING PERMIT IS HEREBY ISSUED TO
Ticona Polymers, Inc.

AUTHORIZING THE OPERATION OF
Ticona Polymers Bishop Facility
Utilities Area
Plastics Material and Resin Manufacturing

LOCATED AT
Nueces County, Texas
Latitude 27° 34′ 15″ Longitude 97° 49′ 47″
Regulated Entity Number: RN101625721

This permit is issued in accordance with and subject to the Texas Clean Air Act (TCAA), Chapter 382 of the Texas Health and Safety Code and Title 30 Texas Administrative Code Chapter 122 (30 TAC Chapter 122), Federal Operating Permits. Under 30 TAC Chapter 122, this permit constitutes the permit holder's authority to operate the site and emission units listed in this permit. Operations of the site and emission units listed in this permit are subject to all additional rules or amended rules and orders of the Commission pursuant to the TCAA.

This permit does not relieve the permit holder from the responsibility of obtaining New Source Review authorization for new, modified, or existing facilities in accordance with 30 TAC Chapter 116, Control of Air Pollution by Permits for New Construction or Modification.

The site and emission units authorized by this permit shall be operated in accordance with 30 TAC Chapter 122, the general terms and conditions, special terms and conditions, and attachments contained herein.

This permit shall expire five years from the date of issuance. The renewal requirements specified in 30 TAC § 122.241 must be satisfied in order to renew the authorization to operate the site and emission units.

Permit No: O2013 Issuance Date: January 18, 2023

For the Commission

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General Terms and Conditions

The permit holder shall comply with all terms and conditions contained in 30 TAC § 122.143 (General Terms and Conditions), 30 TAC § 122.144 (Recordkeeping Terms and Conditions), 30 TAC § 122.145 (Reporting Terms and Conditions), and 30 TAC § 122.146 (Compliance Certification Terms and Conditions).

In accordance with 30 TAC § 122.144(1), records of required monitoring data and support information required by this permit, or any applicable requirement codified in this permit, are required to be maintained for a period of five years from the date of the monitoring report, sample, or application unless a longer data retention period is specified in an applicable requirement. The five year record retention period supersedes any less stringent retention requirement that may be specified in a condition of a permit identified in the New Source Review Authorization attachment.

If the permit holder chooses to demonstrate that this permit is no longer required, a written request to void this permit shall be submitted to the Texas Commission on Environmental Quality (TCEQ) by the Responsible Official in accordance with 30 TAC § 122.161(e). The permit holder shall comply with the permit's requirements, including compliance certification and deviation reporting, until notified by the TCEQ that this permit is voided.

The permit holder shall comply with 30 TAC Chapter 116 by obtaining a New Source Review authorization prior to new construction or modification of emission units located in the area covered by this permit.

All reports required by this permit must include in the submittal a cover letter which identifies the following information: company name, TCEQ regulated entity number, air account number (if assigned), site name, area name (if applicable), and Air Permits Division permit number(s).

Special Terms and Conditions:

Emission Limitations and Standards, Monitoring and Testing, and Recordkeeping and Reporting

1. Permit holder shall comply with the following requirements:

    A. Emission units (including groups and processes) in the Applicable Requirements Summary attachment shall meet the limitations, standards, equipment specifications, monitoring, recordkeeping, reporting, testing, and other requirements listed in the Applicable Requirements Summary attachment to assure compliance with the permit.

    B. The textual description in the column titled "Textual Description" in the Applicable Requirements Summary attachment is not enforceable and is not deemed as a substitute for the actual regulatory language. The Textual Description is provided for information purposes only.

    C. A citation listed on the Applicable Requirements Summary attachment, which has a notation [G] listed before it, shall include the referenced section and subsection for all commission rules, or paragraphs for all federal and state regulations and all subordinate paragraphs, subparagraphs and clauses, subclauses, and items contained within the referenced citation as applicable requirements.

    D. When a grouped citation, notated with a [G] in the Applicable Requirements Summary, contains multiple compliance options, the permit holder must keep records of when each compliance option was used.

E. Emission units subject to 40 CFR Part 63, Subpart DDDDD as identified in the attached Applicable Requirements Summary table are subject to 30 TAC Chapter 113, Subchapter C, § 113.1130 which incorporates the 40 CFR Part 63 Subpart by reference.

2. The permit holder shall comply with the following sections of 30 TAC Chapter 101 (General Air Quality Rules):

A. Title 30 TAC § 101.1 (relating to Definitions), insofar as the terms defined in this section are used to define the terms used in other applicable requirements

B. Title 30 TAC § 101.3 (relating to Circumvention)

C. Title 30 TAC § 101.8 (relating to Sampling), if such action has been requested by the TCEQ

D. Title 30 TAC § 101.9 (relating to Sampling Ports), if such action has been requested by the TCEQ

E. Title 30 TAC § 101.10 (relating to Emissions Inventory Requirements)

F. Title 30 TAC § 101.201 (relating to Emission Event Reporting and Recordkeeping Requirements)

G. Title 30 TAC § 101.211 (relating to Scheduled Maintenance, Start-up, and Shutdown Reporting and Recordkeeping Requirements)

H. Title 30 TAC § 101.221 (relating to Operational Requirements)

I. Title 30 TAC § 101.222 (relating to Demonstrations)

J. Title 30 TAC § 101.223 (relating to Actions to Reduce Excessive Emissions)

3. Permit holder shall comply with the following requirements of 30 TAC Chapter 111:

A. For visible emissions from a building, enclosed facility, or other structure; the permit holder shall comply with the following requirements:

(i) Title 30 TAC § 111.111(a)(7)(A) (relating to Requirements for Specified Sources)

(ii) Title 30 TAC § 111.111(a)(7)(B)(i) or (ii)

(iii) For a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source subject to 30 TAC § 111.111(a)(7)(A), complying with 30 TAC § 111.111(a)(7)(B)(i) or (ii), and capable of producing visible emissions from, but not limited to, particulate matter, acid gases and NO_x, the permit holder shall also comply with the following periodic monitoring requirements for the purpose of annual compliance certification under 30 TAC § 122.146:

(1) An observation of visible emissions from a building containing an air emission source, enclosed facility, or other structure containing or associated with an air emission source which is required to comply with 30 TAC § 111.111(a)(7)(A) shall be conducted at least once during each calendar quarter unless the air emission source or enclosed facility is not operating for the entire quarter.

(2) Records of all observations shall be maintained.

(3) Visible emissions observations of air emission sources or enclosed facilities operated during daylight hours shall be conducted no earlier than one hour after sunrise and no later than one hour before sunset. Visible emissions observations of air emission sources or enclosed facilities operated only at night must be made with additional lighting and the temporary installation of contrasting backgrounds. Visible emissions shall be determined with each emissions outlet in clear view of the observer. The observer shall be at least 15 feet, but not more than 0.25 mile, away from each emissions outlet during the observation. For outdoor locations, the observer shall select a position where the sun is not directly in the observer's eyes. When condensed water vapor is present within the plume, as it emerges from the emissions outlet, observations must be made beyond the point in the plume at which condensed water vapor is no longer visible. When water vapor within the plume condenses and becomes visible at a distance from the emissions outlet, the observation shall be evaluated at the outlet prior to condensation of water vapor. A certified opacity reader is not required for visible emissions observations.

(4) Compliance Certification:

(a) If visible emissions are not present during the observation, the RO may certify that the source is in compliance with the applicable opacity requirement in 30 TAC § 111.111(a)(7) and (a)(7)(A).

(b) However, if visible emissions are present during the observation, the permit holder shall either list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2) or conduct the appropriate opacity test specified in 30 TAC § 111.111(a)(7)(B) as soon as practicable, but no later than 24 hours after observing visible emissions to determine if the source is in compliance with the opacity requirements. If an opacity test is performed and the source is determined to be in compliance, the RO may certify that the source is in compliance with the applicable opacity requirement. However, if an opacity test is performed and the source is determined to be out of compliance, the permit holder shall list this occurrence as a deviation on the next deviation report as required under 30 TAC § 122.145(2). The opacity test must be performed by a certified opacity reader.

B. Certification of opacity readers determining opacities under Method 9 (as outlined in 40 CFR Part 60, Appendix A) to comply with opacity monitoring requirements shall be accomplished by completing the Visible Emissions Evaluators Course, or approved agency equivalent, no more than 180 days before the opacity reading.

C. Emission limits on nonagricultural processes, except for the steam generators specified in 30 TAC § 111.153, shall comply with the following requirements:

(i) Emissions of PM from any source may not exceed the allowable rates as required in 30 TAC § 111.151(a) (relating to Allowable Emissions Limits)

(ii) Sources with an effective stack height (h_e) less than the standard effective stack height (H_e), must reduce the allowable emission level by multiplying it by $[h_e/H_e]^2$ as required in 30 TAC § 111.151(b)

(iii) Effective stack height shall be calculated by the equation specified in 30 TAC § 111.151(c)

4. For storage vessels maintaining working pressure as specified in 30 TAC Chapter 115, Subchapter B, Division 1: "Storage of Volatile Organic Compounds," the permit holder shall comply with the requirements of 30 TAC § 115.112(b)(1).

5. The permit holder shall comply with the following requirements for units subject to any subpart of 40 CFR Part 60, unless otherwise stated in the applicable subpart:

   A. Title 40 CFR § 60.7 (relating to Notification and Recordkeeping)

   B. Title 40 CFR § 60.8 (relating to Performance Tests)

   C. Title 40 CFR § 60.11 (relating to Compliance with Standards and Maintenance Requirements)

   D. Title 40 CFR § 60.12 (relating to Circumvention)

   E. Title 40 CFR § 60.13 (relating to Monitoring Requirements)

   F. Title 40 CFR § 60.14 (relating to Modification)

   G. Title 40 CFR § 60.15 (relating to Reconstruction)

   H. Title 40 CFR § 60.19 (relating to General Notification and Reporting Requirements)

6. The permit holder shall comply with the requirements of 30 TAC Chapter 113, Subchapter C, § 113.100 for units subject to any subpart of 40 CFR Part 63, unless otherwise stated in the applicable subpart.

7. The permit holder shall comply with certified registrations submitted to the TCEQ for purposes of establishing federally enforceable emission limits. A copy of the certified registration shall be maintained with the permit. Records sufficient to demonstrate compliance with the established limits shall be maintained. The certified registration and records demonstrating compliance shall be provided, on request, to representatives of the appropriate TCEQ regional office and any local air pollution control agency having jurisdiction over the site. The permit holder shall submit updated certified registrations when changes at the site require establishment of new emission limits. If changes result in emissions that do not remain below major source thresholds, the permit holder shall submit a revision application to codify the appropriate requirements in the permit.

Additional Monitoring Requirements

8. The permit holder shall comply with the periodic monitoring requirements as specified in the attached "Periodic Monitoring Summary" upon issuance of the permit. Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permit holder shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the pollutant-specific emissions unit is operating. The permit holder may elect to collect monitoring data on a more frequent basis and average the data, consistent

with the averaging time or minimum frequency specified in the "Periodic Monitoring Summary," for purposes of determining whether a deviation has occurred. However, the additional data points must be collected on a regular basis. In no event shall data be collected and used in particular instances to avoid reporting deviations. Deviations shall be reported according to 30 TAC § 122.145 (Reporting Terms and Conditions).

New Source Review Authorization Requirements

9. Permit holder shall comply with the requirements of New Source Review authorizations issued or claimed by the permit holder for the permitted area, including permits, permits by rule (including the terms, conditions, monitoring, recordkeeping, and reporting identified in registered PBR and permits by rule identified in the PBR Supplemental Tables dated June 24, 2022 in the application for project 33942), standard permits, flexible permits, special permits, permits for existing facilities including Voluntary Emissions Reduction Permits and Electric Generating Facility Permits issued under 30 TAC Chapter 116, Subchapter I, or special exemptions referenced in the New Source Review Authorization References attachment. These requirements:

    A. Are incorporated by reference into this permit as applicable requirements

    B. Shall be located with this operating permit

    C. Are not eligible for a permit shield

10. The permit holder shall comply with the general requirements of 30 TAC Chapter 106, Subchapter A or the general requirements, if any, in effect at the time of the claim of any PBR.

11. The permit holder shall maintain records to demonstrate compliance with any emission limitation or standard that is specified in a permit by rule (PBR) or Standard Permit listed in the New Source Review Authorizations attachment. The records shall yield reliable data from the relevant time period that are representative of the emission unit's compliance with the PBR or Standard Permit. These records may include, but are not limited to, production capacity and throughput, hours of operation, safety data sheets (SDS), chemical composition of raw materials, speciation of air contaminant data, engineering calculations, maintenance records, fugitive data, performance tests, capture/control device efficiencies, direct pollutant monitoring (CEMS, COMS, or PEMS), or control device parametric monitoring. These records shall be made readily accessible and available as required by 30 TAC § 122.144. Any monitoring or recordkeeping data indicating noncompliance with the PBR or Standard Permit shall be considered and reported as a deviation according to 30 TAC § 122.145 (Reporting Terms and Conditions).

12. The permit holder shall comply with the following requirements for Air Quality Standard Permits:

    A. Registration requirements listed in 30 TAC § 116.611, unless otherwise provided for in an Air Quality Standard Permit

    B. General Conditions listed in 30 TAC § 116.615, unless otherwise provided for in an Air Quality Standard Permit

    C. Boiler Standard Permit

Compliance Requirements

13. The permit holder shall certify compliance in accordance with 30 TAC § 122.146. The permit holder shall comply with 30 TAC § 122.146 using at a minimum, but not limited to, the continuous or intermittent compliance method data from monitoring, recordkeeping, reporting, or testing required by the permit and any other credible evidence or information. The certification period

may not exceed 12 months and the certification must be submitted within 30 days after the end of the period being certified.

14. Use of Discrete Emission Credits to comply with the applicable requirements:

    A. Unless otherwise prohibited, the permit holder may use discrete emission credits to comply with the following applicable requirements listed elsewhere in this permit:

        (i) Title 30 TAC Chapter 115

        (ii) Title 30 TAC Chapter 117

        (iii) If applicable, offsets for Title 30 TAC Chapter 116

        (iv) Temporarily exceed state NSR permit allowables

    B. The permit holder shall comply with the following requirements in order to use the credit to comply with the applicable requirements:

        (i) The permit holder must notify the TCEQ according to 30 TAC § 101.376(d)

        (ii) The discrete emission credits to be used must meet all the geographic, timeliness, applicable pollutant type, and availability requirements listed in 30 TAC Chapter 101, Subchapter H, Division 4

        (iii) The executive director has approved the use of the discrete emission credits according to 30 TAC § 101.376(d)(1)(A)

        (iv) The permit holder keeps records of the use of credits towards compliance with the applicable requirements in accordance with 30 TAC § 101.372(h) and 30 TAC Chapter 122

        (v) Title 30 TAC § 101.375 (relating to Emission Reductions Achieved Outside the United States)

Protection of Stratospheric Ozone

15. Permit holders at a site subject to Title VI of the FCAA Amendments shall meet the following requirements for protection of stratospheric ozone:

    A. The permit holder shall comply with 40 CFR Part 82, Subpart H related to Halon Emissions Reduction requirements as specified in 40 CFR § 82.250 - § 82.270 and the applicable Part 82 Appendices.

Permit Location

16. The permit holder shall maintain a copy of this permit and records related to requirements listed in this permit on site.

Attachments

Applicable Requirements Summary

Additional Monitoring Requirements

New Source Review Authorization References

Applicable Requirements Summary

Note: A “none” entry may be noted for some emission sources in this permit’s “Applicable Requirements Summary” under the heading of “Monitoring and Testing Requirements” and/or “Recordkeeping Requirements” and/or “Reporting Requirements.” Such a notation indicates that there are no requirements for the indicated emission source as identified under the respective column heading(s) for the stated portion of the regulation when the emission source is operating under the conditions of the specified SOP Index Number. However, other relevant requirements pursuant to 30 TAC Chapter 122 including Recordkeeping Terms and Conditions (30 TAC § 122.144), Reporting Terms and Conditions (30 TAC § 122.145), and Compliance Certification Terms and Conditions (30 TAC § 122.146) continue to apply.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
305DB	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111A18049	30 TAC Chapter 111, Visible Emissions	No changing attributes.
305DB	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db18049	40 CFR Part 60, Subpart Db	No changing attributes.
305PT1861	STATIONARY TURBINES	N/A	60GG18049	40 CFR Part 60, Subpart GG	No changing attributes.
310B12	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111A18049	30 TAC Chapter 111, Visible Emissions	No changing attributes.
310B12	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
310B16	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111A	30 TAC Chapter 111, Visible Emissions	No changing attributes.
310B16	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.
310V2608	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.
310V2608	STORAGE TANKS/VESSELS	N/A	1158442	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
310V2608	STORAGE TANKS/VESSELS	N/A	60Kb8442	40 CFR Part 60, Subpart Kb	No changing attributes.
310V2835	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111-1	30 TAC Chapter 111, Visible Emissions	No changing attributes.

Unit Summary

Unit/Group/ Process ID No.	Unit Type	Group/Inclusive Units	SOP Index No.	Regulation	Requirement Driver
310V2835	STORAGE TANKS/VESSELS	N/A	1158442	30 TAC Chapter 115, Storage of VOCs	No changing attributes.
310V2835	STORAGE TANKS/VESSELS	N/A	60Kb8442	40 CFR Part 60, Subpart Kb	No changing attributes.
B-21	EMISSION POINTS/STATIONARY VENTS/PROCESS VENTS	N/A	111A	30 TAC Chapter 111, Visible Emissions	No changing attributes.
B-21	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	60Db	40 CFR Part 60, Subpart Db	No changing attributes.
B-21	BOILERS/STEAM GENERATORS/STEAM GENERATING UNITS	N/A	63DDDDD	40 CFR Part 63, Subpart DDDDD	No changing attributes.

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
305DB	EP	111A18049	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(C) § 111.111(a)(1)(E)	Visible emissions from any stationary vent shall not exceed an opacity of 15% averaged over a six minute period for any source with a total flow rate of at least 100,000 acfm unless a CEMS is installed.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
305DB	EU	60Db18049	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
305DB	EU	60Db18049	PM (Opacity)	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
305DB	EU	60Db18049	SO_2	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
305PT1861	EU	60GG18049	SO_2	40 CFR Part 60, Subpart GG	§ 60.333(b)	No stationary gas turbine shall burn any fuel which contains sulfur in excess of 0.8% by weight.	§ 60.334(h) [G]§ 60.334(h)(3)	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
310B12	EP	111A18049	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(A) § 111.111(a)(1)(E) § 111.111(a)(3)	Visible emissions from any stationary vent shall not exceed an opacity of 30% averaged over a six minute period.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
310B12	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio must conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.	§ 63.7515(d) § 63.7525(a)(7) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
310B16	EP	111A	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E) § 111.111(a)(3)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute period for any source on which construction was begun after January 31, 1972.	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring Summary	None	None
310B16	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio must conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.	§ 63.7515(d) § 63.7525(a)(7) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)
310V2608	EP	111-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six-minute	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						period for any source on which construction was begun after January 31, 1972. The emissions from this vent originate from colorless VOCs, non-fuming liquids, or other sources that are not capable of obstructing the transmission of light. These vents are not capable of exceeding the opacity standards of 30 TAC Chapter 111 and therefore no monitoring is required to demonstrate compliance.			
310V2608	EU	1158442	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.114(b)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(1)(A) [G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(1)(B)
310V2608	EU	60Kb8442	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(C) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.113b(a)(1) § 60.113b(a)(2) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3) § 60.116b(f)(1)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b)	§ 60.113b(a)(2) § 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(3)
310V2835	EP	111-1	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six-minute	None	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						period for any source on which construction was begun after January 31, 1972. The emissions from this vent originate from colorless VOCs, non-fuming liquids, or other sources that are not capable of obstructing the transmission of light. These vents are not capable of exceeding the opacity standards of 30 TAC Chapter 111 and therefore no monitoring is required to demonstrate compliance.			
310V2835	EU	1158442	VOC	30 TAC Chapter 115, Storage of VOCs	§ 115.112(b)(1) § 115.112(b)(2) § 115.112(b)(2)(A) § 115.112(b)(2)(B) § 115.112(b)(2)(C) § 115.112(b)(2)(D) § 115.112(b)(2)(E) § 115.114(b)(1)(A)	Tanks shall not store VOC unless the required pressure is maintained, or they are equipped with the appropriate control device specified in Table I(a) or Table II(a).	§ 115.114(b)(1)(A) [G]§ 115.117 ** See Periodic Monitoring Summary	§ 115.118(b)(2) § 115.118(b)(4) § 115.118(b)(5)	§ 115.114(b)(1)(B)
310V2835	EU	60Kb8442	VOC	40 CFR Part 60, Subpart Kb	§ 60.112b(a)(1) § 60.112b(a)(1)(i) § 60.112b(a)(1)(ii)(C) § 60.112b(a)(1)(iii) § 60.112b(a)(1)(iv) § 60.112b(a)(1)(ix) § 60.112b(a)(1)(v) § 60.112b(a)(1)(vi) § 60.112b(a)(1)(vii) § 60.112b(a)(1)(viii)	Storage vessels specified in §60.112b(a) and equipped with a fixed roof in combination with an internal floating roof shall meet the specifications listed in §60.112b(a)(1)(i)-(ix).	§ 60.113b(a)(1) § 60.113b(a)(2) § 60.113b(a)(4) § 60.113b(a)(5) § 60.116b(a) § 60.116b(b) § 60.116b(e) § 60.116b(e)(1) [G]§ 60.116b(e)(3) § 60.116b(f)(1)	§ 60.115b § 60.115b(a)(2) § 60.116b(a) § 60.116b(b)	§ 60.113b(a)(2) § 60.113b(a)(5) § 60.115b § 60.115b(a)(1) § 60.115b(a)(3)
B-21	EP	111A	Opacity	30 TAC Chapter 111, Visible Emissions	§ 111.111(a)(1)(B) § 111.111(a)(1)(E) § 111.111(a)(3)	Visible emissions from any stationary vent shall not exceed an opacity of 20% averaged over a six minute	[G]§ 111.111(a)(1)(F) ** See Periodic Monitoring	None	None

Applicable Requirements Summary

Unit Group Process ID No.	Unit Group Process Type	SOP Index No.	Pollutant	State Rule or Federal Regulation Name	Emission Limitation, Standard or Equipment Specification Citation	Textual Description (See Special Term and Condition 1.B.)	Monitoring And Testing Requirements	Recordkeeping Requirements (30 TAC § 122.144)	Reporting Requirements (30 TAC § 122.145)
						period for any source on which construction was begun after January 31, 1972.	Summary		
B-21	EU	60Db	PM	40 CFR Part 60, Subpart Db	§ 60.40b(a)	This subpart applies to each steam generating unit constructed, modified, or reconstructed after 6/19/84, and that has a heat input capacity from fuels combusted in the unit > 29 MW (100 MMBtu/hr).	None	[G]§ 60.49b(d) § 60.49b(o)	§ 60.49b(a) § 60.49b(a)(1) § 60.49b(a)(3)
B-21	EU	63DDDDD	112(B) HAPS	40 CFR Part 63, Subpart DDDDD	§ 63.7500(a)(1)-Table 3.1 § 63.7500(a)(1) § 63.7500(a)(3) § 63.7505(a) § 63.7540(a) [G]§ 63.7540(a)(10) § 63.7540(a)(12) § 63.7540(a)(13)	A new or existing boiler or process heater with a continuous oxygen trim system that maintains an optimum air to fuel ratio must conduct a tune-up of the boiler or process heater every 5 years as specified in § 63.7540.	§ 63.7515(d) § 63.7525(a)(7) § 63.7540(a) [G]§ 63.7540(a)(10)	§ 63.7555(a) § 63.7555(a)(1) § 63.7560(a) § 63.7560(b) § 63.7560(c)	§ 63.7530(e) § 63.7530(f) § 63.7545(a) § 63.7545(b) § 63.7545(c) [G]§ 63.7545(e) § 63.7550(a) [G]§ 63.7550(b) [G]§ 63.7550(c) [G]§ 63.7550(h)

Additional Monitoring Requirements

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 305DB	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111A18049
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(C)
Monitoring Information	
Indicator: Opacity	
Minimum Frequency: Once per month	
Averaging Period: Six-minutes	
Deviation Limit: It will be considered a deviation if opacity readings are above the 15% opacity limit.	
Periodic Monitoring Text: Opacity shall be monitored, by a certified observer, for at least one, six-minute period in accordance with Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60), Appendix A, Test Method 9. Any opacity readings above the deviation limit shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 310B12	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111A18049
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(A)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: N/A	
Deviation Limit: It will be considered a deviation if visible emissions are observed.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 310B16	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111A
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(B)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: N/A	
Deviation Limit: It will be considered a deviation if visible emissions are observed.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 310V2608	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 1158442
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: N/A	
Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be reported as a deviation.	
Periodic Monitoring Text: Visually inspect and record the inspection of the internal floating roof to ensure: the roof is floating on the surface of the VOC and, liquid has not accumulated on the internal floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: 310V2835	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 115, Storage of VOCs	SOP Index No.: 1158442
Pollutant: VOC	Main Standard: § 115.112(b)(1)
Monitoring Information	
Indicator: Internal Floating Roof	
Minimum Frequency: annually	
Averaging Period: N/A	
Deviation Limit: Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be reported as a deviation.	
Periodic Monitoring Text: Visually inspect and record the inspection of the internal floating roof to ensure: the roof is floating on the surface of the VOC and, liquid has not accumulated on the internal floating roof, the seals are not detached, and there are no holes or tears in the seal fabric. Any monitoring data in which the roof is not floating on the surface of the VOC, if liquid has accumulated on the internal floating roof, the seals are detached, or if there are holes or tears in the seal fabric shall be considered and reported as a deviation.	

Periodic Monitoring Summary

Unit/Group/Process Information	
ID No.: B-21	
Control Device ID No.: N/A	Control Device Type: N/A
Applicable Regulatory Requirement	
Name: 30 TAC Chapter 111, Visible Emissions	SOP Index No.: 111A
Pollutant: Opacity	Main Standard: § 111.111(a)(1)(B)
Monitoring Information	
Indicator: Fuel Type	
Minimum Frequency: Annually or at any time an alternate fuel is used	
Averaging Period: N/A	
Deviation Limit: It will be considered a deviation if visible emissions are observed.	
Periodic Monitoring Text: Record the type of fuel used by the unit. If an alternate fuel is fired, either alone or in combination with the specified gas, for a period greater than or equal to 24 consecutive hours it shall be considered and reported as a deviation or the permit holder shall conduct an observation of the stationary vent for each such period to determine if visible emissions are observed. Any time an alternate fuel is fired for a period of greater than 7 consecutive days then visible emissions observations will be conducted no less than once per week. Documentation of all observations shall be maintained. If visible emissions are present during the firing of an alternate fuel, the permit holder shall either list this occurrence as a deviation or the permit holder may determine the opacity consistent with Test Method 9. Any opacity readings that are above the opacity limit from the underlying applicable requirement shall be reported as a deviation.	

New Source Review Authorization References

New Source Review Authorization References

The New Source Review authorizations listed in the table below are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Prevention of Significant Deterioration (PSD) Permits	
PSD Permit No.: PSDTX725	Issuance Date: 11/21/2023
Title 30 TAC Chapter 116 Permits, Special Permits, and Other Authorizations (Other Than Permits By Rule, PSD Permits, or NA Permits) for the Application Area.	
Authorization No.: 8442	Issuance Date: 11/21/2023
Authorization No.: 18049	Issuance Date: 11/21/2023
Authorization No.: 83933	Issuance Date: 04/11/2017
Authorization No.: 108222	Issuance Date: 03/15/2022
Permits By Rule (30 TAC Chapter 106) for the Application Area	
Number: 106.261	Version No./Date: 11/01/2003
Number: 106.262	Version No./Date: 11/01/2003

New Source Review Authorization References by Emissions Unit

The following is a list of New Source Review (NSR) authorizations for emission units listed elsewhere in this operating permit. The NSR authorizations are applicable requirements under 30 TAC Chapter 122 and enforceable under this operating permit.

Unit/Group/Process ID No.	Emission Unit Name/Description	New Source Review Authorization**
305DB	COGEN DUCT BURNER	18049, PSDTX725
305PT1861	COGENERATION POWER TURBINE PT-1861	18049, PSDTX725
310B12	BOILER 12	18049, PSDTX725, 106.261/11/01/2003 [152689], 106.262/11/01/2003 [152689]
310B16	BOILER 16	8442
310V2608	BOILER 16 LIQUID FEED TANK	8442
310V2835	BOILER 16 LIQUID FUEL STORAGE TANK	8442
B-21	B-21	83933

**This column may include Permit by Rule (PBR) numbers and version dates, PBR Registration numbers in brackets, Standard Permit Registration numbers, Minor NSR permit numbers, and Major NSR permit numbers.

Appendix A

Acronym List

The following abbreviations or acronyms may be used in this permit:

ACFM ..... actual cubic feet per minute
AMOC ..... alternate means of control
ARP ..... Acid Rain Program
ASTM ..... American Society of Testing and Materials
B/PA ..... Beaumont/Port Arthur (nonattainment area)
CAM ..... Compliance Assurance Monitoring
CD ..... control device
CEMS ..... continuous emissions monitoring system
CFR ..... Code of Federal Regulations
COMS ..... continuous opacity monitoring system
CVS ..... closed vent system
D/FW ..... Dallas/Fort Worth (nonattainment area)
EP ..... emission point
EPA ..... U.S. Environmental Protection Agency
EU ..... emission unit
FCAA Amendments ..... Federal Clean Air Act Amendments
FOP ..... federal operating permit
gr/100 scf ..... grains per 100 standard cubic feet
HAP ..... hazardous air pollutant
H/G/B ..... Houston/Galveston/Brazoria (nonattainment area)
H_2S ..... hydrogen sulfide
ID No. ..... identification number
lb/hr ..... pound(s) per hour
MACT ..... Maximum Achievable Control Technology (40 CFR Part 63)
MMBtu/hr ..... Million British thermal units per hour
NA ..... nonattainment
N/A ..... not applicable
NADB ..... National Allowance Data Base
NESHAP ..... National Emission Standards for Hazardous Air Pollutants (40 CFR Part 61)
NO_x ..... nitrogen oxides
NSPS ..... New Source Performance Standard (40 CFR Part 60)
NSR ..... New Source Review
ORIS ..... Office of Regulatory Information Systems
Pb ..... lead
PBR ..... Permit By Rule
PEMS ..... predictive emissions monitoring system
PM ..... particulate matter
ppmv ..... parts per million by volume
PRO ..... process unit
PSD ..... prevention of significant deterioration
psia ..... pounds per square inch absolute
SIP ..... state implementation plan
SO_2 ..... sulfur dioxide
TCEQ ..... Texas Commission on Environmental Quality
TSP ..... total suspended particulate
TVP ..... true vapor pressure
U.S.C. ..... United States Code
VOC ..... volatile organic compound

Appendix B

Major NSR Summary Table

Permit Numbers 18049 and PSDTX725					Issuance Date: November 21, 2023		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
305COGEN	47.4 MW Gas Turbine	NO_x	80.0	--	2, 6, 8, 10, 14, 39	2, 6, 8, 10, 14, 39	2, 6, 8
		CO	11.0	--			
		VOC	5.0	--			
		PM	2.5	--			
		PM_{10}	2.5	--			
		$PM_{2.5}$	2.5	--			
		SO_2	2.9	--			
305COGEN	Duct Burners	NO_x	9.57	--	6, 14, 39	6, 14, 39	6
		CO	10.20	--			
		VOC	3.19	--			
		PM	1.75	--			
		PM_{10}	1.75	--			
		$PM_{2.5}$	1.75	--			
		SO_2	0.04	--			
305COGEN	Emission Cap	NO_x	--	388.51	2, 6, 8, 10, 14, 39	2, 6, 8, 10, 39	2, 6, 8
		CO	--	88.9			

Major NSR Summary Table

Permit Numbers 18049 and PSDTX725					Issuance Date: November 21, 2023		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
		VOC	--	34.6			
		PM	--	18.0			
		PM_{10}	--	18.0			
		$PM_{2.5}$	--	18.0			
		SO_2	--	12.9			
310B12	Power Boiler No. 12 (5)	NO_x	32.70	143.3	3, 14, 15, 17, 18, 20	3, 14, 15, 17, 18, 20, 38, 39	3, 17, 20
		CO	44.80	196.3			
		VOC	2.94	12.9			
		PM	4.06	17.8			
		PM_{10}	4.06	17.8			
		$PM_{2.5}$	4.06	17.8			
		SO_2	21.30	5.61			
310B24	Boiler No. 24 – Routine Operations	NO_x	5.23	--	2, 3, 24, 25, 26, 27, 31, 33, 37	2, 3, 24, 26, 27, 31, 33, 37, 38, 39	2, 3, 31, 37
		CO	22.42	--			
		VOC	2.82	--			
		PM	3.89	--			

Major NSR Summary Table

Permit Numbers 18049 and PSDTX725					Issuance Date: November 21, 2023		
Emission Point No. (1)	**Source Name (2)**	**Air Contaminant Name (3)**	**Emission Rates**		**Monitoring and Testing Requirements**	**Recordkeeping Requirements**	**Reporting Requirements**
			lb/hr	**TPY (4)**	**Special Condition/Application Information**	**Special Condition/Application Information**	**Special Condition/Application Information**
		PM_{10}	3.89	--			
		$PM_{2.5}$	3.89	--			
		SO_2	6.38	--			
		NH_3	2.72	--			
310B24	Boiler No. 24 - MSS	NO_x	12.92	--	2, 3, 31, 33	2, 3, 28, 30, 31, 33, 38, 39	2, 3, 31
		CO	60.71	--			
		VOC	0.70	--			
		PM	0.96	--			
		PM_{10}	0.96	--			
		$PM_{2.5}$	0.96	--			
		SO_2	0.52	--			
		NH_3	0.74	--			
310B24	Boiler No. 24 – Combined Routine Operations and MSS	NO_x	--	20.94	2, 3, 31, 33	2, 3, 28, 30, 31, 38, 39	2, 3, 31
		CO	--	90.46			
		VOC	--	10.75			
		PM	--	14.85			

Major NSR Summary Table

Permit Numbers 18049 and PSDTX725					Issuance Date: November 21, 2023		
Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates		Monitoring and Testing Requirements	Recordkeeping Requirements	Reporting Requirements
			lb/hr	TPY (4)	Special Condition/Application Information	Special Condition/Application Information	Special Condition/Application Information
		PM_{10}	--	14.85			
		$PM_{2.5}$	--	14.85			
		SO_2	--	15.89			
		NH_3	--	10.38			
B24FUG	Ammonia Fugitives	NH_3	0.01	0.01	35	35, 36, 39	

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
NH_3 - ammonia
(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Emission rates are based on and the facilities are limited by the following maximum operating schedule:

__Hrs/day __Days/week __Weeks/year or 8,760 Hrs/year

(5) Power Boiler No. 12, EPN 310B12, shall no longer be authorized to operate upon the completion of the time period specified in 30 TAC 116.12(22)(D) for the initial start-up of Boiler No. 24 (EPN 310B24).

Texas Commission on Environmental Quality
Air Quality Permit

A Permit Is Hereby Issued To
TICONA POLYMERS, INC.
Authorizing the Construction and Operation of
Ticona Polymers Bishop Facility
Located at **Bishop, Nueces County, Texas**
Latitude 27.565833 Longitude -97.824722

Permits: 18049 and PSDTX725

Amendment Date: November 21, 2023

Expiration Date: September 25, 2033

For the Commission

1. **Facilities** covered by this permit shall be constructed and operated as specified in the application for the permit. All representations regarding construction plans and operation procedures contained in the permit application shall be conditions upon which the permit is issued. Variations from these representations shall be unlawful unless the permit holder first makes application to the Texas Commission on Environmental Quality (commission) Executive Director to amend this permit in that regard and such amendment is approved. [Title 30 Texas Administrative Code (TAC) Section 116.116 (30 TAC § 116.116)] [1]
2. **Voiding of Permit**. A permit or permit amendment is automatically void if the holder fails to begin construction within 18 months of the date of issuance, discontinues construction for more than 18 months prior to completion, or fails to complete construction within a reasonable time. Upon request, the executive director may grant an 18-month extension. Before the extension is granted the permit may be subject to revision based on best available control technology, lowest achievable emission rate, and netting or offsets as applicable. One additional extension of up to 18 months may be granted if the permit holder demonstrates that emissions from the facility will comply with all rules and regulations of the commission, the intent of the Texas Clean Air Act (TCAA), including protection of the public's health and physical property; and (b)(1)the permit holder is a party to litigation not of the permit holder's initiation regarding the issuance of the permit; or (b)(2) the permit holder has spent, or committed to spend, at least 10 percent of the estimated total cost of the project up to a maximum of $5 million. A permit holder granted an extension under subsection (b)(1) of this section may receive one subsequent extension if the permit holder meets the conditions of subsection (b)(2) of this section. [30 TAC § 116.120]
3. **Construction Progress**. Start of construction, construction interruptions exceeding 45 days, and completion of construction shall be reported to the appropriate regional office of the commission not later than 15 working days after occurrence of the event. [30 TAC § 116.115(b)(2)(A)]
4. **Start-up Notification**. The appropriate air program regional office shall be notified prior to the commencement of operations of the facilities authorized by the permit in such a manner that a representative of the commission may be present. The permit holder shall provide a separate notification for the commencement of operations for each unit of phased construction, which may involve a series of units commencing operations at different times. Prior to operation of the facilities authorized by the permit, the permit holder shall identify the source or sources of allowances to be utilized for compliance with Chapter 101, Subchapter H, Division 3 of this title (relating to Mass Emissions Cap and Trade Program). [30 TAC § 116.115(b)(2)(B)]
5. **Sampling Requirements**. If sampling is required, the permit holder shall contact the commission's Office of Compliance and Enforcement prior to sampling to obtain the proper data forms and procedures. All sampling and testing procedures must be approved by the executive director and coordinated with the regional representatives of the commission. The permit holder is also responsible for providing sampling facilities and conducting the sampling operations or contracting with an independent sampling consultant. [30 TAC § 116.115(b)(2)(C)]
6. **Equivalency of Methods.** The permit holder must demonstrate or otherwise justify the equivalency of emission control methods, sampling or other emission testing methods, and monitoring methods proposed as alternatives to methods indicated in the conditions of the permit. Alternative methods shall be applied for in writing and must be reviewed and approved by the executive director prior to their use in fulfilling any requirements of the permit. [30 TAC § 116.115(b)(2)(D)]
7. **Recordkeeping.** The permit holder shall maintain a copy of the permit along with records containing the information and data sufficient to demonstrate compliance with the permit, including production records and

operating hours; keep all required records in a file at the plant site. If, however, the facility normally operates unattended, records shall be maintained at the nearest staffed location within Texas specified in the application; make the records available at the request of personnel from the commission or any air pollution control program having jurisdiction in a timely manner; comply with any additional recordkeeping requirements specified in special conditions in the permit; and retain information in the file for at least two years following the date that the information or data is obtained. [30 TAC § 116.115(b)(2)(E)]

8. **Maximum Allowable Emission Rates**. The total emissions of air contaminants from any of the sources of emissions must not exceed the values stated on the table attached to the permit entitled "Emission Sources--Maximum Allowable Emission Rates." [30 TAC § 116.115(b)(2)(F)] [1]
9. **Maintenance of Emission Control**. The permitted facilities shall not be operated unless all air pollution emission capture and abatement equipment is maintained in good working order and operating properly during normal facility operations. The permit holder shall provide notification in accordance with 30 TAC §101.201, 101.211, and 101.221 of this title (relating to Emissions Event Reporting and Recordkeeping Requirements; Scheduled Maintenance, Startup, and Shutdown Reporting and Recordkeeping Requirements; and Operational Requirements). [30 TAC§ 116.115(b)(2)(G)]
10. **Compliance with Rules**. Acceptance of a permit by an applicant constitutes an acknowledgment and agreement that the permit holder will comply with all rules and orders of the commission issued in conformity with the TCAA and the conditions precedent to the granting of the permit. If more than one state or federal rule or regulation or permit condition is applicable, the most stringent limit or condition shall govern and be the standard by which compliance shall be demonstrated. Acceptance includes consent to the entrance of commission employees and agents into the permitted premises at reasonable times to investigate conditions relating to the emission or concentration of air contaminants, including compliance with the permit. [30 TAC § 116.115(b)(2)(H)]
11. **This** permit may not be transferred, assigned, or conveyed by the holder except as provided by rule. [30 TAC § 116.110(e)]
12. **There** may be additional special conditions attached to a permit upon issuance or modification of the permit. Such conditions in a permit may be more restrictive than the requirements of Title 30 of the Texas Administrative Code. [30 TAC § 116.115(c)]
13. **Emissions** from this facility must not cause or contribute to "air pollution" as defined in Texas Health and Safety Code (THSC) §382.003(3) or violate THSC § 382.085. If the executive director determines that such a condition or violation occurs, the holder shall implement additional abatement measures as necessary to control or prevent the condition or violation.
14. **The** permit holder shall comply with all the requirements of this permit. Emissions that exceed the limits of this permit are not authorized and are violations of this permit. [1]

[1] Please be advised that the requirements of this provision of the general conditions may not be applicable to greenhouse gas emissions.

Common Acronyms in Air Permits

°C = Temperature in degrees Celsius
°F = Temperature in degrees Fahrenheit
°K = Temperature in degrees Kelvin
µg = microgram
$\mu g/m^3$ = microgram per cubic meter
acfm = actual cubic feet per minute
AMOC = alternate means of control
AOS = alternative operating scenario
AP-42 = Air Pollutant Emission Factors, 5th edition
APD = Air Permits Division
API = American Petroleum Institute
APWL = air pollutant watch list
BPA = Beaumont/ Port Arthur
BACT = best available control technology
BAE = baseline actual emissions
bbl = barrel
bbl/day = barrel per day
bhp = brake horsepower
BMP = best management practices
Btu = British thermal unit
Btu/scf = British thermal unit per standard cubic foot or feet
CAA = Clean Air Act
CAM = compliance-assurance monitoring
CEMS = continuous emissions monitoring systems
cfm = cubic feet (per) minute
CFR = Code of Federal Regulations
CN = customer ID number
CNG = compressed natural gas
CO = carbon monoxide
COMS = continuous opacity monitoring system
CPMS = continuous parametric monitoring system
DFW = Dallas/ Fort Worth (Metroplex)
DE = destruction efficiency
DRE = destruction and removal efficiency
dscf = dry standard cubic foot or feet
dscfm = dry standard cubic foot or feet per minute
ED = (TCEQ) Executive Director
EF = emissions factor
EFR = external floating roof tank
EGU = electric generating unit
EI = Emissions Inventory
ELP = El Paso
EPA = (United States) Environmental Protection Agency
EPN = emission point number
ESL = effects screening level
ESP = electrostatic precipitator
FCAA = Federal Clean Air Act
FCCU = fluid catalytic cracking unit
FID = flame ionization detector
FIN = facility identification number
ft = foot or feet
ft/sec = foot or feet per second
g = gram
gal/wk = gallon per week
gal/yr = gallon per year
GLC = ground level concentration
GLC_{max} = maximum (predicted) ground-level concentration
gpm = gallon per minute
gr/1000scf = grain per 1000 standard cubic feet
gr/dscf = grain per dry standard cubic feet
H_2CO = formaldehyde
H_2S = hydrogen sulfide
H_2SO_4 = sulfuric acid
HAP = hazardous air pollutant as listed in § 112(b) of the Federal Clean Air Act or Title 40 Code of Federal Regulations Part 63, Subpart C
HC = hydrocarbons
HCl = hydrochloric acid, hydrogen chloride
Hg = mercury
HGB = Houston/Galveston/Brazoria
hp = horsepower
hr = hour
IFR = internal floating roof tank
in H_2O = inches of water
in Hg = inches of mercury
IR = infrared
ISC3 = Industrial Source Complex, a dispersion model
ISCST3 = Industrial Source Complex Short-Term, a dispersion model
K = Kelvin; extension of the degree Celsius scaled-down to absolute zero
LACT = lease automatic custody transfer
LAER = lowest achievable emission rate
lb = pound
lb/day = pound per day
lb/hr = pound per hour
lb/MMBtu = pound per million British thermal units
LDAR = Leak Detection and Repair (Requirements)
LNG = liquefied natural gas
LPG = liquefied petroleum gas
LT/D = long ton per day
m = meter
m^3 = cubic meter
m/sec = meters per second
MACT = maximum achievable control technology
MAERT = Maximum Allowable Emission Rate Table
MERA = Modeling and Effects Review Applicability
mg = milligram
mg/g = milligram per gram
mL = milliliter
MMBtu = million British thermal units
MMBtu/hr = million British thermal units per hour
MSDS = material safety data sheet
MSS = maintenance, startup, and shutdown
MW = megawatt
NAAQS = National Ambient Air Quality Standards
NESHAP = National Emission Standards for Hazardous Air Pollutants
NGL = natural gas liquids
NNSR = nonattainment new source review
NO_x = total oxides of nitrogen
NSPS = New Source Performance Standards

PAL = plant-wide applicability limit
PBR = Permit(s) by Rule
PCP = pollution control project
PEMS = predictive emission monitoring system
PID = photo ionization detector
PM = periodic monitoring
PM = total particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
$PM_{2.5}$ = particulate matter equal to or less than 2.5 microns in diameter
PM_{10} = total particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
POC = products of combustion
ppb = parts per billion
ppm = parts per million
ppmv = parts per million (by) volume
psia = pounds (per) square inch, absolute
psig = pounds (per) square inch, gage
PTE = potential to emit
RA = relative accuracy
RATA = relative accuracy test audit
RM = reference method
RVP = Reid vapor pressure
scf = standard cubic foot or feet
scfm = standard cubic foot or feet (per) minute
SCR = selective catalytic reduction
SIL = significant impact levels
SNCR = selective non-catalytic reduction
SO_2 = sulfur dioxide
SOCMI = synthetic organic chemical manufacturing industry
SRU = sulfur recovery unit
TAC = Texas Administrative Code
TCAA = Texas Clean Air Act
TCEQ = Texas Commission on Environmental Quality
TD = Toxicology Division
TLV = threshold limit value
TMDL = total maximum daily load
tpd = tons per day
tpy = tons per year
TVP = true vapor pressure
VOC = volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
VRU = vapor recovery unit or system

Special Conditions

Permit Numbers 18049 and PSDTX725

1. This permit covers only those sources of emissions listed in the attached table entitled “Emission Sources - Maximum Allowable Emission Rates,” and those sources are limited to the rates listed in that attached table.

Federal Applicability

2. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on Standards of Performance for New Stationary Sources promulgated in Title 40 Code of Federal Regulations Part 60 (40 CFR Part 60):

   A. Subpart A, General Provisions.

   B. Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units.

   C. Subpart GG, Standards of Performance for Stationary Gas Turbines.

3. These facilities shall comply with all applicable requirements of the U.S. Environmental Protection Agency (EPA) regulations on National Emission Standards for Hazardous Air Pollutants for Source Categories in 40 CFR Part 63:

   A. Subpart A, General Provisions.

   B. Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters.

Gas Turbine and Duct Burners

4. The concentration of nitrogen oxides (NO_x) in the stack gases from turbine-only operation shall not exceed 42 parts per million by volume dry (ppmvd). The concentration of NO_x in the stack gases from turbine and duct burner operation shall not exceed 59 ppmvd.

5. The steam injection rates necessary to comply with the turbine-only NO_x concentration limit of 42 ppmv (dry, 15 percent oxygen [O_2]) for natural gas fuel shall be determined by means of the stack sampling required in Special Condition No. 8.C and the custom ambient temperature and humidity correction algorithms supplied by the turbine manufacturer. The maximum steam injection rates as a function of turbine fuel input rate (cubic feet per second) so determined shall be maintained at all times. This steam injection rate schedule was determined by means of the required stack sampling emissions demonstration while firing natural gas. A plot of steam/fuel ratio (steam injection rate versus fuel input rate) shall be constructed from the sampled, adjusted NOx concentrations. The plot and steam versus fuel input records of Special Condition No. 6 will be used to demonstrate continuous compliance with Special Condition No. 4.

6. The holder of this permit shall operate a continuous monitoring system to monitor and record ambient temperature, ambient humidity, fuel flow, actual ratio of injection steam to fuel flow, and the ratio of NO_x injection steam to fuel flow required by the turbine NO_x controller. The system shall be accurate to ±5.0 percent and shall be approved by the Executive Director of the Texas Commission on Environmental Quality (TCEQ) prior to the initial compliance demonstration. Average hourly steam versus fuel input records shall be made. Records of one-hour periods of turbine operation, except during start-up or shutdown, during which the hourly steam mass injection rate falls below

the steam mass injection rate determined in Special Condition Nos. 5 and 8 will be used to demonstrate exceedances of the emission limitation of Special Condition No. 4. The records shall be maintained by the source for a period of two years on a rolling retention basis and shall be made available on request to representatives of the TCEQ or EPA or any local air pollution control program having jurisdiction.

Additional monitoring records shall be maintained according to 40 CFR § 60.7(d). In accordance with 40 CFR § 60.334(c)(1) and 40 CFR § 60.7(c), quarterly emission reports shall be sent to the TCEQ Regional Office in Corpus Christi; and the Air Enforcement Branch of the EPA.

The holder of this permit shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas consumption of the duct burner. The systems shall be accurate to ±5.0 percent of the units maximum flow.

7. Fuel fired in the gas turbine and duct burners is limited to pipeline-quality natural gas containing no more than 0.2 grain of sulfur per 100 dry standard cubic feet (dscf) of gas.

8. No testing of the turbine or duct burner is required under the amendment submitted February 24, 2004.

The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from the turbine. Hydrogen contents of the fuels consumed during testing shall be substantially similar to the contents represented in the permit application. Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the EPA Reference Method 5 for particulate matter (PM), Reference Method 9 for opacity, and Reference Method 20 for the concentrations of NO_x and O_2. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operation at his expense.

A. The TCEQ Regional Office in Corpus Christi shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

The notice shall include:

(1) Date for pretest meeting.

(2) Date sampling will occur.

(3) Name of firm conducting sampling.

(4) Type of sampling equipment to be used.

(5) Method or procedure to be used in sampling.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports.

A written proposed description of any deviating from sampling procedures specified in permit condition or the TCEQ or EPA sampling procedures shall be made available to the TCEQ at or prior to the pretest meeting. The TCEQ Regional Director may approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in B of the condition shall be submitted to the TCEQ Air Permits Division.

Test waivers and alternate/equivalent procedure proposals for New Source Performance Standards (NSPS) testing which must have the EPA approval shall be submitted to the TCEQ Regional Office for further review and approval by the EPA.

B. Air emissions to be tested for at full load include (but are not limited to) NO_x and PM.

C. For natural gas firing, NO_x shall be sampled at four turbine loads, including the minimum point in the normal operating range, and the peak load for the atmospheric conditions occurring during the test. The NO_x concentrations shall be corrected according to Special Condition No. 4.

D. The TCEQ or EPA may require additional sampling as they deem appropriate.

E. Copies of the sampling report shall be distributed as follows:

One copy to the TCEQ Regional Office in Corpus Christi.

One copy to the TCEQ Office Air Permits Division in Austin.

One copy to the Air Enforcement Branch of the EPA in Dallas.

9. After initial demonstration of compliance and in the event different methods for measuring the stack or fuel concentration standards disagree as to the concentration for purposes of demonstrating compliance, the methods required for continuous demonstration of compliance under Special Condition No. 6 shall be the best evidence of compliance.

10. Opacity of emissions from the gas turbine must not exceed 5 percent opacity averaged over a six-minute period as determined by the EPA Reference Method 9. The initial compliance demonstration shall consist of 30 six-minute opacity readings as required in 40 CFR § 60.11(b). Thereafter, visible emissions shall be determined once per day by EPA Reference Method 22 and, if visible emissions are present, opacity shall be determined by EPA Reference Method 9.

Power Boiler No. 12

11. Emissions from Power Boiler No. 12, Emission Point No. (EPN) 310B12, of NO_x shall be controlled to 0.06 pound per million Btu heat input (lb/MMBtu). Emissions of carbon monoxide (CO) shall be controlled to 100 ppmvd.

12. Power Boiler No. 12 is limited to a firing rate of 545 MMBtu/hr.

13. Fuel used in Power Boiler No. 12 is limited to pipeline-quality, sweet natural gas containing no more than 0.2 grain total sulfur per 100 dscf or a high hydrogen content process gas mixture.

14. Upon request by the Executive Director of the TCEQ or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel being fired or shall allow air pollution control agency representatives to obtain a sample for analysis.

15. Opacity of emissions from Power Boiler No. 12 shall not exceed 5 percent averaged over a six-minute period. Opacity shall be determined by the U.S. Environmental Protection Agency (EPA) Reference Method 9 during the initial determination of compliance stack sampling. Thereafter, visible emissions shall be determined once per day by EPA Reference Method 22 and, if visible emissions are present, opacity shall be determined by EPA Reference Method 9.

Initial Determination of Compliance – Power Boiler No. 12

16. Sampling ports and platforms shall be incorporated into the design of all exhaust stacks according to the specifications set forth in the attachment entitled "Chapter 2, Stack Sampling Facilities." Alternate sampling facility designs may be submitted for approval by the TCEQ Regional Director.

17. The holder of this permit shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere by Power Boiler No. 12. The testing required by this special condition for NO_x and CO shall be used to determine compliance with Special Condition No. 11. Initial compliance with the permit opacity limit in Special Condition No. 15 shall be demonstrated on the basis of 30 six-minute averages as described in 40 CFR § 60.11(b). Sampling must be conducted in accordance with appropriate procedures of the TCEQ Sampling Procedures Manual and in accordance with the EPA Reference Method 9 for opacity, Reference Method 10 for CO, Reference Method 7E for NO_x, Reference Method 3 for O_2, or equivalent methods. The holder of this permit is responsible for providing sampling and testing facilities and conducting the sampling and testing operation at his expense.

    A. The TCEQ Corpus Christi Regional Office shall be contacted as soon as testing is scheduled but not less than 45 days prior to sampling to schedule a pretest meeting.

       The notice shall include:

       (1) Date for pretest meeting.

       (2) Date sampling will occur.

       (3) Name of firm conducting sampling.

       (4) Type of sampling equipment to be used.

       (5) Method or procedure to be used in sampling.

       (6) Procedure used to determine turbine loads during and after the sampling period.

       The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for submitting the test reports. A written proposed description of any deviation from sampling procedures specified in permit conditions, or the TCEQ or the EPA sampling procedures shall be made available to the TCEQ prior to the pretest meeting. The TCEQ Regional Director shall approve or disapprove of any deviation from specified sampling procedures. Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Air Permits Division. Test waivers and alternate/equivalent procedure proposals for New Source Performance Standards testing which must have the EPA approval shall be submitted to the TCEQ Regional Office.

    B. Air contaminants emitted from Power Boiler No. 12 to be tested for at minimum (standby) and maximum firing include (but are not limited to) NO_x, CO, O_2, and opacity. The flue gas recirculation (FGR) ratio in percent of total combustion air may be varied to verify the range which shows compliance with the emission limits of Special Condition No. 11. Power Boiler No. 12 shall be tested for firing of natural gas at the minimum and maximum firing rates and for firing of a natural gas/process gas mixture at the minimum firing rate. All available process gas shall be fired during the minimum fire test with natural gas supplementing. This does not imply any limitation on future process gas firing other than what has been represented in the permit application. The limits in the maximum allowable emission rates table (MAERT) may

be exceeded during this test for purposes of determining appropriate operating parameters of any control equipment.

C. Sampling on Power Boiler No. 12 shall occur as may be required by the Executive Director of the TCEQ, the TCEQ Corpus Christi Regional Office, or the EPA.

D. Sampling reports shall comply with the provisions of Chapter 14 of the TCEQ Sampling Procedures Manual. Two copies of the sampling report shall be distributed within 60 days of receipt as follows:

One copy to the TCEQ Corpus Christi Regional Office.

One copy to the TCEQ Air Permits Division, Austin.

18. The holder of this permit shall additionally install, calibrate, maintain, and operate continuous monitoring systems to monitor and record the average hourly natural gas and process gas consumption of Power Boiler No. 12. The systems shall be accurate to ±5.0 percent of the units' maximum flow.

Continuous Determination of Compliance – Power Boiler No. 12

19. Power Boiler No. 12 shall demonstrate continuous compliance with the emission limits of this permit by operating with the FGR ratio within the tested range for both natural gas only and natural gas/process gas mixture burning. Operation of the FGR outside the range that showed initial compliance shall be considered an exceedance of the emission limits of Special Condition No. 11. This does not apply during start-up and shutdown of the boiler.

20. Power Boiler No. 12, EPN 310B12, shall no longer be authorized to operate upon the completion of the time period specified in 30 TAC 116.12(22)(D) for the initial start-up of Boiler No. 24 (EPN 310B24). The permit holder shall submit a permit alteration request for Permit No. 18049 within 30 days following the completion of the initial start-up of Boiler No. 24 to remove the special conditions and MAERT limits related to Power Boiler No. 12 to reflect that it is no longer authorized to operate. **(11/23)**

Boiler No. 24 (11/23)

21. Emissions from Boiler No. 24, identified as Emission Point No. (EPN) 310B24, shall not exceed the following, except during periods of planned maintenance, start-up, and shutdown (MSS): **(11/23)**

0.01 pounds per million British thermal unit (lb/MMBtu) of NO_x on a 1-hour average and 12-month rolling basis;

50 ppmvd carbon monoxide (CO) at 3% oxygen (O_2) on an 1-hour average and 12-month rolling basis; and

10 ppmvd ammonia (NH_3) at 3% oxygen (O_2) on an 1-hour average and 12-month rolling basis.

Planned start-up and shutdown events for Boiler No. 24 as specified in Special Condition Nos. 28 through 30 are excluded from the NOx and CO concentration limits specified above.

22. The heat input for Boiler No. 24 shall not exceed 522.63 million British thermal units per hour (MMBtu/hr) and 3,979,580 million British thermal units per year (MMBtu/yr) as determined by the fuel flow at the higher heating value (HHV) of the fuel. Additionally, the purge gas heat input rate to Boiler No. 24 shall not exceed 33.28 MMBtu/hr. **(11/23)**

23. Boiler No. 24 is limited to the following fuels: **(11/23)**

    A. Pipeline-quality, sweet natural gas containing no more than 1.5 grains hydrogen sulfide (H_2S) per 100 dry standard cubic feet (dscf) on a 1-hour average basis and 12-month rolling basis. Compliance with this paragraph shall be demonstrated in accordance with the sampling specified in Special Condition No. 26.

    B. Plant purge gas containing no more than 100 ppmvd H_2S on a 1-hour average basis and 12-month rolling basis, no more than 400 ppmvd carbonyl sulfide (COS) on a 1-hour average basis, and 150 ppmvd COS on a 12-month rolling basis. Compliance with this paragraph shall be demonstrated in accordance with the sampling specified in Special Condition No. 25

24. The permit holder shall install and operate a totalizing fuel flow meter to measure the natural gas and purge gas fuel usage for Boiler No. 24, and the fuel usage for each shall be recorded monthly. Each monitoring device shall be calibrated at a frequency in accordance with the manufacturer's specifications or at least annually, whichever is more frequent, and shall be accurate to within 5 percent.

    Quality assured (or valid) data must be generated when the boiler is operating. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the boiler operated over the previous rolling 12 month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. **(11/23)**

25. The plant purge gas fired in Boiler No. 24 shall be sampled at least every month to determine the H_2S and COS fuel contents. **(11/23)**

26. The natural gas shall be sampled at least every 6 months to determine total sulfur content and net heating value. Test results from the fuel supplier or annual fuel purchasing contracts documenting the natural gas total sulfur content and net heaving value may be used to satisfy this requirement. Additionally, upon written request by the Executive Director of the TCEQ or any air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel utilized at this facility at the time the request is made or shall allow air pollution control agency representatives to obtain a sample for analysis. **(11/23)**

27. Opacity of emissions from Boiler No. 24 shall not exceed 5 percent averaged over a six-minute period. Opacity shall be determined by the U.S. EPA Reference Method 9 during the initial determination of compliance stack sampling. Thereafter, visible emissions shall be determined once per day by EPA Reference Method 22 and, if visible emissions are present, opacity shall be determined by EPA Reference Method 9. **(11/23)**

Planned Maintenance, Start-up and Shutdown - Boiler No. 24 (11/23)

28. Planned MSS events for Boiler No. 24 shall be limited to a total of 240 hours per 12-month rolling basis. Each start-up period shall not exceed 10 hours/event and is defined as the period that begins

when fuel is introduced into the boiler and ends when the steam vent is fully closed. Each shutdown period shall not exceed 10 hours/event and is defined as the period that begins when the boiler is reduced to minimum load and ends up to 10 hours from when the air fan is shut down. The number and duration of start-up events and hours of operation may be demonstrated by using recorded operating parameters such as fuel feed rates or power generation records. **(11/23)**

29. MSS emissions shall not exceed the hourly emission rates in the MAERT. **(11/23)**

30. Each planned MSS activity performed and associated emissions shall be recorded and the rolling 12-month emissions from planned MSS emissions updated, in pounds per hour, on a monthly basis. These records shall include the following information: **(11/23)**

    A. The physical location at which the planned MSS activity occurred, including the emission point number, common name and any other identifier for the point at which the emissions were released into the atmosphere;

    B. The type of planned MSS and the reason for the activity;

    C. The date and time of the planned MSS and its duration;

    D. The estimated quantity of each air contaminant or mixture of air contaminants emitted with the data and methods used to determine such quantities and contaminants. Emissions shall be estimated using the methods identified in the permit amendment application, PI-1 form dated April 11, 2023 and subsequent application updates associated with TCEQ Project No. 356252; and

    E. Measures taken to minimize emissions from planned MSS activities and the use of any control devices not permanently used for emission reductions for the facility.

Continuous Demonstration of Compliance - Boiler No. 24 (11/23)

31. The permit holder shall install, calibrate, and maintain a continuous emission monitoring system (CEMS) to measure and record the in-stack concentration of NO_x, CO, and O_2 from Boiler No. 24, EPN 310B24. **(11/23)**

    A. The CEMS shall meet the design and performance specifications, pass the field tests, and meet the installation requirements and the data analysis and reporting requirements specified in the applicable Performance Specification Nos. 1 through 9, Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60), Appendix B. If there are no applicable performance specifications in 40 CFR Part 60, Appendix B, contact the TCEQ Office of Air, Air Permits Division for requirements to be met.

    B. Section 1 below applies to sources subject to the quality-assurance requirements of 40 CFR Part 60, Appendix F; section 2 applies to all other sources:

        (1) The permit holder shall assure that the CEMS meets the applicable quality-assurance requirements specified in 40 CFR Part 60, Appendix F, Procedure 1. Relative accuracy exceedances, as specified in 40 CFR Part 60, Appendix F, Section 5.2.3 and any CEMS downtime shall be reported to the appropriate TCEQ Regional Manager, and necessary corrective action shall be taken. Supplemental stack concentration measurements may be required at the discretion of the appropriate TCEQ Regional Manager.

(2) The system shall be zeroed and spanned daily, and corrective action taken when the 24-hour span drift exceeds two times the amounts specified in the applicable Performance Specification Nos. 1 through 9, 40 CFR Part 60, Appendix B, or as specified by the TCEQ if not specified in Appendix B. Zero and span is not required on weekends and plant holidays if instrument technicians are not normally scheduled on those days.

Each monitor shall be quality-assured at least quarterly using Cylinder Gas Audits (CGA) in accordance with 40 CFR Part 60, Appendix F, Procedure 1, Section 5.1.2, with the following exception: a relative accuracy test audit (RATA) is not required once every four quarters (i.e., four successive quarterly CGA may be conducted). An equivalent quality-assurance method approved by the TCEQ may also be used. Successive quarterly audits shall occur no closer than two months.

All CGA exceedances of +15 percent accuracy indicate that the CEMS is out of control.

C. The monitoring data shall be reduced to 1-hour average concentrations at least once every day, using a minimum of four equally-spaced data points from each one-hour period. The individual average concentrations shall be reduced to units of lb/MMBtu, ppmvd, and lb/hr at least once every week as follows:

The measured 1-hour average concentrations from the CEMS shall be multiplied by the corresponding exhaust gas flow rate to determine the hourly emission rate. The NOx lb/MMBtu values shall be calculated using the average concentrations from the CEMS divided by the corresponding Btu rate as specified in Special Condition No. 24. The measured CO concentrations shall be converted to ppmvd at 3% O_2.

D. All monitoring data and quality-assurance data shall be maintained by the source. The data from the CEMS may, at the discretion of the TCEQ, be used to determine compliance with the conditions of this permit.

E. The appropriate TCEQ Regional Office shall be notified at least 30 days prior to any required RATA in order to provide them the opportunity to observe the testing.

F. Quality-assured (or valid) data must be generated when the boiler is operating except during the performance of a daily zero and span check. Loss of valid data due to periods of monitor break down, out-of-control operation (producing inaccurate data), repair, maintenance, or calibration may be exempted provided it does not exceed 5 percent of the time (in minutes) that the boiler operated over the previous rolling 12-month period. The measurements missed shall be estimated using engineering judgment and the methods used recorded. Options to increase system reliability to an acceptable value, including a redundant CEMS, may be required by the TCEQ Regional Manager.

Ammonia / Selective Catalytic Reduction (SCR) - Boiler No. 24 (11/23)

32. Boiler No. 24, EPN 310B24, shall be equipped with an SCR system. The concentration of NH_3 from Boiler No. 24 shall not exceed concentration limits specified in Special Condition No. 21. **(11/23)**

33. The NH_3 concentration in the stack of Boiler No. 24, EPN 310B24, shall be tested or calculated according to one of the methods listed below and shall be monitored according to one of the methods listed below. These results shall be recorded and used to determine compliance with

Special Condition Nos. 21 and 32. Monitoring NH_3 slip is only required on days when the SCR unit is in operation. **(11/23)**

A. The holder of this permit may install, calibrate, maintain, and operate a CEMS in accordance with manufacturer's recommendation to measure and record the concentrations of NH_3. The NH_3 concentrations shall be corrected in accordance with Special Condition Nos. 21 and 32.

B. The NH_3 slip may be measured using a sorbent or stain tube device specific for NH_3 measurement in the 5 to 10 ppm range. The frequency of sorbent or stain tube testing shall be daily for the first 60 days of operation, after which, the frequency may be reduced to weekly testing if operating procedures have been developed to prevent excess amounts of NH_3 from being introduced in the SCR unit and when operation of the SCR unit has been proven successful with regard to controlling NH_3 slip. Daily sorbent or stain tube testing shall resume when the catalyst is within 30 days of its useful life expectancy.

(1) If the sorbent or stain tube testing indicates an ammonia (NH_3) slip concentration that exceeds 5 ppm at any time, the permit holder shall begin NH_3 testing by either the Phenol-Nitroprusside Method, the Indophenol Method, or EPA Conditional Test Method (CTM) 27 on a quarterly basis in addition to the monthly sorbent or stain tube testing.

(2) If the quarterly testing indicates NH_3 slip is 4 ppm or less, the Phenol Nitroprusside Indophenol CTM 27 tests may be suspended until sorbent or stain tube testing again indicate 5 ppm NH_3 slip or greater.

C. The permit holder may install and operate a second NO_x CEMS probe located before the SCR, upstream of the stack NO_x CEMS, which may be used in association with the SCR efficiency and NH_3 injection rate to estimate NH_3 slip. This condition shall not be construed to set a minimum NO_x reduction efficiency on the SCR unit.

D. The permit holder may install and operate a dual stream system of NO_x CEMS at the exit of the SCR. One of the exhaust streams would be routed, in an unconverted state, to one NO_x CEMS and the other exhaust stream would be routed through a NH_3 converter to convert NH_3 to NO_x and then to a second NO_x CEMS. The NH_3 slip concentration shall be calculated from the delta between the two NO_x CEMS readings (converted and unconverted).

E. Any other method used for measuring NH_3 slip shall require prior approval from the TCEQ Office of Air, Air Permits Division.

34. The aqueous NH_3 stored for use with the SCR system shall have a concentration of less than 20% NH_3 by weight. **(11/23)**

35. The permit holder shall maintain the piping and valves in NH_3 service as follows (28AVO): **(11/23)**

A. Audio, olfactory, and visual checks for NH_3 leaks within the operating area shall be made once per 12-hour shift.

B. Immediately, but no later than one hour upon detection of a leak, plant personnel shall take one or more of the following actions:

(1) Locate and isolate the leak, if necessary.

(2) Commence repair or replacement of the leaking component.

(3) Use a leak collection or containment system to control the leak until repair or replacement can be made if immediate repair is not possible.

C. Stored aqueous NH_3 must have a concentration of less than 20% NH_3 by weight.

36. Records of AVO checks, any maintenance performed on piping and valves in NH_3 service, accidental releases, venting, and any corrective actions taken shall be maintained by the holder of this permit. **(11/23)**

Initial Determination of Compliance – Boiler No. 24 (11/23)

37. The permit holder shall perform stack sampling and other testing as required to establish the actual pattern and quantities of air contaminants being emitted into the atmosphere from Boiler No. 24, EPN 310B24, to demonstrate compliance with the MAERT and the limits specified in Special Condition No. 21. The permit holder is responsible for providing sampling and testing facilities and conducting the sampling and testing operations at his expense. Sampling shall be conducted in accordance with the appropriate procedures of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual and the U.S. Environmental Protection Agency (EPA) Reference Methods.

Requests to waive testing for any pollutant specified in this condition shall be submitted to the TCEQ Office of Air, Air Permits Division. Test waivers and alternate/equivalent procedure proposals for Title 40 Code of Federal Regulation Part 60 (40 CFR Part 60) testing which must have EPA approval shall be submitted to the TCEQ Regional Director.

A. The appropriate TCEQ Regional Office shall be notified not less than 45 days prior to sampling. The notice shall include:

(1) Proposed date for pretest meeting.

(2) Date sampling will occur.

(3) Name of firm conducting sampling.

(4) Type of sampling equipment to be used.

(5) Method or procedure to be used in sampling.

(6) Description of any proposed deviation from the sampling procedures specified in this permit or TCEQ/EPA sampling procedures.

(7) Procedure/parameters to be used to determine worst case emissions during the sampling period.

The purpose of the pretest meeting is to review the necessary sampling and testing procedures, to provide the proper data forms for recording pertinent data, and to review the format procedures for the test reports. The TCEQ Regional Director must approve any deviation from specified sampling procedures.

B. Air contaminants emitted from the Boiler No. 24 to be tested for include (but are not limited to) NOx, CO, SO_2, PM_{10}, $PM_{2.5}$, VOC, and NH_3.

C. Sampling shall occur within 60 days after achieving the maximum operating rate, but no later than 180 days after initial start-up of the facilities (or increase in production, as appropriate) and at such other times (identify the need for any periodic sampling here) as may be required

by the TCEQ Executive Director. Requests for additional time to perform sampling shall be submitted to the appropriate regional office.

D. The facility being sampled shall operate at the maximum natural gas and purge gas firing rates during stack emission testing. These conditions/parameters and any other primary operating parameters that affect the emission rate shall be monitored and recorded during the stack test. Any additional parameters shall be determined at the pretest meeting and shall be stated in the sampling report. Permit conditions and parameter limits may be waived during stack testing performed under this condition if the proposed condition/parameter range is identified in the test notice specified in paragraph A and accepted by the TCEQ Regional Office. Permit allowable emissions and emission control requirements are not waived and still apply during stack testing periods.

During subsequent operations, if the maximum natural gas and purge gas firing rates are greater than that recorded during the test period, stack sampling shall be performed at the new operating conditions within 120 days. This sampling may be waived by the TCEQ Air Section Manager for the region.

E. Copies of the final sampling report shall be forwarded to the offices below within 60 days after sampling is completed. Sampling reports shall comply with the attached provisions entitled “Chapter 14, Contents of Sampling Reports” of the TCEQ Sampling Procedures Manual. The reports shall be distributed as follows:

One copy to the appropriate TCEQ Regional Office.
One copy to each local air pollution control program.

F. Sampling ports and platform(s) shall be incorporated into the design of the unit according to the specifications set forth in the attachment entitled “Chapter 2, Guidelines For Stack Sampling Facilities” of the Texas Commission on Environmental Quality (TCEQ) Sampling Procedures Manual. Alternate sampling facility designs must be submitted for approval to the TCEQ Regional Director.

Recordkeeping Requirements

38. The following records shall be kept at the plant for the life of the permit. All records required in this permit shall be made available at the request of personnel from the TCEQ, EPA, or any air pollution control agency with jurisdiction.

A. A copy of this permit.

B. A complete copy of the testing reports and records of the initial performance testing completed pursuant to Special Condition Nos. 17 and 37 to demonstrate initial compliance. **(11/23)**

C. Where applicable and available, manufacturer-recommended operating and maintenance procedures for Power Boiler No. 12, FGR, and Boiler No. 24 including recommended time periods for start-up and shutdown. **(11/23)**

39. The following information shall be maintained by the holder of this permit in a form suitable for inspection for a period of five years after collection and shall be made available upon request to representatives of the TCEQ, the EPA, or any local air pollution control program having jurisdiction:

A. The daily, monthly, and rolling annual hours of operation for Power Boiler No. 12, Boiler No. 24, and the duct burners. **(11/23)**

B. The daily, monthly, and rolling annual quantities of natural gas and process (purge) gas burned in Power Boiler No. 12, Boiler No. 24, and the duct burner and the dates of process gas burning. The records for Boiler No. 24 shall be kept to ensure compliance with Special Condition Nos. 22 and 24. **(11/23)**

C. Natural gas and purge fuel gas sulfur sampling records to demonstrate compliance with Special Condition No. 23. **(11/23)**

D. Calculations based on fuel usage to demonstrate compliance with the annual mass emission limits of the MAERT for Power Boiler No. 12, Boiler No. 24, and duct burner created monthly and totaled on a rolling annual basis. **(11/23)**

E. Dates and times of FGR usage, other than start-up and shutdown, that are not in compliance with the acceptable combustion air ratio or range of ratios established during initial testing.

F. Dates and time periods for start-ups and shutdowns of Power Boiler No. 12.

G. Records of planned MSS activities to demonstrate compliance with Special Condition Nos. 28 through 30 for Boiler No. 24. **(11/23)**

H. Daily visible emission (opacity) records according to Special Condition No. 27. **(11/23)**

I. Records of quality assurance requirements for the CEMs as required by Special Condition No. 31. **(11/23)**

J. Records demonstrating compliance with the requirements of 28AVO as specified in Special Condition Nos. 35 and 36. **(11/23)**

K. Records of stack tests completed in accordance with Special Condition No. 37. **(11/23)**

Referenced Permits by Rule

40. The following sources and/or activities are authorized under a Permit by Rule (PBR) by Title 30 Texas Administrative Code Chapter 106 (30 TAC Chapter 106). These lists are not intended to be all-inclusive and can be altered without modifications to this permit. **(11/23)**

Authorization	Source or Activity
152689	Authorizes an alternative operating scenario for vent stream controls. (EPN 310B12)
87623	Authorizes installation of a crossover valve in existing piping that would allow vent stream from a single unit to be diverted to Boiler No.12
88181	Authorizes the change of methane blanket to nitrogen to control level and pressure of acetaldehyde in Tank 639 that is routed to Boiler No. 12

Date: November 21, 2023

Emission Sources - Maximum Allowable Emission Rates

Permit Numbers 18049 and PSDTX725

This table lists the maximum allowable emission rates and all sources of air contaminants on the applicant's property covered by this permit. The emission rates shown are those derived from information submitted as part of the application for permit and are the maximum rates allowed for these facilities. Any proposed increase in emission rates may require an application for a modification of the facilities covered by this permit.

Air Contaminants Data

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
305COGEN	47.4 MW Gas Turbine	NO_x	80.0	--
		CO	11.0	--
		VOC	5.0	--
		PM	2.5	--
		PM_{10}	2.5	--
		$PM_{2.5}$	2.5	--
		SO_2	2.9	--
305COGEN	Duct Burners	NO_x	9.57	--
		CO	10.20	--
		VOC	3.19	--
		PM	1.75	--
		PM_{10}	1.75	--
		$PM_{2.5}$	1.75	--
		SO_2	0.04	--
305COGEN	Emission Cap	NO_x	--	388.51
		CO	--	88.9
		VOC	--	34.6
		PM	--	18.0
		PM_{10}	--	18.0
		$PM_{2.5}$	--	18.0
		SO_2	--	12.9

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
310B12	Power Boiler No. 12 (5)	NO_x	32.70	143.3
		CO	44.80	196.3
		VOC	2.94	12.9
		PM	4.06	17.8
		PM_{10}	4.06	17.8
		$PM_{2.5}$	4.06	17.8
		SO_2	21.30	5.61
310B24	Boiler No. 24 – Routine Operations	NO_x	5.23	--
		CO	22.42	--
		VOC	2.82	--
		PM	3.89	--
		PM_{10}	3.89	--
		$PM_{2.5}$	3.89	--
		SO_2	6.38	--
		NH_3	2.72	--
310B24	Boiler No. 24 - MSS	NO_x	12.92	--
		CO	60.71	--
		VOC	0.70	--
		PM	0.96	--
		PM_{10}	0.96	--
		$PM_{2.5}$	0.96	--
		SO_2	0.52	--
		NH_3	0.74	--
310B24	Boiler No. 24 –	NO_x	--	20.94

Emission Sources - Maximum Allowable Emission Rates

Emission Point No. (1)	Source Name (2)	Air Contaminant Name (3)	Emission Rates	
			lbs/hour	TPY (4)
	Combined Routine Operations and MSS	CO	--	90.46
		VOC	--	10.75
		PM	--	14.85
		PM_{10}	--	14.85
		$PM_{2.5}$	--	14.85
		SO_2	--	15.89
		NH_3	--	10.38
B24FUG	Ammonia Fugitives	NH_3	0.01	0.01

(1) Emission point identification - either specific equipment designation or emission point number from a plot plan.
(2) Specific point source names. For fugitive sources, use an area name or fugitive source name.
(3) VOC - volatile organic compounds as defined in Title 30 Texas Administrative Code § 101.1
NO_x - total oxides of nitrogen
SO_2 - sulfur dioxide
PM - particulate matter, suspended in the atmosphere, including PM_{10} and $PM_{2.5}$, as represented
PM_{10} - particulate matter equal to or less than 10 microns in diameter, including $PM_{2.5}$, as represented
$PM_{2.5}$ - particulate matter equal to or less than 2.5 microns in diameter
CO - carbon monoxide
NH_3 - ammonia

(4) Compliance with annual emission limits (tons per year) is based on a 12 month rolling period. Emission rates are based on and the facilities are limited by the following maximum operating schedule:

__Hrs/day __Days/week __Weeks/year or 8,760 Hrs/year

(5) Power Boiler No. 12, EPN 310B12, shall no longer be authorized to operate upon the completion of the time period specified in 30 TAC 116.12(22)(D) for the initial start-up of Boiler No. 24 (EPN 310B24).

Date: November 21, 2023