Outlook

RE: MZX Tech LLC Draft Air PSD Construction Permit

From Slater Smith <Slater.Smith@trinityconsultants.com>
Date Wed 1/14/2026 9:56 PM
To Jeffrey Bland <JBland@mdeq.ms.gov>; Jaricus Whitlock <jwhitlock@mdeq.ms.gov>
Cc Shannon Lynn <slynn@trinityconsultants.com>; mrao@trinityconsultants.com <mrao@trinityconsultants.com>; Brian Ketchum <Brian.Ketchum@trinityconsultants.com>; cwinter@fce-engineering.com <cwinter@fce-engineering.com>; Brent Mayo <brent@colossusx.com>; Kathryn Jordan <Kathryn.Jordan@trinityconsultants.com>

1 attachment (5 MB)
2026-0114 MZX Tech MS PSD Application.pdf;

Jaricus and Jeffrey,

On behalf of our client, MZX Tech LLC, Trinity Consultants respectfully submits the attached revision to the previously submitted application. In addition to this email, we will upload the application through MDEQ's EPD Electronic Application Submittal Portal.

The attached revised application reflects the discussions from our recent phone and email communications regarding the ammonia emission requirements. Please feel free to contact me if you have any questions or need further information.

Sincerely,
Slater Smith, P.E.
Senior Consultant
M 662.415.6196
Email: slater.smith@trinityconsultants.com
141 Township Avenue, Suite 304, Ridgeland, MS 39157

Trinity Consultants

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From: Chad Winter <cwinter@fce-engineering.com>
Sent: Wednesday, January 14, 2026 5:47 PM
To: Shannon Lynn <slynn@trinityconsultants.com>
Cc: Jeffrey Bland <jbland@mdeq.ms.gov>; Jaricus Whitlock <jwhitlock@mdeq.ms.gov>; Maya Rao <mrao@trinityconsultants.com>; Brian Ketchum <Brian.Ketchum@trinityconsultants.com>; Slater Smith <Slater.Smith@trinityconsultants.com>
Subject: RE: MZX Tech LLC Draft Air PSD Construction Permit

Mr. Lynn,

Attached please find a copy of the proposed, revised draft Air PSD Construction Permit for the referenced facility. The attached draft permit contains conditions that we intend to incorporate as part of the final permit.

If you have any comments concerning the contents of the draft permit, please notify the MDEQ Office of Pollution Control in writing, or via email, no later than 15 days from this transmittal date. If you would like to contact me to discuss any of these concerns, please email me, or call me at (601) 540-3966.

Sincerely,

Chad Winter, P.E.
MDEQ Air Permit/Compliance Contractor
mobile: (601) 540-3966

From: Shannon Lynn <slynn@trinityconsultants.com>
Sent: Wednesday, January 14, 2026 6:55 AM
To: Chad Winter <cwinter@fce-engineering.com>
Cc: Jeffrey Bland <jbland@mdeq.ms.gov>; Jaricus Whitlock <jwhitlock@mdeq.ms.gov>; Maya Rao <mrao@trinityconsultants.com>; Brian Ketchum <Brian.Ketchum@trinityconsultants.com>; Slater Smith <Slater.Smith@trinityconsultants.com>
Subject: RE: MZX Tech LLC Draft Air PSD Construction Permit
Importance: High

Dear Chad and MDEQ Staff,

Thank you so much for the opportunity to review the draft permit for MZX Tech LLC. Attached are our comments based on a review of the draft.

1. p. 8, Section 2.0 - Technically AA-001 through AA-017 are 16.48 MW
2. p. 11, Section 3.0 - AA-000 BACT numerical limits for CO_2, PM_{10}, $PM_{2.5}$, SO_2, ammonia and opacity. As presented in the BACT analysis, BACT for the $PM_{10}/PM_{2.5}$ species was presented as use of natural gas and good combustion practice with 5% opacity. The argument against a numerical limit is that it can be difficult to test PM species at the levels emitted by gas-fired units because PM is so low and the potential for inaccurate results is relatively high. $PM_{10}/PM_{2.5}$ did not exceed their respective Class II Significant Impact Levels (SILs). In a similar argument, BACT for SO_2 was presented as use of pipeline quality natural gas.
3. p. 11 AA-000 - SO_2 tpy should be 2.20 tpy
4. p. 12 AB-000 - BACT same comments as #2
5. p. 12 AB-000 - SO_2 tpy should be 4.61, NO_x tpy should be 11.38
6. p. 13 AB-000 - formaldehyde emissions should be 0.06 lbs/hr and 0.24 tpy
7. p. 13 AC-000 - BACT same comments as #2
8. p. 16 Condition 3.9 - SO_2 tpy 2.20
9. p. 18 Condition 3.12 - SO_2 tpy 4.61, NO_x tpy 11.38 and formaldehyde 0.06 lbs/hr & 0.24 tpy
10. P. 22 Table 4 - Is this table required? If so, pollutant/parameters should be SO_2/NO_x
11. p. 26 Condition 5.8 – Refer to comment #2. MZX would respectfully request removal of exhaustive performance testing for SO_2 and $PM_{10}/PM_{2.5}$ per the discussion under Comment 2. However, a testing a representative sample is understood. In addition, MZX respectfully requests a portion of turbines be tested for CO, VOC and formaldehyde periodically until all turbines are cycled through.
12. p. 26 Condition 5.8 – SO_2 tpy 2.20
13. p. 27 Condition 5.9 - same comment as #11
14. p. 27 Condition 5.9 - SO_2 tpy 4.61, NO_x tpy 11.38 and formaldehyde 0.06 lbs/hr & 0.24 tpy
15. p. 28-29, Condition 5.10 - same comment as #11
16. Section 3 - For BACT limits from the table, can we remove the long term numbers for startup and shut down from the table as those are not BACT limits. Those can be mentioned as facility totals as it has been done in 3.9 and 5.8. Having it in the table is confusing for someone looking at it as it appears to be BACT.
17. Section 2.0 - Can you please add the MMBtu/hr value to the emission point descriptions of each unit since Subpart KKKK emissions for NO_x are dependent on the rated capacity.
18. Is it possible to add some clarity to Condition 6.1(f) to make sure certification of construction should be submitted for each unit.
19. P. 25 - Condition 5.5 , Please delete GWF row for SF6
20. Conditions 3.10, 3.13, 3.15 – We think the conditions limiting SU/SD to 10 or 30 minutes are unnecessary. The SU/SD calculations we presented were "per event" from the manufacturer. We were conservative and added regular operating emissions to the per event emissions to get a "worst-case" 1-hour emission rate for the modeling. Plus, we are showing compliance with the ton/year limit.

Thank you again for your time and efforts on this significant project for the state of Mississippi. Do not hesitate to reach out if you have any questions.

Shannon

Shannon G. Lynn, P.E., C.M.
Principal Consultant

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From: Chad Winter <cwinter@fce-engineering.com>
Sent: Friday, January 09, 2026 1:39 PM
To: Shannon Lynn <slynn@trinityconsultants.com>; brent@colossusx.com
Cc: Jeffrey Bland <jbland@mdeq.ms.gov>; Jaricus Whitlock <jwhitlock@mdeq.ms.gov>
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Sincerely,

Chad Winter, P.E.
MDEQ Air Permit/Compliance Contractor
mobile: (601) 540-3966

PSD PERMIT APPLICATION

Volume I - Air Construction Permit Application

Greenfield Simple Cycle Combustion Turbine Project

MZX Tech LLC
Southaven, MS

Prepared by:

TRINITY CONSULTANTS
1701 Centerview Drive
Suite 109
Little Rock, AR 72211
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141 Township Ave, Suite 302
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(601) 775-6540

January 2026

Project 250401.5102

Trinity Consultants

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1. INTRODUCTION

MZX Tech LLC "MZX" is proposing to construct and operate a generation facility that will be located in DeSoto County, Southaven, Mississippi. This will be a greenfield facility. The proposed facility will produce electricity for its own use and will include simple cycle combustion turbines (CT) and supporting equipment. Three (3) turbine models will be used for the site:

- Solar PGM-130
- Solar Titan 350
- ProEnergy 6000PE

The CT units will fire natural gas as the only fuel. The combination of turbines will generate a base load electricity rating of approximately 1.2 gigawatts (GW).

The initial configuration will consist of (16) Solar Titan 350 units rated at 35 megawatts (MW) each, (17) Solar PGM-130 units rated at 16.5 MW each and (8) ProEnergy 6000PE units rated at 50 MW each. MZX is proposing for each CT to operate for a maximum of 8,760 hours per year.

As proposed, the project will require a Prevention of Significant Deterioration (PSD) construction permit as a new major source since project-related emissions of at least one PSD regulated pollutant exceeds the major source threshold of 250 tons per year (tpy). Project-related emissions are anticipated to exceed the PSD significant emission rate (SER) thresholds for total particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}), total particulate matter with an aerodynamic diameter of 2.5 microns or less ($PM_{2.5}$), nitrogen oxides (NO_X), volatile organic compounds (VOC), sulfur dioxide (SO_2), carbon monoxide (CO), and greenhouse gases (GHG) in terms of carbon dioxide equivalents (CO_2e).

The site will be an area source of hazardous air pollutants (HAP) emissions with total HAPs less than 25 tpy and each individual HAP less than 10 tpy.

This application package contains the necessary state air construction permit application for the proposed project, included in two (2) separate application volumes. Volume I of the application details the required emissions analyses, regulatory review, and control technology analyses. Volume II of the application package includes all the required air quality assessments necessary as part of this PSD permit application.

1.1 Summary of Permit Request

MZX has identified the regulatory requirements pertaining to PSD major sources applicable to the facility. These requirements are summarized below:

1. Permitting construction of Solar PGM-130, Solar Titan 350 and ProEnergy 6000PE turbines equipped with selective catalytic reduction (SCR) and oxidation catalyst.
2. Permitting construction of natural gas-fired PLUM pressure reduction system (PRS) units.
3. Applicable requirements under 40 CFR 60 Subpart KKKK, *Standards of Performance for Stationary Combustion Turbines (NSPS KKKK).*

With this application, MZX requests the issuance of a PSD permit-to-construct under 11 Mississippi Administrative Code, Part 2, Chapter 5.

1.2 Permitting and Regulatory Requirements

MZX is submitting this construction permit application, in accordance with the PSD permitting requirements, to request authorization to construct an assortment of simple-cycle combustion turbines and supporting equipment. Since the proposed facility will be a major source under the PSD permitting program (i.e., the potential to emit for at least one regulated NSR pollutant exceeds 250 tpy), substantive PSD requirements apply with respect to each regulated NSR pollutant whose potential to emit exceeds the applicable SER thresholds. MZX has evaluated emissions increases of CO, NO_X, filterable PM, total PM_{10}, total $PM_{2.5}$, CO_2e, SO_2, and VOC resulting from the proposed project for comparison to their respective PSD SER to determine whether PSD permitting is required, as identified in Table 1-1. Project Potential Emissions.

Table 1-1. Project Potential Emissions

Pollutant	Project Emissions (tpy)	PSD Significant Emission Rate (tpy)	PSD Triggered? (Yes/No)
Filterable PM	19.56	25	No
Total PM_{10}	19.56	15	Yes
Total $PM_{2.5}$	19.53	10	Yes
SO_2	156.53	40	Yes
NO_X	423.39	40	Yes
VOC	417.40	40	Yes
CO	364.16	100	Yes
H_2SO_4	0.18	7	No
CO_2e	6,410,729	75,000	Yes

Since the project potential emissions of total PM_{10}, total $PM_{2.5}$, NO_X, VOC, SO_2 and CO exceed their respective SERs, the proposed project is required to undergo PSD review for those pollutants. Because these pollutants trigger PSD permitting, PSD Best Available Control Technology (BACT) review is also required for greenhouse gases (GHG, as CO_2e) because the calculated CO_2e project emission increases exceed the threshold above which GHG are subject to evaluation. Emission calculations are described in Section 7 of this application, and PSD permitting requirements are detailed in Section 3.

MZX is submitting this construction permit application package in accordance with all federal and state requirements. The proposed project will be subject to applicable federal New Source Performance Standards (NSPS) and Mississippi Department of Environmental Quality (MDEQ)'s state regulations. Applicability of these programs is discussed in Section 4 of this application.

1.3 BACT Determination

The project will satisfy PSD BACT requirements for all regulated NSR pollutants (including greenhouse gases). This includes, inter alia, use of SCR to achieve a NO_X emission limit of 2 ppm. Refer to Section 5 for a complete control technology analysis.

1.4 Application Contents

Volume I of this permit application is organized as follows:

- Section 2 contains a description of the proposed project;
- Section 3 summarizes emissions calculation methodologies and assesses PSD applicability;
- Section 4 details the regulatory applicability analysis for the proposed project;
- Section 5 contains the required BACT assessment;
- Section 6 contains the ambient air quality analysis;
- Section 7 contains the discussion and basis for air emission calculations;
- Appendix A includes a detailed regulatory review of all federal, state, county and city air rules;
- Appendix B includes an area map;
- Appendix C includes a site map;
- Appendix D includes the detailed potential emissions calculations;
- Appendix E includes the applicable Reasonably Available Control Technology (RACT)/BACT/Lowest Achievable Emission Reduction (LAER) Clearinghouse (RBLC) database tables;
- Appendix F contains the MDEQ permit application forms; and
- Appendix G contains suggested permit requirements.

2. DESCRIPTION OF FACILITY

2.1 Process Description

MZX proposes to construct a greenfield generation facility in Southaven, Mississippi and will be considered a PSD major stationary source. This application for an initial PSD permit requests approval to operate a combination of Solar PGM-130 turbines (16.5 MW each), Solar Titan 350 turbines (35 MW each) and ProEnergy 6000PE turbines (50 MW each) to provide a continuous power source with a capacity of approximately 1.2 GW. PLUM PRS units, which are natural gas-fired and contain two (2) burners each rated at a heat input of 5.0 MMBtu/hr each for a total of 10 MMBtu/hr, will be utilized to ensure a steady, consistent natural gas supply to the combustion turbines (CTs). No black start engines or cooling towers will be utilized at the site.

MZX is designing this facility to provide an efficient, resilient power source. Electrical power systems will be designed to be fully redundant so that in the event of a disruption, Tesla battery packs will provide redundant, 100% back-up power for uninterrupted continuous operations. Therefore, no emissions units are being permitted that will provide back-up power. Appendix B presents a plot plan which also indicates the site boundary.

2.1.1 Equipment to Be Utilized

The equipment to be utilized on-site includes the aforementioned Solar PGM-130 turbines and Solar Titan 350 turbines, each equipped with Solar's Dry Low Emissions (DLE)/SoLoNO$_X$ control technology followed by SCR and oxidation catalyst and ProEnergy 6000PE turbines equipped with SCR and oxidation catalyst. The site will also utilize PLUM PRS units to ensure a steady, consistent natural gas supply to the CTs.

MZX will charge Tesla battery packs during off-peak hours which can then be used as backup power, if needed. The site does not plan to supply power to the grid. As such, MZX will be exempt from EPA regulations that apply to Electric Utilities (e.g., 40 CFR Part 75) or other regulation for which applicability is determined based on "net-electric sales".

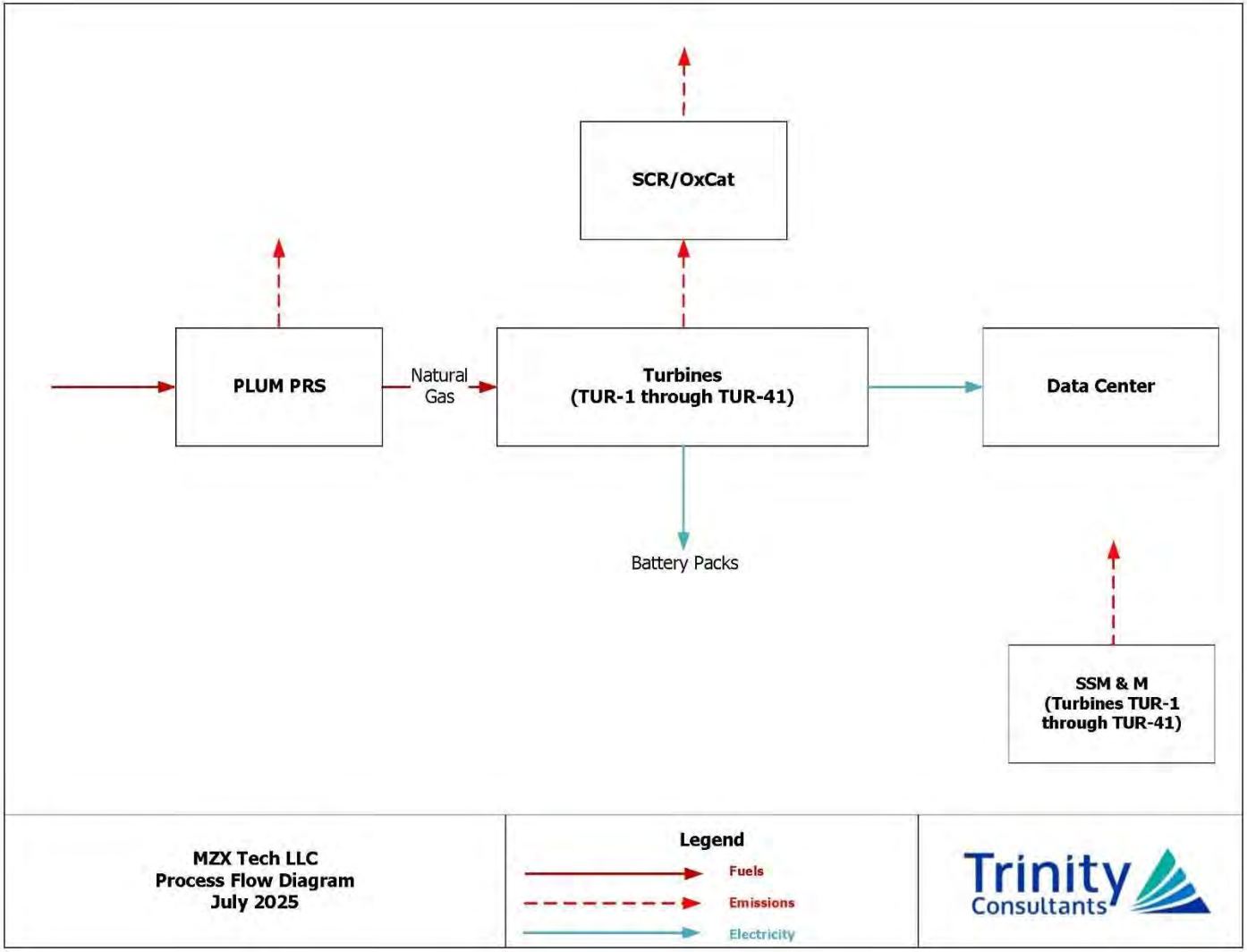
2.1.2 General Description of Power Demand

Electricity is distributed from the electrical substation transformers to the uninterruptable power supply system. The uninterruptible power supply system consists of the proposed turbines to enable the equipment to operate continuously.

A battery energy storage system (BESS) can store energy when demand is low and release it when demand is high. A BESS can respond quickly to changes in demand and supply, ensuring critical loads are running without straining services.

2.2 Process Flow Diagram

Figure 2-1. Process Flow Diagram



3. PSD APPLICABILITY ANALYSIS

The New Source Review (NSR) permitting program requires that a source obtain a permit prior to construction if the proposed project will result in emission increases above certain threshold levels. The PSD program applies on a pollutant-by-pollutant basis and only in areas classified as "attainment" or "unclassifiable" for the particular pollutant. The MZX facility is a new, greenfield site that will be located in DeSoto County, part of Air Quality Control Region [AQCR] 018 Metropolitan Memphis (Arkansas, Mississippi), as described in 40 CFR §81.44. This AQCR is designated as "attainment" or "unclassifiable/attainment" for all pollutants. *See* 40 CFR §81.325.

"Major stationary source" is defined under the PSD regulations to include any source that emits or has the potential to emit over 250 tpy of at least one criteria pollutant and is not one of the 28 specifically listed industrial source categories.[1] MZX is not on the list of specified industrial source categories and is a PSD major stationary source since it has the potential to emit over 250 tpy of CO, NO_X, VOC, and GHGs measured as CO_2e.

A "major modification" is defined as a physical change or change in the method of operation of a major stationary source that would result in a significant emissions increase of a regulated NSR pollutant and a significant net emissions increase of that pollutant from the major stationary source.[2] A significant emissions increase is defined by the PSD regulations for each pollutant.[3] These thresholds are commonly referred to as the PSD SERs.

PSD requirements will apply to the following pollutants: VOC, NO_X, CO, SO_2, PM_{10}, $PM_{2.5}$ and GHG. PSD review, including an air quality analysis and BACT evaluation, is required for new PSD major sources.

[1] 40 CFR 52.21(b)(1).

[2] 40 CFR 52.21(b)(2).

[3] 40 CFR 52.21(b)(23).

4. REGULATORY REVIEW

MZX is subject to certain federal and state air regulations. This section of the application summarizes the air permitting requirements and key air quality regulations that apply to MZX under both federal and state permitting programs.

A summary of federal, state, and local regulations applicable is included as Appendix A.

4.1 MDEQ Air Construction Permit Program

"Major source" is defined as:[4]

> *Major Stationary Source is defined under the Prevention of Significant Deterioration (PSD) regulations in 11 Miss. Admin. Code Pt. 2, Ch. 5, which adopts the federal PSD regulations in 40 CFR 52.21 by reference (with a few exceptions). Major stationary sources require a preconstruction permit, generally referred to as a PSD Permit to Construct.*

4.2 New Source Review Applicability

The NSR permitting program generally requires a source to obtain a permit and undertake other obligations prior to construction of any project at an industrial facility if the proposed project results in an increase in emissions in excess of certain pollutant threshold levels. MDEQ administers its major NSR permitting program through 11 Mississippi Administrative Code, Part 2, Chapter 5, *Regulations for the Prevention of Significant Deterioration of Air Quality*, which establishes preconstruction, construction, and operation requirements for new and modified sources.

The NSR program is comprised of two elements: Non-Attainment New Source Review (NNSR) and PSD. The NNSR program potentially applies to new construction or modifications that result in emission increases of a particular pollutant for which the area where the facility is located is classified as "nonattainment" for that pollutant. The PSD program applies to new construction or modifications that result in emission increases of a particular pollutant for which the area where the facility is located is classified as "attainment" or "unclassifiable." The MZX facility will be located in DeSoto County, which has been designated by the U.S. Environmental Protection Agency (EPA) as "attainment" or "unclassifiable/attainment" for all criteria pollutants. Therefore, the proposed project is not potentially subject to NNSR permitting requirements. However, new construction or modifications that result in emissions increases are potentially subject to PSD permitting requirements.

The PSD program only regulates emissions from "major" stationary sources of regulated air pollutants. A stationary source is considered PSD major if potential emissions of any regulated pollutant exceed the major source thresholds. The PSD major source threshold for the facility is 250 tpy for all regulated pollutants, except GHG. The proposed project will require a PSD construction permit as a new major source. Projected-related emissions increases exceed the PSD SER thresholds for total PM_{10}, total $PM_{2.5}$, NO_X, VOC, SO_2, CO and CO_2e (although CO_2e does not alone trigger PSD permitting).

Since the proposed facility is a PSD major source for at least one regulated pollutant, PSD review applies. The emissions increase for all regulated pollutants resulting from the proposed project must be compared

[4] 11 Mississippi Administrative Code, Part 2, Chapter 5

against the PSD SER to determine whether a particular regulated NSR pollutant is subject to PSD review. For CO_2e, PSD permitting is only required if the emissions increase from the proposed project exceeds the SER for CO_2e and the project is already undergoing PSD permitting for at least one other PSD-regulated pollutant. The emissions increase from the proposed project for each PSD regulated pollutant compared to the respective SER are included in Table 1-1. Project Potential Emissions.

As illustrated in Table 1-1, the proposed project emissions increase (and net emission increase) exceeds the SER for total PM_{10}, total $PM_{2.5}$, NO_X, VOC, CO, SO_2, and CO_2e. Accordingly, PSD review is required for these pollutants.

4.3 Title V Operating Permits

40 CFR 70 establishes the federal Title V operating permit program. MDEQ has incorporated the provisions of this federal program in its regulation, 11 Mississippi Administrative Code, Part 2, Chapter 6, *Air Emissions Operating Permit Regulations for the Purposes of Title V of the Federal Clean Air Act.* This regulation requires that all new and existing Title V major sources of air emissions obtain federally approved state administered operating permits. A major source is defined under the Title V program as a facility that has the potential to emit either more than 100 tpy for any criteria pollutant, more than 10 tpy for any single HAP, or more than 25 tpy for combined HAPs. Potential emissions from MZX exceed the major source threshold for several criteria pollutants and it will therefore be a Title V major source.

A Title V operating permit application must be submitted electronically to the MDEQ within one year of a facility starting operations as a major source as required by 11 Mississippi Administrative Code, Part 2, Chapter 6, Rule 6.2(A)(1)(a), *Timely Applications*.

4.4 Section 504(f) Permit Shield Request

Section 504(f) of the Clean Air Act (CAA) authorizes the permitting authority to provide a "permit shield" whereby compliance with a Part 70 permit shall be deemed in compliance with all other applicable provisions of the Act. The concept of a permit shield is incorporated into 11 Mississippi Administrative Code, Part 2, Chapter 6, Rule 6.3(F). Accordingly, a Title V source may request a permit shield with respect to all applicable requirements provided that such applicable requirements are included and are specifically identified in the permit; or the MDEQ determines that other requirements specifically identified are not applicable to the source, and the permit includes the determination or listed provisions.

MZX requests a permit shield for the applicable and non-applicable requirements provided in Section 4 and Appendix A.

4.5 Mississippi Air Emission Regulations for the Prevention, Abatement, and Control of Air Contaminants

Pursuant to the authority granted by Miss. Code Ann. 49-17-17, the following regulations are adopted for the purpose of preventing, abating, and controlling air pollution caused by air contaminants being discharged into the atmosphere as particulates, smoke, fly ash, solvents, and other chemicals or combinations thereof (11 Mississippi Administrative Code, Part 2, Chapter 1, Rule 1.1(A)).

4.5.1 Visible Emissions Standards: 11 Miss. Admin. Code Pt. 2, R. 1.3. A & B

Facility-wide visible emissions are subject to a limit of 40% opacity (with exceptions for startup and soot blowing operations). MZX does not expect visible emission to the atmosphere from its combustion sources to exceed the opacity limit. In case of excess emissions, MZX will provide a notice of upset within 5 working days to the MDEQ as specified under 11 Miss. Admin. Code Pt. 2, R. 1.10, *Provisions for Upsets, Startups, and Shutdowns*.

4.5.2 General Nuisance: 11 Miss. Admin. Code Pt. 2, R. 1.3. C

General nuisance requirements are specified under 11 Miss. Admin. Code Pt. 2, R. 1.3(C). MZX will take reasonable precautions to prevent the discharge of fugitive dust or any other air contaminant in sufficient amounts or duration beyond the facility's property line.

In case of excess emissions, MZX will determine the cause and rectify the situation. If the excess emission is due to an upset condition which cannot be rectified even after taking necessary steps, then MZX will provide a notice of upset within 5 working days to the MDEQ as specified under 11 Miss. Admin. Code Pt. 2, R. 1.10, *Provisions for Upsets, Startups, and Shutdowns*.

4.5.3 Particulate Matter Emissions from Fuel Burning: 11 Miss. Admin. Code Pt. 2, R. 1.3. D(1)(b)

The maximum permissible emission of ash and/or particulate matter from fossil fuel burning installations of greater than 10 MMBTU/hour heat input but less than 10,000 MMBTU/hour shall not exceed an emission rate determined by the following relationship:

$$E = 0.8808 \times I^{-0.1667}$$

where E is the emission rate in pounds per MMBTU/hour heat input and I is the heat input in MMBTU/hour. MZX will demonstrate a wide margin of compliance with the emission standard by firing pipeline-quality natural gas.

4.5.4 SO_2 Emissions from Fuel Burning: 11 Miss. Admin. Code Pt. 2, R. 1.4. A.(1)

The maximum discharge of sulfur oxides from any fuel burning installation in which the fuel is burned primarily to produce heat or power by indirect heat transfer shall not exceed 4.8 pounds (measured as sulfur dioxide) per MMBtu heat input. MZX will demonstrate a wide margin of compliance with the emission standard by firing pipeline-quality natural gas.

4.5.5 General Provisions: 11 Miss. Admin. Code Pt. 2, R. 2.2.B.(10).

MDEQ may establish limitations and requirements on the emission of air pollutants and on other parameters of a stationary source to assure that the requirements of Applicable Rules and Regulations are met subject to Miss. Code Ann. § 49-17-34(2) and (3). Ammonia (NH_3) is not a regulated pollutant under Mississippi's EPA Approved State Implementation Plan. However, MZX is proposing the NH_3 emission limitations found Table 4-1 to minimize any additional environmental impacts. MZX received Vendor Guarantees stipulating that the units will comply with the limitations in Table 4-1 while the units comply with the NO_x emission limitations.

Table 4-1. Proposed Mississippi State Limitations

Units	Proposed Limitation
Solar PGM130	5 ppm (0% O_2)
Solar Titan 350	5 ppm (0% O_2)
ProEnergy 6000PE	10 ppm (0% O_2)

4.6 Mississippi Ambient Air Quality Standards

Mississippi ambient air quality standards at 11 Mississippi Administrative Code, Part 2, Chapter 4, *Ambient Air Quality Standards*.

The ambient air quality standards for Mississippi shall be the Primary and Secondary National Ambient Air Quality Standards (NAAQS) as duly promulgated by the U.S. Environmental Protection Agency in (or to be printed in) 40 CFR Part 50, pursuant to the Federal Clean Air Act, as amended. All such standards promulgated by the U.S. Environmental Protection Agency as of September 6, 2013, are hereby adopted and incorporated herein by the Commission by reference as the official ambient air quality standards of the State of Mississippi and shall hereafter be enforceable as such (except that the word "Administrator" in said standards shall be replaced by the words "Executive Director" and the word "Agency" in said standards shall be replaced by the word "Department").

The state of Mississippi may require externally provided air quality dispersion modeling submittals from industries seeking to obtain Air Pollution Control construction permits in order to demonstrate ambient compliance with the NAAQS standards for criteria pollutants defined by EPA as well as air toxic pollutants defined by the EPA National Emission Standards for Hazardous Air Pollutants (NESHAP) program.

Specifically, the MDEQ uses dispersion modeling analyses, in combination with several NAAQS for federally designated criteria air pollutants, to protect air quality in the state, by requiring dispersion modeling analyses through the following main program:

1. PSD and NNSR for new and modified emission sources of criterial pollutants, as well as State Implementation Plan (SIP) revisions for existing sources near areas of measured or modeled pollutant concentrations which exceed NAAQS levels.

MZX will meet these criteria and demonstrate compliance through the Ambient Air Quality Analysis required as part of the PSD review. An air dispersion modeling analysis is required and addressed in Section 6 of this application (included in *PSD Permit Application – Volume II – Modeling Report*).

4.7 New Source Performance Standards (NSPS)

4.7.1 40 CFR Part 60 Subpart A – General Provisions

All affected sources are subject to the general provisions of NSPS Subpart A unless specifically excluded by the source-specific NSPS. Subpart A requires initial notification and performance testing, recordkeeping, monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable.

4.7.2 40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

The affected facility to which this subpart applies is each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 29 megawatts (MW) (100 million British thermal units per hour (MMBtu/h)) or less, but greater than or equal to 2.9 MW (10 MMBtu/h).

The PLUM PRS units proposed for MZX are rated at 10.0 MMBtu/hr each. However, MZX is exempt from the requirements of NSPS Dc since each PLUM PRS unit contains two (2) burners, with two (2) stacks, each rated at 5.0 MMBtu/hr.

4.7.3 40 CFR Part 60 Subpart GG – Standards of Performance for Stationary Gas Turbines

MZX is exempt from the requirements of NSPS GG since it will become subject to the requirements of NSPS KKKK following the installation of stationary combustion turbines. As stated at §60.4305(b), "Stationary combustion turbines regulated under this subpart are exempt from the requirements of Subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of Subparts Da, Db, and Dc of this part."

4.7.4 40 CFR Part 60 Subpart KKKK – Standards of Performance for Stationary Combustion Turbines (EU01 – EU15)

MZX expects to install and operate the following sources as stationary combustion turbines. Because the units will be constructed after the applicability date for NSPS KKKK, the units are subject to the standard.

SOURCES

Solar PGM-130 Turbines
Solar Titan 350 Turbines
ProEnergy 6000PE Turbines

SUMMARY

The turbines at MZX will be subject to NSPS KKKK.

EMISSION LIMITS AND CALCULATIONS

The NO_X emission limit for each *new turbine firing natural gas is* 25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh).

The SO_2 emission limit is 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output.

WORK PRACTICE STANDARDS

Operate and maintain the combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

INITIAL AND CONTINUOUS COMPLIANCE

By using SCR control technology, MZX will conduct initial performance testing on each turbine to demonstrate initial compliance. MZX will continuously monitor appropriate parameters to verify the proper operation of the emission controls for continuous compliance. Subsequent performance testing will be done as prescribed by the regulations.

MZX will conduct annual testing for continuous compliance. Frequency can be reduced for compliant testing.

RECORDKEEPING

Keep the following records:

- All submitted notifications and reports
- All startup and shutdown information
- All malfunction information
- Natural gas certificate of analysis for sulfur content
- Performance test notifications and reports

Maintain all records for at least five years.

REPORTING

Applicable reporting dates:

- Performance Test Notifications – due 30 days before the test date
- Performance Test Reports – due within 60 days after the test date

MZX will submit all reports to MDEQ.

§60.4300 What is the purpose of this subpart?
This subpart establishes emission standards and compliance schedules for the control of emissions from stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005.

The turbines at MZX will be constructed after February 18, 2005 and are affected sources.

§60.4305 Does this subpart apply to my stationary combustion turbine?
(a) If you are the owner or operator of a stationary combustion turbine with a heat input at peak load equal to or greater than 10.7 gigajoules (10 MMBtu) per hour, based on the higher heating value of the fuel, which commenced construction, modification, or reconstruction after February 18, 2005, your turbine is subject to this subpart. Only heat input to the combustion turbine should be included when determining whether or not this subpart is applicable to your turbine. Any additional heat input to associated heat recovery steam generators (HRSG) or duct burners should not be included when determining your peak heat input. However, this subpart does apply to emissions from any associated HRSG and duct burners.

The heat input for all turbines at MZX will be greater than 10 MMBtu/hr.

(b) Stationary combustion turbines regulated under this subpart are exempt from the requirements of subpart GG of this part. Heat recovery steam generators and duct burners regulated under this subpart are exempted from the requirements of subparts Da, Db, and Dc of this part.

Based on this paragraph, MZX will be exempt from NSPS GG.

§60.4310 What types of operations are exempt from these standards of performance?
(a) Emergency combustion turbines, as defined in §60.4420(i), are exempt from the nitrogen oxides (NO_X) emission limits in §60.4320.
(b) Stationary combustion turbines engaged by manufacturers in research and development of equipment for both combustion turbine emission control techniques and combustion turbine efficiency improvements are exempt from the NO_X emission limits in §60.4320 on a case-by-case basis as determined by the Administrator.
(c) Stationary combustion turbines at integrated gasification combined cycle electric utility steam generating units that are subject to subpart Da of this part are exempt from this subpart.
(d) Combustion turbine test cells/stands are exempt from this subpart.

The turbines at MZX will not meet any exemption criteria.

§60.4315 What pollutants are regulated by this subpart?

The pollutants regulated by this subpart are nitrogen oxide (NO_X) and sulfur dioxide (SO_2).

§60.4320 What emission limits must I meet for nitrogen oxides (NO_X)?

(a) You must meet the emission limits for NO_X specified in Table 1 to this subpart.

The Table 1 applicable category for MZX is *New turbine firing natural gas*. As such, the NSPS KKKK NO_X emission limit is 25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh).

MZX will be using SCR to control NO_X emissions to 2 ppm NO_X at 15 percent O_2.

(b) If you have two or more turbines that are connected to a single generator, each turbine must meet the emission limits for NO_X.

MZX will not have two or more turbines that are connected to a single generator.

§60.4325 What emission limits must I meet for NO_X if my turbine burns both natural gas and distillate oil (or some other combination of fuels)?

You must meet the emission limits specified in Table 1 to this subpart. If your total heat input is greater than or equal to 50 percent natural gas, you must meet the corresponding limit for a natural gas-fired turbine when you are burning that fuel. Similarly, when your total heat input is greater than 50 percent distillate oil and fuels other than natural gas, you must meet the corresponding limit for distillate oil and fuels other than natural gas for the duration of the time that you burn that particular fuel.

MZX will only combust natural gas. Thus, this paragraph is not applicable.

§60.4330 What emission limits must I meet for sulfur dioxide (SO_2)?

(a) If your turbine is located in a continental area, you must comply with either paragraph (a)(1), (a)(2), or (a)(3) of this section. If your turbine is located in Alaska, you do not have to comply with the requirements in paragraph (a) of this section until January 1, 2008.

(1) You must not cause to be discharged into the atmosphere from the subject stationary combustion turbine any gases which contain SO_2 in excess of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output;

MZX will meet the SO_2 emission limit of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output by only combusting natural gas.

(2) You must not burn in the subject stationary combustion turbine any fuel which contains total potential sulfur emissions in excess of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input. If your turbine simultaneously fires multiple fuels, each fuel must meet this requirement; or

MZX will only combust natural gas to meet this requirement.

(3) For each stationary combustion turbine burning at least 50 percent biogas on a calendar month basis, as determined based on total heat input, you must not cause to be discharged into the atmosphere from the affected source any gases that contain SO_2 in excess of 65 ng SO_2/J (0.15 lb SO2/MMBtu) heat input.

This paragraph is not applicable, as MZX will only combust natural gas.

(b) If your turbine is located in a noncontinental area or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit, you must comply with one or the other of the following conditions:

This paragraph is not applicable and the remainder has been omitted for brevity.

§60.4333 What are my general requirements for complying with this subpart?

(a) You must operate and maintain your stationary combustion turbine, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

MZX will operate and maintain its stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.

(b) When an affected unit with heat recovery utilizes a common steam header with one or more combustion turbines, the owner or operator shall either:

MZX will not utilize heat recovery nor steam. This paragraph is not applicable and the remainder has been omitted for brevity.

§60.4335 How do I demonstrate compliance for NO_X if I use water or steam injection?

MZX will demonstrate compliance by using SCR technology. This paragraph is not applicable and the remainder has been omitted for brevity.

§60.4340 How do I demonstrate continuous compliance for NO_X if I do not use water or steam injection?

(a) If you are not using water or steam injection to control NO_X emissions, you must perform annual performance tests in accordance with § 60.4400 to demonstrate continuous compliance. If the NO_X emission result from the performance test is less than or equal to 75 percent of the NO_X emission limit for the turbine, you may reduce the frequency of subsequent performance tests to once every 2 years (no more than 26 calendar months following the previous performance test). If the results of any subsequent performance test exceed 75 percent of the NO_X emission limit for the turbine, you must resume annual performance tests.

MZX is aware that it may use annual performance testing to demonstrate continuous compliance.

(b) As an alternative, you may install, calibrate, maintain and operate one of the following continuous monitoring systems:

MZX is aware that it may alternatively opt for one of the following continuous monitoring options instead of annual performance testing.

(1) Continuous emission monitoring as described in §§ 60.4335(b) and 60.4345, or

(2) Continuous parameter monitoring as follows:

(i) For a diffusion flame turbine without add-on selective catalytic reduction (SCR) controls, you must define parameters indicative of the unit's NO_X formation characteristics, and you must monitor these parameters continuously.

(ii) For any lean premix stationary combustion turbine, you must continuously monitor the appropriate parameters to determine whether the unit is operating in low-NO_X mode.

(iii) For any turbine that uses SCR to reduce NO_X emissions, you must continuously monitor appropriate parameters to verify the proper operation of the emission controls.

MZX will conduct required annual performance testing.

(iv) For affected units that are also regulated under part 75 of this chapter, with state approval you can monitor the NO_X emission rate using the methodology in appendix E to part 75 of this chapter, or the low mass emissions methodology in § 75.19, the requirements of this paragraph (b) may be met by performing the parametric monitoring described in section 2.3 of part 75 appendix E or in § 75.19(c)(1)(iv)(H).

§60.4345 What are the requirements for the continuous emission monitoring system equipment, if I choose to use this option?

At this time MZX does not propose to utilize continuous emission monitoring. The remaining paragraphs have been omitted for brevity.

§60.4350 How do I use data from the continuous emission monitoring equipment to identify excess emissions?

At this time MZX does not propose to utilize continuous emission monitoring. The remaining paragraphs have been omitted for brevity.

§60.4355 How do I establish and document a proper parameter monitoring plan?

MZX understands that parameter monitoring to demonstrate compliance is a compliance option.

(a) The steam or water to fuel ratio or other parameters that are continuously monitored as described in §60.4335 and §60.4340 must be monitored during the performance test required under §60.8, to establish acceptable values and ranges. You may supplement the performance test data with engineering analyses, design specifications, manufacturer's recommendations and other relevant information to define the acceptable parametric ranges more precisely. You must develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_X emission controls. The plan must:

(1) Include the indicators to be monitored and show there is a significant relationship to emissions and proper operation of the NO_X emission controls,

(2) Pick ranges (or designated conditions) of the indicators, or describe the process by which such range (or designated condition) will be established,

(3) Explain the process you will use to make certain that you obtain data that are representative of the emissions or parameters being monitored (such as detector location, installation specification if applicable),

(4) Describe quality assurance and control practices that are adequate to ensure the continuing validity of the data,

(5) Describe the frequency of monitoring and the data collection procedures which you will use (e.g., you are using a computerized data acquisition over a number of discrete data points with the average (or maximum value) being used for purposes of determining whether an exceedance has occurred), and

(6) Submit justification for the proposed elements of the monitoring. If a proposed performance specification differs from manufacturer recommendation, you must explain the reasons for the differences. You must submit the data supporting the justification, but you may refer to generally available sources of information used to support the justification. You may rely on engineering assessments and other data, provided you demonstrate factors which assure compliance or explain why performance testing is unnecessary to establish indicator ranges. When establishing indicator ranges, you may choose to simplify the process by treating the parameters as if they were correlated. Using this assumption, testing can be divided into two cases:

(i) All indicators are significant only on one end of range (e.g., for a thermal incinerator controlling volatile organic compounds (VOC) it is only important to insure a minimum temperature, not a maximum). In this case, you may conduct your study so that each parameter is at the significant limit of its range while you conduct your emissions testing. If the emissions tests show that the source is in compliance at the significant limit of each parameter, then as long as each parameter is within its limit, you are presumed to be in compliance.

(ii) Some or all indicators are significant on both ends of the range. In this case, you may conduct your study so that each parameter that is significant at both ends of its range assumes its extreme values in all possible combinations of the extreme values (either single or double) of all of the other parameters. For example, if there were only two parameters, A and B, and A had a range of values while B had only a minimum value, the combinations would be A high with B minimum and A low with B minimum. If both A and B had a range, the combinations would be A high and B high, A low and B low, A high and B low, A low and B high. For the case of four parameters all having a range, there are 16 possible combinations.

(b) For affected units that are also subject to part 75 of this chapter and that have state approval to use the low mass emissions methodology in § 75.19 or the NO_X emission measurement methodology in appendix E to part 75, you may meet the requirements of this paragraph by developing and keeping on-site (or at a central location for unmanned facilities) a QA plan, as described in § 75.19(e)(5) or in section 2.3 of appendix E to part 75 of this chapter and section 1.3.6 of appendix B to part 75 of this chapter.

§60.4360 How do I determine the total sulfur content of the turbine's combustion fuel?

You must monitor the total sulfur content of the fuel being fired in the turbine, except as provided in § 60.4365. The sulfur content of the fuel must be determined using total sulfur methods described in § 60.4415. Alternatively, if the total sulfur content of the gaseous fuel during the most recent performance test was less than half the applicable limit, ASTM D4084, D4810, D5504, or D6228, or Gas Processors Association Standard 2377 (all of which are incorporated by reference, see § 60.17), which measure the major sulfur compounds, may be used.

MZX utilizes pipeline quality natural gas with a rating of 1 grain of sulfur per 100 scf.

§60.4365 How can I be exempted from monitoring the total sulfur content of the fuel?

You may elect not to monitor the total sulfur content of the fuel combusted in the turbine, if the fuel is demonstrated not to exceed potential sulfur emissions of 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for units located in continental areas and 180 ng SO_2/J (0.42 lb SO_2/MMBtu) heat input for units located in non-continental areas or a continental area that the Administrator determines does not have access to natural gas and that the removal of sulfur compounds would cause more environmental harm than benefit. You must use one of the following sources of information to make the required demonstration:
(a) The fuel quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the fuel, specifying that the maximum total sulfur content for oil use in continental areas is 0.05 weight percent (500 ppmw) or less and 0.4 weight percent (4,000 ppmw) or less for non-continental areas, the total sulfur content for natural gas use in continental areas is 20 grains of sulfur or less per 100 standard cubic feet and 140 grains of sulfur or less per 100 standard cubic feet for noncontinental areas, has potential sulfur emissions of less than less than 26 ng SO_2/J (0.060 lb SO_2/MMBtu) heat input for continental areas and has potential sulfur emissions of less than less than 180 ng SO_2/J (0.42 lb SO2/MMBtu) heat input for noncontinental areas; or

MZX will be exempt from monitoring total sulfur by maintaining documentation that the maximum total sulfur content will be 20 grains of sulfur or less per 100 standard cubic feet.

The remaining paragraphs have been omitted for brevity.

§60.4370 How often must I determine the sulfur content of the fuel?

Per § 60.4365, MZX is exempt from determining sulfur content by using pipeline quality natural gas.

The remaining paragraphs have been omitted for brevity.

§60.4375 What reports must I submit?

(a) For each affected unit required to continuously monitor parameters or emissions, or to periodically determine the fuel sulfur content under this subpart, you must submit reports of excess emissions and monitor downtime, in accordance with § 60.7(c). Excess emissions must be reported for all periods of unit operation, including start-up, shutdown, and malfunction.

MZX will submit reports of excess emissions and monitor downtime semiannually, in accordance with § 60.7(c), as applicable.

(b) For each affected unit that performs annual performance tests in accordance with § 60.4340(a), you must submit a written report of the results of each performance test before the close of business on the 60th day following the completion of the performance test.

MZX will submit required annual performance test reports, as specified.

§60.4380 How are excess emissions and monitor downtime defined for NO_X?

Similarly, the use of different types of electric generating equipment, or changes to the project to reduce on-site generation needs, likewise constitute impermissible redefinition of the source/project.

For the purpose of reports required under § 60.7(c), periods of excess emissions and monitor downtime that must be reported are defined as follows:

(a) For turbines using water or steam to fuel ratio monitoring:

MZX is not using water nor steam to fuel ratio monitoring. The remaining paragraphs have been omitted for brevity.

(b) For turbines using continuous emission monitoring, as described in §§ 60.4335(b) and 60.4345:

MZX does not implement continuous emission monitoring. The remaining paragraphs have been omitted for brevity.

(c) For turbines required to monitor combustion parameters or parameters that document proper operation of the NO_X emission controls:

(1) An excess emission is a 4-hour rolling unit operating hour average in which any monitored parameter does not achieve the target value or is outside the acceptable range defined in the parameter monitoring plan for the unit.

(2) A period of monitor downtime is a unit operating hour in which any of the required parametric data are either not recorded or are invalid.

MZX will determine excess emissions and monitor downtime as defined here.

§60.4385 How are excess emissions and monitoring downtime defined for SO_2?

MZX is exempt from sulfur content monitoring. The remaining paragraphs have been omitted for brevity.

§60.4390 What are my reporting requirements if I operate an emergency combustion turbine or a research and development turbine?

MZX does not operate an emergency combustion turbine nor a research and development turbine. The remaining paragraphs have been omitted for brevity.

§60.4395 When must I submit my reports?

All reports required under § 60.7(c) must be postmarked by the 30th day following the end of each 6-month period.

All reports required under § 60.7(c) will be postmarked by the 30th day following the end of each 6-month period.

§60.4400 How do I conduct the initial and subsequent performance tests, regarding NO_X?

(a) You must conduct an initial performance test, as required in § 60.8. Subsequent NO_X performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test).

MZX will conduct performance testing as required in accordance with the appropriate schedules.

§60.4405 How do I perform the initial performance test if I have chosen to install a NO_X-diluent CEMS?

MZX does not utilize a CEMS. The remaining paragraphs have been omitted for brevity.

§60.4410 How do I establish a valid parameter range if I have chosen to continuously monitor parameters?

If you have chosen to monitor combustion parameters or parameters indicative of proper operation of NO_X emission controls in accordance with § 60.4340, the appropriate parameters must be continuously monitored and recorded during each run of the initial performance test, to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in § 60.4355.

MZX understands that parametric monitoring is a compliance option. If selected, MZX will monitor and record the appropriate parameters during each run of the initial performance test to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in § 60.4355.

§60.4415 How do I conduct the initial and subsequent performance tests for sulfur?

(a) You must conduct an initial performance test, as required in § 60.8. Subsequent SO_2 performance tests shall be conducted on an annual basis (no more than 14 calendar months following the previous performance test). There are four methodologies that you may use to conduct the performance tests.

(1) The use of a current, valid purchase contract, tariff sheet, or transportation contract for the fuel specifying the maximum total sulfur content of all fuels combusted in the affected facility. Alternately, the fuel sampling data specified in section 2.3.1.4 or 2.3.2.4 of appendix D to part 75 of this chapter may be used.

MZX will obtain a valid purchase contract, tariff sheet, or transportation contract for natural gas specifying the maximum total sulfur content annually.

The remaining paragraphs and options have been omitted for brevity.

§60.4420 What definitions apply to this subpart?

As used in this subpart, all terms not defined herein will have the meaning given them in the Clean Air Act and in subpart A (General Provisions) of this part.

Biogas means gas produced by the anaerobic digestion or fermentation of organic matter including manure, sewage sludge, municipal solid waste, biodegradable waste, or any other biodegradable feedstock, under anaerobic conditions. Biogas is comprised primarily of methane and CO_2.
Combined cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to generate steam that is only used to create additional power output in a steam turbine.
Combined heat and power combustion turbine means any stationary combustion turbine which recovers heat from the exhaust gases to heat water or another medium, generate steam for useful purposes other than additional electric generation, or directly uses the heat in the exhaust gases for a useful purpose.
Combustion turbine model means a group of combustion turbines having the same nominal air flow, combustor inlet pressure, combustor inlet temperature, firing temperature, turbine inlet temperature and turbine inlet pressure.
Combustion turbine test cell/stand means any apparatus used for testing uninstalled stationary or uninstalled mobile (motive) combustion turbines.
Diffusion flame stationary combustion turbine means any stationary combustion turbine where fuel and air are injected at the combustor and are mixed only by diffusion prior to ignition.
Duct burner means a device that combusts fuel and that is placed in the exhaust duct from another source, such as a stationary combustion turbine, internal combustion engine, kiln, etc., to allow the firing of additional fuel to heat the exhaust gases before the exhaust gases enter a heat recovery steam generating unit.
Efficiency means the combustion turbine manufacturer's rated heat rate at peak load in terms of heat input per unit of power output—based on the higher heating value of the fuel.
Emergency combustion turbine means any stationary combustion turbine which operates in an emergency situation. Examples include stationary combustion turbines used to produce power for critical networks or equipment, including power supplied to portions of a facility, when electric power from the local utility is interrupted, or stationary combustion turbines used to pump water in the case of fire or flood, etc. Emergency stationary combustion turbines do not include stationary combustion turbines used as peaking units at electric utilities or stationary combustion turbines at industrial facilities that typically operate at low capacity factors. Emergency combustion turbines may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are required by the manufacturer, the vendor, or the insurance company associated with the turbine. Required testing of such units should be minimized, but there is no time limit on the use of emergency combustion turbines.
Excess emissions means a specified averaging period over which either

(1) the NO_X emissions are higher than the applicable emission limit in § 60.4320;
(2) the total sulfur content of the fuel being combusted in the affected facility exceeds the limit specified in § 60.4330; or
(3) the recorded value of a particular monitored parameter is outside the acceptable range specified in the parameter monitoring plan for the affected unit.
Gross useful output means the gross useful work performed by the stationary combustion turbine system. For units using the mechanical energy directly or generating only electricity, the gross useful work performed is the gross electrical or mechanical output from the turbine/generator set. For combined heat and power units, the gross useful work performed is the gross electrical or mechanical output plus the useful thermal output (i.e., thermal energy delivered to a process).
Heat recovery steam generating unit means a unit where the hot exhaust gases from the combustion turbine are routed in order to extract heat from the gases and generate steam, for use in a steam turbine or other device that utilizes steam. Heat recovery steam generating units can be used with or without duct burners.
Integrated gasification combined cycle electric utility steam generating unit means a coal-fired electric utility steam generating unit that burns a synthetic gas derived from coal in a combined-cycle gas turbine. No solid coal is directly burned in the unit during operation.
ISO conditions means 288 Kelvin, 60 percent relative humidity and 101.3 kilopascals pressure.
Lean premix stationary combustion turbine means any stationary combustion turbine where the air and fuel are thoroughly mixed to form a lean mixture before delivery to the combustor. Mixing may occur before or in the combustion chamber. A lean premixed turbine may operate in diffusion flame mode during operating conditions such as startup and shutdown, extreme ambient temperature, or low or transient load.
Natural gas means a naturally occurring fluid mixture of hydrocarbons (e.g., methane, ethane, or propane) produced in geological formations beneath the Earth's surface that maintains a gaseous state at standard atmospheric temperature and pressure under ordinary conditions. Additionally, natural gas must either be composed of at least 70 percent methane by volume or have a gross calorific value between 950 and 1,100 British thermal units (Btu) per standard cubic foot. Natural gas does not include the following gaseous fuels: landfill gas, digester gas, refinery gas, sour gas, blast furnace gas, coal-derived gas, producer gas, coke oven gas, or any gaseous fuel produced in a process which might result in highly variable sulfur content or heating value.
Noncontinental area means the State of Hawaii, the Virgin Islands, Guam, American Samoa, the Commonwealth of Puerto Rico, the Northern Mariana Islands, or offshore platforms.
Peak load means 100 percent of the manufacturer's design capacity of the combustion turbine at ISO conditions.
Regenerative cycle combustion turbine means any stationary combustion turbine which recovers heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine.
Simple cycle combustion turbine means any stationary combustion turbine which does not recover heat from the combustion turbine exhaust gases to preheat the inlet combustion air to the combustion turbine, or which does not recover heat from the combustion turbine exhaust gases for purposes other than enhancing the performance of the combustion turbine itself.
Stationary combustion turbine means all equipment, including but not limited to the turbine, the fuel, air, lubrication and exhaust gas systems, control systems (except emissions control equipment), heat recovery system, and any ancillary components and sub-components comprising any simple cycle stationary combustion turbine, any regenerative/recuperative cycle stationary combustion turbine, any combined cycle combustion turbine, and any combined heat and power combustion turbine based system. Stationary means that the combustion turbine is not self propelled or intended to be propelled while performing its function. It may, however, be mounted on a vehicle for portability.

Unit operating day means a 24-hour period between 12 midnight and the following midnight during which any fuel is combusted at any time in the unit. It is not necessary for fuel to be combusted continuously for the entire 24-hour period.
Unit operating hour means a clock hour during which any fuel is combusted in the affected unit. If the unit combusts fuel for the entire clock hour, it is considered to be a full unit operating hour. If the unit combusts fuel for only part of the clock hour, it is considered to be a partial unit operating hour.
Useful thermal output means the thermal energy made available for use in any industrial or commercial process, or used in any heating or cooling application, i.e., total thermal energy made available for processes and applications other than electrical or mechanical generation. Thermal output for this subpart means the energy in recovered thermal output measured against the energy in the thermal output at 15 degrees Celsius and 101.325 kilopascals of pressure.

Table 1 to Subpart KKKK of Part 60 – Nitrogen Oxide Emission Limits for New Stationary Combustion Turbines

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_X emission standard
New turbine firing natural gas, electric generating	≤ 50 MMBtu/h	42 ppm at 15 percent O_2 or 290 ng/J of useful output (2.3 lb/MWh).
New turbine firing natural gas, mechanical drive	≤ 50 MMBtu/h	100 ppm at 15 percent O_2 or 690 ng/J of useful output (5.5 lb/MWh).
New turbine firing natural gas	**> 50 MMBtu/h and ≤ 850 MMBtu/h**	**25 ppm at 15 percent O2 or 150 ng/J of useful output (1.2 lb/MWh).**
New, modified, or reconstructed turbine firing natural gas	> 850 MMBtu/h	15 ppm at 15 percent O_2 or 54 ng/J of useful output (0.43 lb/MWh)
New turbine firing fuels other than natural gas, electric generating	≤ 50 MMBtu/h	96 ppm at 15 percent O_2 or 700 ng/J of useful output (5.5 lb/MWh).
New turbine firing fuels other than natural gas, mechanical drive	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
New turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	74 ppm at 15 percent O_2 or 460 ng/J of useful output (3.6 lb/MWh).
New, modified, or reconstructed turbine firing fuels other than natural gas	> 850 MMBtu/h	42 ppm at 15 percent O_2 or 160 ng/J of useful output (1.3 lb/MWh).
Modified or reconstructed turbine	≤ 50 MMBtu/h	150 ppm at 15 percent O_2 or 1,100 ng/J of

Combustion turbine type	Combustion turbine heat input at peak load (HHV)	NO_X emission standard
		useful output (8.7 lb/MWh).
Modified or reconstructed turbine firing natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	42 ppm at 15 percent O_2 or 250 ng/J of useful output (2.0 lb/MWh).
Modified or reconstructed turbine firing fuels other than natural gas	> 50 MMBtu/h and ≤ 850 MMBtu/h	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).
Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	≤ 30 MW output	150 ppm at 15 percent O_2 or 1,100 ng/J of useful output (8.7 lb/MWh).
Turbines located north of the Arctic Circle (latitude 66.5 degrees north), turbines operating at less than 75 percent of peak load, modified and reconstructed offshore turbines, and turbine operating at temperatures less than 0 °F	> 30 MW output	96 ppm at 15 percent O_2 or 590 ng/J of useful output (4.7 lb/MWh).
Heat recovery units operating independent of the combustion turbine	All sizes	54 ppm at 15 percent O_2 or 110 ng/J of useful output (0.86 lb/MWh).

4.7.5 40 CFR 60 Subpart TTTT – Greenhouse Gas Emissions for Electric Generating Units

NSPS Subpart TTTT currently applies to stationary combustion turbines that commence construction after January 8, 2014, but on or before May 23, 2023, or commence reconstruction after June 18, 2014, but on or before May 23, 2023, that have a base load rating greater than 250 MMBtu/hr of fossil fuel and serve a generator or generators capable of selling greater than 25 MW of electricity to a utility power distribution system. *See* 40 CFR §60.5509(a). Because MZX does not propose to sell power to a utility power distribution system, Subpart TTTT does not apply.

4.7.6 40 CFR 60 Subpart TTTTa – Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units

NSPS Subpart TTTTa currently applies to any stationary combustion turbine that commences construction or reconstruction after May 23, 2023, that has a base load rating greater than 250 MMBtu/hr of fossil fuel and serves a generator or generators capable of selling greater than 25 MW of electricity to a utility power distribution system. *See* 40 CFR §60.5509a(a). Because MZX does not propose to sell power to a utility power distribution system, Subpart TTTTa does not apply.

4.7.7 Non-Applicability of All Other NSPS

NSPS are developed for specific industrial source categories. The applicability of a particular NSPS to the proposed project can be readily ascertained based on the industrial source category covered. All other NSPS, besides Subpart A, are categorically not applicable to the proposed project.

4.8 National Emissions Standards for Hazardous Air Pollutants (NESHAP)

NESHAP, federal regulations found in CFR Title 40 Parts 61 and 63, are emission standards for HAP and are generally only applicable to HAP major sources (facilities that exceed the major source thresholds of 10 tpy of a single HAP or 25 tpy of any combination of HAP) or specifically designated area sources. MZX is located at an area source for HAPs (less than 10 tpy of formaldehyde). The NESHAPs apply specifically listed industrial source categories (CAA Section 112(d)) or on a case-by-case basis (CAA Section 112(g)) for facilities not regulated under a specific industrial category. Pollutant-specific NESHAP under 40 CFR Part 61 may also be applicable to Part 63 sources.

4.8.1 40 CFR 63 Subpart A – General Provisions

All affected sources are subject to the general provisions of Part 63 NESHAP Subpart A unless specifically excluded by the source-specific NESHAP. Subpart A requires initial notification and performance testing, recordkeeping, monitoring, provides reference methods, and mandates general control device requirements for all other subparts as applicable. Because various other Part 63 subparts are applicable, the provisions of Subpart A also apply.

4.8.2 40 CFR 63 Subpart YYYY – National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines

NESHAP Subpart YYYY establishes national emission limitations and operating limitations for HAP emissions from stationary combustion turbines located at major sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

This subpart is not applicable as it only applies to stationary combustion turbines located at major sources of HAP emissions. *See* 40 CFR §63.6085.

4.8.3 Non-Applicability of All Other NESHAP

NESHAP are developed for particular industrial source categories. The potential applicability of a particular NESHAP to the proposed project can be readily ascertained based on the industrial source category covered. All other NESHAP are categorically not applicable to the proposed project.

4.9 Compliance Assurance Monitoring

A Title V permitted facility must include in the permit application a Compliance Assurance Monitoring (CAM) Plan for certain pollutant-specific emissions units. Per 40 CFR 64.2(a) the following determine the applicability criteria to the emissions units:

- A pollutant-specific emissions unit must be located at a Title V permitted major source.
- The unit must be subject to an emission limitation or standard for the applicable regulated air pollutant.
- The unit uses a control device to achieve compliance with any such emission limitation or standard.

- The unit has potential pre-control device emissions of the applicable regulated air pollutant that are equal to or greater than 100% of the major source threshold.

MZX is required to obtain a Title V permit as specified in Section 3 and the SCR is a control device for NO_X. MZX anticipates that the issued draft permit will contain enhanced monitoring provisions for operation of the CO and NO_X control devices. Therefore, at the time the facility obtains a Title V permit, a case-by-case evaluation of CAM requirements may be unnecessary pursuant to 40 CFR 64.2(b)(1)(vi).

4.10 Risk Management Plan

Section 112(r) of the CAA mandates EPA to publish rules, which are codified in 40 CFR Part 68, requiring sources with more than the threshold quantity of a listed regulated substance to identify, prevent, and minimize the consequences of accidental releases. The three (3) elements that must be incorporated into a source's RMP include:

- Hazard Assessment;
- Prevention Program; and
- Emergency Response Program.

The facility will store and utilize aqueous ammonia with a concentration of less than 20% in the SCR systems to control NO_X emissions from the proposed CT units. Thus, RMP requirements will not apply to these systems.

4.11 Acid Rain Program

The Solar Titan 350 and ProEnergy 6000PE turbines serve generators with a total nameplate capacity of greater than 25 MW. However, since the site does not produce electricity for sale, the turbines are not utility units and the federal acid rain regulations found at 40 CFR Parts 72 through 77 will not apply. *See* 40 CFR §72.6(b)(8).

5. BACT ANALYSIS

DeSoto County was reclassified as attainment under the 2008 8-hr Ozone NAAQS effective April 8, 2016. The area is designated as unclassifiable/attainment under the 2015 Ozone NAAAQS, effective January 6, 2018.[5] The area is not otherwise a "nonattainment area" with respect to any NAAQS pollutant. Therefore, PSD permitting is potentially applicable with respect to each regulated NSR pollutant, and BACT requirements apply for significant pollutants. However, MZX has elected to voluntarily install emission controls on the combustion turbines that will meet the Lowest Achievable Emission Rate (LAER) for NO_x that would apply if the area were to be designated as nonattainment for ozone.

In order to receive a PSD permit, a major stationary source must meet each applicable emissions limitation under the Mississippi SIP and under EPA's NSPS and NESHAP standards. Additionally, BACT requirements apply for each regulated NSR pollutant that a new major source would have the potential to emit in significant amounts.

MZX proposes to apply BACT emission controls as follows. The remainder of this section evaluates MZX's proposal using the EPA "top down" framework for conducting control technology reviews in PSD permitting. The remainder of this section summarizes the top-down methodology, identifies all available control techniques, ranks the technically feasible techniques according to their effectiveness, and then selects the most effective method not rejected on economic or other grounds (no control options were rejected for NOx, for which LAER will be voluntarily applied). The top-down methodology for all BACT determinations was initially recommended in 1987.[6] A more detailed guidance document was issued in 1990 and subsequently incorporated into EPA's 1990 *NSR Workshop Manual.* The top-down methodology forms the basis for the present demonstration.

Table 5-1. Solar PGM130 and Solar Titan 350 Combustion Turbines BACT (or LAER) Summary

Pollutant	Control Technology	BACT (or LAER) Emission Limitation / Work Practice
NO_X (LAER)	SCR	2 ppm (15% O_2)
CO	Oxidation Catalyst	2 ppm (15% O_2)
VOC	Good combustion practices, gaseous fuels	2 ppm (15% O_2)
SO_2	Use pipeline natural gas	Use pipeline natural gas not to exceed 1 gr S per 100 scf
PM	Good combustion practices, gaseous fuels	Use of Natural gas as fuel and good combustion practices
GHG	Energy efficient design	120 lb CO_2/MMBtu

[5] 40 CFR §81.325.

[6] Craig J. Potter (OAR) to Regional Administrators. December 1, 1987. *Improving NSR Implementation*.

Table 5-2. ProEnergy 6000PE Combustion Turbines BACT (or LAER) Summary

Pollutant	Control Technology	BACT (or LAER) Emission Limitation / Work Practice
NO_X (LAER)	SCR	2 ppm (15% O_2)
CO	Oxidation Catalyst	4 ppm (15% O_2)
VOC	Good combustion practices, gaseous fuels	2.5 ppm (15% O_2)
SO_2	Use pipeline natural gas	Use pipeline natural gas not to exceed 1 gr S per 100 scf
PM	Good combustion practices, gaseous fuels	Good combustion practice and use of natural gas as fuel
GHG	Energy efficient design	120 lb CO_2/MMBtu

Table 5-3. PLUM Pressure Reduction System BACT Summary

Pollutant	Control Technology	BACT Emission Limitation / Work Practice
NO_X	Exclusive use of natural gas, good combustion practices, and low NO_X burners	0.049 lb/MMBtu
CO	Exclusive use of natural gas and good combustion practices	0.082 lb/MMBtu
VOC	Exclusive use of natural gas and good combustion practices	Exclusive use of natural gas
SO_2	Use of clean fuels with inherently low sulfur content	Use pipeline natural gas not to exceed 1 gr S per 100 scf
PM	Exclusive use of natural gas and good combustion practices	Exclusive use of natural gas
GHG	Exclusive use of natural gas and good combustion practices	Exclusive use of natural gas

5.1 BACT for Solar PGM130 and Solar Titan 350 Combustion Turbines

5.1.1 Step 1 – Identify Applicable Controls

In order to identify potentially applicable controls, MZX conducted a search of the RBLC database, reviewed recently issued permits identifying specific control methods, and consulted literature made available by turbine and control equipment manufacturers. The search focused on control techniques for emissions from electric generating combustion turbines. The alternatives identified are shown below for each pollutant.

Table 5-4. Step 1 Control Techniques Evaluated

#	Pollutant	Technique	Performance
N1	NO_X	SCR	2–7 ppmvd (15% O_2)
N2		Dry Low NO_X Combustors	9–25 ppmvd (15% O_2)
N3		Water or steam Injection	25 ppmvd (15% O_2)
C1	CO	Oxidation Catalyst	2–5 ppmvd (15% O_2)
C2		Good Combustion Practices	2–9 ppmvd
V1	VOC	Oxidation Catalyst	1–4 ppmvd (15% O_2)
V2		Good Combustion Practices, Gaseous Fuel	1–4 ppmvd (15% O_2)
S1	SO_2	Low sulfur fuel (pipeline natural gas, ULSD)	Applicable fuel specification
P1	Particulate	Good Combustion Practices, No visible emissions	5% opacity
G1	CO_2	Highly efficient simple cycle design	10,000–13,400 Btu/kW-hr (530–710 kg CO_2/MW-hr)
G2		Low carbon fuels	120–160 lb CO_2/MMBtu

RBLC results for traditional pollutants are given in an attachment for this submission. For greenhouse gases (GHG), MZX reviewed the control techniques identified in EPA's recent rulemaking notice for Subpart TTTTa.[7] The following observations can be made about the control techniques identified at Step 1.

- The most recent permits or RBLC entries identifying SCR as the selected control for NO_X reflect a limit of 2 ppm, suggesting that current generation SCR systems are capable of achieving results at the low end of the attested performance ranges. However, SCR control installations predominantly occur on combined cycle projects.
- Performance ranges for both CO and VOC largely overlap, suggesting that comparable levels of performance are achievable using either good combustion practices or an oxidation catalyst (add-on control). Projects incorporating SCR controls are more likely to also include oxidation catalyst, suggesting that an oxidation catalyst may be more cost effective if SCR will also be installed.
- No examples of add-on controls are attested for natural gas-fired turbines in simple cycle mode for SO_2, particulate matter, or CO_2. Gas turbines have relatively low levels of emissions for these pollutants, and the relevant control technique is typically identified in terms of a fuel specification.
- A work practice standard (good combustion practices) is frequently identified as reducing emissions of CO, VOC, and particulate matter.
- Add-on controls for GHG are not commercially available for gas turbines in this size range operating in simple cycle mode.

Step 1 does not include control techniques that would redefine the source.[8]
Here, the use of the selected gas turbines (operating in simple cycle mode and providing electricity directly to an industrial customer) is driven by a project need for scalable, rapidly dispatchable, and highly reliable generation based on a defined but highly variable and subject-to-change demand scenario. Add-on CO_2 controls, to the extent they may be deemed demonstrated control technology, are not compatible with these basic project criteria and are not considered at Step 1. Similarly, the use of different types of electric generating equipment, or changes to the project to reduce on-site generation needs, likewise constitute impermissible redefinition of the source/project.

[7] 89 Fed. Reg. 39798. May 9, 2024.

[8] *Helping Hand Tools v. EPA*. 848 F.3d 1185, 1194. *Accord Sierra Club v. EPA*, 499 F.3d 653, 655. *See also Friends of Buckingham v. State Air Pollution Control Board*, 947 F.3d 68, 73.

5.1.2 Step 2 – Technical Feasibility

At Step 2, any control technique that is potentially available, yet not technically feasible for a particular pollutant stream, is rejected. Of the potentially available techniques surveyed, none of the Step 1 techniques are technically infeasible. Therefore, all of the Step 1 alternatives are progressed to Step 3.

5.1.3 Step 3 – Ranking of Remaining Options

No control options were eliminated on the basis of technical infeasibility. Therefore, all options are ranked below based on control efficiency, and the table includes information on cost effectiveness, and energy and secondary environmental impacts. Under the top-down BACT process, the rankings developed in Step 3 are used to inform the permitting authority's judgment as to whether it is appropriate to select any option other than the "top" one.[9]

Table 5-5. Step 3 Rankings (Proposed Options Highlighted)

#	Pollutant	Technique	Performance	Energy and Secondary environmental Impacts
N1	NO_X	SCR	2–7 ppmvd (15% O_2)	Parasitic load, collateral ammonia emissions
N2		Dry Low NO_X Combustors	9–25 ppmvd (15% O_2)	Insignificant
N3		Water or steam Injection	25 ppmvd (15% O_2)	Increased water consumption
C1	CO	Oxidation Catalyst	2–5 ppmvd (15% O_2)	Insignificant
C2		Good Combustion Practices	2–9 ppmvd	Insignificant
V1	VOC	Oxidation Catalyst	1–4 ppmvd (15% O_2)	Insignificant
V2		Good Combustion Practices, Gaseous Fuel	1–4 ppmvd (15% O_2)	Insignificant
S1	SO_2	Low sulfur fuel (pipeline natural gas, ULSD)	Applicable fuel specification	Insignificant
P1	Particulate	Good Combustion Practices, No visible emissions	5% opacity	Insignificant
G1	CO_2	Highly efficient simple cycle design	10,000–13,400 Btu/kW-hr (530–710 kg CO_2/MW-hr)	Insignificant
G2		Low carbon fuels	120–160 lb CO_2/MMBtu	Insignificant

5.1.4 Step 4 – Eliminate Options Based on Economic, Energy, and Secondary Environmental Impacts

Because MZX is proposing to use the top-ranked technology for every pollutant, economic impacts are not evaluated.

[9] EPA OAQPS. *1990 NSR Workshop Manual*. At B.2. *Accord EPA OAQPS BACT Guidelines* (Dec. 1978)

The selected NO_X control option includes energy and secondary environmental impacts. However, the energy impacts are relatively modest. These impacts do not provide a basis for selecting a control option other than the top ranked NO_x control technology.

5.1.5 Step 5 – Select BACT

Based on the foregoing analysis, MZX is proposing the following control options and associated BACT emission limits, and the emission limitation for NOx also meets the criteria for LAER.

Table 5-6. Proposed BACT (or LAER) Limits for Solar PGM130 and Solar Titan 350 Combustion Turbines

Pollutant	Proposed BACT (or LAER) Limit	Comment
NO_X (LAER)	2 ppm (15% O_2), achieved with SCR	Top-ranked control option, energy and secondary environmental impacts partly mitigated through collateral pollutant (NH_3) emission standard. Compliance to be demonstrated via performance test.
CO	2 ppm (15% O_2), achieved with oxidation catalyst	Top-ranked control option(s). Compliance to be demonstrated via performance test.
VOC	2 ppm (15% O_2)	Top-ranked control option(s). Compliance to be demonstrated via performance test.
Particulate	Good Combustion Practices and use of Natural Gas as fuel	Combustion Practices and use of Natural Gas as fuel
SO_2	Use pipeline natural gas not to exceed 1 gr S per 100 scf.	Top-ranked control option. The sulfur content of the natural gas will be verified periodically through documentation provided by the supplier.
CO_2	Natural gas fuel and efficient equipment design	Top-ranked control option(s).

5.2 BACT for ProEnergy 6000PE Combustion Turbines

5.2.1 Step 1 – Identify Applicable Controls

In order to identify potentially applicable controls, MZX conducted a search of the RBLC database, reviewed recently issued permits identifying specific control methods, and consulted literature made available by turbine and control equipment manufacturers. The search focused on control techniques for emissions from electric generating combustion turbines. The alternatives identified are shown below for each pollutant.

Table 5-7. Step 1 Control Techniques Evaluated

#	Pollutant	Technique	Performance
N1	NO_X	SCR	2–7 ppmvd (15% O_2)
N2		Dry Low NO_X Combustors	9–25 ppmvd (15% O_2)
N3		Water or steam Injection	25 ppmvd (15% O_2)
C1	CO	Oxidation Catalyst	2–5 ppmvd (15% O_2)
C2		Good Combustion Practices	2–9 ppmvd
V1	VOC	Oxidation Catalyst	1–4 ppmvd (15% O_2)
V2		Good Combustion Practices, Gaseous Fuel	1–4 ppmvd (15% O_2)
S1	SO_2	Low sulfur fuel (pipeline natural gas, ULSD)	Applicable fuel specification
P1	Particulate	Good Combustion Practices	Good Combustion Practices, Natural gas as fuel
G1	CO_2	Highly efficient simple cycle design	10,000–13,400 Btu/kW-hr (530–710 kg CO_2/MW-hr)
G2		Low carbon fuels	120–160 lb CO_2/MMBtu

RBLC results for traditional pollutants are given in an attachment for this submission. For greenhouse gases (GHG), MZX reviewed EPA's recent rulemaking notice for Subpart TTTTa.[10] The following observations can be made about the control techniques identified at Step 1.

- The most recent permits or RBLC entries identifying SCR as the selected control for NO_X reflect a limit of 2 ppm, suggesting that current generation SCR systems are capable of achieving results at the low end of the attested performance ranges. However, SCR control installations predominantly occur on combined cycle projects.
- Performance ranges for both CO and VOC largely overlap, suggesting that comparable levels of performance are achievable using either good combustion practices or an oxidation catalyst (add-on control). Projects incorporating SCR controls are more likely to also include oxidation catalyst, suggesting that an oxidation catalyst may be more cost effective if SCR will also be installed.
  - It is important to note that the performance of an oxidation catalyst depends heavily on operating conditions, particularly exhaust temperature and the inlet concentrations of pollutants such as CO and VOC. While higher temperatures generally enhance oxidation efficiency, the actual outlet concentrations are also influenced by the amount of each pollutant present at the inlet. Consequently, even when a catalyst demonstrates similar control efficiency (e.g., 90%), the resulting outlet concentrations of CO and VOCs can vary depending on the inlet loadings.
- No examples of add-on controls are attested for natural gas-fired turbines in simple cycle mode for SO_2, particulate matter, or CO_2. Gas turbines have relatively low levels of emissions for these pollutants, and the relevant control technique is typically identified in terms of a fuel specification.
- A work practice standard (good combustion practices) is frequently identified as reducing emissions of CO, VOC, and particulate matter.
- Add-on controls for GHG are not commercially available for gas turbines in this size range operating in simple cycle mode.

[10] 89 Fed. Reg. 39798. May 9, 2024.

Step 1 does not include control techniques that would redefine the source.[11]
Here, the use of the selected gas turbines (operating in simple cycle mode and providing electricity directly to an industrial customer) is driven by a project need for scalable, rapidly dispatchable, and highly reliable generation based on a defined but highly variable and subject-to-change demand scenario. Add-on CO_2 controls, to the extent they may be deemed demonstrated control technology, are not compatible with these basic project criteria and are not considered at Step 1.

5.2.2 Step 2 – Technical Feasibility

At Step 2, any control technique that is potentially available, yet not technically feasible for a particular pollutant stream, is rejected. Of the potentially available techniques surveyed, none of the Step 1 techniques are technically infeasible. Therefore, all of the Step 1 alternatives are progressed to Step 3.

5.2.3 Step 3 – Ranking of Remaining Options

No control options were eliminated on the basis of technical infeasibility. Therefore, all options are ranked below based on control efficiency, and the table includes information on cost effectiveness, and energy and secondary environmental impacts. Under the top-down BACT process, the rankings developed in Step 3 are used to inform the permitting authority's judgment as to whether it is appropriate to select any option other than the "top" one.[12]

Table 5-8. Step 3 Rankings (Proposed Options Highlighted)

#	Pollutant	Technique	Performance	Energy and Secondary environmental Impacts
N1	NO_X	SCR	2–7 ppmvd (15% O_2)	Parasitic load, collateral ammonia emissions
N2		Dry Low NO_X Combustors	9–25 ppmvd (15% O_2)	Insignificant
N3		Water or steam Injection	25 ppmvd (15% O_2)	Increased water consumption
C1	CO	Oxidation Catalyst	2–5 ppmvd (15% O_2)	Insignificant
C2		Good Combustion Practices	2–9 ppmvd	Insignificant
V1	VOC	Oxidation Catalyst	1–4 ppmvd (15% O_2)	Insignificant
V2		Good Combustion Practices, Gaseous Fuel	1–4 ppmvd (15% O_2)	Insignificant
S1	SO_2	Low sulfur fuel (pipeline natural gas, ULSD)	Applicable fuel specification	Insignificant

[11] *Helping Hand Tools v. EPA*. 848 F.3d 1185, 1194 (9th Cir. 2016) (internal citations omitted). *Accord Sierra Club v. EPA*, 499 F.3d 653, 655 (7th Cir. 2007). *See also Friends of Buckingham v. State Air Pollution Control Board*, 947 F.3d 68, 73 (4th Cir. 2020).

[12] EPA OAQPS. *1990 NSR Workshop Manual*. At B.2. *Accord EPA OAQPS BACT Guidelines* (Dec. 1978) ("If no better control technology is available for an emission point, then such finding should be stated and supported, and no further analysis is required.") (emphasis in original). *Accord In the Matter of Honolulu Resource Recovery Facility*, PSD 2 E.A.D. 375 (Adm'r 1987) ("The Region will have to determine whether the applicant has met its burden of demonstrating that significant technical defects, or substantial local economic, energy, or environmental factors or other costs warrant a control technology less effective…").

#	Pollutant	Technique	Performance	Energy and Secondary environmental Impacts
P1	Particulate	Good Combustion Practices, No visible emissions	Good Combustion Practices	Insignificant
G1	CO_2	Highly efficient simple cycle design	10,000–13,400 Btu/kW-hr (530–710 kg CO_2/MW-hr)	Insignificant
G2		Low carbon fuels	120–160 lb CO_2/MMBtu	Insignificant

5.2.4 Step 4 – Eliminate Options Based on Economic, Energy, and Secondary Environmental Impacts

Because MZX is proposing to use the top-ranked technology for every pollutant, economic impacts are not evaluated.

The selected NO_X control option includes energy and secondary environmental impacts. However, the energy impacts are relatively modest. These impacts do not provide a basis for selecting a control option other than the top ranked NO_x technology.

5.2.5 Step 5 – Select BACT

The ProEnergy 6000PE units are a relatively recent addition to the market, demonstrating the integration of aviation and power generation technologies. The ProEnergy 6000PE units utilize an overhauled aircraft engine core, combined with newly engineered aeroderivative components.

Due to their unique design and size, the ProEnergy 6000PE units exhibit different combustion characteristics compared to the Solar PGM130 and Solar Titan 350 units. Notably, they have higher inlet concentrations of CO and VOC as compared to the Solar units. The CO and VOC limits presented below account for these elevated inlet concentrations and are proposed based on similar oxidation catalyst performance and control efficiencies relative to the Solar units.

Based on the foregoing analysis, MZX is proposing the following control options and associated BACT proposed emission limits, and the emission limitation for NOx also meets the criteria for LAER.

Table 5-9. Proposed BACT (or LAER) Limits for ProEnergy 6000PE

Pollutant	Proposed BACT Limit	Comment
NO_X (LAER)	2 ppm (15% O_2), achieved with SCR	Top-ranked control option, energy and secondary environmental impacts partly mitigated through collateral pollutant (NH_3) emission standard. Compliance to be demonstrated via performance test.
CO	4 ppm (15% O_2), achieved with oxidation catalyst	Top-ranked control option(s). Compliance to be demonstrated via performance test.
VOC	2.5 ppm (15% O_2)	Top-ranked control option(s). Compliance to be demonstrated via performance test.
Particulate	Good Combustion Practices	Good Combustion Practices
SO_2	Use pipeline natural gas not to exceed 1 gr S per 100 scf.	Top-ranked control option. The sulfur content of the natural gas will be verified periodically through documentation provided by the supplier.
CO_2	Natural gas fuel and efficient equipment design	Top-ranked control option(s).

5.3 BACT for PLUM Pressure Reduction System

5.3.1 Step 1 – Identify Applicable Controls

Equipment associated with the proposed project includes ten (10) PLUM pressure reduction systems (PRS), each rated at 10 MMBtu/hr. Each unit consists of two (2) 5.0 MMBtu/hr burners for a total of 10.0 MMBtu/hr. The PRS are designed to regulate CNG/RNG gas pressure down to levels required for industrial and power generation equipment. Heat is supplied by natural gas fired burners in order to heat the gas to eliminate freeze-up risks and deliver the gas at the desired conditions.

MZX searched EPA's control technology database and considered relevant existing and proposed federal and state emissions standards to identify potential control options from the proposed PRS.

Generally, NO_X emissions from fuel burning equipment can be controlled through two types of emission control strategies: combustion controls and add-on controls. Combustion controls address thermal NO_X directly by reducing peak flame temperature by, for example, staging combustion and/or recirculating flue gas to reduce the oxygen content of the combustion air. Add-on controls employ various strategies to reduce NO_X emissions to water and nitrogen, which often includes the use of reagents in the presence of a catalyst. Based on the RBLC search results, no add-on control options were identified. Many facilities listed some variation of use of clean fuels (such as natural gas), good combustion practices (e.g., tune-ups), and combustion controls (such as low NO_X burners), as BACT. Add-on controls potentially applicable to the proposed PRS include SCR, selective non-catalytic reduction (SNCR), and non-selective catalytic reduction (NSCR). MZX has not identified any case in which add-on controls (SCR, SNCR, and NSCR) have been installed and operated successfully on small fuel-burning equipment similar to the proposed PRS. Therefore, add-on controls are not considered available.

Like NO_X, CO emissions from fuel burning equipment can be controlled through two types of emission control strategies: good combustion practices and add-on controls. For sources such as the proposed PRS, there is typically a trade-off between emissions of NO_X and CO. For example, higher combustion temperatures and residence times may lead to more complete fuel combustion and thus lower CO emissions, but these control techniques may result in excessive NO_X emissions. Good combustion practices

strive to optimize emissions for both pollutants. Add-on controls may employ various types of catalysts to oxidize CO emissions to CO_2. Based on the RBLC search results, no add-on control options were identified. Many facilities listed some variation of use of clean fuels such as natural gas and good combustion practices (e.g., tune-ups). Add-on controls potentially applicable to the proposed PRS include oxidation catalysts.

Like CO, VOC emissions from fuel-burning equipment have similar considerations and can be controlled through good combustion practices and add-on controls. Based on the RBLC search results, no add-on control options were identified. Many facilities listed some variation of use of clean fuels such as natural gas and good combustion practices. Add-on controls potentially applicable to the proposed PRS include oxidation catalysts.

For PM, based on the RBLC search results, no add-on control options were identified. Generally, conventional add-on controls often applied to solid fuel boilers, such as baghouses, electrostatic precipitators, and scrubbers, have not been applied to gas fired fuel-burning equipment like the PRS since combustion of natural gas inherently results in low levels of emissions. Instead, many facilities listed some variation of use of clean fuels such as natural gas and good combustion practices as BACT. Accordingly, these control options are the only options considered further.

The only potentially available control option for SO_2 emissions from the proposed PRS is the use of clean fuels with inherently low sulfur content. Conventional add-on controls for SO_2 applied to solid fuel boilers, such as scrubbers, have never been applied to natural gas fired fuel gas heaters (or boilers) because the use of clean fuels inherently results in a low level of SO_2 emissions.

For GHG, based on the RBLC search results, no add-on control options were identified that would reduce GHG emissions from the proposed PRS. Instead, many facilities listed some variation of use of clean fuels (natural gas) and good combustion practices as BACT for GHG emissions. CCS should not be considered as a potentially available control option for sources with minimal GHG emissions such as the small PRS. Accordingly, use of natural gas and good combustion practices are the only potentially available control options for GHG emissions from the proposed PRS.

5.3.2 Step 2 – Technical Feasibility

At Step 2, any control technique that is potentially available, yet not technically feasible for a particular pollutant stream, is rejected.

For NO_X, use of natural gas, good combustion practices, and low NO_X burners are inherent to the proposed project and are technically feasible. Combustion controls such as low NO_X burners are the most effective controls that can be obtained through commercial channels for such units.

For CO and VOC, use of natural gas and good combustion practices are inherent to the proposed project and are technically feasible. Oxidation catalysts are add-on controls which convert emissions of CO and organic compounds to CO_2 in the presence of a catalyst without the addition of any chemical reagent. MZX is unaware of any case in which these add-on controls have been installed and operated successfully on small fuel-burning equipment like the proposed PRS. Therefore, oxidation catalysts are not technically feasible.

For PM, use of natural gas and good combustion practices are inherent to the proposed project and are technically feasible.

As stated in the previous section, the only potentially available control option for SO_2 emissions from the PRS is the use of clean fuels with inherently low sulfur content. The use of clean fuels with inherently low sulfur content is part of the project and technically feasible.

For GHG, exclusive use of natural gas and good combustion practices for the proposed PRS are inherent to the proposed project and are technically feasible.

5.3.3 Step 3 – Ranking of Remaining Options

For NO_X, no ranking of control options is required, as use of natural gas, good combustion practices, and low NO_X burners are the only available and technically feasible control options for NO_X emissions from the proposed PRS.

For CO, VOC, PM, and GHG, no ranking of control options is required, as use of natural gas and good combustion practices are the only available and technically feasible control options for CO emissions from the proposed PRS.

For SO_2, no ranking of control options is required, as the use of clean fuels with inherently low sulfur content is the only available and technically feasible control option for SO_2 emissions from the PRS.

5.3.4 Step 4 – Eliminate Options Based on Economic, Energy, and Secondary Environmental Impacts

The top control options are being proposed for each of the BACT subject pollutants from the proposed PRS. Therefore, no evaluation of the control options is required.

5.3.5 Step 5 – Select BACT

Based on the foregoing analysis, MZX is selecting the following control options and BACT emission limits.

Based on the RBLC search results, NO_X emission limits for natural gas-fired fuel gas heaters with a heat input rating that is close to the proposed PRS units range from 0.011 to 0.10 lb/MMBtu heat input based on the same technologies proposed by MZX. There were no other pollution controls listed as approved BACT in the RBLC.

CO BACT for the proposed PRS is based on the exclusive use of natural gas and good combustion practices. Based on the RBLC search results, CO emission limits for natural gas-fired fuel gas heaters with a heat input rating that is close to the proposed PRS units range from 0.037 to 0.082 lb/MMBtu heat input based on the same technologies proposed by MZX. There were no other pollution controls listed as approved BACT in the RBLC. As previously mentioned, good combustion practices seek to optimize emissions for both NO_X and CO emissions.

VOC BACT for the proposed PRS is based on the exclusive use of natural gas and good combustion practices. Based on the RBLC search results, VOC emission limits for natural gas-fired fuel gas heaters with a heat input rating that is close to the proposed units range from 0.005 to 0.008 lb/MMBtu.

PM BACT for the proposed PRS is based on the exclusive use of natural gas and good combustion practices.

SO_2 BACT for the proposed PRS is based on the use of clean fuels with inherently low sulfur content. The facility proposes to only fire pipeline quality natural gas in the proposed PRS.

GHG BACT for the proposed PRS is based on the exclusive use of natural gas as fuel and good combustion practices.

Table 5-10. Proposed BACT Limits for PLUM Pressure Reduction System

Pollutant	Proposed BACT Limit	Comment
NO_X	0.049 lb/MMBtu	Top-ranked control option(s), based on the use of natural gas, good combustion practices, and low NO_X burners.
CO	0.082 lb/MMBtu	Top-ranked control option(s), based on the use of natural gas and good combustion practices.
VOC	Exclusive use of natural gas	Top-ranked control option(s) based on the use of natural gas and good combustion practices. VOC emissions from the proposed PRS should not exceed 0.0054 lb/MMBtu. However, instead of a numerical BACT limit, MZX is proposing the exclusive use of natural gas as BACT.
$PM/PM_{10}/PM_{2.5}$	Exclusive use of natural gas	Top-ranked control option(s) based on the use of natural gas and good combustion practices. MZX is proposing exclusive use of natural gas as BACT.
SO_2	1.0 grains sulfur/100 standard cubic feet burning natural gas exclusively	Top-ranked control option(s), the sulfur content of the natural gas will be verified periodically through documentation provided by the supplier.
CO_2	Exclusive use of natural gas	Top-ranked control option(s) based on the exclusive use of natural gas.

6. AIR QUALITY ANALYSIS

The modeling protocol and ambient air quality analysis are addressed in a forthcoming second report titled, *PSD Permit Application – Volume II – Modeling Report*.

7. EMISSION CALCULATION METHODOLOGY

This section addresses the methodology used to quantify the emissions from the proposed project and assesses federal NSR permitting applicability. Emissions from the proposed project will include CO, NO_X, SO_2, VOC, PM, PM_{10}, $PM_{2.5}$, GHG in the form of CO_2e, and HAPs. These emissions occur as a result of natural gas combustion in the combustion turbines and PRS. Detailed emission calculations are presented in Appendix D. This section provides a description of the basis for the estimation of emissions from these sources.

7.1 NSR Permitting Evaluation Methodology

The NSR permitting program generally requires that a source obtain a permit prior to construction of any project at an industrial facility if the proposed project includes new emission units with the potential to emit (PTE) air pollution in excess of certain threshold levels. The NSR program is comprised of two elements: nonattainment NSR (NNSR) and PSD. The NNSR program potentially applies to new construction or modifications that result in emission increases of a particular pollutant for which the area the facility is located in is classified as "nonattainment" with the NAAQS for that pollutant. The PSD program applies to project increases of those pollutants for which the area the facility is located in is classified as "attainment" or "unclassifiable" for the NAAQS. The facility is located in DeSoto County, which is presently designated as "attainment" or "unclassifiable" for all criteria pollutants. As such, PSD permitting is potentially applicable to the proposed project.

The proposed facility is a new PSD major source. Accordingly, the PSD permitting requirements apply.

The following sections discuss the methodology used in the project emissions increase evaluation conducted to assess PSD applicability under the NSR program. For all PSD-regulated pollutants other than CO_2e, PSD permitting is required if the emissions increase of a specific pollutant exceeds that pollutant's PSD SER. For CO_2e, PSD permitting is only required if the emissions increase exceeds the SER for CO_2e and the project is already undergoing PSD permitting for at least one other PSD-regulated pollutant.

7.1.1 Potential Emissions

Potential emissions are defined by 40 CFR 52.21(b)(4) where the potential to emit:

> *…means the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable…*

7.2 Potential Emissions Calculations

The following sections discuss the methodology used to calculate the potential emissions for each emission unit at the facility. NSR project emission increase assessment, the potential emissions of other facility emission units are detailed herein to support the air dispersion modeling analyses detailed in Volume II of this application package.

7.2.1 Solar PGM-130 and Titan 350 Turbines – Criteria Pollutant Emissions

Potential emissions for the proposed simple-cycle Solar PGM-130 and Titan 350 combustion turbines are based on a maximum of 8,760 hours per year. The potential emissions for each of these turbines were determined on a pollutant-by-pollutant basis for the combustion of natural gas. Table 7-1 summarizes the emission factors utilized for estimation of emissions from natural gas combustion for the four simple-cycle combustion turbine units.

Table 7-1. Criteria Pollutant Emission Factors for Solar PGM-130 and Titan 350 Turbines Firing of Natural Gas

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Basis
SO_2	0.01 gr S/scf	Gas analysis
NO_x	7.48E-03	See Note 1
CO	4.55E-03	See Note 1
Total PM	3.60E-04	See Note 2
Total PM_{10}	3.60E-04	See Note 2
Total $PM_{2.5}$	3.60E-04	See Note 2
VOC	7.17E-03	See Note 1
GHGs		
CO_2	116.98	See Note 3
CH_4	2.20E-03	See Note 4
N_2O	2.20E-04	See Note 4
CO_2e	117.10	See Note 5

1. Equivalent to 2.0 ppm @15% O_2 for NO_X, 2.0 ppm @15% O_2 for CO, and 2.0 ppm @15% O_2 for VOC (as propane).
2. Emission factors for PM from natural gas combustion are estimated from Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
3. Emission factor for CO_2 derived from Equation G-4 in Appendix G to 40 CFR 75.
   CO_2 emission factor (lb/MMBtu) = F_c * U_f * MW_{CO2}
   CO_2 emission factor (lb/MMBtu) = 1,040 (scf/MMBtu) * 1/385 (scf CO_2/lb-mol) * 44.0 (lb/lb-mol)
4. Based on EPA default factors in 40 CFR Part 98 Subpart C Tables C-1 and C-2. Emission factors were converted from units of kg/MMBtu to lb/MMBtu by multiplying the factors by 2.2046 lb/kg.
5. The CO_2e factor is calculated based on the emission factors for CO_2, CH_4, and N_2O and the global warming potential (GWP) for each pollutant per 40 CFR 98, Subpart A, Table A-1:
   CO_2: 1
   CH_4: 28
   N_2O: 265

7.2.2 ProEnergy 6000PE Turbines – Criteria Pollutant Emissions

Potential emissions for the proposed simple-cycle ProEnergy 6000PE combustion turbines are based on a maximum of 8,760 hours per year. The potential emissions for each of these turbines were determined on a pollutant-by-pollutant basis for the combustion of natural gas. Table 7-1 summarizes the emission factors

utilized for estimation of emissions from natural gas combustion for the eight (8) simple-cycle combustion turbine units.

Table 7-2. Criteria Pollutant Emission Factors for ProEnergy 6000PE Turbine Firing of Natural Gas

Pollutant	Emission Factor (lb/MMBtu)	Emission Factor Basis
SO_2	0.01 gr S/scf	Gas analysis
NO_x	7.48E-03	See Note 1
CO	9.11E-03	See Note 1
Total PM	3.60E-04	See Note 2
Total PM_{10}	3.60E-04	See Note 2
Total $PM_{2.5}$	3.60E-04	See Note 2
VOC	8.96E-03	See Note 1
GHGs		
CO_2	116.98	See Note 3
CH_4	2.20E-03	See Note 4
N_2O	2.20E-04	See Note 4
CO_2e	117.10	See Note 5

1. Equivalent to 2.0 ppm @15% O_2 for NO_X, 4.0 ppm @15% O_2 for CO, and 2.5 ppm @15% O_2 for VOC (as propane).
2. Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
3. Emission factor for CO_2 derived from Equation G-4 in Appendix G to 40 CFR 75.
   CO_2 emission factor (lb/MMBtu) = F_c * U_f * MW_{CO2}
   CO_2 emission factor (lb/MMBtu) = 1,040 (scf/MMBtu) * 1/385 (scf CO_2/lb-mol) * 44.0 (lb/lb-mol)
4. Based on EPA default factors in 40 CFR Part 98 Subpart C Tables C-1 and C-2. Emission factors were converted from units of kg/MMBtu to lb/MMBtu by multiplying the factors by 2.2046 lb/kg.
5. The CO_2e factor is calculated based on the emission factors for CO_2, CH_4, and N_2O and the global warming potential (GWP) for each pollutant per 40 CFR 98, Subpart A, Table A-1:
   CO_2: 1
   CH_4: 28
   N_2O: 265

7.2.3 Combustion Turbines – HAP Emissions

HAP emissions are evaluated from facility sources based on a variety of resources including AP-42 based emission factors, Solar Product Information Letters and Alpha Gamma EPA HAP studies for combustion turbines. Details regarding the estimation of HAP emissions can be found in Appendix D.

7.2.4 PLUM PRS Units

Potential emissions for the proposed PLUM units are based on a maximum of 8,760 hours per year. The potential emissions for each of these units were determined on a pollutant-by-pollutant basis for the combustion of natural gas for all but PM species using emission factors from AP-42, Chapter 1.4, Natural

Gas Combustion. PM emissions were based on the January 2010, EPA Region 4, Roy Huntley compilation of emission factors for combustion.

APPENDIX A. SUMMARY OF APPLICABLE REGULATIONS

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 50.1 - 50.18	National Primary and Secondary Ambient Air Quality Standards	Yes	Provides ambient air quality standards for six principle pollutants known as criteria pollutants.
40 CFR 51.40	Requirements for Preparation, Adoption, and Submittal of Implementation Plans	No	State requirements.
40 CFR 52.21	Prevention of Significant Deterioration of Air Quality	Yes	Contains general requirements for PSD sources. This facility is a major source for all criteria pollutants and GHG.
40 CFR 52.2270 – 52.2312	Tennessee	No	Contains agency requirements.
40 CFR 53	Ambient Air Monitoring Reference and Equivalent Methods	No	No applicable requirements.
40 CFR 54	Prior Notice of Citizen Suits	Yes	Contains general facility-wide requirements; however, there are no compliance requirements.
40 CFR 55	Outer Continental Shelf Air Regulations	No	No applicable requirements.
40 CFR 56	Regional Consistency	No	No applicable requirements.
40 CFR 57	Primary Nonferrous Smelter Orders	No	No applicable requirements.
40 CFR 58	Ambient Air Quality Surveillance	No	No applicable requirements.
40 CFR 60 (Subpart A)	Standards of Performance for New Stationary Sources: General Provisions	Yes	Facility has affected sources under NSPS KKKK.
40 CFR 60 (Subpart B)	Adoption and Submittal of State Plans for Designated Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ba)	Adoption and Submittal of State Plans for Designated Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart C)	Emission Guidelines and Compliance Times	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ca)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart Cb)	Emissions Guidelines and Compliance Times for Large Municipal Waste Combustors That are Constructed on or Before September 20, 1994	No	Facility does not have an affected source.
40 CFR 60 (Subpart Cc)	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart Cd)	Emissions Guidelines and Compliance Times for Sulfuric Acid Production Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ce)	Emission Guidelines and Compliance Times for Hospital/Medical/Infectious Waste Incinerators	No	Facility does not have an affected source.
40 CFR 60 (Subpart Cf)	Emission Guidelines and Compliance Times for Municipal Solid Waste Landfills	No	Facility does not have an affected source.
40 CFR 60 (Subpart D)	Standards of Performance for Fossil-Fuel-Fired Steam Generators	No	Facility does not have an affected source.
40 CFR 60 (Subpart Da)	Standards of Performance for Electric Utility Steam Generating Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart Db)	Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart Dc)	Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart E)	Standards of Performance for Incinerators	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ea)	Standards of Performance for Municipal Waste Combustors for Which Construction Is Commenced After December 20, 1989 and On or Before September 20, 1994	No	Facility does not have an affected source.
40 CFR 60 (Subpart Eb)	Standards of Performance for Large Municipal Waste Combustors for Which Construction is Commenced After September 20, 1994 or for Which Modification or Reconstruction is Commenced After June 19, 1996	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ec)	Standards of Performance for New Stationary Sources: Hospital/Medical/Infectious Waste Incinerators	No	Facility does not have an affected source.
40 CFR 60 (Subpart F)	Standards of Performance for Portland Cement Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart G)	Standards of Performance for Nitric Acid Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ga)	Standards of Performance for Nitric Acid Plants for Which Construction, Reconstruction, or Modification Commenced After October 14, 2011	No	Facility does not have an affected source.
40 CFR 60 (Subpart H)	Standards of Performance for Sulfuric Acid Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart I)	Standards of Performance for Hot Mix Asphalt Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart J)	Standards of Performance for Petroleum Refineries	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart Ja)	Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007	No	Facility does not have an affected source.
40 CFR 60 (Subpart K)	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and Prior to May 19, 1978	No	Facility does not have an affected source.
40 CFR 60 (Subpart Ka)	Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984	No	Facility does not have an affected source.
40 CFR 60 (Subpart Kb)	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984, and On or Before October 4, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart Kc)	Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After October 4, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart L)	Standards of Performance for Secondary Lead Smelters for Which Construction, Reconstruction, or Modification Commenced After June 11, 1973, and On or Before December 1, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart La)	Standards of Performance for Secondary Lead Smelters for Which Construction, Reconstruction, or Modification Commenced After December 1, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart M)	Standards of Performance for Secondary Brass and Bronze Production Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart N)	Standards of Performance for Primary Emissions from Basic Oxygen Process Furnaces for Which Construction is Commenced After June 11, 1973	No	Facility does not have an affected source.
40 CFR 60 (Subpart Na)	Standards of Performance for Secondary Emissions from Basic Oxygen Process Steelmaking Facilities for Which Construction is Commenced After January 20, 1983	No	Facility does not have an affected source.
40 CFR 60 (Subpart O)	Standards of Performance for Sewage Treatment Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart P)	Standards of Performance for Primary Copper Smelters	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart Q)	Standards of Performance for Primary Zinc Smelters	No	Facility does not have an affected source.
40 CFR 60 (Subpart R)	Standards of Performance for Primary Lead Smelters	No	Facility does not have an affected source.
40 CFR 60 (Subpart S)	Standards of Performance for Primary Aluminum Reduction Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart T)	Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart U)	Standards of Performance for the Phosphate Fertilizer Industry: Superphosphoric Acid Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart V)	Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart W)	Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart X)	Standards of Performance for the Phosphate Fertilizer Industry: Granular Triple Superphosphate Storage Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart Y)	Standards of Performance for Coal Preparation and Processing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart Z)	Standards of Performance for Ferroalloy Production Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart AA)	Standards of Performance for Steel Plants: Electric Arc Furnaces Constructed After October 21, 1974, and On or Before August 17, 1983	No	Facility does not have an affected source.
40 CFR 60 (Subpart AAa)	Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After August 17, 1983, and On or Before May 16, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart AAb)	Standards of Performance for Steel Plants: Electric Arc Furnaces and Argon-Oxygen Decarbonization Vessels Constructed After May 16, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart BB)	Standards of Performance for Kraft Pulp Mills	No	Facility does not have an affected source.
40 CFR 60 (Subpart BBa)	Standards of Performance for Kraft Pulp Mill Affected Sources for Which Construction, Reconstruction, or Modification Commenced After May 23, 2013	No	Facility does not have an affected source.
40 CFR 60 (Subpart CC)	Standards of Performance for Glass Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart DD)	Standards of Performance for Grain Elevators	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart EE)	Standards of Performance for Surface Coating of Metal Furniture	No	Facility does not have an affected source.
40 CFR 60 (Subpart FF)	[Reserved]	No	Facility does not have an affected source.
40 CFR 60 (Subpart GG)	Standards of Performance for Stationary Gas Turbines	No	Facility is exempt from NSPS GG since it is applicable to NSPS KKKK.
40 CFR 60 (Subpart HH)	Standards of Performance for Lime Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart KK)	Standards of Performance for Lead-Acid Battery Manufacturing Plants for Which Construction, Reconstruction, or Modification Commenced After January 14, 1980, and On or Before February 23, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart KKa)	Standards of Performance for Lead Acid Battery Manufacturing Plants for Which Construction, Modification or Reconstruction Commenced After February 23, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart LL)	Standards of Performance for Metallic Mineral Processing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart MM)	Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations for which Construction, Modification or Reconstruction Commenced After October 5, 1979, and On or Before May 18, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart MMa)	Standards of Performance for Automobile and Light Duty Truck Surface Coating Operations for which Construction, Modification or Reconstruction Commenced After May 18, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart NN)	Standards of Performance for Phosphate Rock Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart PP)	Standards of Performance for Ammonium Sulfate Manufacture	No	Facility does not have an affected source.
40 CFR 60 (Subpart QQ)	Standards of Performance for the Graphic Arts Industry: Publication Rotogravure Printing	No	Facility does not have an affected source.
40 CFR 60 (Subpart RR)	Standards of Performance for Pressure Sensitive Tape and Label Surface Coating Operations	No	Facility does not have an affected source.
40 CFR 60 (Subpart SS)	Standards of Performance for Industrial Surface Coating: Large Appliances	No	Facility does not have an affected source.
40 CFR 60 (Subpart TT)	Standards of Performance for Metal Coil Surface Coating	No	Facility does not have an affected source.
40 CFR 60 (Subpart UU)	Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart VV)	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry (SOCMI) for which Construction, Reconstruction, or Modification commenced after January 5, 1981, but before November 7, 2006	No	Facility does not have an affected source.
40 CFR 60 (Subpart VVa)	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006, and on or Before April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart VVb)	Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for Which Construction, Reconstruction, or Modification Commenced After April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart WW)	Standards of Performance for the Beverage Can Surface Coating Industry	No	Facility does not have an affected source.
40 CFR 60 (Subpart XX)	Standards of Performance for Bulk Gasoline Terminals That Commenced Construction, Modification, or Reconstruction After December 17, 1980, and On or Before June 10, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart XXa)	Standards of Performance for Bulk Gasoline Terminals that Commenced Construction, Modification, or Reconstruction After June 10, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subparts YY-ZZ)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart AAA)	40 CFR (Subpart AAA)	No	Facility does not have an affected source.
40 CFR 60 (Subpart BBB)	40 CFR (Subpart BBB)	No	Facility does not have an affected source.
40 CFR 60 (Subpart CCC)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart DDD)	Standards of Performance for Volatile Organic Compound (VOC) Emissions from the Polymer Manufacturing Industry	No	Facility does not have an affected source.
40 CFR 60 (Subpart EEE)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart FFF)	Standards of Performance for Flexible Vinyl and Urethane Coating and Printing	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart GGG)	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced After January 4, 1983, and on or Before November 7, 2006	No	Facility does not have an affected source.
40 CFR 60 (Subpart GGGa)	Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006	No	Facility does not have an affected source.
40 CFR 60 (Subpart HHH)	Standards of Performance for Synthetic Fiber Production Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart III)	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes After October 21, 1983, and on or Before April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart IIIa)	Standards of Performance for Volatile Organic Compound (VOC) Emissions From the Synthetic Organic Chemical Manufacturing Industry (SOCMI) Air Oxidation Unit Processes for Which Construction, Reconstruction, or Modification Commenced After April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart JJJ)	Standards of Performance for Petroleum Dry Cleaners	No	Facility does not have an affected source.
40 CFR 60 (Subpart KKK)	Standards of Performance for Equipment Leaks of VOC From Onshore Natural Gas Processing Plants for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011	No	Facility does not have an affected source.
40 CFR 60 (Subpart LLL)	Standards of Performance for SO2 Emissions From Onshore Natural Gas Processing for Which Construction, Reconstruction, or Modification Commenced After January 20, 1984, and on or Before August 23, 2011	No	Facility does not have an affected source.
40 CFR 60 (Subpart MMM)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart NNN)	Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations After December 30, 1983, and on or Before April 25, 2023	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart NNNa)	Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations for Which Construction, Reconstruction, or Modification Commenced After April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart OOO)	Standards of Performance for Nonmetallic Mineral Processing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart PPP)	Standard of Performance for Wool Fiberglass Insulation Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 60 (Subpart QQQ)	Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems	No	Facility does not have an affected source.
40 CFR 60 (Subpart RRR)	Subpart RRR—Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes After June 29, 1990, and on or Before April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart RRRa)	Standards of Performance for Volatile Organic Compound Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Reactor Processes for Which Construction, Reconstruction, or Modification Commenced After April 25, 2023	No	Facility does not have an affected source.
40 CFR 60 (Subpart SSS)	Standards of Performance for Magnetic Tape Coating Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart TTT)	Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines	No	Facility does not have an affected source.
40 CFR 60 (Subpart TTTa)	Standards of Performance for Industrial Surface Coating: Surface Coating of Plastic Parts for Business Machines for Which Construction, Reconstruction, or Modification Commenced After June 21, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart UUU)	Standards of Performance for Calciners and Dryers in Mineral Industries	No	Facility does not have an affected source.
40 CFR 60 (Subpart VVV)	Standards of Performance for Polymeric Coating of Supporting Substrates Facilities	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart WWW)	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification on or After May 30, 1991, but Before July 18, 2014	No	Facility does not have an affected source.
40 CFR 60 (Subpart XXX)	Standards of Performance for Municipal Solid Waste Landfills That Commenced Construction, Reconstruction, or Modification After July 17, 2014	No	Facility does not have an affected source.
40 CFR 60 (Subparts YYY-ZZZ)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart AAAA)	Standards of Performance for Small Municipal Waste Combustion Units for Which Construction is Commenced After August 30, 1999 or for Which Modification or Reconstruction is Commenced After June 6, 2001	No	Facility does not have an affected source.
40 CFR 60 (Subpart BBBB)	Emission Guidelines and Compliance Times for Small Municipal Waste Combustion Units Constructed on or Before August 30, 1999	No	Facility does not have an affected source.
40 CFR 60 (Subpart CCCC)	Standards of Performance for Commercial and Industrial Solid Waste Incineration Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart DDDD)	Emissions Guidelines and Compliance Times for Commercial and Industrial Solid Waste Incineration Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart EEEE)	Standards of Performance for Other Solid Waste Incineration Units for Which Construction is Commenced After December 9, 2004, or for Which Modification or Reconstruction is Commenced on or After June 16, 2006	No	Facility does not have an affected source.
40 CFR 60 (Subpart FFFF)	Emission Guidelines and Compliance Times for Other Solid Waste Incineration Units that Commenced Construction On or Before December 9, 2004	No	Facility does not have an affected source.
40 CFR 60 (Subparts GGGG-HHHH)	[Reserved]	No	Facility does not have an affected source.
40 CFR 60 (Subpart IIII)	Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	No	Facility does not have an affected source.
40 CFR 60 (Subpart JJJJ)	Standards of Performance for Stationary Spark Ignition Internal Combustion Engines	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart KKKK)	Standards of Performance for Stationary Combustion Turbines	Yes	The proposed turbines are affected sources under this subpart. Refer to Section 4.5.3 of this application document for detailed applicability.
40 CFR 60 (Subpart LLLL)	Standards of Performance for New Sewage Sludge Incineration Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart MMMM)	Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart NNNN)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart OOOO)	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification, or Reconstruction Commenced After August 23, 2011, and on or Before September 18, 2015	No	Facility does not have an affected source.
40 CFR 60 (Subpart OOOOa)	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After September 18, 2015 and On or Before December 6, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart OOOOb)	Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022	No	Facility does not have an affected source.
40 CFR 60 (Subpart OOOOc)	Emissions Guidelines for Greenhouse Gas Emissions From Existing Crude Oil and Natural Gas Facilities	No	Facility does not have an affected source.
40 CFR 60 (Subpart PPPP)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart QQQQ)	Standards of Performance for New Residential Hydronic Heaters and Forced-Air Furnaces	No	Facility does not have an affected source.
40 CFR 60 (Subpart TTTT)	Standards of Performance for Greenhouse Gas Emissions for Electric Generating Units	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 60 (Subpart TTTTa)	Standards of Performance for Greenhouse Gas Emissions for Modified Coal-Fired Steam Electric Generating Units and New Construction and Reconstruction Stationary Combustion Turbine Electric Generating Units	No	Facility does not have an affected source.
40 CFR 60 (Subpart UUUUa)	[Reserved]	N/A	[Reserved]
40 CFR 60 (Subpart UUUUb)	Emission Guidelines for Greenhouse Gas Emissions for Electric Utility Generating Units	No	Facility does not have an affected source.
40 CFR 61 (Subpart A)	General Provisions	No	Contains general requirements applicable to affected sources. The facility has no affected sources.
40 CFR 61 (Subpart B)	National Emission Standards for Radon Emissions From Underground Uranium Mines	No	Facility does not have an affected source.
40 CFR 61 (Subpart C)	National Emission Standard for Beryllium	No	Facility does not have an affected source.
40 CFR 61 (Subpart D)	National Emission Standard for Beryllium Rocket Motor Firing	No	Facility does not have an affected source.
40 CFR 61 (Subpart E)	National Emission Standard for Mercury	No	Facility does not have an affected source.
40 CFR 61 (Subpart F)	National Emission Standard for Vinyl Chloride	No	Facility does not have an affected source.
40 CFR 61 (Subpart G)	[Reserved]	N/A	[Reserved]
40 CFR 61 (Subpart H)	National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities	No	Facility does not have an affected source.
40 CFR 61 (Subpart I)	National Emission Standards for Radionuclide Emissions From Federal Facilities Other Than Nuclear Regulatory Commission Licensees and Not Covered by Subpart H	No	Facility does not have an affected source.
40 CFR 61 (Subpart J)	National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene	No	Facility does not have an affected source.
40 CFR 61 (Subpart K)	National Emission Standards for Radionuclide Emissions From Elemental Phosphorus Plants	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 61 (Subpart L)	National Emission Standard for Benzene Emissions from Coke By-Product Recovery Plants	No	Facility does not have an affected source.
40 CFR 61 (Subpart M)	National Emission Standard for Asbestos	No	Facility does not have an affected source.
40 CFR 61 (Subpart N)	National Emission Standard for Inorganic Arsenic Emissions From Glass Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 61 (Subpart O)	National Emission Standard for Inorganic Arsenic Emissions From Primary Copper Smelters	No	Facility does not have an affected source.
40 CFR 61 (Subpart P)	National Emission Standard for Inorganic Arsenic Emissions From Arsenic Trioxide and Metallic Arsenic Production Facilities	No	Facility does not have an affected source.
40 CFR 61 (Subpart Q)	National Emission Standards for Radon Emissions From Department of Energy Facilities	No	Facility does not have an affected source.
40 CFR 61 (Subpart R)	National Emission Standards for Radon Emissions From Phosphogypsum Stacks	No	Facility does not have an affected source.
40 CFR 61 (Subpart S)	[Reserved]	N/A	[Reserved]
40 CFR 61 (Subpart T)	National Emission Standards for Radon Emissions From the Disposal of Uranium Mill Tailings	No	Facility does not have an affected source.
40 CFR 61 (Subpart U)	[Reserved]	N/A	[Reserved]
40 CFR 61 (Subpart V)	National Emission Standard for Equipment Leaks (Fugitive Emission Sources)	No	Facility does not have an affected source.
40 CFR 61 (Subpart W)	National Emission Standards for Radon Emissions From Operating Mill Tailings	No	Facility does not have an affected source.
40 CFR 61 (Subpart X)	[Reserved]	N/A	[Reserved]
40 CFR 61 (Subpart Y)	National Emission Standard for Benzene Emissions From Benzene Storage Vessels	No	Facility does not have an affected source.
40 CFR 61 (Subparts Z-AA)	[Reserved]	No	Facility does not have an affected source.
40 CFR 61 (Subpart BB)	National Emission Standard for Benzene Emissions From Benzene Transfer Operations	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 61 (Subparts CC-EE)	[Reserved]	N/A	[Reserved]
40 CFR 61 (Subpart FF)	National Emission Standard for Benzene Waste Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart A)	NESHAP: General Provisions	No	Contains general requirements applicable to affected sources. Facility is a HAP area source that is not subject to any NESHAP.
40 CFR 63 (Subpart B)	Requirements for Control Technology Determinations for Major Sources in Accordance With Clean Air Act Sections, Sections 112(g) and 112(j)	No	Facility does not have an affected source.
40 CFR 63 (Subpart C)	List of Hazardous Air Pollutants, Petitions Process, Lesser Quantity Designations, Source Category List	No	Facility does not have an affected source.
40 CFR 63 (Subpart D)	Regulations Governing Compliance Extensions for Early Reductions of Hazardous Air Pollutants	No	Facility does not have an affected source.
40 CFR 63 (Subpart E)	Approval of State Programs and Delegation of Federal Authorities	No	Facility does not have an affected source.
40 CFR 63 (Subpart F)	National Emission Standards for Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry	No	Facility does not have an affected source.
40 CFR 63 (Subpart G)	National Emission Standards for Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater	No	Facility does not have an affected source.
40 CFR 63 (Subpart H)	National Emission Standards for Hazardous Air Pollutants for Equipment Leaks and Fenceline Monitoring for All Emission Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart I)	National Emission Standards for Hazardous Air Pollutants for Certain Processes Subject to the Negotiated Regulation for Equipment Leaks	No	Facility does not have an affected source.
40 CFR 63 (Subpart J)	National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart K)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart L)	National Emission Standards for Coke Oven Batteries	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart M)	National Perchloroethylene Air Emission Standards for Dry Cleaning Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart N)	National Emission Standards for Chromium Emissions From Hard and Decorative Chromium Electroplating and Chromium Anodizing Tanks	No	Facility does not have an affected source.
40 CFR 63 (Subpart O)	Ethylene Oxide Emissions Standards for Sterilization Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart P)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart Q)	National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers	No	Facility does not have an affected source.
40 CFR 63 (Subpart R)	National Emission Standards for Gasoline Distribution Facilities (Bulk Gasoline Terminals and Pipeline Breakout Stations)	No	Facility does not have an affected source.
40 CFR 63 (Subpart S)	National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry	No	Facility does not have an affected source.
40 CFR 63 (Subpart T)	National Emission Standards for Halogenated Solvent Cleaning	No	Facility does not have an affected source.
40 CFR 63 (Subpart U)	National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins	No	Facility does not have an affected source.
40 CFR 63 (Subpart V)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart W)	National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart X)	National Emission Standards For Hazardous Air Pollutants From Secondary Lead Smelting	No	Facility does not have an affected source.
40 CFR 63 (Subpart Y)	National Emission Standards for Marine Tank Vessel Loading Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart Z)	[Reserved]	N/A	[Reserved]
40 CFR 63 (§§ 63.569-63.599)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart AA)	National Emission Standards for Hazardous Air Pollutants from Phosphoric Acid Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 63 (Subpart BB)	National Emission Standards for Hazardous Air Pollutants from Phosphate Fertilizers Production Plants	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart CC)	National Emission Standards for Hazardous Air Pollutants From Petroleum Refineries	No	Facility does not have an affected source.
40 CFR 63 (Subpart DD)	National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart V)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart EE)	National Emission Standards for Magnetic Tape Manufacturing Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart FF)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart GG)	National Emission Standards for Aerospace Manufacturing and Rework Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart HH)	National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart II)	National Emission Standards for Shipbuilding and Ship Repair (Surface Coating)	No	Facility does not have an affected source.
40 CFR 63 (Subpart JJ)	National Emission Standards for Wood Furniture Manufacturing Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart KK)	National Emission Standards for the Printing and Publishing Industry	No	Facility does not have an affected source.
40 CFR 63 (Subpart LL)	National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants	No	Facility does not have an affected source.
40 CFR 63 (Subpart MM)	National Emission Standards for Hazardous Air Pollutants for Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills	No	Facility does not have an affected source.
40 CFR 63 (Subpart NN)	National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing at Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart OO)	National Emission Standards for Tanks—Level 1	No	Facility does not have an affected source.
40 CFR 63 (Subpart PP)	National Emission Standards for Containers	No	Facility does not have an affected source.
40 CFR 63 (Subpart QQ)	National Emission Standards for Surface Impoundments	No	Facility does not have an affected source.
40 CFR 63 (Subpart RR)	National Emission Standards for Individual Drain Systems	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart SS)	National Emission Standards for Closed Vent Systems, Control Devices, Recovery Devices and Routing to a Fuel Gas System or a Process	No	Facility does not have an affected source.
40 CFR 63 (Subpart TT)	National Emission Standards for Equipment Leaks—Control Level 1	No	Facility does not have an affected source.
40 CFR 63 (Subpart UU)	National Emission Standards for Equipment Leaks—Control Level 2 Standards	No	Facility does not have an affected source.
40 CFR 63 (Subpart VV)	National Emission Standards for Oil-Water Separators and Organic-Water Separators	No	Facility does not have an affected source.
40 CFR 63 (Subpart WW)	National Emission Standards for Storage Vessels (Tanks)—Control Level 2	No	Facility does not have an affected source.
40 CFR 63 (Subpart XX)	National Emission Standards for Ethylene Manufacturing Process Units: Heat Exchange Systems and Waste Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart YY)	National Emission Standards for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards	No	Facility does not have an affected source.
40 CFR 63 (Subparts ZZ-BBB)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart CCC)	National Emission Standards for Hazardous Air Pollutants for Steel Pickling—HCl Process Facilities and Hydrochloric Acid Regeneration Plants	No	Facility does not have an affected source.
40 CFR 63 (Subpart DDD)	National Emission Standards for Hazardous Air Pollutants for Mineral Wool Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart EEE)	National Emission Standards for Hazardous Air Pollutants from Hazardous Waste Combustors	No	Facility does not have an affected source.
40 CFR 63 (Subpart FFF)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart GGG)	National Emission Standards for Pharmaceuticals Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart HHH)	National Emission Standards for Hazardous Air Pollutants From Natural Gas Transmission and Storage Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart III)	National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart JJJ)	National Emission Standards for Hazardous Air Pollutant Emissions: Group IV Polymers and Resins	No	Facility does not have an affected source.
40 CFR 63 (Subpart KKK)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart LLL)	National Emission Standards for Hazardous Air Pollutants From the Portland Cement Manufacturing Industry	No	Facility does not have an affected source.
40 CFR 63 (Subpart MMM)	National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart NNN)	National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart OOO)	National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins	No	Facility does not have an affected source.
40 CFR 63 (Subpart PPP)	National Emission Standards for Hazardous Air Pollutant Emissions for Polyether Polyols Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart QQQ)	National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting	No	Facility does not have an affected source.
40 CFR 63 (Subpart RRR)	National Emission Standards for Hazardous Air Pollutants for Secondary Aluminum Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart SSS)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart TTT)	National Emission Standards for Hazardous Air Pollutants for Primary Lead Smelting	No	Facility does not have an affected source.
40 CFR 63 (Subpart UUU)	National Emission Standards for Hazardous Air Pollutants for Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units	No	Facility does not have an affected source.
40 CFR 63 (Subpart VVV)	National Emission Standards for Hazardous Air Pollutants: Publicly Owned Treatment Works	No	Facility does not have an affected source.
40 CFR 63 (Subpart WWW)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart XXX)	National Emission Standards for Hazardous Air Pollutants for Ferroalloys Production: Ferromanganese and Silicomanganese	No	Facility does not have an affected source.
40 CFR 63 (Subpart AAAA)	National Emission Standards for Hazardous Air Pollutants: Municipal Solid Waste Landfills	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart BBBB)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart CCCC)	National Emission Standards for Hazardous Air Pollutants: Manufacturing of Nutritional Yeast	No	Facility does not have an affected source.
40 CFR 63 (Subpart DDDD)	National Emission Standards for Hazardous Air Pollutants: Plywood and Composite Wood Products	No	Facility does not have an affected source.
40 CFR 63 (Subpart EEEE)	National Emission Standards for Hazardous Air Pollutants: Organic Liquids Distribution (Non-Gasoline)	No	Facility does not have an affected source.
40 CFR 63 (Subpart FFFF)	National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart GGGG)	National Emission Standards for Hazardous Air Pollutants: Solvent Extraction for Vegetable Oil Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart HHHH)	National Emission Standards for Hazardous Air Pollutants for Wet-Formed Fiberglass Mat Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart IIII)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Automobiles and Light-Duty Trucks	No	Facility does not have an affected source.
40 CFR 63 (Subpart JJJJ)	National Emission Standards for Hazardous Air Pollutants: Paper and Other Web Coating	No	Facility does not have an affected source.
40 CFR 63 (Subpart KKKK)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Cans	No	Facility does not have an affected source.
40 CFR 63 (Subpart MMMM)	National Emission Standards for Hazardous Air Pollutants for Surface Coating of Miscellaneous Metal Parts and Products	No	Facility does not have an affected source.
40 CFR 63 (Subpart NNNN)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances	No	Facility does not have an affected source.
40 CFR 63 (Subpart OOOO)	National Emission Standards for Hazardous Air Pollutants: Printing, Coating, and Dyeing of Fabrics and Other Textiles	No	Facility does not have an affected source.
40 CFR 63 (Subpart PPPP)	National Emission Standards for Hazardous Air Pollutants for Surface Coating of Plastic Parts and Products	No	Facility does not have an affected source.
40 CFR 63 (Subpart QQQQ)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Wood Building Products	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart RRRR)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Furniture	No	Facility does not have an affected source.
40 CFR 63 (Subpart SSSS)	National Emission Standards for Hazardous Air Pollutants: Surface Coating of Metal Coil	No	Facility does not have an affected source.
40 CFR 63 (Subpart TTTT)	National Emission Standards for Hazardous Air Pollutants for Leather Finishing Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart UUUU)	National Emission Standards for Hazardous Air Pollutants for Cellulose Products Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart VVVV)	National Emission Standards for Hazardous Air Pollutants for Boat Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart WWWW)	National Emissions Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart XXXX)	National Emissions Standards for Hazardous Air Pollutants: Rubber Tire Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart YYYY)	National Emission Standards for Hazardous Air Pollutants for Stationary Combustion Turbines	No	Facility is a HAP area source.
40 CFR 63 (Subpart ZZZZ)	National Emission Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines	No	Facility does not have an affected source.
40 CFR 63 (Subpart AAAAA)	National Emission Standards for Hazardous Air Pollutants for Lime Manufacturing Plants	No	Facility does not have an affected source.
40 CFR 63 (Subpart BBBBB)	National Emission Standards for Hazardous Air Pollutants for Semiconductor Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart CCCCC)	National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching, and Battery Stacks	No	Facility does not have an affected source.
40 CFR 63 (Subpart DDDDD)	National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	No	Facility does not have an affected source.
40 CFR 63 (Subpart EEEEE)	National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries	No	Facility does not have an affected source.
40 CFR 63 (Subpart FFFFF)	National Emission Standards for Hazardous Air Pollutants for Integrated Iron and Steel Manufacturing Facilities	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart GGGGG)	National Emission Standards for Hazardous Air Pollutants: Site Remediation	No	Facility does not have an affected source.
40 CFR 63 (Subpart HHHHH)	National Emission Standards for Hazardous Air Pollutants: Miscellaneous Coating Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart IIIII)	National Emission Standards for Hazardous Air Pollutants for Mercury Cell Chlor-Alkali Plants	No	Facility does not have an affected source.
40 CFR 63 (Subpart JJJJJ)	National Emission Standards for Hazardous Air Pollutants for Brick and Structural Clay Products Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart KKKKK)	National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart LLLLL)	National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart MMMMM)	National Emission Standards for Hazardous Air Pollutants: Flexible Polyurethane Foam Fabrication Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart NNNNN)	National Emission Standards for Hazardous Air Pollutants: Hydrochloric Acid Production	No	Facility does not have an affected source.
40 CFR 63 (Subpart OOOOO)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart PPPPP)	National Emission Standards for Hazardous Air Pollutants for Engine Test Cells/Stands	No	Facility does not have an affected source.
40 CFR 63 (Subpart QQQQQ)	National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart RRRRR)	National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing	No	Facility does not have an affected source.
40 CFR 63 (Subpart SSSSS)	National Emission Standards for Hazardous Air Pollutants for Refractory Products Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart TTTTT)	National Emissions Standards for Hazardous Air Pollutants for Primary Magnesium Refining	No	Facility does not have an affected source.
40 CFR 63 (Subpart UUUUU)	National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units	No	Facility does not have an affected source.

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Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart VVVVV)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart WWWWW)	National Emission Standards for Hospital Ethylene Oxide Sterilizers	No	Facility does not have an affected source.
40 CFR 63 (Subpart XXXXX)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart YYYYY)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Electric Arc Furnace Steelmaking Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart ZZZZZ)	National Emission Standards for Hazardous Air Pollutants for Iron and Steel Foundries Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart AAAAAA)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart BBBBBB)	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Distribution Bulk Terminals, Bulk Plants, and Pipeline Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart CCCCCC)	National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart DDDDDD)	National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart EEEEEE)	National Emission Standards for Hazardous Air Pollutants for Primary Copper Smelting Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart FFFFFF)	National Emission Standards for Hazardous Air Pollutants for Secondary Copper Smelting Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart GGGGGG)	National Emission Standards for Hazardous Air Pollutants for Primary Nonferrous Metals Area Sources—Zinc, Cadmium, and Beryllium	No	Facility does not have an affected source.
40 CFR 63 (Subpart HHHHHH)	National Emission Standards for Hazardous Air Pollutants: Paint Stripping and Miscellaneous Surface Coating Operations at Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart IIIIII)	[Reserved]	N/A	[Reserved]

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart JJJJJJ)	National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart KKKKKK)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart LLLLLL)	National Emission Standards for Hazardous Air Pollutants for Acrylic and Modacrylic Fibers Production Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart MMMMMM)	National Emission Standards for Hazardous Air Pollutants for Carbon Black Production Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart NNNNNN)	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources: Chromium Compounds	No	Facility does not have an affected source.
40 CFR 63 (Subpart OOOOOO)	National Emission Standards for Hazardous Air Pollutants for Flexible Polyurethane Foam Production and Fabrication Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart PPPPPP)	National Emission Standards for Hazardous Air Pollutants for Lead Acid Battery Manufacturing Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart QQQQQQ)	National Emission Standards for Hazardous Air Pollutants for Wood Preserving Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart RRRRRR)	National Emission Standards for Hazardous Air Pollutants for Clay Ceramics Manufacturing Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart SSSSSS)	National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart TTTTTT)	National Emission Standards for Hazardous Air Pollutants for Secondary Nonferrous Metals Processing Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart UUUUUU)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart VVVVVV)	National Emission Standards for Hazardous Air Pollutants for Chemical Manufacturing Area Sources	No	Facility does not have an affected source.
40 CFR 63 (Subpart WWWWWW)	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations	No	Facility does not have an affected source.
40 CFR 63 (Subpart XXXXXX)	National Emission Standards for Hazardous Air Pollutants Area Source Standards for Nine Metal Fabrication and Finishing Source Categories	No	Facility does not have an affected source.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 63 (Subpart YYYYYY)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Ferroalloys Production Facilities	No	Facility does not have an affected source.
40 CFR 63 (Subpart ZZZZZZ)	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Aluminum, Copper, and Other Nonferrous Foundries	No	Facility does not have an affected source.
40 CFR 63 (Subpart AAAAAAA)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Asphalt Processing and Asphalt Roofing Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart BBBBBBB)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Chemical Preparations Industry	No	Facility does not have an affected source.
40 CFR 63 (Subpart CCCCCCC)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Paints and Allied Products Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart DDDDDDD)	National Emission Standards for Hazardous Air Pollutants for Area Sources: Prepared Feeds Manufacturing	No	Facility does not have an affected source.
40 CFR 63 (Subpart EEEEEEE)	National Emission Standards for Hazardous Air Pollutants: Gold Mine Ore Processing and Production Area Source Category	No	Facility does not have an affected source.
40 CFR 63 (Subparts FFFFFFF and GGGGGGG)	[Reserved]	N/A	[Reserved]
40 CFR 63 (Subpart HHHHHHH)	National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production	No	Facility does not have an affected source.
40 CFR 64	Compliance Assurance Monitoring (CAM)	No	Site is subject to provisions under NSPS KKKK.
40 CFR 65 (Subpart A)	Consolidated Federal Air Rule: General Provisions	No	Facility does not have an affected source.
40 CFR 65 (Subpart B)	[Reserved]	N/A	[Reserved]
40 CFR 65 (Subpart C)	Storage Vessels	No	Facility does not have an affected source.
40 CFR 65 (Subpart D)	Process Vents	No	Facility does not have an affected source.
40 CFR 65 (Subpart E)	Transfer Racks	No	Facility does not have an affected source.
40 CFR 65 (Subpart F)	Equipment Leaks	No	Facility does not have an affected source.
40 CFR 65 (Subpart G)	Closed Vent Systems, Control Devices, and Routing to a Fuel Gas System or a Process	No	Facility does not have an affected source.
40 CFR 68 (Subpart A)	Chemical Accident Prevention Provisions: General Provisions	No	Contains general requirements.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 68 (Subpart B)	Hazard Assessment	No	
40 CFR 68 (Subpart C)	Program 2 Prevention Program	No	
40 CFR 68 (Subpart D)	Program 3 Prevention Program	No	
40 CFR 68 (Subpart E)	Emergency Response	No	
40 CFR 68 (Subpart F)	Regulated Substances for Accidental Release Prevention	No	
40 CFR 68 (Subpart G)	Risk Management Plan	No	
40 CFR 70	State Operating Permit Programs	Yes	The facility will be a major source under 40 CFR 70.
40 CFR 71 (Subpart A)	Federal Operating Permit Program — Operating Permits	No	No applicable requirements.
40 CFR 71 (Subpart B)	Permits for Early Reductions Sources	No	No applicable requirements.
40 CFR 72 (Part 72)	Permits Regulation	No	No applicable requirements.
40 CFR 72 (Subpart A)	Acid Rain Program General Provisions	No	No applicable requirements.
40 CFR 72 (Subpart B)	Designated Representative	No	No applicable requirements.
40 CFR 72 (Subpart C)	Acid Rain Permit Applications	No	No applicable requirements.
40 CFR 72 (Subpart D)	Acid Rain Compliance Plan and Compliance Options	No	No applicable requirements.
40 CFR 72 (Subpart E)	Acid Rain Permit Contents	No	No applicable requirements.
40 CFR 72 (Subpart F)	Federal Acid Rain Permit Issuance Procedures	No	No applicable requirements.
40 CFR 72 (Subpart G)	Acid Rain Phase II Implementation	No	No applicable requirements.
40 CFR 72 (Subpart H)	Permit Revisions	No	No applicable requirements.
40 CFR 72 (Subpart I)	Compliance Certification	No	No applicable requirements.
40 CFR 73	Sulfur Dioxide Allowance System	No	No applicable requirements.
40 CFR 82 (Subpart A)	Protection of Stratospheric Ozone – Production and Consumption Controls	No	Facility will not have air conditioners and/or refrigeration units that use ozone depleting substances (ODS). Facility personnel do not maintain, service, repair, and/ or dispose of motor vehicle air conditioners.

Federal Applicable Requirements Overview

Regulation	Description	Applicable	Notes
40 CFR 82 (Subpart B)	Servicing of Motor Vehicle Air Conditioners	No	Facility personnel do not maintain, service, repair, and/ or dispose of motor vehicle air conditioners.
40 CFR 82 (Subpart C)	Ban on Nonessential Products Containing Class I Substances and Ban on Nonessential Products Containing or Manufactured with Class II Substances	Yes	Contains general requirements.
40 CFR 82 (Subpart D)	Federal Procurement	No	No applicable requirements.
40 CFR 82 (Subpart E)	The Labeling of Products Using Ozone Depleting Substances	Yes	Contains general requirements.
40 CFR 82 (Subpart F)	Recycling and Emissions Reduction	Yes	Contains general requirements.
40 CFR 82 (Subpart G)	Significant New Alternatives Policy Program	No	Facility is not producing alternative substances for ODS.
40 CFR 82 (Subpart H)	Halon Emissions Reduction	No	No applicable requirements.
40 CFR 82 (Subpart I)	Ban on Refrigeration and Air-Conditioning Appliances Containing HCFCs	Yes	Contains general requirements.
40 CFR 83	[Reserved]	N/A	[Reserved]
40 CFR 84	Phasedown of Hydrofluorocarbons	No	No applicable requirements.
40 CFR 85 through 89	Regulations governing mobile sources	No	No applicable requirements.
40 CFR 93	Determining conformity of federal actions to state or federal implementation plans	No	No applicable requirements.
40 CFR 95	Mandatory patent licenses	No	No applicable requirements.
40 CFR 96	NO_X Budget Trading Program and CAIR NO_X and SO_2 Trading Programs for State Implementation Plans	No	No applicable requirements.
40 CFR 97	Federal NO_X Budget Trading Program and CAIR NO_X and SO_2 Trading Programs	No	No applicable requirements.
40 CFR 98	Mandatory Greenhouse Gas Reporting Rule	Yes	Contains specific recordkeeping and reporting requirements.
40 CFR 99	[Reserved]	N/A	[Reserved]

APPENDIX B. AREA MAP

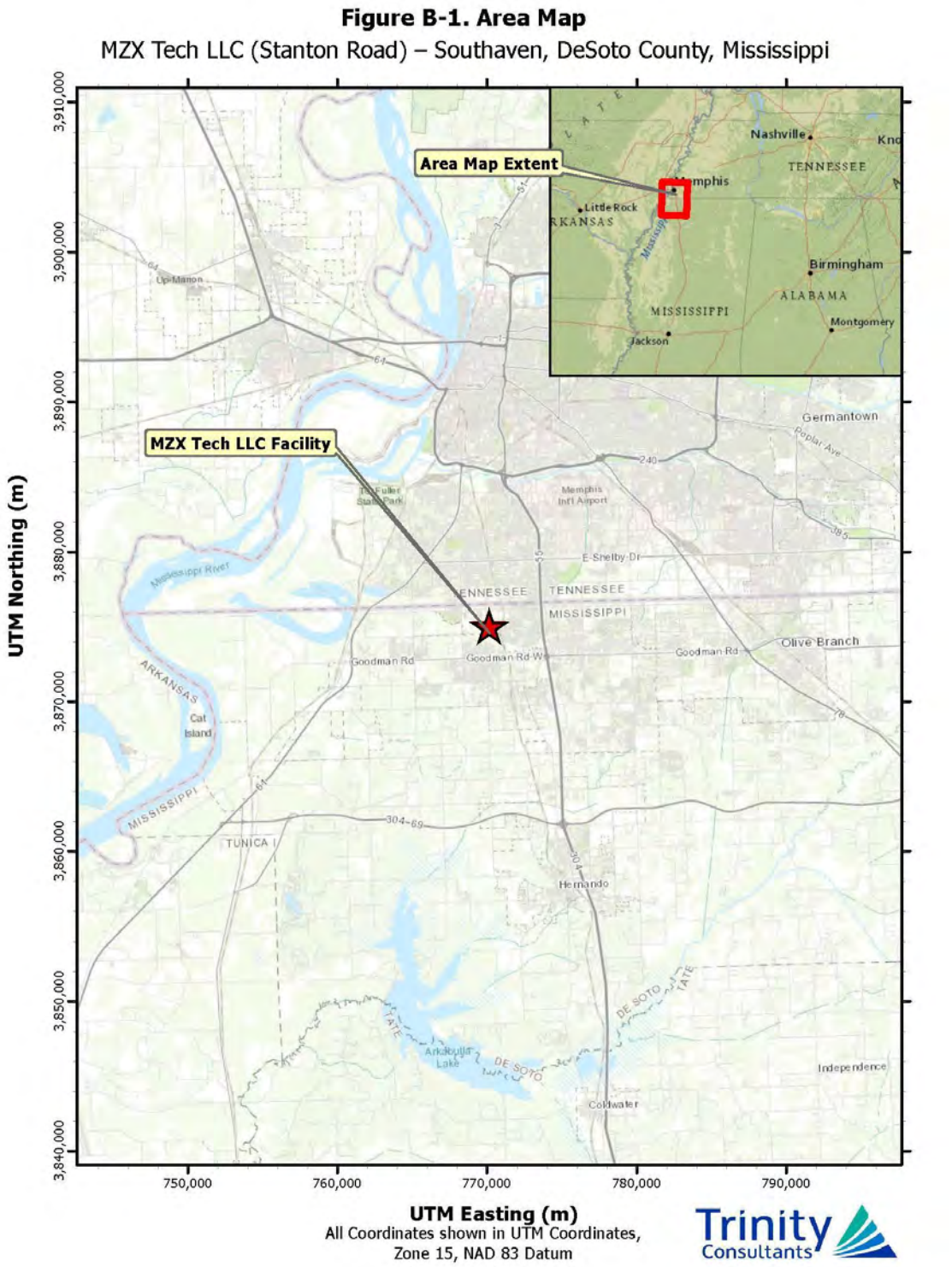
Figure B-1. Area Map
MZX Tech LLC (Stanton Road) – Southaven, DeSoto County, Mississippi
Area Map Extent
MZX Tech LLC Facility
Nashville
TENNESSEE
Memphis
Little Rock
ARKANSAS
MISSISSIPPI
ALABAMA
Birmingham
Montgomery
Jackson
Germantown
Olive Branch
Hernando
TUNICA
Independence
Coldwater
Goodman Rd
Goodman Rd W
E Shelby Dr
Poplar Ave
Mississippi River
Cat Island
Arkabutla Lake
DE SOTO
Memphis Intl Airport
UTM Northing (m)
3,910,000
3,900,000
3,890,000
3,880,000
3,870,000
3,860,000
3,850,000
3,840,000
750,000
760,000
770,000
780,000
790,000
UTM Easting (m)
All Coordinates shown in UTM Coordinates,
Zone 15, NAD 83 Datum
Trinity Consultants

APPENDIX C. SITE MAP

Figure C-2. Site Map

APPENDIX D. EMISSION CALCULATIONS

MZX Tech LLC - Southaven, MS

Emission Summary

Uncontrolled Emissions																			
Unit	Description	NO_x		CO		VOC		SO_2		H_2SO_4		PM_{10}		$PM_{2.5}$		Ammonia		Total HAPs	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
TUR-1	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-2	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-3	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-4	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-5	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-6	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-7	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-8	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-9	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-10	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-11	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-12	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-13	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-14	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-15	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-16	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-17	PGM130 Turbine	6.55	25.20	6.64	25.57	2.09	8.05	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.07	0.29
TUR-18	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-19	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-20	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-21	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-22	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-23	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-24	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-25	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-26	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-27	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-28	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-29	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-30	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-31	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-32	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-33	Titan 350 Turbine	22.89	85.34	23.23	86.59	7.31	27.26	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.15	0.59
TUR-34	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-35	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-36	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-37	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-38	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-39	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-40	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-41	ProEnergy 6000PE	46.71	193.32	67.10	277.75	14.32	59.29	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
PRS-1	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-2	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-3	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-4	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-5	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-6	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-7	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-8	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-9	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-10	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
SSM-1	PGM130 SSM	255.00	0.13	5,228	2.61	1,275	0.64	-	-	-	-	-	-	-	-	-	-	7.27	0.02
SSM-2	Titan 350 SSM	560.00	0.28	9,840	4.92	720.00	0.36	-	-	-	-	-	-	-	-	-	-	3.69	7.38E-03
SSM-3	ProEnergy 6000PE	1065.20	0.53	2245.60	1.12	180.40	0.09	-	-	-	-	-	-	-	-	-	-	0.58	1.16E-03
Total		2,736	3,363	18,343	4,087	2,443	1,051	35.74	156.53	0.04	0.18	4.79	19.56	4.78	19.53	117.51	485.53	16.81	21.54

Controlled Emissions																				
Unit	Description	NO_x		CO		VOC		SO_2		H_2SO_4		PM_{10}		$PM_{2.5}$		Ammonia		Total HAPs	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
TUR-1	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-2	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-3	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-4	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-5	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-6	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-7	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-8	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-9	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-10	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-11	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-12	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-13	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-14	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-15	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-16	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-17	PGM130 Turbine	1.45	5.60	0.89	3.41	1.39	5.37	0.50	2.20	3.00E-04	1.31E-03	0.07	0.27	0.07	0.27	1.28	5.18	0.06	0.24
TUR-18	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-19	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-20	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-21	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-22	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-23	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-24	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-25	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-26	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-27	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-28	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-29	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-30	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-31	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-32	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-33	Titan 350 Turbine	3.05	11.38	1.86	6.93	2.93	10.91	1.05	4.61	1.14E-03	5.01E-03	0.14	0.55	0.14	0.55	2.69	10.53	0.12	0.49
TUR-34	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-35	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-36	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-37	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-38	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-39	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-40	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
TUR-41	ProEnergy 6000PE	3.74	15.47	4.55	18.83	4.48	18.53	1.29	5.64	1.40E-03	6.14E-03	0.17	0.75	0.17	0.75	6.59	28.62	0.18	0.80
PRS-1	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-2	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-3	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-4	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-5	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-6	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-7	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-8	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-9	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
PRS-10	PLUM PRS	0.49	2.15	0.82	3.61	0.05	0.24	5.88E-03	0.03	5.88E-04	2.58E-03	5.10E-03	0.02	4.22E-03	0.02	-	-	0.02	0.08
SSM-1	PGM130 SSM	255.00	0.13	5,228	2.61	1,275	0.64	-	-	-	-	-	-	-	-	-	-	7.27	0.02
SSM-2	Titan 350 SSM	560.00	0.28	9,840	4.92	720.00	0.36	-	-	-	-	-	-	-	-	-	-	3.69	7.38E-03
SSM-3	ProEnergy 6000PE SSM	1065.20	0.53	2245.60	1.1228	180.40	0.09	-	-	-	-	-	-	-	-	-	-	0.58	1.16E-03
Total		#####	423.39	17,403	364.16	#####	417.40	35.74	156.53	0.04	0.18	4.79	19.56	4.78	19.53	117.51	485.53	16.18	19.07

MZX Tech LLC - Southaven, MS

Emission Summary - HAPs

HAP Emissions																	
Unit	Description	Total HAPs		Acetaldehyde		Acrolein		Benzene		Ethylbenzene		Formaldehyde		Xylenes		Toluene	
		lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy	lb/hr	tpy
TUR-1	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-2	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-3	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-4	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-5	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-6	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-7	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-8	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-9	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-10	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-11	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-12	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-13	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-14	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-15	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-16	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-17	PGM130 Turbine	0.06	0.24	0.02	0.10	9.46E-04	3.82E-03	5.28E-04	2.13E-03	8.65E-04	3.50E-03	0.03	0.12	1.87E-03	7.56E-03	2.44E-03	9.88E-03
TUR-18	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-19	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-20	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-21	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-22	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-23	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-24	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-25	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-26	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-27	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-28	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-29	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-30	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-31	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-32	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-33	Titan 350 Turbine	0.12	0.49	0.05	0.19	1.99E-03	7.77E-03	1.11E-03	4.33E-03	1.81E-03	7.10E-03	0.09	0.24	3.92E-03	0.02	5.13E-03	0.02
TUR-34	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-35	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-36	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-37	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-38	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-39	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-40	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
TUR-41	ProEnergy 6000PE	0.18	0.80	0.06	0.26	2.43E-03	0.01	1.36E-03	5.89E-03	2.22E-03	9.65E-03	0.11	0.46	4.80E-03	0.02	6.28E-03	0.03
PRS-1	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-2	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-3	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-4	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-5	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-6	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-7	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-8	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-9	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
PRS-10	PLUM PRS	0.02	0.08	-	-	-	-	2.06E-05	9.02E-05	-	-	7.35E-04	3.22E-03	-	-	3.33E-05	1.46E-04
SSM-1	PGM130 SSM	7.27	0.02	2.41	7.23E-03	0.10	2.88E-04	0.05	1.61E-04	0.09	2.64E-04	4.18	0.013	0.19	5.70E-04	0.25	7.45E-04
SSM-2	Titan 350 SSM	3.69	7.38E-03	1.22	2.45E-03	0.049	9.77E-05	0.03	5.45E-05	0.04	8.93E-05	2.12	4.25E-03	0.10	1.93E-04	0.13	2.52E-04
SSM-3	ProEnergy 6000PE SSM	0.58	1.16E-03	0.19	3.83E-04	7.65E-03	1.53E-05	4.27E-03	8.54E-06	6.99E-03	1.40E-05	0.33	6.65E-04	0.02	3.03E-05	0.02	3.95E-05
Total		16.18	19.07	5.51	6.87	0.22	0.27	0.12	0.15	0.20	0.25	9.36	9.49	0.43	0.54	0.57	0.71

Emission Summary - GHG

GHG Emissions						
Unit	Description	CO_2	CH_4	N_2O	GHG	CO_2e[1]
		tpy	tpy	tpy	tpy	tpy
TUR-1	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-2	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-3	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-4	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-5	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-6	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-7	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-8	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-9	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-10	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-11	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-12	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-13	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-14	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-15	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-16	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-17	PGM130 Turbine	87,560	1.65	0.17	87,562	87,650
TUR-18	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-19	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-20	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-21	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-22	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-23	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-24	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-25	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-26	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-27	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-28	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-29	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-30	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-31	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-32	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-33	Titan 350 Turbine	177,911	3.35	0.34	177,914	178,093
TUR-34	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-35	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-36	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-37	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-38	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-39	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-40	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
TUR-41	ProEnergy 6000PE	241,819	4.56	0.46	241,824	242,067
PRS-1	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-2	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-3	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-4	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-5	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-6	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-7	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-8	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-9	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
PRS-10	PLUM PRS	5,124	0.10	9.66E-03	5,124	5,129
SSM-1	PGM130 SSM	26,508	0.50	0.05	26,509	26,535
SSM-2	Titan 350 SSM	33,795	0.64	0.06	33,795	33,829
SSM-3	ProEnergy 6000PE SSM	22,967	0.43	0.04	22,968	22,991
Total		6,404,151	120.70	12.07	6,404,283	6,410,729

[1] CO_2e emission calculation (tpy): CO_2 (tpy) + (CH_4*28) (tpy) + (N_2O*265) (tpy)

MZX Tech LLC - Southaven, MS

PGM130 Turbines (16480 kW)

Emission Unit:	TUR-1 through TUR-17
Source Description:	Solar PGM130
Manufacturer:	Solar Turbines
Model:	Titan 130-23001S Radial
Type:	Natural Gas

Fuel Consumption @ Worst Case Hourly 20 °F

Net Output Power	16,480	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	2,926.00	scfm	Manufacturer Specs
Heat Input	185.15	MMBtu/hr	Updated emissions output x 1.1
Hourly Fuel Rate	175.56	Mscf/hr	
Hours of Operation	8,760	hr/yr	

Fuel Consumption @ Annual Average 60 °F

Net Output Power	14,974	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	2,700.83	scfm	Manufacturer Specs
Heat Input	170.90	MMBtu/hr	Updated emissions output x 1.1
Hourly Fuel Rate	162.05	Mscf/hr	
Hours of Operation	8,760	hr/yr	
Annual Fuel Rate	1,419.56	MMscf/yr	

Uncontrolled Emissions

	NO_x[2,3]	CO[2,3]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[3,8]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	9.00	15.00	3.00				0.091		ppm	Manufacturer expected emission performance
	0.034	0.034	0.011				2.22E-04		lb/MMBtu	Calculated value[3]
						3.60E-04			lb/MMBtu	Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
				0.01					gr S/scf	Provided by client per, MLP same header as MLGW
Emissions	6.55	6.64	2.09	0.50	3.00E-04	0.07	0.04	0.07	lb/hr	
	25.20	25.57	8.05	2.20	1.31E-03	0.27	0.17	0.29	tpy	

Controlled Emissions

	NO_x[3,8]	CO[3,8]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[3,8]	Ammonia[3,9]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03	17.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	2.00	2.00	2.00				0.0637	5.00		ppm	
	7.48E-03	4.55E-03	7.17E-03				1.56E-04	6.92E-03		lb/MMBtu	Calculated value[3]
	78%	87%	33%				30%	-		%	% Reduction
						3.60E-04				lb/MMBtu	Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
Emissions	1.45	0.89	1.39	0.50	3.00E-04	0.07	0.03	1.28	0.06	lb/hr	
	5.60	3.41	5.37	2.20	1.31E-03	0.27	0.12	5.18	0.24	tpy	

Speciated HAP Emission Calculations

	Acetaldehyde[10]	Acrolein[10]	Benzene[10]	Ethylbenzene[10]	Xylenes[10]	Toluene[10]	Units	Notes
Emission Factors	1.28E-04	5.11E-06	2.85E-06	4.67E-06	1.01E-05	1.32E-05	lb/MMBtu	AlphaGamma EFs
Emissions	2.37E-02	9.46E-04	5.28E-04	8.65E-04	1.87E-03	2.44E-03	lb/hr	AlphaGamma EFs
	0.10	3.82E-03	2.13E-03	3.50E-03	7.56E-03	9.88E-03	tpy	AlphaGamma EFs

NOTES

[1] This value is based on the average HHV Btu/scf from the gas analysis received from Memphis Light, Gas and Water for 9/1/24 through 9/30/24. Mississippi Light & Power (MLP) natural gas from same header.

[2] Inlet NO_x and CO emission factors are taken from the manufacturer expected performance report (September 26, 2024). Updated outlet emission factors are taken from EnLink guarantee design. A safety factor of 5% is applied for emissions.
VOC: Non-ethane and methane are less than 50% saturated.

[3] Emission factors (lb/MMBtu) = ppmv / 10^6 / molar volume * MW (NO_x /CO/VOC/HCHO/NH_3) * F_d Factor * 20.9 / (20.9 - $\%O_2$)
Molar Volume (dscf/lb-mol) = 379.5
MW (lb/lb-mol) = 46.01 NO_x & 28.01 CO & 44.10 VOC & 30.031 HCHO & 17.03 NH_3
F_d (dscf/MMBtu) = 8710 (40 CFR 60 Appendix A Method 19 Table 19-2)
%O2 (Dry) = 15 %

[4] The manufacturer specification sheet contains an emission factor for UHCs (unburned hydrocarbons) which includes Methane and Ethane. It is conservatively assumed that all UHCs are propane, with the molecular weight being set to 44.10 lb/lb-mol.

[5] SO_2 emissions are based on fuel consumption and fuel sulfur content of 1 grain of sulfur per 100 scf.
H_2SO_4 emissions are based on Equation 6-1 in Section 6 of the 2012 EPRI document "Estimating Total Sulfuric Acid Emissions from Stationary Power Plants" conservatively using exhaust temp of 900 °F.
1 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO_2/ 32 lb-mol S = lb/hr SO_2
lb/hr SO_2 * 98 lb-mol H_2SO_4 / 64 lb-mol SO_2 * 0.00039 = lb/hr H_2SO_4

[6] PM emissions are based on Solar PIL 171.

[7] Assumes PM (Filterable + Condensable) = PM_{10} = $PM_{2.5}$

[8] Formaldehyde is calculated using the emission factor of 91 ppb @15% O2 provided by Solar Turbines Incorporated within PIL 168 Revision 9.1.

[9] NO_x, CO, and Ammonia (NH_3) emission factors taken from the SCR manufacturer guarantee. Ammonia emissions are a result of ammonia slip with the SCR.

[10] HAP emissions factors are referenced from Alpha-Gamma Study for EPA, Table 19.

MZX Tech LLC - Southaven, MS

Titan 350 Turbines (35000 kW)

Emission Unit:	TUR-18 through TUR-33
Source Description:	Solar Titan 350
Manufacturer:	Solar Turbines
Model:	Titan 350-52500S
Type:	Natural Gas

Fuel Consumption @ Worst Case Hourly 20 °F

Net Output Power	41,992	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	6,139.96	scfm	Manufacturer Specs
Heat Input	388.52	MMBtu/hr	Updated emissions output x 1.1
Hourly Fuel Rate	368.40	Mscf/hr	
Hours of Operation	8,760	hr/yr	

Fuel Consumption @ Annual Average 60 ºF

Net Output Power	36,632	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	5,487.61	scfm	Manufacturer Specs
Heat Input	347.24	MMBtu/hr	Updated emissions output x 1.1
Hourly Fuel Rate	329.26	Mscf/hr	
Hours of Operation	8,760	hr/yr	
Annual Fuel Rate	2,884.29	MMscf/yr	

Uncontrolled Emissions

	NO_x[2,3]	CO[2,3]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[8]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	15.00	25.00	5.00				0.091		ppm	Manufacturer expected emission performance
	0.056	0.057	0.018				2.22E-04		lb/MMBtu	Calculated value[3]
										Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
						3.60E-04			lb/MMBtu	
				0.01					gr S/scf	Provided by client per, MLP same header as MLGW
Emissions	22.89	23.23	7.31	1.05	1.14E-03	0.14	0.09	0.15	lb/hr	
	85.34	86.59	27.26	4.61	5.01E-03	0.55	0.34	0.59	tpy	

Controlled Emissions

	NO_x[3,9]	CO[3,9]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[8]	Ammonia[3,9]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03	17.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	2.00	2.00	2.00				0.0637	5.00		ppm	
	7.48E-03	4.55E-03	7.17E-03				1.56E-04	6.92E-03		lb/MMBtu	Calculated value[3]
	87%	92%	60%				30%	-		%	% Reduction
											Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
						3.60E-04				lb/MMBtu	
Emissions	3.05	1.86	2.93	1.05	1.14E-03	0.14	0.06	2.69	0.12	lb/hr	
	11.38	6.93	10.91	4.61	5.01E-03	0.55	0.24	10.53	0.49	tpy	

Speciated HAP Emission Calculations

	Acetaldehyde[10]	Acrolein[10]	Benzene[10]	Ethylbenzene[10]	Xylenes[10]	Toluene[10]	Units	Notes
Emission Factors	1.28E-04	5.11E-06	2.85E-06	4.67E-06	1.01E-05	1.32E-05	lb/MMBtu	AlphaGamma EFs
Emissions	4.97E-02	1.99E-03	1.11E-03	1.81E-03	3.92E-03	5.13E-03	lb/hr	AlphaGamma EFs
	0.19	7.77E-03	4.33E-03	7.10E-03	0.02	0.02	tpy	AlphaGamma EFs

NOTES

[1] This value is based on the average HHV Btu/scf from the gas analysis received from Memphis Light, Gas and Water for 9/1/24 through 9/30/24. Mississippi Light & Power (MPL) natural gas from same header.

[2] Inlet NO_x and CO emission factors are taken from the manufacturer expected performance report (September 26, 2024). Updated outlet emission factors are taken from EnLink guarantee design. A safety factor of 5% is applied for emissions.
VOC: Non-ethane and methane are less than 50% saturated.

[3] Emission factors (lb/MMBtu) = ppmv / 10^6 / molar volume * MW (NO_x /CO/VOC/HCHO/NH_3) * F_d Factor * 20.9 / (20.9 - $\%O_2$)
Molar Volume (dscf/lb-mol) = 379.5
MW (lb/lb-mol) = 46.01 NO_x & 28.01 CO & 44.10 VOC & 30.031 HCHO & 17.03 NH_3
F_d (dscf/MMBtu) = 8710 (40 CFR 60 Appendix A Method 19 Table 19-2)
%O2 (Dry) = 15 %

[4] The manufacturer specification sheet contains an emission factor for UHCs (unburned hydrocarbons) which includes Methane and Ethane. It is conservatively assumed that all UHCs are propane, with the molecular weight being set to 44.10 lb/lb-mol.

[5] SO_2 emissions are based on fuel consumption and fuel sulfur content of 1 grain of sulfur per 100 scf.
H_2SO_4 emissions are based on Equation 6-1 in Section 6 of the 2012 EPRI document "Estimating Total Sulfuric Acid Emissions from Stationary Power Plants" conservatively using exhaust temp of 850 °F.
1 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO_2/ 32 lb-mol S = lb/hr SO_2
lb/hr SO_2 * 98 lb-mol H_2SO_4 / 64 lb-mol SO_2 * 0.00071 = lb/hr H_2SO_4

[6] PM emissions are based on Solar PIL 171.

[7] Assumes PM (Filterable + Condensable) = PM_{10} = $PM_{2.5}$

[8] Formaldehyde is calculated using the emission factor of 91 ppb @15% O2 provided by Solar Turbines Incorporated within PIL 168 Revision 9.1.

[9] NO_x, CO, and Ammonia (NH_3) emission factors taken from the SCR manufacturer guarantee. Ammonia emissions are a result of ammonia slip with the SCR.

[10] HAP emissions factors are referenced from Alpha-Gamma Study for EPA, Table 19.

MZX Tech LLC - Southaven, MS

Proenergy 6000 PE Turbines (50000 kW)

Emission Unit: TUR-34 through TUR-41
Source Description: ProEnergy 6000PE
Manufacturer: ProEnergy
Model: 6000PE
Type: Natural Gas

Fuel Consumption @ Worst Case Hourly 36 °F

Net Output Power	50,363	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	7,517.23	scfm	Manufacturer Specs
Heat Input	475.66	MMBtu/hr	
Hourly Fuel Rate	451.03	Mscf/hr	
Hours of Operation	8,760	hr/yr	

Fuel Consumption @ Annual Average 60 °F

Net Output Power	48,958	kW	Manufacturer Rating
Fuel Heat Value	1,054.60	Btu/scf	Fuel Gas Analysis HHV
Fuel Rate	7,458.91	scfm	Manufacturer Specs
Heat Input	471.97	MMBtu/hr	
Hourly Fuel Rate	447.53	Mscf/hr	
Hours of Operation	8,760	hr/yr	
Annual Fuel Rate	3,920.40	MMscf/yr	

Uncontrolled Emissions

	NO_x[2,3]	CO[2,3]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[8]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	25.00	59.00	8.00				0.091		ppm	Manufacturer expected emission performance
	0.094	0.134	0.029				2.22E-04		lb/MMBtu	Calculated value[3]
						3.60E-04			lb/MMBtu	Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
				0.01					gr S/scf	Provided by client per, MLP same header as MLGW
Emissions	46.71	67.10	14.32	1.29	1.40E-03	0.17	0.11	0.18	lb/hr	
	193.32	277.75	59.29	5.64	6.14E-03	0.75	0.46	0.80	tpy	

Controlled Emissions

	NO_x[3,9]	CO[3,9]	VOC[2,3,4]	SO_2[5]	H_2SO_4[5]	PM[6,7]	Formaldehyde[8]	Ammonia[3,9]	Total HAPs	Units	Notes
Molecular Weight	46.01	28.01	44.10				30.03	17.03		lb/lbmol	VOC was conservatively set to the molecular weight of propane.
Emission Factors	2.00	4.00	2.50				0.091	10.00		ppm	ProEnergy guarantee NOx, CO, NH3, PM, VOC
	7.48E-03	9.11E-03	8.96E-03				2.22E-04	1.38E-02		lb/MMBtu	Calculated value[3]
	92%	93%	69%				0%	-		%	% Reduction
						3.60E-04				lb/MMBtu	Brewer et al. (2016), "PM2.5 and ultrafine particulate matter emissions from natural gas-fired turbine for power generation." Atm. Env. 131:141-149. DOI: http://dx.doi.org/10.1016/j.atmosenv.2015.11.048
Emissions	3.74	4.55	4.48	1.29	1.40E-03	0.17	0.11	6.59	0.18	lb/hr	
	15.47	18.83	18.53	5.64	6.14E-03	0.75	0.46	28.62	0.80	tpy	

Speciated HAP Emission Calculations

	Acetaldehyde[10]	Acrolein[10]	Benzene[10]	Ethylbenzene[10]	Xylenes[10]	Toluene[10]	Units	Notes
Emission Factors	1.28E-04	5.11E-06	2.85E-06	4.67E-06	1.01E-05	1.32E-05	lb/MMBtu	AlphaGamma EFs
Emissions	6.09E-02	2.43E-03	1.36E-03	2.22E-03	4.80E-03	6.28E-03	lb/hr	AlphaGamma EFs
	0.26	0.01	5.89E-03	9.65E-03	0.02	0.03	tpy	AlphaGamma EFs

NOTES

[1] This value is based on the average HHV Btu/scf from the gas analysis received from Memphis Light, Gas and Water for 9/1/24 through 9/30/24. Mississippi Light & Power (MPL) natural gas from same header.

[2] Inlet NO_x and CO emission factors are taken from the manufacturer expected performance report (September 26, 2024). Updated outlet emission factors are taken from EnLink guarantee design. A safety factor of 5% is applied for emissions.
VOC: Non-ethane and methane are less than 50% saturated.

[3] Emission factors (lb/MMBtu) = ppmv / 10^6 / molar volume * MW (NO_x /CO/VOC/HCHO/NH_3) * F_d Factor * 20.9 / (20.9 - %O_2)
Molar Volume (dscf/lb-mol) = 379.5
MW (lb/lb-mol) = 46.01 NO_x & 28.01 CO & 44.10 VOC & 30.031 HCHO & 17.03 NH_3
F_d (dscf/MMBtu) = 8710 (40 CFR 60 Appendix A Method 19 Table 19-2)
%O2 (Dry) = 15 %

[4] The manufacturer specification sheet contains an emission factor for UHCs (unburned hydrocarbons) which includes Methane and Ethane. It is conservatively assumed that all UHCs are propane, with the molecular weight being set to 44.10 lb/lb-mol.

[5] SO_2 emissions are based on fuel consumption and fuel sulfur content of 1 grain of sulfur per 100 scf.
H_2SO_4 emissions are based on Equation 6-1 in Section 6 of the 2012 EPRI document "Estimating Total Sulfuric Acid Emissions from Stationary Power Plants" conservatively using exhaust temp of 850 °F.
1 gr S/100 scf * fuel scf/hr * 1 lb/7000 gr * 64 lb-mol SO_2/ 32 lb-mol S = lb/hr SO_2
lb/hr SO_2 * 98 lb-mol H_2SO_4 / 64 lb-mol SO_2 * 0.00071 = lb/hr H_2SO_4

[6] PM emissions are based on Solar PIL 171.

[7] Assumes PM (Filterable + Condensable) = PM_{10} = $PM_{2.5}$

[8] Formaldehyde is calculated using the emission factor of 91 ppb @15% O2 provided by Solar Turbines Incorporated within PIL 168 Revision 9.1.

[9] NO_x, CO, and Ammonia (NH_3) emission factors taken from the SCR manufacturer guarantee. Ammonia emissions are a result of ammonia slip with the SCR.

[10] HAP emissions factors are referenced from Alpha-Gamma Study for EPA, Table 19.

[11] AP-42 Table 3.1-3 & adjusted for 1054.60 Btu/scf

PLUM TBD Pressure Reduction System (PRS)

PLUM Pressure Reduction Systems (PRS) is designed to regulate CNG/RNG gas pressure down to levels required for industrial and power generation equipment. Heat is supplied by natural gas fired burners in order to heat the gas to eliminate freeze-up risks and deliver gas at temperatures that meet customers' requirements.

Burner Data

			Notes
Rated Heat Input	10.0	MMBtu/hr	Plum vendor data
Natural Gas Usage	9.80E-03	MMscf/hr	
Hours of Operation	8,760	hr/yr	

Natural Gas Combustion Emissions

Pollutant	Emission Factor [1,2,3] (lb/MMscf)	Emission Rates (lb/hr)	Emission Rates (tpy)
SO_2	0.6	5.88E-03	2.58E-02
H_2SO_4	0.06	5.88E-04	2.58E-03
NO_x	50	0.49	2.15
CO	84	0.82	3.61
VOC	5.5	0.05	0.24
PM	0.52	0.005	0.022
PM_{10}	0.52	0.005	0.022
$PM_{2.5}$	0.43	0.004	0.018

NOTES

[1] From AP-42 Section 1.4, Tables 1.4-1 and 1.4-2, Uncontrolled Small Boilers (<100) (July 1998).

[2] Low-NOx burners confirmed by vendor May 21, 2025

[3] H_2SO_4 emissions conservatively assumed to be equal to 10% of SO_2 emissions.

[4] PM_{10} & $PM_{2.5}$ emission factors per Roy Huntley EPA Region 5, January 2010

Sample Calculations

Short-Term PM Emission Rate:

$$\frac{0.52\ \text{lb}}{\text{MMscf}} \times \frac{9.80\text{E-}03\ \text{MMscf}}{\text{hr}} = \frac{0.01\ \text{lb}}{\text{hr}}$$

Long-Term PM Emission Rate:

$$\frac{0.01\ \text{lb}}{\text{hr}} \times \frac{8{,}760\ \text{hr}}{1\ \text{yr}} \times \frac{1\ \text{ton}}{2{,}000\ \text{lb}} = \frac{0.02\ \text{ton}}{\text{yr}}$$

HAP Emissions

Pollutant	Emission Factor [1] (lb/MMscf)	Emission Rates (lb/hr)	Emission Rates (tpy)
Acenaphthene	1.80E-06	1.76E-08	7.73E-08
Acenaphthylene	1.80E-06	1.76E-08	7.73E-08
Anthracene	2.40E-06	2.35E-08	1.03E-07
Benz(a)anthracene	1.80E-06	1.76E-08	7.73E-08
Benzene	2.10E-03	2.06E-05	9.02E-05
Benzo(a)pyrene	1.20E-06	1.18E-08	5.15E-08
Benzo(b)fluoranthene	1.80E-06	1.76E-08	7.73E-08
Benzo(g,h,i)perylene	1.20E-06	1.18E-08	5.15E-08
Benzo(k)fluoranthene	1.80E-06	1.76E-08	7.73E-08
Chrysene	1.80E-06	1.76E-08	7.73E-08
Dibenzo(a,h)anthracene	1.20E-06	1.18E-08	5.15E-08
1,4-Dichlorobenzene	1.20E-03	1.18E-05	5.15E-05
7,12-Dimethylbenz(a)anthracene	1.60E-05	1.57E-07	6.87E-07
Fluoranthene	3.00E-06	2.94E-08	1.29E-07
Fluorene	2.80E-06	2.75E-08	1.20E-07
Formaldehyde	7.50E-02	7.35E-04	3.22E-03
Hexane	1.80E+00	1.76E-02	7.73E-02
Indeno(1,2,3-c,d)pyrene	1.80E-06	1.76E-08	7.73E-08
Lead	5.00E-04	4.90E-06	2.15E-05
3-Methylchloranthrene	1.80E-06	1.76E-08	7.73E-08
2-Methylnaphthalene	2.40E-05	2.35E-07	1.03E-06
Naphthalene	6.10E-04	5.98E-06	2.62E-05
Phenanthrene	1.70E-05	1.67E-07	7.30E-07
Polycyclic Organic Matter (POM)	8.82E-05	8.65E-07	3.79E-06
Pyrene	5.00E-06	4.90E-08	2.15E-07
Toluene	3.40E-03	3.33E-05	1.46E-04
Arsenic Compounds (inorganic including arsine	2.00E-04	1.96E-06	8.59E-06
Beryllium Compounds	1.20E-05	1.18E-07	5.15E-07
Cadmium Compounds	1.10E-03	1.08E-05	4.72E-05
Chromium Compounds (Trivalent, Total)	1.40E-03	1.37E-05	6.01E-05
Cobalt Compounds	8.40E-05	8.24E-07	3.61E-06
Manganese Compounds	3.80E-04	3.73E-06	1.63E-05
Mercury Compounds	2.60E-04	2.55E-06	1.12E-05
Nickel Compounds	2.10E-03	2.06E-05	9.02E-05
Selenium Compounds	2.40E-05	2.35E-07	1.03E-06
Total HAP	1.89	1.85E-02	0.08

NOTES

[1] From AP-42 Tables 1.4-2 and 1.4-3 (July 1998).

MZX Tech LLC - Southaven, MS

Start-Up and Shutdown Emissions PGM130

Unit	SSM-1		
Description:	PGM130 Start-up and Shutdown		
Number of Turbines on Site	17		
Number of Startups and Shutdowns/turbine	6		
Total SSM-1 Annual Hours	102	hr/yr	Combined 102 hours of SSM for all PGM130 turbines
Safety Factor	25%		

SSM Emission Calculations

Pollutant	Startup per Turbine (lb/event)[1]	Shutdown per Turbine (lb/event)[1]	Total Emissions per Turbine (lb/event)[2,3]	Total SSM Emissions per turbine (tons/turbine-year)[2,3]	Total PGM-130 SSM Emissions (lb/yr)[4]	Total PGM-130 SSM Emissions (tpy)[4]
NO_x	1.0	1.0	2.50	7.50E-03	255	0.13
CO	20.0	21.0	51	0.15	5,228	2.61
VOC[2]	5.0	5.0	12.5	0.04	1,275	0.64
CO_2	943	885	2,285	6.86	233,070	117

NOTES

[1] Emission data based on Solar Product Information Letter 170, Revision 12, Table 3 dated August 18, 2022.

[2] Per Turbine Calculations are below:

Per Turbine SSM Emissions (lb/hr) = (Startup (lb/hr) + Shutdown (lb/hr))* (1 + Safety Factor (%))

Per Turbine SSM Emissions (tpy) = Total SSM Emission (lb/hr) * Total SSM-1 Annual Hours (hr/yr) / Number of Turbines / (2000 lb/ton)

[3] A safety factor of 25% is used as data received is not guaranteed.

[4] Total PGM-130 Calculations are below:

Total SSM-1 Emissions (lb/hr) = Per Turbine SSM Emissions (lb/hr) * Number of Turbines

Total SSM-1 Emissions (tpy) = Per Turbine SSM Emissions (tpy) * Number of Turbines

Pollutants	Uncontrolled Emissions	SSM Emissions[1]	
	(lb/hr)	(lb/hr)[2]	(tpy)[3]
VOC	2.09	12.50	0.04
Acetaldehyde	2.37E-02	2.41	7.23E-03
Acrolein	9.46E-04	0.10	2.88E-04
Benzene	5.28E-04	0.05	1.61E-04
Ethylbenzene	8.65E-04	0.09	2.64E-04
Formaldehyde	4.11E-02	4.18	1.25E-02
Xylenes	1.87E-03	0.19	5.70E-04
Toluene	2.44E-03	0.25	7.45E-04
HAP Total	0.07	7.27	0.02

NOTES

[1] Uncontrolled HAP (lb/hr) for all PGM-130.

[2] Total SSM-1 HAP (lb/hr) = Uncontrolled HAP (lb/hr) * (Total SSM-1 VOC (lb/hr) / uncontrolled VOC (lb/hr)) * number of turbines

[3] Total SSM-1 HAP (tpy) = Uncontrolled HAP (lb/hr) * (Total SSM-1 VOC (lb/hr) / uncontrolled VOC (lb/hr)) *Total SSM-1 Annual Hours (hr/yr) / (2000 lb/ton)

MZX Tech LLC - Southaven, MS

Start-Up and Shutdown Emissions Titan 350

Unit	SSM-2		
Description:	Titan 350 Start-up and Shutdown		
Number of Turbines on Site	16		
Number of Startups and Shutdowns/turbine	4		
Total SSM-1 Annual Hours	64	hr/yr	Combined 104 hours of SSM for all Titan 350 turbines
Safety Factor	25%		

SSM Emission Calculations

Pollutant	Startup (lb/event)[1]	Shutdown (lb/event)[1]	Total SSM Emissions per turbine (lb/event)[2,3]	Total SSM Emissions per turbine (tons/turbine)[2,3]	Total Titan 350 SSM Emissions (lb/yr)[4]	Total Titan 350 SSM Emissions (tpy)[4]
NO_x	4.0	3.0	8.75	0.02	560	0.28
CO	68.0	55.0	153.75	0.31	9,840	4.92
VOC[2]	5.0	4.0	11.25	0.02	720	0.36
CO_2	2,629	2,028	5,821	11.64	372,560	186

NOTES

[1] Emission data based on Solar email dated February 14, 2025.

[2] Per Turbine Calculations are below:

Per Turbine SSM Emissions (lb/hr) = (Startup (lb/hr) + Shutdown (lb/hr))* (1 + Safety Factor (%))

Per Turbine SSM Emissions (tpy) = Total SSM Emission (lb/hr) * Total SSM-1 Annual Hours (hr/yr) / Number of Turbines / (2000 lb/ton)

[3] A safety factor of 25% is used as data received is not guaranteed.

[4] Total Titan 350 Calculations are below:

Total SSM-2 Emissions (lb/hr) = Per Turbine SSM Emissions (lb/hr) * Number of Turbines

Total SSM-2 Emissions (tpy) = Per Turbine SSM Emissions (tpy) * Number of Turbines

Pollutants	Uncontrolled Emissions	SSM Emissions	
	(lb/hr)	(lb/hr)[2]	(tpy)[3]
VOC	7.31	11.25	0.02
Acetaldehyde	4.97E-02	1.22	2.45E-03
Acrolein	1.99E-03	0.049	9.77E-05
Benzene	1.11E-03	0.03	5.45E-05
Ethylbenzene	1.81E-03	0.04	8.93E-05
Formaldehyde	8.63E-02	2.12	4.25E-03
Xylenes	3.92E-03	0.10	1.93E-04
Toluene	5.13E-03	0.13	2.52E-04
HAP Total	0.15	3.69	7.38E-03

NOTES

[1] Uncontrolled HAP (lb/hr) for all Titan 350.

[2] Total SSM-2 HAP (lb/hr) = Uncontrolled HAP (lb/hr) * (Total SSM-2 VOC (lb/hr) / uncontrolled VOC (lb/hr)) * number of turbines

[3] Total SSM-2 HAP (tpy) = Uncontrolled HAP (lb/hr) * (Total SSM-2 VOC (lb/hr) / uncontrolled VOC (lb/hr)) * Total SSM-2 Annual Hours (hr/yr) / (2000 lb/ton)

MZX Tech LLC - Southaven, MS

Start-Up and Shutdown Emissions ProEnergy 6000PE

Unit	SSM-3		
Description:	6000PE Start-up and Shutdown		
Number of Turbines on Site	8		
Number of Startups and Shutdowns/turbine	4		
Total SSM-1 Annual Hours	32	hr/yr	Combined 32 hours of SSM for all 6000PE turbines
Safety Factor	25%		

SSM Emission Calculations

Pollutant	Startup per Turbine (lb/event)[1]	Shutdown per Turbine (lb/event)[1]	Total Emissions per Turbine (lb/event)[2,3]	Total SSM Emissions per turbine (tons/turbine-year)[2,3]	Total 6000PE SSM Emissions (lb/yr)[4]	Total 6000PE SSM Emissions (tpy)[4]
NO_x	18.6	8.0	33.29	0.07	1,065	0.53
CO	39.2	16.9	70.18	0.14	2,246	1.12
VOC[2]	3.0	1.5	5.64	0.01	180	0.09
CO_2	23,938	8,437	40,469	80.94	1,295,000	648

NOTES

[1] Emission data based on ProEnergy email dated May 7, 2025.

[2] Per Turbine Calculations are below:

Per Turbine SSM Emissions (lb/hr) = (Startup (lb/hr) + Shutdown (lb/hr))* (1 + Safety Factor (%))

Per Turbine SSM Emissions (tpy) = Total SSM Emission (lb/hr) * Total SSM-1 Annual Hours (hr/yr) / Number of Turbines / (2000 lb/ton)

[3] A safety factor of 25% is used as data received is not guaranteed.

[4] Total 6000PE Calculations are below:

Total SSM-3 Emissions (lb/hr) = Per Turbine SSM Emissions (lb/hr) * Number of Turbines

Total SSM-3 Emissions (tpy) = Per Turbine SSM Emissions (tpy) * Number of Turbines

Pollutants	Uncontrolled Emissions	SSM Emissions	
	lb/hr	lb/hr[2]	tpy[3]
VOC	14.32	5.64	0.01
Acetaldehyde	6.09E-02	0.19	3.83E-04
Acrolein	2.43E-03	7.65E-03	1.53E-05
Benzene	1.36E-03	4.27E-03	8.54E-06
Ethylbenzene	2.22E-03	6.99E-03	1.40E-05
Formaldehyde	1.06E-01	0.33	6.65E-04
Xylenes	4.80E-03	0.02	3.03E-05
Toluene	6.28E-03	0.02	3.95E-05
HAP Total	0.18	0.58	1.16E-03

NOTES

[1] Uncontrolled HAP (lb/hr) for all 6000 PE.

[2] Total SSM-3 HAP (lb/hr) = Uncontrolled HAP (lb/hr) * (Total SSM-3 VOC (lb/hr) / uncontrolled VOC (lb/hr)) * number of turbines

[3] Total SSM-3 HAP (tpy) = Uncontrolled HAP (lb/hr) * (Total SSM-3 VOC (lb/hr) / uncontrolled VOC (lb/hr)) * Total SSM-3 Annual Hours (hr/yr) / (2000 lb/ton)

Greenhouse Gas Emissions - PGM130

Sources	Facility Total Emissions				
	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	GHG (tpy)	CO_2e[1] (tpy)
Turbine Exhaust Emissions	1,488,526	28.05	2.81	1,488,557	1,490,055
SSM Emissions	26,508	0.500	0.05	26,509	26,535
Total:	1,515,034	28.55	2.86	1,515,066	1,516,590

[1] Global Warming Potential (GWP) factors included in CO_2e calculation are taken from 40 CFR 98, Subpart A, Table A-1.

Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors[2]			Emission Rates[3]		
		CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
TUR-1	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-2	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-3	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-4	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-5	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-6	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-7	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-8	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-9	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-10	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-11	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-12	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-13	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-14	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-15	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-16	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
TUR-17	PGM130 Turbine	53.06	1.00E-03	1.00E-04	87,560	1.65	0.17
				Total:	1,488,526	28.05	2.81

[2] The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2.

[3] Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types[4]	Operating Hours[4] (hr/yr)	Design Heat Rates (MMBtu/hr)	Fuel Usage[5] (MMBtu/yr)
TUR-1	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-2	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-3	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-4	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-5	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-6	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-7	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-8	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-9	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-10	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-11	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-12	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-13	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-14	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-15	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-16	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049
TUR-17	PGM130 Turbine	Natural Gas	8,760	170.90	1,497,049

[4] The fuel type and operating time are provided by Mobile Energy Rentals.

[5] Annual Heat Rate (MMBtu/yr) = Design Heat Rates (MMBtu/hr) x hr/yr

SSM Emissions

PGM130 Fuel Consumption:	0.16	MMscf/hr
PGM130 Annual SUSD Operating Times:	102	hr/yr
Safety Factor:	25.00	%
Fuel Heat Value:	1054.60	Btu/scf
	1.05E-03	MMBtu/scf

Unit Numbers	Description	Emission Factors			Emission Rates[9]		
		CO_2[6] (lb/MMscf)	CH_4[7] (lb/MMscf)	N_2O[8] (lb/MMscf)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
SSM-1	PGM130 Start-up and Shutdown	123,364	2.32	0.23	26,508	0.500	0.05

[6] CO_2 emission factor based on 40 CFR 98, Subpart C, Table C-1 (1,067.5 Btu/scf; 53.02 kg/MMBtu = 124,796.76 lb/MMscf)

[7] N_2O emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.0001 kg/MMBtu = 0.2353 lb/MMscf)

[8] CH_4 emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.001 kg/MMBtu = 2.3537 lb/MMscf)

[9] Emission rates calculation: Emission factor (lb/MMscf) * PGM130 Fuel Consumption (MMscf/hr) * Operating Time (102 hr/yr) / 2000 (lb/ton)

Greenhouse Gas Emissions - Titan 350

Sources	Facility Total Emissions				
	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	GHG (tpy)	CO_2e[1] (tpy)
Turbine Exhaust Emissions	2,846,568	53.65	5.36	2,846,627	2,849,492
SSM Emissions	33,795	0.64	0.06	33,795	33,829
Total:	2,880,363	54.29	5.43	2,880,422	2,883,321

[1] Global Warming Potential (GWP) factors included in CO2e calculation are taken from 40 CFR 98, Subpart A, Table A-1.

Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors[2]			Emission Rates[3]		
		CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
TUR-18	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-19	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-20	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-21	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-22	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-23	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-24	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-25	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-26	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-27	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-28	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-29	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-30	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-31	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-32	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
TUR-33	Titan 350 Turbine	53.06	1.00E-03	1.00E-04	177,911	3.35	0.34
				Total:	2,846,568	53.65	5.36

[2] The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2.

[3] Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types[4]	Operating Hours[4] (hr/yr)	Design Heat Rates (MMBtu/hr)	Fuel Usage[5] (MMBtu/yr)
TUR-18	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-19	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-20	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-21	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-22	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-23	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-24	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-25	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-26	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-27	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-28	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-29	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-30	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-31	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-32	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796
TUR-33	Titan 350 Turbine	Natural Gas	8,760	347.24	3,041,796

[4] The fuel type and operating time are provided by Mobile Energy Rentals.

[5] Annual Heat Rate (MMBtu/yr) = Design Heat Rates (MMBtu/hr) x hr/yr

SSM Emissions

Titan 350 Fuel Consumption:	0.33	MMscf/hr
Titan 350 Annual SUSD Operating Times:	64	hr/yr
Safety Factor:	25.00	%
Fuel Heat Value:	1054.60	Btu/scf
	1.05E-03	MMBtu/scf

Unit Numbers	Description	Emission Factors			Emission Rates[9]		
		CO_2[6] (lb/MMscf)	CH_4[7] (lb/MMscf)	N_2O[8] (lb/MMscf)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
SSM-2	Titan 350 Start-up and Shutdown	123,364	2.32	0.23	33,795	0.64	0.06

[6] CO_2 emission factor based on 40 CFR 98, Subpart C, Table C-1 (1,067.5 Btu/scf; 53.02 kg/MMBtu = 124,796.76 lb/MMscf)

[7] N_2O emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.0001 kg/MMBtu = 0.2353 lb/MMscf)

[8] CH_4 emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.001 kg/MMBtu = 2.3537 lb/MMscf)

[9] Emission rates calculation: Emission factor (lb/MMscf) * Titan 350 Fuel Consumption (MMscf/hr) * Operating Time (64 hr/yr) / 2000 (lb/ton)

Greenhouse Gas Emissions - 6000PE

Sources	Facility Total Emissions				
	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	GHG (tpy)	CO_2e[1] (tpy)
Turbine Exhaust Emissions	1,934,550	36.46	3.65	1,934,590	1,936,537
SSM Emissions	22,967	0.43	0.04	22,968	22,991
Total:	1,957,517	36.89	3.69	1,957,558	1,959,528

[1] Global Warming Potential (GWP) factors included in CO2e calculation are taken from 40 CFR 98, Subpart A, Table A-1.

Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors[2]			Emission Rates[3]		
		CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
TUR-34	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TU5-35	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-36	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-37	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-38	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-39	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-40	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
TUR-41	ProEnergy 6000PE	53.06	1.00E-03	1.00E-04	241,819	4.56	0.46
				Total:	1,934,550	36.46	3.65

[2] The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2.

[3] Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types[4]	Operating Hours[4] (hr/yr)	Design Heat Rates (MMBtu/hr)	Fuel Usage[5] (MMBtu/yr)
TUR-34	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TU5-35	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-36	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-37	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-38	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-39	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-40	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457
TUR-41	ProEnergy 6000PE	Natural Gas	8,760	471.97	4,134,457

[4] The fuel type and operating time are provided by Mobile Energy Rentals.

[5] Annual Heat Rate (MMBtu/yr) = Design Heat Rates (MMBtu/hr) x hr/yr

SSM Emissions

6000PE Fuel Consumption:	0.45	MMscf/hr
6000PE Annual SUSD Operating Times:	32	hr/yr
Safety Factor:	25.00	%
Fuel Heat Value:	1054.60	Btu/scf
	1.05E-03	MMBtu/scf

Unit Numbers	Description	Emission Factors			Emission Rates[9]		
		CO_2[6] (lb/MMscf)	CH_4[7] (lb/MMscf)	N_2O[8] (lb/MMscf)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
SSM-3	6000PE Start-up and Shutdown	123,364	2.32	0.23	22,967	0.43	0.04

[6] CO_2 emission factor based on 40 CFR 98, Subpart C, Table C-1 (1,067.5 Btu/scf; 53.02 kg/MMBtu = 124,796.76 lb/MMscf)

[7] N_2O emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.0001 kg/MMBtu = 0.2353 lb/MMscf)

[8] CH_4 emission factor based on 40 CFR 98, Subpart C, Table C-2 (1,067.5 Btu/scf; 0.001 kg/MMBtu = 2.3537 lb/MMscf)

[9] Emission rates calculation: Emission factor (lb/MMscf) * ProEnergy 6000 PE Fuel Consumption (MMscf/hr) * Operating Time (32 hr/yr) / 2000 (lb/ton)

Greenhouse Gas Emissions - PLUM PRS

Sources	Facility Total Emissions				
	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)	GHG (tpy)	CO_2e[1] (tpy)
PRS Exhaust Emissions	51,236	0.97	0.10	51,237	51,289
Total:	51,236	0.97	0.10	51,237	51,289

[1] Global Warming Potential (GWP) factors included in CO2e calculation are taken from 40 CFR 98, Subpart A, Table A-1.

Turbine Exhaust Emissions

Unit Numbers	Description	Emission Factors[2]			Emission Rates[3]		
		CO_2 (kg/MMBtu)	CH_4 (kg/MMBtu)	N_2O (kg/MMBtu)	CO_2 (tpy)	CH_4 (tpy)	N_2O (tpy)
PRS-1	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-2	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-3	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-4	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-5	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-6	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-7	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-8	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-9	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
PRS-10	PLUM PRS	53.06	1.00E-03	1.00E-04	5,124	0.10	9.66E-03
				Total:	51,236	0.97	0.10

[2] The emissions factors are taken from 40 CFR 98, Subpart C, Tables C-1 & C-2.

[3] Emission Rates (tpy) = kg/MMBtu x 2.2 lb/kg x MMBtu/yr / 2,000 lb/ton

Unit Numbers	Description	Fuel Types[4]	Operating Hours[4] (hr/yr)	Design Heat Rates (MMBtu/hr)	Fuel Usage[5] (MMBtu/yr)
PRS-1	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-2	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-3	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-4	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-5	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-6	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-7	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-8	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-9	PLUM PRS	Natural Gas	8,760	10.00	87,600
PRS-10	PLUM PRS	Natural Gas	8,760	10.00	87,600

[4] The fuel type and operating time are provided by Mobile Energy Rentals.

[5] Annual Heat Rate (MMBtu/yr) = Design Heat Rates (MMBtu/hr) x hr/yr

APPENDIX E. BACT SUPPORTING DOCUMENTATION

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
CT-0157	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/12 months		Carbon Monoxide	Oxidation Catalyst	0.9	PPMVD @15% O2	1 HR BLOCK	BACT-PSD	OPERATING PERMIT	Emission 1: turbine w/o duct firing□ Emission 2: turbine w/ duct firing
CT-0158	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/yr		Carbon Monoxide	Oxidation Catalyst	0.9	PPMVD @15% O2	1 HR BLOCK	BACT-PSD	OPERATING PERMIT	Emission 1: turbine w/o duct firing □ Emission 2: turbine w/ duct firing
CT-0161	KILLINGLY ENERGY CENTER	NTE CONNECTICUT, LLC	Natural Gas w/o Duct Firing	15.21	Natural Gas	2969	MMBtu/hr	Throughput is for turbine only	Carbon Monoxide	Oxidation Catalyst	0.9	PPMVD @15% O2	1 HOUR BLOCK	BACT-PSD	OPERATING PERMIT	
NJ-0082	WEST DEPTFORD ENERGY STATION	WEST DEPTFORD ENERGY ASSOCIATES	Combined Cycle Combustion Turbine without Duct Burner	15.21	Natural Gas	20282	MMCF/YR	This is a 427 MW Siemens Combined Cycle Turbine with duct burner□ Heat Input rate of the turbine = 2276 MMbtu/ hr (HHV)□ Heat Input rate of the Duct burner= 777 MMbtu/hr(HHV)□ □ The fuel use of 20,282 MMCF/YR is for three turbines and three Duct burner.	Carbon Monoxide	Oxidation Catalyst and Use of Natural gas a clean burning fuel	0.9	PPMVD@15 %O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	BACT-PSD	OPERATING PERMIT	
VA-0328	C4GT, LLC	NOVI ENERGY	GE Combustion Turbine - Option 1 - Normal Operation	15.21	natural gas	34000	MMCF/YR	Option 1: □ Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Carbon Monoxide	Oxidation catalyst and good combustion practices	1	PPMVD@ 15% O2	3 HR AV/WITHOUT DB	BACT-PSD	NSPS , SIP	Alternative emission limits apply during startup and shutdown. CEMS required.
VA-0332	CHICKAHOMINY POWER LLC	CHICKAHOMINY POWER LLC	Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators	15.21	natural gas	35000	MMCF/YR	One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines.	Carbon Monoxide	Controlled by an oxidation catalyst and good combustion practices (e.g. controlled fuel/air mixing, adequate temperature, and gas residence time).	1	PPMVD @ 15% O2	3 HR AVG	BACT-PSD	NSPS , SIP	Alternative emission limits apply during startup, shutdown, and tuning. CEMS required.
CA-1251	PALMDALE ENERGY PROJECT	PALMDALE ENERGY, LLC	Combustion Turbines (GEN1 and GEN2)	15.21	Natural Gas	2217	MMBTU/H	Each combustion turbine rated at 214 MW, with a□ maximum heat input rate of 2,217 MMBtu/ H (HHV, at ISO□ conditions); natural gas-fired Siemens SGT6-5000F; each vents to □ dedicated Heat Recovery Steam Generator and a shared 276□ MW Steam Turbine Generator; 160-ft□ stack height; 22-ft stack diameter	Carbon Monoxide	Oxidation Catalyst	1.5	PPM @ 15% O2	1-HR, DEMO LIMIT, W/O DUCT FIRING	BACT-PSD		During demonstration period, limit without duct firing is 2.0 ppm□ □ Mass Emission Limits: □ w/o duct firing: 7.8 lb/hr (10.4 lb/hr during demonstration period)□ w/ ducting firing: 11.3 lb/hr□ □ Startup/Shutdown Limits: □ Cold Start: 416 lb/ event, 39 minutes□ Warm Start: 378 lb/ event, 35 minutes□ Hot Start: 305 lb/ event, 30 minutes□ Shutdown: 75.9 lb/event, 25 minutes□ □ NAAQS modeling-based limit: 419 lb/hr during SU/SD
IL-0133	LINCOLN LAND ENERGY CENTER	LINCOLN LAND ENERGY CENTER (A/K/A EMBERCLEAR)	Combined-Cycle Combustion Turbines	15.21	Natural Gas	3647	mmBtu/hour	Combined-cycle comustion turbines and heat recovery steam generators (HRSG) with a 35 mmBtu/hr duct burner. Turbine inlets would have evaporative cooling systems to cool the inlet air during warm weather to increase power output.	Carbon Monoxide	Oxidation catalyst and good combustion practices	1.5	PPMV @ 15% O2	TURBINE LOAD > OR = 60% W/O DUCT BURNERS	BACT-PSD		Emission Limits 1 and 2 are averaged on a rolling 3-operating hour basis. Emission Limit 3: 2.0 ppmv @ 15% O2 for turbine load < 60% on a rolling 3-operating hour operating basis. Emission Limits 1, 2 and 3 do not include startup, shutdown or breakdown. Emission Limit 4: During any clock hour, including startup, shutdown and breakdown, emissions shall not exceed 923 pounds/hour (cold start/shakedown); 325 pounds/hour (non-cold start); 216 pounds/hour (shutdown). Compliance is demonstrated using a continuous emissions monitoring system (CEMS).
MD-0042	WILDCAT POINT GENERATION FACILITY	OLD DOMINION ELECTRIC CORPORATION (ODEC)	2 COMBINED CYCLE COMBUSTION TURBINES, WITHOUT DUCT FIRING	15.21	NATURAL GAS	270	MW		Carbon Monoxide	EXCLUSIVE USE OF PIPELINE QUALITY NATURAL GAS, USE OF AN OXIDATION CATALYST AND EFFICIENT CT DESIGN	1.5	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	BACT-PSD		818 LB/EVENT FOR SHUTDOWNS. STARTUP AND SHUTDOWN LIMITS ARE TOTAL FOR BOTH CTS COMBINED
MD-0044	COVE POINT LNG TERMINAL	DOMINION COVE POINT LNG, LP	2 COMBUSTION TURBINES	15.11	NATURAL GAS	130	MW	TWO GENERAL ELECTRIC (GE) FRAME 7EA COMBUSTION TURBINES (CTS) WITH A NOMINAL NET 87.2 MEGAWATT (MW) RATED CAPACITY, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), EQUIPPED WITH DRY LOW-NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), AND OXIDATION CATALYST.	Carbon Monoxide	EXCLUSIVE USE OF FACILITY PROCESS FUEL GAS OR PIPELINE QUALITY NATURAL GAS, USE OF AN OXIDATION CATALYST AND EFFICIENT COMBUSTION	1.5	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXLUDING SU/SD	BACT-PSD		59.2 LB/SHUTDOWN EVENT. LIMITS ARE TOTAL FOR BOTH FRAME 7 CTS PER STARTUP OR SHUTDOWN EVENT
NJ-0082	WEST DEPTFORD ENERGY STATION	WEST DEPTFORD ENERGY ASSOCIATES	Combined Cycle Combustion Turbine with Duct Burner	15.21	Natural Gas	20282	MMCF/YR	This is a 427 MW Siemens Combined Cycle Turbine with duct burner□ Heat Input rate of the turbine = 2276 MMbtu/ hr (HHV)□ Heat Input rate of the Duct burner= 777 MMbtu/hr(HHV)□ □ The fuel use of 20,282 MMCF/YR is for three turbines and three Duct burners.	Carbon Monoxide	Oxidation catalyst and use of natural gas a clean burning fuel	1.5	PPMVD@15 %O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	BACT-PSD	OPERATING PERMIT	
PA-0333	ESC TIOGA COUNTY POWER LLC/ELEC PWR GEN FAC	ESC TIOGA COUNTY POWER, LLC	COMBUSTION TURBINE/DUCT BURNER	15.21	Natural Gas	4469	MMBtu/Hr		Carbon Monoxide		1.5	PPMVD	@ 15% O2 / 1 HR	BACT-PSD		
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #2 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Carbon Monoxide	SCR, CATALYTIC OXIDIZER	1.5	PPMVD	@ 15% O2 / 1 HR	LAER		
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #1 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Carbon Monoxide	SCR, Catalytic Oxidizer	1.5	PPMVD	@ 15% O2 / 1 HR	LAER		
WI-0300	NEMADJI TRAIL ENERGY CENTER	NEMADJI TRAIL ENERGY CENTER	Natural-Gas-Fired Combined-Cycle Turbine (P01)	15.21	Natural Gas	4671	MMBTU/H	One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b)	Carbon Monoxide	Oxidation Catalyst and good combustion controls	1.5	PPM AT 15% O2	168-HR ROLLING AVG., NATURAL GAS	BACT-PSD		*Except during start-up and shutdown
VA-0325	GREENSVILLE POWER STATION	VIRGINIA ELECTRIC AND POWER COMPANY	COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3)	15.21	natural gas	3227	MMBTU/HR	3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration.	Carbon Monoxide	Oxidation Catalyst	1.6	PPMVD	3 HR AVG	N/A		Emission Limit 1 turbine without DB: 1.0 ppmvd 3 hr avg□ Alternative Operation: 436 lb/ turbine/ calendar year; □ Cold start: 6,944 lb/turbine; □ Warm start: 3,316 lb/ turbine; □ Hot start: 1,771 lb/turbine
*LA-0324	COMMONWEALTH LNG FACILITY	COMMONWEALTH LNG, LLC	Refrgeration Turbines and Generator Turbines (EQT0001 - EQT0006 and EQT0013 - EQT0015)	15.11	natural gas	575	mm btu/hr		Carbon Monoxide	Good combustion practices and use of clean fuel.	1.7	PPMVD	@15% O2	BACT-PSD		
VA-0328	C4GT, LLC	NOVI ENERGY	Siemens Combusion Turbine - Option 2 - Normal Operation	15.21	Natural Gas	35000	MMCF/YR	Option 2: □ Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Carbon Monoxide	Oxidation catalyst & good combustion practice	1.8	PPMVD @ 15% O2	3 H AV/WITH OR WITHOUT DB	BACT-PSD	NSPS , SIP	Alternative emission limits apply during tuning, water washing, startup and shutdown. CEMS required.

Table C-1: RBLC Search Results for Turbines

Search Basis	Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
*IN-0365	MAPLE CREEK ENERGY LLC		Combined Cycle Turbine CTGB	15.21	natural gas	4200	MMBtu per hour	Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□ □ Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used.	Carbon Monoxide	oxidation catalyst	2	PPMVD	@ 15% O2 BASED ON A 3-HR AVERAGE	BACT-PSD		The CO emissions from the GE combustion turbine generator shall be controlled using good combustion practices and an oxidation catalyst.
*IN-0365	MAPLE CREEK ENERGY LLC		Combined Cycle Turbine CTGA	15.21	Natural Gas	3800	MMBtu per hour	Option 1 Siemens Model SCC6-9000HL Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 3,800 MMBtu per hour, equipped with a Siemens combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□ □ Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used.	Carbon Monoxide	Oxidation catalyst	2	PPMVD	15% O2 BASED ON A 3-HR AVERAGE	BACT-PSD		The CO emissions from the Siemens combustion turbine generator shall be controlled using good combustion practices and an oxidation catalyst.
*PA-0315	HILLTOP ENERGY CENTER, LLC	HILLTOP ENERGY CENTER, LLC	Combustion Turbine without Duct Burner	15.21	Natural Gas	3509	MMBtu/hr		Carbon Monoxide	Oxidation Catalyst	2	PPMDV	CORRECTED TO 15% O2	BACT-PSD		
*VA-0335	PANDA STONEWALL LLC	PANDA STONEWALL LLC	Combustion Turbines, Two (2) and HRSG Duct Burners	15.21	Natural Gas	2.55	MMBTU/H	2x1 natural gas-only configuration: Two Siemens SGT6-5000F5 CTs at 2554 MMBtu/hr and two 430 MMBtu/hr duct burners	Carbon Monoxide	Catalytic Oxidizer	2	PPMVD @ 15% O2	NORMAL OPERATION W & W/O DUCT BURNING	BACT-PSD		Emission Limit 1: 2.0 ppmvd at 15% O2 - normal operations with and w/o duct burner□ Emission Limit 2: 1900/1700/1200/85 lb/event - cold start/warm start/hot start/shutdown
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3.875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Carbon Monoxide	Good Combustion Practices and OxCat	2	PPMDV @ 15% O2	3-HOUR BLOCK AVERAGE	BACT-PSD	N/A	Concentration and Mass limits apply at all times excluding startup and shutdown events.
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3.875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Carbon Monoxide	Good Combustion Practices and Oxidation catalyst	2	PPMDV @ 15% O2	3-HOUR BLOCK AVERAGE	BACT-PSD	N/A	Concentration and Mass limits apply at all times excluding startup and shutdown events.
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Four Combined Cycle Gas-Fired Turbines	15.21	Natural Gas	384	MMBtu/hr	EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility	Carbon Monoxide	Oxidation Catalyst and good combustion practices	2	PPMV @ 15% O2	3-HOURS	BACT-PSD		Allowed 40 hours per year per turbine of operation without SCR and OxCat.
IA-0107	MARSHALLTOW N GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #1 - combined cycle	15.21	natural gas	2258	mmBtu/hr	two identical Siemens SGT6-5000F combined cycle turbines without duct firing, each at 2258 mmBtu/hr generating approx. 300 MW each.	Carbon Monoxide	catalytic oxidizer	2	PPM	30-DAY ROLLING AVG. @15% O2	BACT-PSD		
IA-0107	MARSHALLTOW N GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #2 -combined cycle	15.21	natural gas	2258	mmBtu/hr		Carbon Monoxide	CO catalyst	2	PPM	30-DAY ROLLING AVERAGE	BACT-PSD		552.4 ton/yr limit includes startup, shutdown and malfunction
IL-0130	JACKSON ENERGY CENTER	JACKSON GENERATION, LLC	Combined-Cycle Combustion Turbine	15.21	Natural Gas	3864	mmBtu/hr	Combined-cycle combustion turbines with heat recovery steam generator (HRSG). Turbines will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output.	Carbon Monoxide	Oxidation catalyst	2	PPMV	3 OPERATING HOUR AVERAGE @ 15% O2	BACT-PSD		Emission Limits 1 is applicable when operating with duct burner. Emission Limit 2 is applicable without the duct burner, after 36 months from initial operation. Pounds/hour limit without duct burner is 30.5, 3-hour average. Pounds/hour limit with duct burner is 33.9, 3 hour average. Emission Limits 1 and 2 and pounds/hour limits do not apply during startup/shutdown/commissioning and tuning. □ □ Pounds/hour limit for startup/shutdown/commissioning is 483.5. Pounds/hour limit for tuning is 239. Pounds/hour limit for period of very low load is 20.6
KY-0106	RIVERSIDE GENERATING CO LLC	RIVERSIDE GENERATING CO LLC	Five Combined Cycle Generation Turbines (CCGT) with Duct burners and HRSG	11.31	Natural Gas	1700	MW	Five natural gas-fired turbines for electric generation, rated 2,076 MMBtu/hr each.□ □ New Project: □ Five Combined Cycle Generation Turbines (CCGT)□ (EU 01B-05B) - Five New Natural Gas-Fired Duct Burners for Five New Heat Recovery□ Steam Generators (HRSG) providing heat for Two New Steam Turbine Generators (STG)□ System (1) â€˜ Three CTG/ HRSG combined cycles to one STG□ System (2) â€˜ Two CTG/ HRSG combined cycles to one STG□ □ Maximum Rated Capacity: EU 01B-05B Duct Burners for HRSGs, 660 MMBtu/ hr each STG, 3x1 â€˜ 500MW, 2x1 â€˜ 350 MW□ Construction Commenced: EU01B-05B proposed 2016	Carbon Monoxide	Catalytic oxidation	2	PPM	15% OXYGEN, DRY BASIS, 3-HOUR AVG	BACT-PSD	NSPS	
LA-0391	MAGNOLIA POWER GENERATING STATION UNIT 1	MAGNOLIA POWER LLC	Combined Cycle Gas Turbine w/ Duct Burners and HRSG	15.21	Natural Gas	5081	mm BTU/h	Normal operating rate is 4930 MMBTU/h.	Carbon Monoxide	Catalytic oxidation and good combustion practices.	2	PPMVD	24-HR ROLLING AVG BASED ON 1-HR AVG	BACT-PSD	NSPS	BACT is 2.0 ppmvd @ 15% O2 on a 24-hour rolling average based on a one-hour average.
MA-0039	SALEM HARBOR STATION REDEVELOPMEN T	FOOTPRINT POWER SALEM HARBOR DEVELOPMENT LP	Combustion Turbine with Duct Burner	15.21	Natural Gas	2449	MMBTU/H	two 315 MW (nominal) GE Energy 7F Series 5 Rapid Response Combined Cycle Combustion Turbines with Duct Burners and 31 MW (estimated) steam turbine generators	Carbon Monoxide	oxidation catalyst	2	PPMVD@15 % O2	1 HR AVG, DOES NOT APPLY DURING SS	OTHER CASE-BY-CASE	SIP , OPERATING PERMIT	BACT under 310 CMR 7.02(8)□ □ during start-ups (â‰¤ 45 minutes): CO â‰¤ 285 lb per event□ during shutdowns (â‰¤= 27 minutes): CO â‰¤= 151 lb per event

Table C-1: RBLC Search Results for Turbines

Search Basis	Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MA-0041	MEDICAL AREA TOTAL ENERGY PLANT	MATEP LIMITED PARTNERSHIP	Combustion Turbine with Duct Burner	15.21	Natural Gas	203.4	MMBTU/H	a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing, 158.8MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (38.8MMBtu/hr NG firing only).□ Max. ULSD usage: 878,400 gallons per 12-month rolling period	Carbon Monoxide	Oxidation Catalyst	2	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	SIP , OPERATING PERMIT	CO limits are determined as BACT under 310 CMR 7.02(8).□ CO(firing NG): â‰¤0.0045 lb/MMBtu, â‰¤0.74 lb/hr(no duct firing), â‰¤0.92 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤153.7 lb per event, during shutdowns (â‰¤1 hr): â‰¤41.6 lb per event □ CO(turbine firing ULSD): â‰¤0.0166 lb/MMBtu (no duct firing), â‰¤0.0164 lb/MMBtu (with duct firing), â‰¤2.63 lb/hr(no duct firing), â‰¤3.24 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤144.8 lb per event, during shutdowns (â‰¤1 hr): â‰¤40.9 lb per event.
MA-0043	MIT CENTRAL UTILITY PLANT	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Combustion Turbine with Duct Burner	15.21	Natural Gas	353	MMBtu/hr	two nominal 22 Megawatt (MW) Solar Titan 250 Combustion Turbine Generators (219MMBtu/hr for NG firing, 212MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (134MMBtu/hr NG firing only). Max. ULSD usage: 279,216 gallons per 12-month rolling period per CTG	Carbon Monoxide	Oxidation Catalyst	2	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	OPERATING PERMIT , SIP	CO limits are determined as BACT under 310 CMR 7.02(8). CO(firing NG): â‰¤0.0045 lb/MMBtu, â‰¤1.00 lb/hr(no duct firing), â‰¤1.61 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤201 lb per event, during shutdowns (â‰¤1 hr): â‰¤26.3 lb per event. CO(turbine firing ULSD): â‰¤7.0ppmvd@15% O2,â‰¤0.017 lb/MMBtu&â‰¤3.80 lb/hr (no duct firing); â‰¤6.3ppmvd@15% O2,â‰¤0.0145 lb/MMBtu&â‰¤5.29 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤453 lb per event, during shutdowns (â‰¤1 hr): â‰¤129 lb per event.
MD-0041	CPV ST. CHARLES	CPV MARYLAND, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	725	MEGAWATT	TWO GENERAL ELECTRIC (GE) F-CLASS ADVANCED COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 725 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST	Carbon Monoxide	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	BACT-PSD		EMISSION # 1 IS WITH AND WITHOUT DUCT FIRING□ EMISSION #2 APPLIES TO EACH STARTUP/SHUTDOWN EVENT
MD-0045	MATTAWOMAN ENERGY CENTER	MATTAWOMAN ENERGY, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	286	MW	TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□ □ HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Carbon Monoxide	GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE (EXCLUDING SU/SD)	BACT-PSD		WITH AND WITHOUT DUCT FIRING, EXCLUDING SU/SD
MD-0046	KEYS ENERGY CENTER	KEYS ENERGY CENTER, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	235	MW	TWO SIEMENS F-CLASS (SGT6-500FEE) SERIES COMBUSTION TURBINES (CTS) WITH DUCT BURNERS, WITH A NOMINAL GENERATING CAPACITY OF 735 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), DRY LOW-NOX COMBUSTORS, SCR, OXIDATION CATALYST, AND FUELED EXCLUSIVELY ON PI PELINE QUALITY NATURAL GAS.□ □ HEAT INPUT LIMITED TO 6,802 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR KEYS TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS KEYS PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Carbon Monoxide	GOOD COMBUSTION PRACTICES AND OXIDATION CATALYST	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE	BACT-PSD		WITH AND WITHOUT DUCT FIRING, EXCEPT DURING PERIODS OF STARTUP/SHUTDOWN
MI-0432	NEW COVERT GENERATING FACILITY	NEW COVERT GENERATING COMPANY, LLC	FG-TURB/DB1-3 (3 combined cycle combustion turbine and heat recovery steam generator trains)	15.21	Natural gas	1230	MW	Three (3) combined-cycle combustion turbine (CT) / heat recovery steam generator (HRSG) trains. Each CT is a natural gas fired Mitsubishi model 501G, equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG includes a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity and a dry low NOx burner.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	2	PPMVD	EACH CT/HRSG TRAIN; 24-HR ROLL AVG	BACT-PSD	SIP	Emission limits above are for each individual CT/HRSG train in FG-TURB/ DB1-3.□ □ Startup/shutdown emissions are not included. They will be identified separately.□ □ Emission limit 1 above is 2.0 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour except during startup and shutdown.□ □ Emission limit 2 above is 357 ton/year based on a 12-month rolling time period as determined at the end of each calendar month.

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0442	THOMAS TOWNSHIP ENERGY, LLC	THOMAS TOWNSHIP ENERGY, LLC	FGCTGHRSG	15.21	Natural gas	625	MW	Two (2) combined-cycle natural gas-fired combustion turbine generators (CTGs), each with a heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG). Each CTGHRSG has a combined nominal 625 MW electricity production (ISO) and a maximum combined heat input rating of 4,200 MMBTU/hr (HHV). Each HRSG is equipped with a natural gas-fired duct burner with a maximum rating of 560 MMBTU/hr (HHV) (ISO) to provide heat for additional steam production.	Carbon Monoxide	Oxidation catalyst and good combustion practices	2	PPM	PPMVD; EACH UNIT; 24-HR AVG, NO START/SH	BACT-PSD		Emission Limit 1 is 2 ppmvd, applies to each unit, and is based on a 24-hour rolling average as determined each hour, except during startup and shutdown. Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from teh lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the combustion process ends at flame-off. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in special condition (SC) III.2 of the permit.□ □ Emission Limit 2 is 2,106 lb/hour, applies to each unit, and is hourly including startup and shutdown.□ □ NSCR and EMxGT were ruled out as technically infeasible. A oxidation catalysts typically has a reduction of 85-90 percent for CO emissions.
MI-0451	MEC NORTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator	15.21	Natural gas	3064	MMBTU/H	Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/ Hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	2	PPM	24-HR ROLLING AVG	BACT-PSD		Emission limit 1 above is 2 ppmvd based on a 24-hour rolling average as determined each operating hour except during startup and shutdown.□ □ Emission limit 2 above is 788.6 lb/hr, operating hour during startup or shutdown. See below for further clarification on startup/shutdown.□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2.□ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0452	MEC SOUTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	3064	MMBTU/H	Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/ H (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Carbon Monoxide	Oxidation Catalyst Technology and Good Combustion Practices	2	PPM	24-HR ROLLING AVG	BACT-PSD	SIP	Emission limit 1 above = 2 ppmvd based on 24-hour rolling average as determined each operating hour, except during startup and shutdown. The applicable requirement is BACT.□ □ Emission limit 2 above = 788.6 lb/hr based on operating hour during startup or shutdown. The applicable requirement is BACT and NAAQS.□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2.□ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0455	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	EUCTGHRSG1	15.21	Natural gas	4197.6	MMBTU/H		Carbon Monoxide	Oxidation catalyst	2	PPM	PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD	BACT-PSD		There are 3 CO emission limits listed below:□ □ Emission limit 1 = 2.0 ppmvd at 15% oxygen on a 24-hour rolling average, except during SU/ SD.□ □ Emission limit 2 = 24.2 lb/hr on an hourly basis except during SU/ SD.□ □ Emission limit 3 = 1486.0 lb/hr during SU/SD.
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine -Siemens turbine without Duct Burner	15.21	Natural gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each Siemens combustion turbine will be 2,356 MMBtu/hr(HHV)	Carbon Monoxide	CO Oxidation Catalyst and Good Combustion Practices and use of Natural gas as a clean burning fuel	2	PPMVD@15 % O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	BACT-PSD	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - SIEMENS	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two Siemens turbines and two associated duct burners) □ The heat input rate of the Siemens turbine will be 2,356 MMBtu/hr(HHV) with a 62.1 duct burner MMBtu/hr(HHV).	Carbon Monoxide	Oxidation catalyst and use of only natural gas a clean burning fuel	2	PPMVD	3-HR ROLLING AVE BASED ON 1-HR BLOCK AVE	BACT-PSD	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - GENERAL ELECTRIC	15.21	Natural gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion each turbine will be 2,312 MMBtu/hr(HHV) with a 164.4 MMBtu/hr duct burner	Carbon Monoxide	CO Oxidation catalyst and good combustion practices and use of natural gas only as a clean burning fuel	2	PPMVD@15 %O2	3-HR ROLLING AVERAGE BASED ON 1-HR BLOCK	BACT-PSD	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITHOUT DUCT BURNER - GENERAL ELECTRIC	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion turbine will be 2,312 MMBtu/hr(HHV)	Carbon Monoxide	CO Oxidation Catalyst and Good Combustion Practices and use of Natural gas as a clean burning fuel	2	PPMVD@15 %O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	BACT-PSD	OPERATING PERMIT	

Table C-1: RBLC Search Results for Turbines

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NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine with Duct Burner firing natural gas	15.11	Natural Gas	0			Carbon Monoxide	Oxidation Catalyst and good combustion practices	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK	BACT-PSD	OPERATING PERMIT	
NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine without Duct Burner Firing Natural Gas	15.11	Natural Gas	28169501	MMBTU/YR	Natural Gas Usage: <=28,169,501 MMBtu/year which includes maximum ultra low sulfur distillate oil usage of =2,371,943 MMBTU/year	Carbon Monoxide	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK	BACT-PSD	OPERATING PERMIT	
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner	15.21	natural gas	4000	h/yr		Carbon Monoxide	Oxidation Catalyst and good combustion practices	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK AV	BACT-PSD	OPERATING PERMIT	COMPLIANCE BY CEMS AND STACK TESTING
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner	15.21	Natural Gas	8040	H/YR		Carbon Monoxide	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	2	PPMVD@15 % O2	3 H ROLLING AV BASED ON ONE H BLOCK AV	BACT-PSD	OPERATING PERMIT	COMPLIANCE BY CEMS AND STACK TESTING
NY-0103	CRICKET VALLEY ENERGY CENTER	CRICKET VALLEY ENERGY CENTER LLC	Turbines and duct burners	15.11	natural gas	228	mw		Carbon Monoxide	good combustion practice and oxidation catalyst	2	PPMVD @ 15% O2	1 H	BACT-PSD		Applies to all operating loads, except during startup and shutdown.
PA-0305	SHELL CHEM APPALACHIA/PETROCHEMICALS COMPLEX	SHELL CHEMICAL APPALACHIA	Combustion turbine wih duct burner and heat recovery steam generator	15.11	Natural Gas	0	Three 40.6 MW turbines	Three (3) General Electric Frame 6B NG fired turbine with duct burners and heat recovery steam generators. Total electric generating capacity will be 250.4 MW from cogeneration three turbines at 40.6 MW and two HRSG at 64.3 MW. Excess electricity generated will be sold to the grid in quantities sufficient to classify the facility as an electric utility.	Carbon Monoxide		2	PPMDV @ 15% O2	1 HR AVG EX DURING STARTUP AND SHUTDOWN	BACT-PSD		
PA-0307	YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT	CALPINE MID-MERIT, LLC	Two Combine Cycle Combustion Turbine with Duct Burner	15.21	Natural Gas	3001.57	MCF/hr	Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner)	Carbon Monoxide	Oxidation catalyst and good combustion practices	2	PPMDV @ 15% O2		BACT-PSD		Tons per year limit is for cumulative emissions from both CCCT in any 12-month period
PA-0310	CPV FAIRVIEW ENERGY CENTER	CPV FAIRVIEW, LLC	Combustion turbine and HRSG with duct burner NG only	15.21	Natural Gas	3338	MMBtu/hr	Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□ Each CCCT and duct burner have 5 operational scenarios: □ 1 CCCT with duct burner fired - fueled by NG only:□ 2 CCCT with duct burner fired - fueled by NG blend with ethane□ 3 CCCT without duct burner fired - fueled by NG only:□ 4 CCCT without duct burner fired - fueled by NG blend with ethane□ 5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only)	Carbon Monoxide	Oxidation catalyst operated at all steady state operating loads and good combustion practices	2	PPMDV @ 15% O2		BACT-PSD	NSPS	
PA-0311	MOXIE FREEDOM GENERATION PLANT	MOXIE FREEDOM LLC	Combustion Turbine With Duct Burner	15.21	Natural Gas	3727	MMBtu/hr	DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□ Emissions limits are for each combustion turbine/duct burner block.	Carbon Monoxide	Oxidation catalyst and good combustion practices	2	PPMDV @ 15% O2		BACT-PSD	NSPS	105.1 tpy 12-month rolling basis
PA-0311	MOXIE FREEDOM GENERATION PLANT	MOXIE FREEDOM LLC	Combustion Turbine without Duct Burner	15.21		0			Carbon Monoxide	Oxidation catalyst, good engineering practice	2	PPMDV @ 15% O2		BACT-PSD	NSPS	105.1 tpy on 12-month rolling basis
TN-0162	JOHNSONVILLE COGENERATION	TENNESSEE VALLEY AUTHORITY	Natural Gas-Fired Combustion Turbine with HRSG	15.21	Natural Gas	1339	MMBtu/hr	Turbine throughput is 1019.7 MMBtu/hr when burning natural gas and 1083.7 MMBtu/hr when burning No. 2 oil. Duct burner throughput is 319.3 MMBtu/hr. Duct burner firing will occur during natural gas combustion only.	Carbon Monoxide	Good combustion design and practices, oxidation catalyst	2	PPMVD @ 15% O2	30 UNIT-OPERATING-DAY MOVING AVERAGE	BACT-PSD		Emission limit #1 is for natural gas combustion, emission limit #2 is for No. 2 oil combustion.
TX-0660	FGE TEXAS POWER I AND FGE TEXAS POWER II	FGE POWER LLC	Alstom Turbine	15.21	Natural Gas	230.7	MW	Four (4) Alstom GT24 CTGs, each with a HRSG and DBs, max design capacity 409 MMBtu/hr	Carbon Monoxide	Oxidation catalyst	2	PPMVD	CORRECTED TO 15% O2, ROLLING 3 HR AVE	BACT-PSD		
TX-0666	PINCREST ENERGY CENTER	PINECREST ENERGY CENTER, LLC	Combined-cycle gas turbine electric generating facility	11.31	natural gas	637	MW	three possible turbines: General Electric 7Fa.05, Siemens SGT6-5000F(4), or Siemens SGT6-5000F(B).	Carbon Monoxide	Oxidation catalyst	2	PPMVD @ 15% O2	ROLLING 24-HR AVERAGE	BACT-PSD	NSPS , MACT	
TX-0689	CEDAR BAYOU ELECTRIC GENERATION STATION	NRG TEXAS POWER	Combined cycle natural gas turbines	15.21	Natural Gas	225	MW		Carbon Monoxide	OC	2	PPM	ROLLING 12 MONTHS	BACT-PSD		
TX-0713	TENASKA BROWNSVILLE GENERATING STATION	TENASKA BROWNSVILLE PARTNERS, LLC	(2) combined cycle turbines	15.21	natural gas	274	MW	Each CTG is site-rated at 274 MW gross electric output at 62Â°F ambient temperature. At this condition, two HRSGs with full duct burner firing produce enough steam to generate an additional 336 MW, for a total of 884 MW gross, or with about 5% losses, about 840 MW net electric output. Under summertime conditions, the net output is approximately 800 MW with the 2x1 CCGT configuration or about 400 MW with the 1x1 CCGT configuration.	Carbon Monoxide	oxidation catalyst	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0751	EAGLE MOUNTAIN STEAM ELECTRIC STATION	EAGLE MOUNTAIN POWER COMPANY LLC	Combined Cycle Turbines (>25 MW) â€" natural gas	15.21	natural gas	210	MW	Two power configuration options authorized:□ Siemens â€" 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner□ GE â€" 210 MW + 349.2 MMBtu/hr duct burner	Carbon Monoxide	Oxidation catalyst	2	PPM	ROLLING 24-HR AVERAGE	LAER	NSPS	
TX-0767	LON C. HILL POWER STATION	LON C. HILL, L.P.	Combined Cycle Turbines (>25 MW)	15.21	natural gas	195	MW	Two power configuration options authorized:□ Siemens â€" 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner□ GE â€" 195 MW + 670 MMBtu/hr duct burner	Carbon Monoxide	Oxidation Catalyst	2	PPM	ROLLING 24-HR AVERAGE	BACT-PSD		
TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Carbon Monoxide	Oxidation Catalyst	2	PPM	3-HR AVERAGE	BACT-PSD		

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TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Carbon Monoxide	Oxidation Catalyst	2	PPM	3-HR AVERAGE	BACT-PSD		
TX-0819	GAINES COUNTY POWER PLANT	SOUTHWESTERN PUBLIC SERVICE COMPANY	Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator	15.21	NATURAL GAS	426	MW	Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators	Carbon Monoxide	Selective Catalytic Reduction (SCR) and Dry Low NOx burners	2	PPMVD	15% O2 3-H AVG	BACT-PSD		
TX-0834	MONTGOMERY COUNTY POWER STATIOIN	ENTERGY TEXAS INC	Combined Cycle Turbine	15.21	NATURAL GAS	2635	MMBTU/HR/UNIT	Two Mitsubishi M501GAC turbines (without fast start)	Carbon Monoxide	OXIDATION CATALYST	2	PPMVD	15% O2 3 HOUR AVERAGE	BACT-PSD	NSPS , MACT	NSPS KKKK & TTTT, MACT YYYY
TX-0939	ORANGE COUNTY ADVANCED POWER STATION	ENTERGY TEXAS, INC.	Combined Cycle Turbines	15.21	NATURAL GAS	1215	MW	2 Mitsubishi M501JAC combustion turbines 1,215 MW (in a 2x1 configuration) output and 6,762 Btu/kW-hr (with a 9% degradation) gross heat rate.	Carbon Monoxide	Oxidation Catalyst and good combustion practices	2	PPMVD	15% O2 24-HR AVERAGE	BACT-PSD	NSPS , MACT	
AK-0082	POINT THOMSON PRODUCTION FACILITY	EXXON MOBIL CORPORATION	Turbines	16.15	Fuel Gas	7520	kW	Four 7.52 MW Solar Turbines with SoLoNOx Technology burning natural gas on the North Slope of Alaska, north of the Artic Circle. Two of the turbines are dual fired units that can combust ULSD as well as Fuel Gas	Carbon Monoxide	SCR (Selective Catalytic Reduction) is a post- combustion gas treatment technique for reduction of nitric oxide (NO) and nitrogen dioxide (NO2) in the turbine exhaust stream to molecular nitrogen, water, and oxygen. This process is accomplished by using ammonia (NH3) as a reducing agent, and is injected into the flue gas upstream of the catalyst bed. By lowering the activation energy of the NOX decomposition removal efficiency of 80 to 90 percent are achievable.	2.5	PPMV	15% OXYGEN	BACT-PSD		
*PA-0298	FUTURE POWER PA/GOOD SPRINGS NGCC FACILITY	FUTURE POWER PA INC	Turbine, COMBINED CYCLE UNIT (Siemens 5000)	15.21	Natural Gas	2267	MMBTU/H		Carbon Monoxide	CO Catalyst	3	PPMVD	@ 15% OXYGEN	BACT-PSD	NSPS	
OR-0050	TROUTDALE ENERGY CENTER, LLC	TROUTDALE ENERGY CENTER, LLC	Mitsubishi M501-GAC combustion turbine, combined cycle configuration with duct burner.	15.21	natural gas	2988	MMBTU/H	or ULSD; Duct burner 499 MMBtu/hr, natural gas	Carbon Monoxide	Oxidation catalyst; □ Limit the time in startup or shutdown.	3.3	PPMDV AT 15% O2	3-HR ROLLING AVERAGE ON NG	BACT-PSD		
*MI-0445	INDECK NILES, LLC	INDECK NILES, LLC	FGCTGHRSG	15.21	Natural gas	3421	MMBTU/H	3421 MMBTU/ H for each turbine□ 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/ H or 8322 MMBTU/ H for both trains.□ □ Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	4	PPM	PPMVD @15% O2. 24HR ROLL AVG EXCEPT SS	BACT-PSD	SIP	There are 3 emission limits for each CTGHRSG in the flexible group (FGCTGHRSG).□ Emission limit 1 = 4 ppmvd @15%O2 based on a 24-hour rolling average as determined each operating hour except during startup/shutdown (SS).□ □ Emission limit 2 = 24.7 lb/h based on a 24-hour rolling average as determined each operating hour, except during startup/shutdown (SS).□ □ Emission limit 3 = 3537 lb/h based on operating hour during startup or shutdown.□ □ Startup and shutdown operations are limited to 500 hours per 12-month rolling time period for each CTGHRSG train. Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the startup and shutdown emission minimization plan. The efficiency range is 85-90 percent.
FL-0346	LAUDERDALE PLANT	FLORIDA POWER & LIGHT	Five 200-MW combustion turbines	15.11	Natural gas	2000	MMBtu/hr (approx)	Throughput could vary slightly (+/- 120 MMBtu/hr) depending on final selection of turbine model and firing of natural gas or oil. Primary fuel is expected to be gas.□ □ Each turbine limited to 3300 hrs per rolling 12-month period. Of these 3300 hrs, no more than 500 may use ULSD fuel oil.	Carbon Monoxide	Good combustion practices	4	PPMVD @ 15% O2		BACT-PSD		Natural gas: 4.0 ppmvd @ 15% O2, and 21.0 lb/ hr.□ ULSD: 9.0 ppmvd@15%O2, and 49.0 lb/ hr.□ □ lb/hr limits are per turbine.
FL-0354	LAUDERDALE PLANT	FLORIDA POWER & LIGHT	Five 200-MW combustion turbines	15.11	Natural gas	2100	MMBtu/hr (approx)	Five simple cycle GE 7F.05 turbines. Max of 3390 hours per year per turbine. Of the 3390 hours per year, up to 500 hour may be on ULSD fuel oil.	Carbon Monoxide	Good combustion minimizes CO formation	4	PPMVD@15 %O2	NAT GAS, THREE 1-HR RUNS	BACT-PSD	SIP	Initial and annual stack test. Also subject to 20 lb/hr CO on gas and 49.6 lb/hr on ULSD.
LA-0364	FG LA COMPLEX	FG LA LLC	Cogeneration Units	15.21	Natural Gas	2222	mm btu/h	Throughput is maximum operating rate. 2139 MM BTU/hr normal operating rate.	Carbon Monoxide	Good combustion practices and catalytic oxidation	4	PPMVD		BACT-PSD	NSPS , NESHAP	BACT limit is 4 ppmvd at 15% O2.

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MI-0424	HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET	HOLLAND BOARD OF PUBLIC WORKS	FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11)	15.21	Natural gas	554	MMBTU/H, each	Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	4	PPM	EACH EU; 24-H ROLL AVG EXCEPT	BACT-PSD	SIP	The emission limits above are for each CTG/HRSG and are as follows: □ 1) 4 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown.□ □ 2) 5.31 LB/H based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. □ □ There are separate limits for each of these emission units during startup and shutdown which will be identified as a separate process in this determination.□ □ Startup is defined as the period of time from synchronization to the grid (generator breaker closed) until the unit reaches steady state operation (loads greater than 50 percent design capacity). Shutdown is defined as that period of time from the initial lowering of the turbine output below 50 percent of full operating load, with the intent to shut down, until the point at which the generator breaker opens.
MI-0427	FILER CITY STATION	FILER CITY STATION LIMITED PARTNERSHIP	EUCCT (Combined cycle CTG with unfired HRSG)	15.21	Natural gas	1934.7	MMBTU/H	A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG).	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	4	PPM	24-H ROLL.AVG., EXCEPT STARTUP/SHUTDOWN	BACT-PSD	SIP	Emission limit 1 above is 4 ppmvd at 15% O2.□ □ Also, each of the emission limits above are based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. There is a separate limit for each startup/shutdown event, which will be entered as a separate 'Process' in the RBLC determination.
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	4	PPMV	AT 15%O2; 240HR ROLL AVG; NOT S.S.	BACT-PSD	SIP	The first emission limit above is 4 PPMVD at 15%O2 based on a 24-hour rolling average as determined each operating hour EXCEPT during startup and shutdown.□ □ Emission limit 2 above is 788.6 LB/H during each operating hour during startup or shutdown (S.S.).□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in Special Condition III.2 in the permit.□ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/ hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Carbon Monoxide	Oxidation catalyst technology and good combustion practices.	4	PPMVD	AT 15%O2; 24-H ROLL AVG; NOT INCL ST/SH	BACT-PSD	SIP	There are two emission limits: □ Emission limit 1 = 4 ppmvd at 15%O2 based on a 24-hr rolling average as determined each operating hour, except during startup or shutdown.□ □ Emission limit 2 = 788.6 lb/h each operating hour during startup or shutdown.□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from teh lowering of teh turbine output below the demonstrated steady state level, with teh intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in Special Condition III.2.□ □ Startup and shutdown hours are limits to 300 hours per 12-month rolling time period.
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1--A 667 MMBTU/H NG fired combustion turbine generator coupled with a heat recovery steam generator (HRSG)	15.21	Natural gas	667	MMBTU/H	A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR) and oxidation catalyst.	Carbon Monoxide	An oxidation catalyst for CO control for each CTG/HRSG unit; good combustion practices.	4	PPM	PPMVD@15%O2;24 H ROLL AVG; SEE NOTES	BACT-PSD	SIP	There are 3 CO emission limits in the permit as follows: □ □ Emission limit 1 is 4 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. Applies when the unit is in combined cycle mode.□ □ Emission limit 2 is 9 lb/h when the unit is in HRSG bypass mode. The limit is hourly except during startup and shutdown.□ □ Emission limit 3 is 289 lb/h when the unit is in combined cycle mode and is hourly including startup and shutdown.□ □ Thermal oxidation and NSCR were considered not technically feasible for these applications.

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2--A 667 MMBTU/H natural gas fired CTG with a HRSG.	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2 is a nominally rated 667 MMBTU/H natural gas fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas fired duct burner rated at 204 MMBTU/h to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR and oxidation catalyst.	Carbon Monoxide	An oxidation catalyst for CO control for each CTG/HRSG unit, good combustion practices.	4	PPM	PPMVD@15%O2; 24-H AVG; SEE NOTES	BACT-PSD	SIP	There are 3 CO emission limits in the permit.□ □ Emission limit 1 is 4 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour except during startup and shutdown. The limit applies when the unit is in combined cycle mode.□ □ Emission limit 2 is 9 lb/h and is an hourly limit except during startup and shutdown. The limit applies when the unit is in HRSG bypass mode.□ □ Emission limit 3 is 289 lb/h and is an hourly limit including startup and shutdown. The limit applies when the unit is in combined cycle mode.□ □ Thermal oxidation and NSCR were considered not technically feasible for these applications.
MI-0447	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG1--A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst.	Carbon Monoxide	An oxidation catalyst for CO control for each CTG/HRSG unit, good combustion practices.	4	PPM	24-HR ROLL AVG EXCEPT STARTUP/SHUTDOWN	BACT-PSD	SIP	There are 3 CO emission limits. Two are listed above but all 3 will also be listed here.□ □ Emission limit 1 = 4 ppmvd at 15% O2, based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 = 9 lb/hr; hourly except during startup and shutdown. Applies in HRSG bypass mode.□ □ Emission limit 3 = 389 lb/hr; hourly including startup and shutdown. Applies in combined cycle mode.□ □ Thermal oxidation and NSCR were considered not technically feasible for the application.
MI-0447	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2--A nominally rated 667 MMBTU/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	Carbon Monoxide	An oxidation catalyst for CO control for each CTG/HRSG unit, good combustion practices.	4	PPM	24-HR ROLL AVG EXCEPT STARTUP/SHUTDOWN	BACT-PSD	SIP	There are 3 CO emission limits.□ □ Emission limit 1 = 4 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 = 9 lb/hr; hourly except during startup and shutdown. Applies in HRSG bypass mode.□ □ Emission limit 3 = 289 lb/hr; hourly including startup and shutdown. Applies in combined cycle mode.□ □ Thermal oxidation and NSCR were considered not technically feasible for these applications.
MI-0454	LBWL-ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	Carbon Monoxide	An oxidation catalyst for CO control for each CTG/HRSG unit, good combustion practices.	4	PPM	PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD	BACT-PSD	SIP	There are 3 CO emission limits, all listed below:□ □ Emission limit 1 = 4 ppmvd at 15%O2 on a 24-hour rolling average as determined each operating hour, except during startup (SU) and shutdown (SD). Applies in combined cycle mode.□ □ Emission limit 2 = 9 lb/hr on an hourly basis except during startup and shutdown. Applies in HRSG bypass mode.□ □ Emission limit 3 = 289 lb/hr on an hourly basis including startup and shutdown. Applies in combined cycle mode. □ □ Thermal oxidation and NSCR were considered not technically feasible for these applications.
TX-0678	FREEPORT LNG PRETREATMENT FACILITY	FREEPORT LNG DEVELOPMENT LP	Combustion Turbine	15.21	natural gas	87	MW	The exhaust heat from the turbine will be used to heat a heating medium which is used to regenerate rich amine from the acid gas removal system.	Carbon Monoxide	oxidation catalyst	4	PPMVD	@15% O2, 3 HOUR ROLLING AVERAGE	BACT-PSD		
TX-0694	INDECK WHARTON ENERGY CENTER	INDECK WHARTON, L.L.C.	(3) combustion turbines	15.11	natural gas	220	MW	The CTGs will either be the General Electric 7FA (~214 MW each) or the Siemens SGT6-5000F (~227 MW each), operating as peaking units in simple cycle mode	Carbon Monoxide	DLN combustors	4	PPMVD	@15% O2, 3-HR ROLLING AVG - SIEMENS	BACT-PSD		
TX-0704	UTILITY PLANT	M & G RESINS USA LLC	cogeneration turbine	16.21	natural gas	49	MW	General Electric LM6000 natural gas-fired combustion turbine equipped with lean pre-mix low-NOx combustors.□ □ One heat recovery steam generator (HRSG) with 263 million British thermal units per hour (MMBtu/hr) natural gas-fired duct burner system containing a selective catalytic reduction system (SCR)	Carbon Monoxide	oxidation catalyst	4	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0710	VICTORIA POWER STATION	VICTORIA WLE L.P.	combined cycle turbine	15.21	natural gas	197	MW	General Electric 7FA.04 at 197 MW nominal ouput. The duct burners will be capable of a maximum natural gas firing rate of up to 483 MMBtu/hr (HHV). The duct burners may be fired additional hours; however, total annual firing will not exceed the equivalent of 4,375 hours at maximum capacity per duct burner. The available capacity of the existing steam turbine will be increased from 125 MW in its existing 1x1x1 configuration to approximately 185 MW in the 2x2x1 configuration.	Carbon Monoxide	oxidation catalyst	4	PPMVD	@15% O2, 3-HR ROLLING AVERAGE	BACT-PSD		
TX-0712	TRINIDAD GENERATING FACILITY	SOUTHERN POWER COMPANY	combined cycle turbine	15.21	natural gas	497	MW	The facility will consist of a Mitsubishi Heavy Industries (MHI) J model gas fired combustion turbine nominally rated at 497 megawatts (MW) equipped with a HRSG and DB with a maximum design capacity of 402 million British thermal units per hour (MMBtu/hr). The gross nominal output of the CTG with HRSG and DB is 530 MW.	Carbon Monoxide	oxidation catalyst	4	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		

Table C-1: RBLC Search Results for Turbines

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RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0714	S R BERTRON ELECTRIC GENERATING STATION	NRG TEXAS POWER LLC	(2) combined cycle turbines	15.21	natural gas	240	MW	The gas turbines will be one of three options: □ □ (1) Two Siemens Model F5 (SF5) CTGs each rated at nominal capability of 225 megawatts (MW). Each CTG will have a duct fired HRSG with a maximum heat input of 688 million British thermal units per hour (MMBtu/ hr).□ □ (2) Two General Electric Model 7FA (GE7FA) CTGs each rated at nominal capability of 215 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 523 MMBtu/hr. □ □ (3) Two Mitsubishi Heavy Industry G Frame (MHI501G) CTGs each rated at a nominal electric output of 263 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 686 MMBtu/hr.	Carbon Monoxide	oxidation catalyst	4	PPMVD	@15% O2, ONE HOUR	BACT-PSD		
TX-0730	COLORADO BEND ENERGY CENTER	COLORADO BEND II POWER, LLC	Combined-cycle gas turbine electric generating facility	15.21	natural gas	1100	MW	combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02	Carbon Monoxide	SCR and oxidation catalyst	4	PPMVD @ 15% O2	3-HR AVERAGE	BACT-PSD	NSPS	Permit requires downward adjustment to CO limits based on first 30 months of operation
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr.	Carbon Monoxide	OXIDATION CATALYST	4	PPM	HOURLY	BACT-PSD	NSPS	NSPS KKKK AND TTTT
TX-0789	DECORDOVA STEAM ELECTRIC STATION	DECORDOVA II POWER COMPANY LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr.	Carbon Monoxide	OXIDATION CATALYST	4	PPM		BACT-PSD	NSPS	KKKK AND TTTT
TX-0915	UNIT 5	NRG CEDAR BAYOU LLC	COMBINED CYCLE TURBINE	15.21	NATURAL GAS	0			Carbon Monoxide	OXIDATION CATALYST	4	PPMVD	3-HR ROLLING	BACT-PSD	NSPS , MACT , SIP	
FL-0356	OKEECHOBEE CLEAN ENERGY CENTER	FLORIDA POWER & LIGHT	Combined-cycle electric generating unit	15.21	Natural gas	3096	MMBtu/hr per turbine	3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD.	Carbon Monoxide	Clean burners that prevent CO formation	4.3	PPMVD@15 % O2	3-HR AVERAGE, NATURAL GAS OPERATION	BACT-PSD		No CEMS required. Also subject to limits of 7.1 ppmvd @15% O2 for gas and 13.6 ppmvd@15%O2 for ULSD, at low loads. The lowest loads at which the facility can demonstrate compliance with these low-load limits determines the minimum permitted operating load for the CT. □ Compliance by stack test.
FL-0363	DANIA BEACH ENERGY CENTER	FLORIDA POWER AND LIGHT COMPANY	2-on-1 combined cycle unit (GE 7HA)	15.21	Natural gas	4000	MMBtu/hr	Two nominal 430 MW combustion turbines, coupled to a steam turbine generator	Carbon Monoxide	Clean burning fuel with lean pre-mix turbines	4.3	PPMVD@15 % O2	AT LOADS > 90%	BACT-PSD		For oil, limit is 10.0 ppmvd @ 15% O2 for loads > 90%, and 14.6 ppmvd@15% O2 for loads < 90%. Compliance by annual stack test.
FL-0367	SHADY HILLS COMBINED CYCLE FACILITY	SHADY HILLS ENERGY CENTER, LLC	1-on-1 combined cycle unit (GE 7HA)	15.21	Natural Gas	3266.9	MMBtu/hour	One nominal 385 MW GE 7HA.02 CTG and one HRSG with duct firing [approximately 210 MMBtu/hour], and one nominal 210 MW steam turbine generator (STG)	Carbon Monoxide	Clean burning fuel with good combustion practices	4.3	PPMVD @15% O2	(TURBINE LOADS â‰¥ 90%); THREE 1-HR RUNS	BACT-PSD	SIP	Initial and annual stack testing required.
FL-0371	SHADY HILLS COMBINED CYCLE FACILITY	SHADY HILLS ENERGY CENTER, LLC	GE 7HA.02 Combustion Turbine and HRSG with Duct Firing	15.21	Natural Gas	3622.1	MMBtu/hour	Throughput based on a compressor inlet air temperature of 59Â° F, the higher heating value (HHV) of natural gas, and 100% load	Carbon Monoxide	Clean burning fuel with good combustion practices	4.3	PPMVD AT 15% O2	(TURBINE LOADS â‰¥ 90%); THREE 1-HR	BACT-PSD		Initial and annual stack testing required.
*PA-0340	HELIX IRONWOOD LLC/LEBANON	HELIX IRONWOOD LLC	001 Turbines	16.11	Natural Gas	3	MMCF/HR		Carbon Monoxide		5	PPMDV	@ 15% O2 / 3 HR ROLLING BLOCK AVG	BACT-PSD		Pursuant to the LAER: Annual CO emissions shall not exceed 1,055 tons per consecutive 12-month period. This limit includes emissions generated during all start-up and shutdown periods as well as during normal operation. CO emissions from all startup, shutdown and load change periods are included in the annual emission caps for these pollutants. Actual CO emissions shall be those measured by the facility's continuous emissions monitoring system (CEMS)
AK-0085	GAS TREATMENT PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six (6) Cogeneration Gas-Fired Turbines (Treated Gas Compressor Turbines)	15.21	Natural Gas	576	MMBtu/hr	576 MMBtu/hr includes turbine and supplemental duct burner for waste heat recovery unit for cogeneration. EUs 1-6, Treat Gas Compressor Turbines.	Carbon Monoxide	Oxidation catalyst and good combustion practices	5	PPMV @ 15% O2	3-HOUR AVERAGE	BACT-PSD		Potential CO emissions of 18.84 tpy per turbine including supplemental firing duct burner for WHRU.
AK-0085	GAS TREATMENT PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six (6) Cogeneration Gas-Fired Turbines (CO2 Compressor Turbines))	15.21	Natural Gas	431	MMBtu/hr	431 MMBtu/hr includes turbine and supplemental duct burner for waste heat recovery unit for cogeneration. EUs 7-12, CO2 Compressor Turbines.	Carbon Monoxide	Oxidation catalyst and good combustion control practices	5	PPMV @ 15% O2	3-HOUR AVERAGE	BACT-PSD		Potential particulate matter emissions of 14.41 tpy per turbine including supplemental firing duct burners for WHRU.
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six Simle Cycle Gas-Fired Turbines	15.11	Natural Gas	1113	MMBtu/hr	EUs 1 - 6 are simple cycle gas turbines used for gas compression at LNG facility	Carbon Monoxide	Oxidation Catalyst and good combustion practices	5	PPMV @ 15% O2	3-HOURS	BACT-PSD		Allowed 40 hours per year per turbine of operation without SCR and OxCat.
LA-0331	CALCASIEU PASS LNG PROJECT	VENTURE GLOBAL CALCASIEU PASS, LLC	Combined Cycle Combustion Turbines (CCCT1 to CCCT5)	15.21	Natural Gas	921	MM BTU/h		Carbon Monoxide	Oxidation Catalyst, Proper Design, Good Combustion Practices.	5	PPMV	30 DAY ROLLING AVERAGE	BACT-PSD	OPERATING PERMIT , NSPS	Units are ppmv @15% O2; Averaging time is 30 Day Rolling Average During Normal Operations.
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 8 / EQUI 8	16.11	Natural Gas	174.1	megawatts		Carbon Monoxide		9	PPM	24 HOUR ROLLING AVERAGE AT 15% O2	BACT-PSD	OPERATING PERMIT	CO <= 18.01 tpy 12-mo rolling sum (SUSD) limited to 180 lb/SUSD event SU 23 min SD 11 min CO <= 11.47 tpy 12-mo rolling sum (emergency operation) limited to 478 lb/hr
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 7 / EQUI 7	16.11	Natural Gas	174.1	megawatts		Carbon Monoxide		9	PPM	24 HOUR ROLLING AVERAGE AT 15% O2, DRY	BACT-PSD	NSPS , MACT , OPERATING PERMIT	Startup/Shutdown and Emergency Operation Modes: 1. Startup commences upon initial firing and continues until Mode 6 is attained. 2. Shutdown begins when the shutdown sequence is initiated and the unit leaves Mode 6. 3. Emergency operation occurs when the unit is not in Mode 6 but shutdown has not been initiated. CO <= 18.01 tpy 12-mo rolling sum (SUSD) limited to 180 lb/SUSD event SU 23 min SD 11 min CO <= 11.47 tpy 12-mo rolling sum (emergency operation) limited to 478 lb/hr
*TX-0975	FREESTONE PEAKERS PLANT	FPEC, LLC	Simple Cycle Gas Turbines	15.11	NATURAL GAS	221	MW	General Electric 7FA.05.	Carbon Monoxide	Good combustion practices	9	PPMVD	15% O2	BACT-PSD	NSPS , MACT , OPERATING PERMIT	

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*TX-0986	JACK COUNTY GENERATION FACILITY	JACK COUNTY POWER LLC	COMBUSTION TURBINES	15.11	NATURAL GAS	180.2	MW	Each Siemens V84.3a simple cycle gas turbine is limited to 2,500 hours of operation per year (29% capacity factor) and has a maximum gross power output of 180.2 MW.	Carbon Monoxide	Each turbine is limited to 9 ppmvd at 15% O2 on a 3-hour average, which meets Tier I BACT. Good combustion practices are used. MSS - Limited to 50 startups and 50 shutdowns per year for each turbine. Startup and shutdown events are each expected to last less than an hour in duration.	9	PPMVD	15% O2, 3-HR AVG	BACT-PSD	NSPS	
TX-0686	ANTELOPE ELK ENERGY CENTER	GOLDEN SPREAD ELECTRIC COOPERATIVE, INC.	Combustion Turbine-Generator(CTG)	15.11	Natural Gas	202	MW	Simple Cycle	Carbon Monoxide	Good combustion practices; limited hours	9	PPMVD	15% O2, 3HR AVG.	BACT-PSD		
TX-0693	ANTELOPE ELK ENERGY CENTER	GOLDEN SPREAD ELECTRIC COOPERATIVE INC	combustion turbine	15.11	natural gas	202	MW	new GE 7FA 5-Series gas turbine in a simple cycle application, with a maximum electric output of 202 megawatts (MW) and a maximum design capacity of 1,941 million British thermal units per hour (MMBtu/hr). The turbine will operate a maximum of 4,572 hours per year.	Carbon Monoxide	DLN combustors, good combustion practices	9	PPMVD	@15% O2. 3-HR ROLLING AVERAGE	BACT-PSD		
TX-0695	ECTOR COUNTY ENERGY CENTER	INVENERGY THERMAL DEVELOPMENT LLC	(2) combustion turbines	15.11	natural gas	180	MW	(2) GE 7FA.03, 2500 hours of operation per year each	Carbon Monoxide	DLN combustors	9	PPMVD	@15% O2, 3-HR ROLLING AVG	BACT-PSD		2500 hrs/yr operation
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Large Combustion Turbines > 25 MW	15.11	natural gas	232	MW	4 Simple cycle CTGs, 2,500 hr/ yr operational limitation.□ Facility will consist of either 232 MW (Siemens) or 220 MW (GE)	Carbon Monoxide	good combustion practices	9	PPM		BACT-PSD	NSPS	Subparts KKKK and TTTT
TX-0833	JACKSON COUNTY GENERATORS	SOUTHERN POWER	Combustion Turbines	15.11	natural gas	920	MW	4 identical units, each limited to 2500 hours of operation per year	Carbon Monoxide	Dry low NOx burners	9	PPMVD		BACT-PSD	NSPS	NSPS KKKK
TX-0933	NACERO PENWELL FACILITY	NACERO TX 1 LLC	TURBINE	15.11	NATURAL GAS	0			Carbon Monoxide	Oxidization catalyst, good combustion practices and the use of gaseous fuel	9	PPMVD	15% O2	BACT-PSD		
WV-0026	WAVERLY FACILITY	PLEASANTS ENERGY, LLC	GE Model 7FA Turbine	15.11	Natural Gas	1571	mmbtu/hr	There are two identical units at the facility.	Carbon Monoxide	Good Combustion Practices	9	PPM	NATURAL GAS	BACT-PSD		
LA-0383	LAKE CHARLES LNG EXPORT TERMINAL	LAKE CHARLES LNG EXPORT COMPANY, LLC	Turbines (EQT0020 - EQT0031)	15.11	Natural gas	0			Carbon Monoxide	catalytic oxidation and carbon monoxide turndown	10	PPMVD @15%O2	3-HOUR AVERAGE, @ LOAD =>50%	BACT-PSD		
LA-0316	CAMERON LNG FACILITY	CAMERON LNG LLC	Gas turbines (9 units)	15.11	natural gas	1069	mm btu/hr		Carbon Monoxide	good combustion practices and fueled by natural gas	15	PPMVD	@15%O2	BACT-PSD		
TX-0727	CEDAR BAYOU ELECTRIC GENERATING STATION	NRG TEXAS POWER LLC	Combined cycle turbines	15.21	Natural Gas	187	MW/turbine		Carbon Monoxide	Oxidation catalysts	15	PPMVD	15%O2	BACT-PSD		
*LA-0365	BIG CAJUN I POWER PLANT	LOUISIANA GENERATING, LLC	Combustion Turbine #1 (EQT0002, CTG-1)	15.21	Natural Gas	1679	MM BTU/hr		Carbon Monoxide		25	PPMV	THREE HOUR ROLLING AVERAGE	BACT-PSD	OPERATING PERMIT	Annual Maximum = 125.90 TPY CO.□ All PPMV measurements are corrected to 15% oxygen. □ PPMV limits apply when unit operates at greater than or equal to 70 Megawatt (MW). These limits are not applicable during any clock hour in which the unit operates at a load less than 70 MW.
*LA-0365	BIG CAJUN I POWER PLANT	LOUISIANA GENERATING, LLC	Combustion Turbine #2 (EQT0003, CTG-2)	15.21	Natural Gas	1679	MM BTU/hr		Carbon Monoxide		25	PPMV	THREE HOUR ROLLING AVERAGE	BACT-PSD	OPERATING PERMIT	Annual Maximum = 125.90 TPY CO.□ All PPMV measurements are corrected to 15% oxygen. □ PPMV limits apply when unit operates at greater than or equal to 70 Megawatt (MW). These limits are not applicable during any clock hour in which the unit operates at a load less than 70 MW.
LA-0349	DRIFTWOOD LNG FACILITY	DRIFTWOOD LNG LLC	Compressor Turbines (20)	15.11	natural gas	540	mm btu/hr		Carbon Monoxide	Good Combustion Practices	25	PPMVD	@ 15% O2	BACT-PSD	NSPS	
LA-0375	SABINE PASS LNG TERMINAL	SABINE PASS LNG, LP AND SABINE PASS LIQUEFACTION	Generator Turbines	16.21		0			Carbon Monoxide	Good combustion practices and use od clean natural gas	25	PPM	@ 15%O2 AT ALL LOAD	BACT-PSD		
MI-0420	DTE GAS COMPANY--MILFORD COMPRESSOR STATION	DTE GAS COMPANY	FG-TURBINES	16.11	Natural gas	10504	HP	Five (5) simple cycle natural gas-fired combustion turbines (CTs) to drive compressors that will be used to transport natural gas through pipelines. The turbines are identified as EUTURBINE1, EUTURBINE2, EUTURBINE3, EUTURBINE4, and EUTURBINE5 within the flexible group FGTURBINES. There shall be no more than a combined total of 5 events (startup or shutdown) per clock hour. The total number of startup events for all units combined shall not exceed 500 events per 12-month rolling time period. The total number of shutdown events for all units combined shall not exceed 500 events per 12-month rolling time period. The maximum nominal rating of each turbine shall not exceed 10,504 HP (ISO).	Carbon Monoxide	Good combustion practices and clean burn fuel (pipeline quality natural gas).	25	PPM	TEST PROTOCOL	BACT-PSD	SIP	The emission limit is 25 ppmvd and is for each turbine.□ □ The BACT emission limit is for normal operation. Normal baseload operation is considered to be loads greater than 50 percent of peak load and at or above 0 deg F. The emission limit does not include startup and shutdown or temperatures below 0deg F. Startup and shutdown is considered to be the ramping up or ramping down of the turbines through loads 50 percent or less. An oxidation catalyst was $10,162/ton of controlled CO.
TX-0702	UTILITIES TURBINES	FORMOSA PLASTICS CORPORATION	Turbines for Steam and Electricity Generation	15.25	natural gas, hydrogen, tail gas	35000	LB/H	Turbines will use sweet natural gas, hydrogen, olefins tail gas to generate electricity and steam in support of the proposed expansion to the Olefins Plant. Turbines will be equipped with dry lo-NOx burners, SCR and heat recovery steam generators	Carbon Monoxide	CO emissions will be minimized by good combustion to achieve less than or equal to 25 ppmvd CO at 15% oxygen in the exhaust gases.	25	PPMVD	AT 15% OXYGEN	BACT-PSD	NSPS , NESHAP , SIP	
TX-0790	PORT ARTHUR LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	natural gas	10	M TONNES/YR	Four GE Frame 7E gas turbines for refrigeration and compression at the site	Carbon Monoxide	Dry low NOx burners and good combustion practices	25	PPM	ROLLING 3-HR AVERAGE	BACT-PSD		
TX-0851	RIO BRAVO PIPELINE FACILITY	RIO GRANDE LNG LLC	Refrigeration Compression Turbines	15.11	NATL GAS	967	MMBTU/HR	Twelve General Electric Frame 7EA simple cycle combustion turbines to serve as drivers for refrigeration and compression at the site. There are six process trains and there are two turbines per train. One each of the pairs of turbines has a downstream heat exchanger in the exhaust stream. The heat exchanger heats oil in a closed circuit for process uses elsewhere in the natural gas liquefaction system.	Carbon Monoxide	Dry Low NOx burners. Good combustion practices	25	PPMVD	15% O2	BACT-PSD	NSPS , NESHAP	
TX-0878	LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	NATURAL GAS	26.92	MMTON/Y	Eight GE Frame 7E gas turbines for refrigeration and compression at the site.	Carbon Monoxide	good combustion practices.	25	PPM	24-HR AVG	BACT-PSD		
TX-0672	CORPUS CHRISTI LIQUEFACTION PLANT	CORPUS CHRISTI LIQUEFACTION LLC	Refrigeration compressor turbines	15.11	natural gas	40000	hp	3 liquefied natural gas trains consisting of a total of (12) GE LM2500+ DLE turbines drive the propane and methane section compressors.	Carbon Monoxide	dry low emission combustors	29	PPMVD	@15% O2, 4 HOUR ROLLING AVERAGE	BACT-PSD		

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0672	CORPUS CHRISTI LIQUEFACTION PLANT	CORPUS CHRISTI LIQUEFACTION LLC	Refrigeration compressor turbines	15.21	natural gas	40000	hp	3 liquefied natural gas trains consisting of a total of (6) GE LM2500+ DLE turbines that drive the ethylene section compressors with waste heat recovery for amine solution regeneration.	Carbon Monoxide	dry low emission combustors	29	PPMVD	@15% O2, 4 HOUR ROLLING AVERAGE	BACT-PSD		
TX-0816	CORPUS CHRISTI LIQUEFACTION	CORPUS CHRISTI LIQUEFACTION STAGE III, LLC	Refrigeration compressor turbines	15.11	NATURAL GAS	40000	HP	2 liquefied natural gas trains consisting of a total of (12) GE LM2500+ DLE turbines drive the propane, ethylene, and methane section compressors.	Carbon Monoxide	Dry low emission burners	29	PPMDV	@ 15% O2	BACT-PSD		
AK-0083	KENAI NITROGEN OPERATIONS	AGRIUM U.S. INC.	Five (5) Natural Gas Fired Combustion Turbines	16.11	Natural Gas	37.6	MMBTU/H	Five (5) Natural Gas-Fired Solar Combustion Turbines rated at 37.6 MMBtu/hr each. Installed in 1976.	Carbon Monoxide		50	PPMV	3-HR AVG @ 15 % O2	BACT-PSD		The economic analysis indicates the level of CO reduction does not justify the use of catalytic oxidation. Based on the excessive cost per ton of CO removed per year, installing catalytic oxidation on the turbines/waste heat boilers is not considered a feasible option for reducing CO emissions.
AK-0086	KENAI NITROGEN OPERATIONS	AGRIUM U.S. INC.	Five (5) Natural Gas-Fired Combustion Turbines	16.21	Natural Gas	102.1	MMBtu/hr	Cogeneration Gas-Fired Turbines:□ Solar Turbine with 55.4 MMBtu/hr heat input□ Certified and Nebraska Co. Waste Heat Boiler with 46.7 MMBtu/hr heat input	Carbon Monoxide	Good Combustion Practices and Clean Burning Fuel	50	PPMV AT 15% O2	THREE-HOUR AVERAGE	BACT-PSD		The economic analysis indicates the level of CO and VOC reduction does not justify the use of catalytic oxidation. Based on the excessive cost per ton of pollutants removed per year, installing catalytic oxidation on the turbines/waste heat boilers is not considered a feasible option for reducing CO emissions.
TX-0687	WEST PLANT AND EAST PLANT CENTRAL HEAT AND POWER	UNIVERSITY OF TEXAS MEDICAL BRANCH AT GALVESTON	Two Combustion Turbine-Generators	15.21	Natural Gas	13	MW	Combined Cycle	Carbon Monoxide	Good combustion practices	50	PPM	15% O2, 24HR ROLLING AVG.	BACT-PSD		
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21) Phase II Commissioning	15.21	Natural Gas	2208	MMBTU/H	Natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase II commissioning is the period when synchronizing the turbine through SCR tuning after Phase I. Total fuel input (natural gas) to the turbines may not exceed 1,960 Million cubic feet for both turbines combined. Oxidation catalyst must run at all times during Phase II commissioning.	Carbon Monoxide		150	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL PERIOD	BACT-PSD		Carbon monoxide emissions may not exceed the limits from either turbine for the first 240 hours of Phase II operation of that turbine. After 240 hours, emissions limitation from prior permits apply.
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21) Phase I Commissioning	15.21	Natural Gas	2208	MMBTU/H	Natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase I commissioning is the period of initial cranking and steam blows when starting a turbine for the first time. Total fuel input (natural gas) to the turbines may not exceed 882 million cubic feet for both turbines combined and 1.20 million cubic feet in any hour for a single turbine.	Carbon Monoxide		1750	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL	BACT-PSD		
LA-0375	SABINE PASS LNG TERMINAL	SABINE PASS LNG, LP AND SABINE PASS LIQUEFACTION	Generator Turbines	16.21		0			Nitrogen Oxides (NOx)	Dry Low NOx and good combustion practices	150	PPM	@ 15%O2 AND < 75% LOAD	BACT-PSD		
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21) Phase I Commissioning	15.21	Natural Gas	2208	MMBTU/H	Natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase I commissioning is the period of initial cranking and steam blows when starting a turbine for the first time. Total fuel input (natural gas) to the turbines may not exceed 882 million cubic feet for both turbines combined and 1.20 million cubic feet in any hour for a single turbine.	Nitrogen Oxides (NOx)		110	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL PERIOD	BACT-PSD		
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21)- Startup operation during Phase I Commissioning	15.21	Natural Gas	2208	MMBTU/H	Two natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase I commissioning is the period of initial cranking and steam blows when starting a turbine for the first time. Startup is defined as the beginning of firing natural gas in the combustion turbine until the turbine/HRSG train reaches the minimum emissions compliance load, or the intended operating load if lower than the minimum emission compliance load.	Nitrogen Oxides (NOx)		110	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL PERIOD	BACT-PSD		
LA-0343	SABINE PASS LNG TERMINAL	SABINE PASS LNG LP AND SABINE PASS LIQUEFACTION LL	gas turbines during startups, shutdowns, and maintenance	15.11	natural gas	0		during startups, shutdowns, and maintenance	Nitrogen Oxides (NOx)	good combustion practices	96	PPMV	@ 15% O2	BACT-PSD	NSPS	
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21) Phase II Commissioning	15.21	Natural Gas	2208	MMBTU/H	Natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase II commissioning is the period when synchronizing the turbine through SCR tuning after Phase I. Total fuel input (natural gas) to the turbines may not exceed 1,960 Million cubic feet for both turbines combined. Oxidation catalyst must run at all times during Phase II commissioning.	Nitrogen Oxides (NOx)		55	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL PERIOD	BACT-PSD		Nitrogen oxide emissions may not exceed the limit from any turbine.
WI-0306	WPL-RIVERSIDE ENERGY CENTER	WPL- RIVERSIDE ENERGY CENTER	Natural Gas Fired Combustion Turbine (P20, P21)- Startup operation during Phase II Commissioning	15.21	Natural Gas	2208		Natural gas fired combustion turbine with heat recovery steam generator (HRSG). Phase II commissioning is the period when synchronizing the turbine through SCR tuning after Phase I. Startup is defined as the beginning of firing natural gas in the combustion turbine until the turbine/HRSG train reaches the minimum emissions compliance load, or the intended operating load if lower than the minimum emission compliance load.	Nitrogen Oxides (NOx)		55	PPMVD, 15% OXYGEN	AVG. ANY 24-HR OPERATIONAL PERIOD	BACT-PSD		
LA-0307	MAGNOLIA LNG FACILITY	MAGNOLIA LNG, LLC	Gas Turbines (8 units)	15.11	natural gas	333	mm btu/hr		Nitrogen Oxides (NOx)	Dry Low NOX burners and good combustion practices	25	PPMVD	@15 %O2	BACT-PSD	NSPS	

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0439	JACKSON GENERATING STATION	CONSUMERS ENERGY COMPANY	FGLMDB1-6 (6 combined cycle natural gas fired CTG each equipped with a HRSG)	15.21	natural gas	420	MW	FGLMDB1-6 is 6 combined cycle natural gas fired combustion turbine generators (CTG) each equipped with a heat recovery steam generator (HRSG).□ □ Nominal rating 420 MW. Each combustion turbine (CT) is a GE LM6000 with a rating of 440 MMBTU/HR (HHV) and a duct burner rating of 222 MMBTU/HR (HHV). A combined cycle natural gas fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 420 MW electricity production. The HRSG is not capable of operating independently from the CTG.	Nitrogen Oxides (NOx)	Steam injection, good combustion practices and only combust natural gas.	25	PPM	AT 15% O2; 30 DAY ROLLING AVG; EACH UNIT	BACT-PSD	NSPS	There are 3 NOx emission limits, two of which are listed in the table above. For clarity, all 3 limits are listed here: □ Emission limit 1 = 25 ppmv at 15% O2 on a dry gas basis for each unit during periods with no duct firing on a 30-day rolling average as determined at the end of each calendar day. This limit is from NSPS GG and NSPS Db. The limit does not apply during startup and shutdown.□ □ Emission limit 2 = 22 ppmv at 15% O2 on a dry gas basis excluding periods for each turbine when it operates in conjunction with its respective duct burner on a 12-month rolling average as determined at the end of each calendar month. This limit is for all units combined and does not apply during periods of startup and shutdown.□ □ Emission limit 3 = 54.0 lb/hr (equates to approximately 0.09 lb/MMBTU) when the turbine operates alone and when the turbine operates in conjunction with its respective duct burner on a 30-day rolling average as determined at the end of each calendar day. These limits apply during periods of startup and shutdown.□ □ Physical constraints came into BACT decision due to modification to an existing facility.
TX-0672	CORPUS CHRISTI LIQUEFACTION PLANT	CORPUS CHRISTI LIQUEFACTION LLC	Refrigeration compressor turbines	15.11	natural gas	40000	hp	3 liquefied natural gas trains consisting of a total of (12) GE LM2500+ DLE turbines drive the propane and methane section compressors.	Nitrogen Oxides (NOx)	Dry low emission combustors	25	PPMVD	@ 15% O2, 4 HOUR ROLLING AVG	BACT-PSD		
TX-0672	CORPUS CHRISTI LIQUEFACTION PLANT	CORPUS CHRISTI LIQUEFACTION LLC	Refrigeration compressor turbines	15.21	natural gas	40000	hp	3 liquefied natural gas trains consisting of a total of (6) GE LM2500+ DLE turbines that drive the ethylene section compressors with waste heat recovery for amine solution regeneration.	Nitrogen Oxides (NOx)	dry low emission combustors	25	PPMVD	@15% O2, 4 HOUR ROLLING AVERAGE	BACT-PSD		
TX-0816	CORPUS CHRISTI LIQUEFACTION	CORPUS CHRISTI LIQUEFACTION STAGE III, LLC	Refrigeration compressor turbines	15.11	NATURAL GAS	40000	HP	2 liquefied natural gas trains consisting of a total of (12) GE LM2500+ DLE turbines drive the propane, ethylene, and methane section compressors.	Nitrogen Oxides (NOx)	Dry low emission burners	25	PPMDV	@ 15% O2	BACT-PSD	NSPS	NSPS Subpart KKKK
*LA-0365	BIG CAJUN I POWER PLANT	LOUISIANA GENERATING, LLC	Combustion Turbine #1 (EQT0002, CTG-1)	15.21	Natural Gas	1679	MM BTU/hr		Nitrogen Oxides (NOx)	Dry low NOX Burners & water injection	23	PPMV	THREE HOUR ROLLING AVERAGE	BACT-PSD	NSPS , OPERATING PERMIT	Annual Maximum = 175.40 TPY NOX.□ All PPMV measurements are corrected to 15% oxygen. □ PPMV limits apply when unit operates at greater than or equal to 70 Megawatt (MW). These limits are not applicable during any clock hour in which the unit operates at a load less than 70 MW.
*LA-0365	BIG CAJUN I POWER PLANT	LOUISIANA GENERATING, LLC	Combustion Turbine #2 (EQT0003, CTG-2)	15.21	Natural Gas	1679	MM BTU/hr		Nitrogen Oxides (NOx)	Dry low NOX burners & water injection	23	PPMV	THREE HOUR ROLLING AVERAGE	BACT-PSD	NSPS , OPERATING PERMIT	Annual Maximum = 175.40 TPY NOX.□ All PPMV measurements are corrected to 15% oxygen. □ PPMV limits apply when unit operates at greater than or equal to 70 Megawatt (MW). These limits are not applicable during any clock hour in which the unit operates at a load less than 70 MW.
IN-0173	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES	16.21	NATURAL GAS	283	MMBTU/H, EACH	NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY	Nitrogen Oxides (NOx)	DRY LOW NOX COMBUSTORS	22.65	PPMVD AT 15% OXYGEN	3-HR AVERAGE AT > 50% PEAK LOAD	BACT-PSD		
IN-0180	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES	16.21	NATURAL GAS	283	MMBTU/H, EACH	NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY	Nitrogen Oxides (NOx)	DRY LOW NOX COMBUSTORS	22.65	PPMVD AT 15% OXYGEN	3-HR AVERAGE AT > 50% PEAK LOAD	BACT-PSD		
AK-0085	GAS TREATMENT PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six (6) Cogeneration Gas-Fired Turbines (Treated Gas Compressor Turbines)	15.21	Natural Gas	576	MMBtu/hr	576 MMBtu/hr includes turbine and supplemental duct burner for waste heat recovery unit for cogeneration. EUs 1-6, Treat Gas Compressor Turbines.	Nitrogen Oxides (NOx)	DLN combustors and Good Combustion Practices	17	PPMV @ 15% O2	3-HOUR AVERAGE	BACT-PSD	NSPS	Potential NOx emissions of 105.24 tpy for each cogeneration turbine including supplemental firing duct burner for WHRU.
AK-0085	GAS TREATMENT PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six (6) Cogeneration Gas-Fired Turbines (CO2 Compressor Turbines))	15.21	Natural Gas	431	MMBtu/hr	431 MMBtu/hr includes turbine and supplemental duct burner for waste heat recovery unit for cogeneration. EUs 7-12, CO2 Compressor Turbines.	Nitrogen Oxides (NOx)	DLN combustors and good combustion practices	17	PPMV @ 15% O2	3-HOUR AVERAGE	BACT-PSD	NSPS	Potential NOx emissions of 80.46 tpy for each cogeneration turbine including supplemental firing duct burner for WHRU.
*TX-0986	JACK COUNTY GENERATION FACILITY	JACK COUNTY POWER LLC	COMBUSTION TURBINES	15.11	NATURAL GAS	180.2	MW	Each Siemens V84.3a simple cycle gas turbine is limited to 2,500 hours of operation per year (29% capacity factor) and has a maximum gross power output of 180.2 MW.	Nitrogen Oxides (NOx)	Each turbine is limited to 15 ppmvd concentration at 15% O2 on a 3-hour average through an upgrade to â€˜HR3â€™ Dry Low-NOx (DLN) burners. 14 ppmvd at 15% O2 is achieved on an annual average and also includes during periods when wet compression (evaporative air cooling) is applied. MSS - Limited to 50 startups and 50 shutdowns per year for each turbine. Startup and shutdown events are each expected to last less than an hour in duration.	15	PPMVD	15% O2	BACT-PSD	NSPS , MACT	
AK-0082	POINT THOMSON PRODUCTION FACILITY	EXXON MOBIL CORPORATION	Turbines	16.15	Fuel Gas	7520	kW	Four 7.52 MW Solar Turbines with SoLoNOx Technology burning natural gas on the North Slope of Alaska, north of the Artic Circle. Two of the turbines are dual fired units that can combust ULSD as well as Fuel Gas	Nitrogen Oxides (NOx)	Dry Low NOx and SoLoNOx. DLN combustors utilize multistage premix combustors where the air and fuel is mixed at a lean fuel to air ratio. The excess air in the lean mixture acts as a heat sink, which lowers peak combustion temperatures and also ensures a more homogeneous mixture, both resulting in greatly reduced NOX formation rates. SoLoNOx is a lean premixed process which improves combustion efficiency and reduce NOx and particulate emissions.	15	PPMV	15% OXYGEN	BACT-PSD	NSPS	
LA-0316	CAMERON LNG FACILITY	CAMERON LNG LLC	Gas turbines (9 units)	15.11	natural gas	1069	mm btu/hr		Nitrogen Oxides (NOx)	good combustion practices and dry low nox burners	15	PPMVD	@15%O2	BACT-PSD		

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0420	DTE GAS COMPANY--MILFORD COMPRESSOR STATION	DTE GAS COMPANY	FG-TURBINES	16.11	Natural gas	10504	HP	Five (5) simple cycle natural gas-fired combustion turbines (CTs) to drive compressors that will be used to transport natural gas through pipelines. The turbines are identified as EUTURBINE1, EUTURBINE2, EUTURBINE3, EUTURBINE4, and EUTURBINE5 within the flexible group FGTURBINES. There shall be no more than a combined total of 5 events (startup or shutdown) per clock hour. The total number of startup events for all units combined shall not exceed 500 events per 12-month rolling time period. The total number of shutdown events for all units combined shall not exceed 500 events per 12-month rolling time period. The maximum nominal rating of each turbine shall not exceed 10,504 HP (ISO).	Nitrogen Oxides (NOx)	Dry ultra-low NOx burners	15	PPM	TEST PROTOCOL	BACT-PSD	NSPS , SIP	The NOx emission limit is 15 ppmvd and is for each turbine within the flexible group.□ □ The BACT emission limit subsumes the NSPS emission limit of 25 ppm at 15 percent O2. Normal baseload operation is considered to be loads greater than 50 percent of peak load and at or above 0 deg. F. The emission limit does not include startup and shutdown or temperatures below 0 deg F. Startup and shutdown is considered to be the ramping up or ramping down of the turbines through loads 50 percent or less. There is also an emission limit for the NSPS that allows 150 ppmvd for each unit when operating at less than 75 percent of peak load and at temperatures less than 0 deg F. Selective catalyst reduction (SCR) was $58,300/ton of controlled NOx for each turbine separately and Selective Non-catalytic reduction (SNCR) was $46,200/ton of controlled NOx for each turbine separately. SCR was $34,120 - $45,833 per ton of controlled NOx for all turbines combined, depending on control efficiency.
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 8 / EQUI 8	16.11	Natural Gas	174.1	megawatts		Nitrogen Oxides (NOx)	Dry Low NOx combustor	11	PPM	24 HOUR ROLLING AVERAGE AT 15% O2	BACT-PSD	NSPS , OPERATING PERMIT	NOx <= 6.76 tpy 12-mo rolling sum (SUSD) limited to 68 lb/SUSD event SU 23 min SD 11 min NOx <= 7.29 tpy 12-mo rolling sum (emergency operation) limited to 304 lb/hr Fuel type: Pipeline natural gas, by design. Startup/Shutdown and Emergency Operation Modes: 1. Startup commences upon initial firing and continues until Mode 6 is attained. 2. Shutdown begins when the shutdown sequence is initiated and the unit leaves Mode 6. 3. Emergency operation occurs when the unit is not in Mode 6 but shutdown has not been initiated. Monthly recordkeeping of startup/shutdown events, not to exceed 200 events per 12 months. Monthly recordkeeping of emergency operation, not to exceed 48 hours per 12 months.
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 7 / EQUI 7	16.11	Natural Gas	174.1	megawatts		Nitrogen Oxides (NOx)	Dry Low NOx Combustor	11	PPM	24 HOUR ROLLING AVERAGE AT 15% O2	BACT-PSD	NSPS , OPERATING PERMIT	NOx <= 6.76 tpy 12-mo rolling sum (SUSD) limited to 68 lb/SUSD event SU 23 min SD 11 min NOx <= 7.29 tpy 12-mo rolling sum (emergency operation) limited to 304 lb/hr Fuel type: Pipeline natural gas, by design. Startup/Shutdown and Emergency Operation Modes: 1. Startup commences upon initial firing and continues until Mode 6 is attained. 2. Shutdown begins when the shutdown sequence is initiated and the unit leaves Mode 6. 3. Emergency operation occurs when the unit is not in Mode 6 but shutdown has not been initiated. Monthly recordkeeping of startup/shutdown events, not to exceed 200 events per 12 months. Monthly recordkeeping of emergency operation, not to exceed 48 hours per 12 months.
*TX-0975	FREESTONE PEAKERS PLANT	FPEC, LLC	Simple Cycle Gas Turbines	15.11	NATURAL GAS	221	MW	General Electric 7FA.05.	Nitrogen Oxides (NOx)	Dry low-NOx burners (DLNB) and good combustion practices.	9	PPMVD	15% O2	BACT-PSD	NSPS , MACT , OPERATING PERMIT	
FL-0346	LAUDERDALE PLANT	FLORIDA POWER & LIGHT	Five 200-MW combustion turbines	15.11	Natural gas	2000	MMBtu/hr (approx)	Throughput could vary slightly (+/- 120 MMBtu/hr) depending on final selection of turbine model and firing of natural gas or oil. Primary fuel is expected to be gas.□ □ Each turbine limited to 3300 hrs per rolling 12-month period. Of these 3300 hrs, no more than 500 may use ULSD fuel oil.	Nitrogen Oxides (NOx)	Required to employ dry low-NOx technology and wet injection. Water injection must be used when firing ULSD.	9	PPMVD @ 15% 02	24-HR BLOCK AVG, BY CEMS (NAT GAS)	BACT-PSD	NSPS	NOx CEMS required -- employing EPA Method 7E.□ □ For natural gas, 9.0 ppmvd@15% O2 and 77 lb/hr. For oil, 42.0 ppmvd@15% O2 and 378.0 lb/hr.
FL-0354	LAUDERDALE PLANT	FLORIDA POWER & LIGHT	Five 200-MW combustion turbines	15.11	Natural gas	2100	MMBtu/hr (approx)	Five simple cycle GE 7F.05 turbines. Max of 3390 hours per year per turbine. Of the 3390 hours per year, up to 500 hour may be on ULSD fuel oil.	Nitrogen Oxides (NOx)	Dry-low-NOx combustion system. Wet injection when firing ULSD.	9	PPMVD@15 %O2	24-HR BLOCK AVERAGE	BACT-PSD	NSPS	Compliance by NOx CEMS. Also subject to NSPS Subpart KKKK.
FL-0355	FORT MYERS PLANT	FLORIDA POWER & LIGHT (FPL)	Combustion Turbines	15.11	Natural gas	2262.4	MMBtu/hr gas	Two GE 7F.05 turbines, approximately 200 MW each.□ Natural-gas is primary fuel.□ Permitted 3390 hr/yr of operation, of which no more than 500 hr may be on fuel oil.□ Dry Low-NOx, with wet injection for oil firing.	Nitrogen Oxides (NOx)	DLN and wet injection (for ULSD operation)	9	PPMVD@15 % O2	GAS FIRING, 24-HR BLOCK AVG	BACT-PSD	NSPS	Compliance by NOx CEMS. Also subject to low-load (<75%) Subpart KKKK NOx limit.
TX-0686	ANTELOPE ELK ENERGY CENTER	GOLDEN SPREAD ELECTRIC COOPERATIVE, INC.	Combustion Turbine-Generator(CTG)	15.11	Natural Gas	202	MW	Simple Cycle	Nitrogen Oxides (NOx)	DLN	9	PPM	15% O2, 3 HR. ROLLING AVG.	BACT-PSD		
TX-0693	ANTELOPE ELK ENERGY CENTER	GOLDEN SPREAD ELECTRIC COOPERATIVE INC	combustion turbine	15.11	natural gas	202	MW	new GE 7FA 5-Series gas turbine in a simple cycle application, with a maximum electric output of 202 megawatts (MW) and a maximum design capacity of 1,941 million British thermal units per hour (MMBtu/hr). The turbine will operate a maximum of 4,572 hours per year.	Nitrogen Oxides (NOx)	DLN combustors	9	PPMVD	@15% O2, 3-HR ROLLING AVERAGE	BACT-PSD		
TX-0694	INDECK WHARTON ENERGY CENTER	INDECK WHARTON, L.L.C.	(3) combustion turbines	15.11	natural gas	220	MW	The CTGs will either be the General Electric 7FA (~214 MW each) or the Siemens SGT6-5000F (~227 MW each), operating as peaking units in simple cycle mode	Nitrogen Oxides (NOx)	DLN combustors	9	PPMVD	@15% O2, 3-HR ROLLING AVERAGE	BACT-PSD		
TX-0695	ECTOR COUNTY ENERGY CENTER	INVENERGY THERMAL DEVELOPMENT LLC	(2) combustion turbines	15.11	natural gas	180	MW	(2) GE 7FA.03, 2500 hours of operation per year each	Nitrogen Oxides (NOx)	DLN combustors	9	PPMVD	@15% O2, 3-HR ROLLING AVG	BACT-PSD		2500 hr/yr operation

Table C-1: RBLC Search Results for Turbines

Search Basis	Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Large Combustion Turbines > 25 MW	15.11	natural gas	232	MW	4 Simple cycle CTGs, 2,500 hr/ yr operational limitation.□ Facility will consist of either 232 MW (Siemens) or 220 MW (GE)	Nitrogen Oxides (NOx)	Dry low-NOx burners (DLN), good combustion practices	9	PPM		BACT-PSD	NSPS	Subparts KKKK and TTTT
TX-0790	PORT ARTHUR LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	natural gas	10	M TONNES/YR	Four GE Frame 7E gas turbines for refrigeration and compression at the site	Nitrogen Oxides (NOx)	Dry low NOx burners and good combustion practices	9	PPM	ROLLING 24-HR AVERAGE	BACT-PSD	NSPS	NSPS KKKKK
TX-0833	JACKSON COUNTY GENERATORS	SOUTHERN POWER	Combustion Turbines	15.11	natural gas	920	MW	4 identical units, each limited to 2500 hours of operation per year	Nitrogen Oxides (NOx)	Dry low NOx burners	9	PPMVD		BACT-PSD	NSPS	NSPS KKKK
TX-0851	RIO BRAVO PIPELINE FACILITY	RIO GRANDE LNG LLC	Refrigeration Compression Turbines	15.11	NATL GAS	967	MMBTU/HR	Twelve General Electric Frame 7EA simple cycle combustion turbines to serve as drivers for refrigeration and compression at the site. There are six process trains and there are two turbines per train. One each of the pairs of turbines has a downstream heat exchanger in the exhaust stream. The heat exchanger heats oil in a closed circuit for process uses elsewhere in the natural gas liquefaction system.	Nitrogen Oxides (NOx)	Dry Low NOx burners. Good combustion practices	9	PPMVD	15% O2	BACT-PSD	NSPS , NESHAP	
TX-0933	NACERO PENWELL FACILITY	NACERO TX 1 LLC	TURBINE	15.11	NATURAL GAS	0			Nitrogen Oxides (NOx)	LOW NOX BURNERS AND SCR	9	PPMVD	15% O2	BACT-PSD		
WV-0026	WAVERLY FACILITY	PLEASANTS ENERGY, LLC	GE Model 7FA Turbine	15.11	Natural Gas	1571	mmbtu/hr	There are two identical units at the facility.	Nitrogen Oxides (NOx)	Dry Low-NOx Combustion System (DLNB), Water Injection	9	PPM	NATURAL GAS	BACT-PSD	NSPS	Additional emission limits are in the permit for use of turbocharging and startup/shutdown emissions. Please contact if need additional information.
AK-0083	KENAI NITROGEN OPERATIONS	AGRIUM U.S. INC.	Five (5) Natural Gas Fired Combustion Turbines	16.11	Natural Gas	37.6	MMBTU/H	Five (5) Natural Gas-Fired Solar Combustion Turbines rated at 37.6 MMBtu/hr each. Installed in 1976.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	7	PPMV	3-HR AVG @ 15 % O2	BACT-PSD		
AK-0086	KENAI NITROGEN OPERATIONS	AGRIUM U.S. INC.	Five (5) Natural Gas-Fired Combustion Turbines	16.21	Natural Gas	102.1	MMBtu/hr	Cogeneration Gas-Fired Turbines□ Solar Turbine with 55.4 MMBtu/hr heat input□ Certified and Nebraska Co. Waste Heat Boiler with 46.7 MMBtu/hr heat input	Nitrogen Oxides (NOx)	Selective Catalytic Reduction and SoLoNOx Technology on Turbines	5	PPMV AT 15% O2	THREE-HOUR AVERAGE	BACT-PSD	NSPS	
LA-0349	DRIFTWOOD LNG FACILITY	DRIFTWOOD LNG LLC	Compressor Turbines (20)	15.11	natural gas	540	mm btu/hr		Nitrogen Oxides (NOx)	DLN and SCR	5	PPMVD	@ 15% O2	BACT-PSD		
*PA-0340	HELIX IRONWOOD LLC/LEBANON	HELIX IRONWOOD LLC	001 Turbines	16.11	Natural Gas	3	MMCF/HR		Nitrogen Oxides (NOx)	SCR	4.5	PPMDV	@ 15% O2 / 3 HR ROLLING BLOCK AVG	RACT		Annual NOx emissions shall not exceed 442 tons per consecutive 12 month period. This limit includes emissions generated during all start-up and shutdown periods as well as during normal operation. NOx emissions from all startup, shutdown and load change periods are included in the annual NOx emission cap. Actual NOx emissions shall be those measured by the facility's continuous emissions monitoring system (CEMS).
LA-0383	LAKE CHARLES LNG EXPORT TERMINAL	LAKE CHARLES LNG EXPORT COMPANY, LLC	Turbines (EQT0020 - EQT0031)	15.11	Natural gas	0			Nitrogen Oxides (NOx)	LNB + SCR	3.1	PPMVD @15%O2	3-HOUR AVERAGE	BACT-PSD		
MI-0424	HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET	HOLLAND BOARD OF PUBLIC WORKS	FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11)	15.21	Natural gas	554	MMBTU/H, each	Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period.	Nitrogen Oxides (NOx)	Selective catalytic reduction with dry low NOx burners (SCR with DLNB).	3	PPM AT 15% O2	24-H ROLLING AVG; EACH EU	BACT-PSD	SIP , NSPS	The emission limits above are for each emission unit as follows: □ □ 1) 3 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown.□ □ 2) 8.18 LB/H based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown.□ □ Startup is defined as the period of time from synchronization to the grid (generator breaker closed) until the unit reaches steady state operation (loads greater than 50 percent of design capacity). Shutdown is defined as that period of time from the initial lowering of the turbine output below 50 percent of full operating load, with the intent to shutdown, until the point at which the generator breaker opens. The efficiency range is 80-99 percent.
MI-0427	FILER CITY STATION	FILER CITY STATION LIMITED PARTNERSHIP	EUCCT (Combined cycle CTG with unfired HRSG)	15.21	Natural gas	1934.7	MMBTU/H	A 1,934.7 MMBTU/H natural gas fired heavy frame industrial combustion turbine. The turbine operates in combined-cycle with an unfired heat recovery steam generator (HRSG).	Nitrogen Oxides (NOx)	SCR with DLNB (Selective catalytic reduction with dry low NOx burners).	3	PPM	24-H ROLL.AVG., EXCEPT STARTUP/SHUTDOWN	BACT-PSD	NSPS , SIP	There are 3 separate NOx emission limits which do not include startup/shutdown events. Those will be entered as a separate 'Process' in the RBLC determination.□ □ Emission limit 1 above is 3 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour and does not include startup/shutdown.□ □ Emission Limit 2 above is 21.4 LB/H based on a 24-hour rolling average as determined each operating hour, except startup/shutdown.□ □ There is a third emission limit, which is not above, and is 15 ppm at 15% O2 and is based on a 30-day rolling average as determined each operating day. Table 1 of 40 CFR Part 60 Subpart KKKK allows 96 ppm at 15 percent 02 when the turbines are operating at less than 75 percent of peak load or at temperatures less than 0 deg. F.

Table C-1: RBLC Search Results for Turbines

Search Basis
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RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1--A 667 MMBTU/H NG fired combustion turbine generator coupled with a heat recovery steam generator (HRSG)	15.21	Natural gas	667	MMBTU/H	A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR) and oxidation catalyst.	Nitrogen Oxides (NOx)	Dry low NOx burners and selective catalytic reduction for NOx control.	3	PPM	PPMVD@15%O2; 24-H ROLL AVG; SEE NOTES	BACT-PSD	SIP	NOx emission limit 1 is 3.0 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. The limit applies when the unit is in combined cycle mode.□ □ NOx emission limit 2 is 25 ppmvd at 15%O2 based on a 4-hour rolling average, except during operation less than 75% of peak load. The limit applies to the unit in HRSG bypass mode.□ □ **There are two additional NOx limits in the permit**********□ NOx emission limit 3 is 60.0 lb/h when the unit is in combined cycle mode. The limit is hourly including startup or shutdown.□ □ NOx emission limit 4 is 60.0 lb/h when the unit is in HRSG bypass mode. The limit is based on a 24-hour rolling average as determined each operating hour.□ □ The use of SCR with the DLNB is the highest ranked control system and was selected as BACT; therefore, an economic analysis was not performed.
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2--A 667 MMBTU/H natural gas fired CTG with a HRSG.	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2 is a nominally rated 667 MMBTU/H natural gas fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas fired duct burner rated at 204 MMBTU/h to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR and oxidation catalyst.	Nitrogen Oxides (NOx)	Dry low NOx burners and selective catalytic reduction for NOx control.	3	PPM	PPMVD@15%O2; 24-H AVG; SEE NOTES	BACT-PSD	SIP	There are 4 NOx emission limits in the permit for this emission unit.□ □ Emission limit 1 is 3.0 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. This limit is when the unit is in combined cycle mode.□ □ Emission limit 2 is 25 ppmvd at 15% O2 based on a 4-hour rolling average, except during operation less than 75% peak load. This limit is when the unit is in HRSG bypass mode.□ □ Emission limit 3 is 60.0 lb/h when the unit is in combined cycle mode. It is hourly including startup or shutdown.□ □ Emission limit 4 is 60.0 lb/h when the unit is in HRSG bypass mode. It is based on a 24-hour rolling average as determined each operating hour.□ □ The use of SCR with DLNB is the highest ranked control system and was selected as BACT; therefore, an economic analysis was not performed.
MI-0454	LBWL-ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG1- A nominally rated 667 MMBtu/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst.	Nitrogen Oxides (NOx)	Dry low NOx burners and selective catalytic reduction for NOx control for each CTG/HRSG unit.	3	PPM	PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD	BACT-PSD	SIP	There are 5 NOx emission limits with only 2 listed above. All 5 are detailed below:□ □ Emission limit 1 (above) = 3.0 ppmvd at 15%O2 on a 240hour rolling average as determined each operating hour, except during startup (SU) and shutdown (SD).□ □ Emission limit 2 (above) = 60.0 lbs/hr on an hourly basis including startup or shutdown in combined cycle mode.□ □ Emission limit 3 = 60.0 lbs/hr on a 24-hour rolling average as determined each operating hour. Applies in HRSG bypass mode.□ □ Emission limit 4 = 25 ppmvd at 15%O2 based on a 4-hour rolling average except during operation less than 75% of peak load. Applies in HRSG bypass mode. (NSPS limit).□ □ Emission limit 5 = 25 ppmvd at 15%O2 on a 30-day rolling average except during operation less than 75% of peak load. Applies in combined cycle mode. (NSPS limit).□ □ The use of SCR with the DLNB is the highest ranked control system and was selected as BACT; therefore, an economic analysis was not performed.
MI-0454	LBWL-ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	Nitrogen Oxides (NOx)	Dry low NOx burners and selective catalytic reduction for NOx control for each CTG/HRSG unit.	3	PPM	@15%OX; 24-HR ROLL AVG EXCEPT START/SHUT	BACT-PSD	NSPS	There are 5 NOx emission limits, all of which are listed below:□ □ Emission Limit 1 = 3.0 ppmvd at 15% Oxygen (O2) on a 24-hour rolling average as determined each operating hour, except during startup and shutdown.□ □ Emission Limit 2 = 25 ppmvd at 15% Oxygen (O2) on a 4-hour rolling average, except during operation less than 75% of peak load. Applies in HRSG bypass mode (NSPS limit).□ □ Emission Limit 3 = 25 ppmvd at 15% Oxygen (O2) on a 30-day rolling average, except during operation less than 75% of peak load. Applies in combined cycle mode. (NSPS limit).□ □ Emission Limit 4 = 60.0 lb/hr on an hourly basis, including startup or shutdown in combined cycle mode.□ □ Emission Limit 5 = 60.0 lb/hr on a 24-hour rolling average as determined each operating hour. Applies in HRSG bypass mode.□ □ The use of SCR with the DLNB is the highest ranked control system and was selected as BACT; therefore, an economic analysis was not performed.

Table C-1: RBLC Search Results for Turbines

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*LA-0324	COMMONWEALT H LNG FACILITY	COMMONWEALTH LNG, LLC	Refrgeration Turbines and Generator Turbines (EQT0001 - EQT0006 and EQT0013 - EQT0015)	15.11	natural gas	575	mm btu/hr		Nitrogen Oxides (NOx)	Good combustion practices and use clean fuel.□ Dry low-NOx and selective catalytic reduction.	2.5	PPMVD	@15% O2	BACT-PSD		
CA-1238	PUENTE POWER		Gas turbine	15.11	Natural gas	262	MW		Nitrogen Oxides (NOx)		2.5	PPMVD	1 HOUR@15%O2	OTHER CASE-BY-CASE		
LA-0331	CALCASIEU PASS LNG PROJECT	VENTURE GLOBAL CALCASIEU PASS, LLC	Combined Cycle Combustion Turbines (CCCT1 to CCCT5)	15.21	Natural Gas	921	MM BTU/h		Nitrogen Oxides (NOx)	Low NOx Burners, SCR, and Good Combustion Practices	2.5	PPMV	30 DAY ROLLING AVERAGE	BACT-PSD	NSPS , OPERATING PERMIT	Units are in ppmv @ 15% O2; Averaging time is 30 Day Rolling Average during Normal Operations.
MD-0044	COVE POINT LNG TERMINAL	DOMINION COVE POINT LNG, LP	2 COMBUSTION TURBINES	15.11	NATURAL GAS	130	MW	TWO GENERAL ELECTRIC (GE) FRAME 7EA COMBUSTION TURBINES (CTS) WITH A NOMINAL NET 87.2 MEGAWATT (MW) RATED CAPACITY, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), EQUIPPED WITH DRY LOW-NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), AND OXIDATION CATALYST	Nitrogen Oxides (NOx)	USE OF DRY LOW-NOX COMBUSTOR TURBINE DESIGN (DLN1), USE OF FACILITY PROCESS FUEL GAS AND PIPELINE NATURAL GAS DURING NORMAL OPERATION AND SCR SYSTEM	2.5	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		48.5 LB/SHUTDOWN EVENT. LIMITS ARE TOTAL FOR BOTH FRAME 7 CTS PER STARTUP OR SHUTDOWN EVENT
MI-0451	MEC NORTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator	15.21	Natural gas	3064	MMBTU/H	Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/ Hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR with DLNB (Selective catalytic reduction with Dry low NOx burners)	2.5	PPM	24-HR ROLLING AVG	BACT-PSD	NSPS	There are 4 NOx emission limits with only 2 noted in table above: □ □ Emission limit 1 above = 2 ppmvd based on a 24-hour rolling avg as determined each operating hour, except during startup and shutdown. The underlying applicable requirement (UAR) for this limit is BACT.□ □ Emission limit 2 above = 29.2 lbs/hr based on a 24-hour rolling avg as determined each operating hour, except during startup and shutdown. The UARs are BACT, NAAQS and PSD Increment.□ □ Emission limit 3 = 15 ppmvd at 15% O2 based on a 30-day rolling average as determined each operating day and does not include startup and shutdown. The UAR is NSPS KKKK.□ □ Emission limit 4 is 126.5 lbs/hr, each operating hour during startup or shutdown. The UAR for this limit is BACT, NAAQS and PSD increment. □ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design
*IN-0365	MAPLE CREEK ENERGY LLC		Combined Cycle Turbine CTGB	15.21	natural gas	4200	MMBtu per hour	Option 2 GE Model 7HA.03 Turbine - natural gas-fired combined cycle system with a maximum heat input capacity of 4,200 MMBtu per hour, equipped with a GE combustion turbine generator (CTG) exhausting to a heat recovery steam generator (HRSG) which will feed steam to one steam turbine generator (STG), using dry-low-NOx (DLN) combustors and selective catalytic reduction (SCR) for control of NOx emissions, and an oxidation catalyst as VOC and CO control, and exhausting to stack CTG with continuous emissions monitors for NOx and CO.□ □ Facility will install only one turbine, but at the time of permitting had not decided which turbine would be used.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction system and dry-low-NOx combustors.	2	PPMVD	15% O2 BASED ON A 3-HR AVERAGE	BACT-PSD		
*MI-0445	INDECK NILES, LLC	INDECK NILES, LLC	FGCTGHRSG	15.21	Natural gas	3421	MMBTU/H	3421 MMBTU/ H for each turbine□ 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/ H or 8322 MMBTU/ H for both trains.□ □ Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period.	Nitrogen Oxides (NOx)	SCR with DLNB (Selective Catalytic Reduction with Dry Low NOx Burners)	2	PPM	PPMVD @15% O2. 24HR ROLL AVG EXCEPT SS	BACT-PSD	NSPS	There are 4 emission limits for EACH CTGHRSG within FGCTGHRSG as follows: □ □ Emission Limit 1 = 2 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour, except during startup/shutdown (SS).□ □ Emission Limit 2 = 15 ppmvd at 15%O2 based on a 30-day rolling average as determined each operating day.□ □ Emission Limit 3 = 27.4 lb/h based on a 24-hour rolling average as determined each operating hour, except during startup/shutdown (SS).□ □ Emission Limit 4 = 286 lb/h based on each operating hour during startup or shutdown.□ □ Startup and shutdown operations are limited to 500 hours per 12-month rolling time period for each CTGHRSG train. Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated.
*PA-0298	FUTURE POWER PA/GOOD SPRINGS NGCC FACILITY	FUTURE POWER PA INC	Turbine, COMBINED CYCLE UNIT (Siemens 5000)	15.21	Natural Gas	2267	MMBTU/H		Nitrogen Oxides (NOx)	SCR	2	PPMVD	@ 15% OXYGEN	BACT-PSD	NSPS	
*PA-0314	BEECH HOLLOW	ROBINSON POWER COMPANY, LCC	COMBUSTION TURBINE without DUCT BURNERS UNIT	16.11	Natural Gas	2433	MMBtu/hr	CEMS for NOx, CO	Nitrogen Oxides (NOx)	SCR	2	PPMDV	CORRECTED TO 15% O2	LAER		
*PA-0315	HILLTOP ENERGY CENTER, LLC	HILLTOP ENERGY CENTER, LLC	Combustion Turbine without Duct Burner	15.21	Natural Gas	3509	MMBtu/hr		Nitrogen Oxides (NOx)		2	PPMDV	CORRECTED TO 15% O2	LAER		

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
*PA-0316	RENOVO ENERGY CENTER, LLC	RENOVO ENERGY CENTER, LLC	Combustion Turbine Firing NG	15.21	Natural Gas	0		General Electric model 7AH.02 lean premix DLN natural-gas/ultra-low diesel-fired combustion turbine (CT) and steam turbine (ST), where the CT and ST train is configured in a single shaft alignment and drive one common electric generator capable of producing approximately 500 megawatts (MW) of electricity, shall be equipped with dry-low-NOx (DLN) combustors.	Nitrogen Oxides (NOx)	SCR	2	PPMDV	CORRECTED TO 15% O2	LAER		
*PA-0319	RENAISSANCE ENERGY CENTER	APV RENAISSANCE PARTNERS	COMBUSTION TURBINE UNIT w/o DUCT BURNERS UNIT	15.21	Natural Gas	2665.9	MMBtu/hr		Nitrogen Oxides (NOx)	SCR	2	PPMDV	@15% O2	LAER		
*VA-0335	PANDA STONEWALL LLC	PANDA STONEWALL LLC	Combustion Turbines, Two (2) and HRSG Duct Burners	15.21	Natural Gas	2.55	MMBTU/H	2x1 natural gas-only configuration: Two Siemens SGT6-5000F5 CTs at 2554 MMBtu/hr and two 430 MMBtu/hr duct burners	Nitrogen Oxides (NOx)	Selective Catalytic Reduction (SCR), with ammonia injection and dry low NOx combustion.	2	PPMVD @ 15% O2	W & W/O DUCT BURNING	LAER		Emission Limit 1: 2.0 ppmvd at 15% O2 - normal operations with and w/o duct burner□ Emission Limit 2: 150/105/93/33 lb/event - cold start/warm start/hot start/shutdown
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3,875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Nitrogen Oxides (NOx)	Dry Low NOx Combustion w/ SCR	2	PPMDV @ 15% O2	3-HOUR ROLLING AVERAGE	BACT-PSD	NSPS	Concentration and Mass limits apply at all times excluding startup and shutdown events.
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3,875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Nitrogen Oxides (NOx)	Dry Low NOx Combustor with SCR	2	PPMDV @ 15% O2	3-HOUR ROLLING AVERAGE	BACT-PSD	NSPS	Concentration and Mass limits apply at all times excluding startup and shutdown events.
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Four Combined Cycle Gas-Fired Turbines	15.21	Natural Gas	384	MMBtu/hr	EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility	Nitrogen Oxides (NOx)	SCR, DLN combustors, and good combustion practices	2	PPMV @ 15% O2	3-HOURS	BACT-PSD	NSPS	Allowed 40 hours per year per turbine of operation without SCR and OxCat.
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six Simle Cycle Gas-Fired Turbines	15.11	Natural Gas	1113	MMBtu/hr	EUs 1 - 6 are simple cycle gas turbines used for gas compression at LNG facility	Nitrogen Oxides (NOx)	SCR, DLN combustors, and good combustion practices	2	PPMV @ 15% O2	3-HOURS	BACT-PSD	NSPS	Allowed 40 hours per year per turbine of operation without SCR and OxCat.
AL-0328	PLANT BARRY	ALABAMA POWER COMPANY	Two 744 MW Combined Cycle Units	15.21	Natural Gas	744	MW		Nitrogen Oxides (NOx)	SCR	2	PPM	3 HOUR AVG / @15% O2	BACT-PSD	NSPS , SIP , OPERATING PERMIT	
CA-1251	PALMDALE ENERGY PROJECT	PALMDALE ENERGY, LLC	Combustion Turbines (GEN1 and GEN2)	15.21	Natural Gas	2217	MMBTU/H	Each combustion turbine rated at 214 MW, with a□ maximum heat input rate of 2,217 MMBtu/ H (HHV, at ISO□ conditions); natural gas-fired Siemens SGT6-5000F; each vents to □ dedicated Heat Recovery Steam Generator and a shared 276□ MW Steam Turbine Generator; 160-ft□ stack height; 22-ft stack diameter	Nitrogen Oxides (NOx)	Selective Catalytic Reduction, Dry Low NOx Burners	2	PPM @ 15% O2	1-HOUR	BACT-PSD		Mass Emission Limits During Normal Operation:□ 18.5 lb/hr with duct burner (1-hr average):□ 17.1 lb/hr without duct burner (1-hr average):□ □ Startup and Shutdown Limits: □ Cold Start: 51.5 lb/ event, 39 minutes□ Warm Start: 46.8 lb/ event, 35 minutes□ Hot Start: 43.2 lb/ event, 30 minutes□ Shutdown: 33.0 lb/event, 25 minutes□ Startup/Shutdown: 53.6 lb/hr (1-hr average) (used in modeling analysis)
CT-0157	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/12 months		Nitrogen Oxides (NOx)	SCR	2	PPMVD @15% O2	1 HR BLOCK	LAER	OPERATING PERMIT , NSPS	
CT-0158	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/yr		Nitrogen Oxides (NOx)	SCR	2	PPMVD @15% O2	1 HR BLOCK	LAER	OPERATING PERMIT	
CT-0161	KILLINGLY ENERGY CENTER	NTE CONNECTICUT, LLC	Natural Gas w/o Duct Firing	15.21	Natural Gas	2969	MMBtu/hr	Throughput is for turbine only	Nitrogen Oxides (NOx)	SCR	2	PPMVD @15% O2	1 HOUR BLOCK	LAER	NSPS , SIP , OPERATING PERMIT	
CT-0161	KILLINGLY ENERGY CENTER	NTE CONNECTICUT, LLC	Natural Gas w/Duct Firing	15.21	Natural Gas	2639	MMBtu/hr	Duct burner MRC is 946 MMbtu/hr	Nitrogen Oxides (NOx)	SCR	2	PPMVD @15% O2	1 HOUR BLOCK	LAER	NSPS , SIP , OPERATING PERMIT	
FL-0356	OKEECHOBEE CLEAN ENERGY CENTER	FLORIDA POWER & LIGHT	Combined-cycle electric generating unit	15.21	Natural gas	3096	MMBtu/hr per turbine	3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD.	Nitrogen Oxides (NOx)	Selective catalytic reduction; dry low-NOx; and wet injection	2	PPMVD@15 % O2	GAS, 24-HR BLOCK, EXCLUDING SSM	BACT-PSD	NSPS	NSPS Subpart KKKK is applicable. This subpart is adopted as ‘‘Secondary BACT‘‘ during startup/shutdown/malfunction periods.□ □ Compliance by NOx CEMS.
FL-0367	SHADY HILLS COMBINED CYCLE FACILITY	SHADY HILLS ENERGY CENTER, LLC	1-on-1 combined cycle unit (GE 7HA)	15.21	Natural Gas	3266.9	MMBtu/hour	One nominal 385 MW GE 7HA.02 CTG and one HRSG with duct firing [approximately 210 MMBtu/hour], and one nominal 210 MW steam turbine generator (STG)	Nitrogen Oxides (NOx)	Dry low-NOX combustors and Selective Catalytic Reduction (SCR)	2	PPMVD AT 15% O2	24-HOUR BLOCK AVERAGE BASIS (BACT)	BACT-PSD	NSPS , SIP , OTHER	2nd Limit of 15 ppmvd @ 15% O2 (for turbine loads â‰¥ 75%), 30- operating-day rolling avg. (NSPS Subpart KKKK)□ □ 3rd Limit: 96 ppmvd @15% O2 (for turbine loads < 75%), 30-operating-day rolling avg. (NSPS Subpart KKKK)
FL-0371	SHADY HILLS COMBINED CYCLE FACILITY	SHADY HILLS ENERGY CENTER, LLC	GE 7HA.02 Combustion Turbine and HRSG with Duct Firing	15.21	Natural Gas	3622.1	MMBtu/hour	Throughput based on a compressor inlet air temperature of 59Â° F, the higher heating value (HHV) of natural gas, and 100% load	Nitrogen Oxides (NOx)	Dry low-NOX combustors and Selective Catalytic Reduction (SCR)	2	PPMVD AT 15% O2	24-HOUR BLOCK AVERAGE BASIS (BACT)	BACT-PSD	NSPS	2nd Limit of 15 ppmvd @ 15% O2 (for turbine loads â‰¥ 75%), 30-operating-day rolling avg. (NSPS Subpart KKKK) 3rd Limit: 96 ppmvd @15% O2 (for turbine loads < 75%), 30-operating-day rolling avg. (NSPS Subpart KKKK)
IA-0107	MARSHALLTOW N GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #1 - combined cycle	15.21	natural gas	2258	mmBtu/hr	two identical Siemens SGT6-5000F combined cycle turbines without duct firing, each at 2258 mmBtu/hr generating approx. 300 MW each.	Nitrogen Oxides (NOx)	Low-NOx burners and SCR	2	PPM	30-DAY ROLLING AVG. @15% O2	BACT-PSD	NSPS	
IA-0107	MARSHALLTOW N GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #2 -combined cycle	15.21	natural gas	2258	mmBtu/hr		Nitrogen Oxides (NOx)	SCR, Low-NOx burner	2	PPM	30-DAY ROLLING AVERAGE	BACT-PSD	NSPS	

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
IL-0129	CPV THREE RIVERS ENERGY CENTER	CPV THREE RIVERS, LLC	Combined Cycle Combustion Turbines	15.21	Natural Gas	3474	mmBtu/hr	Throughput of ultra-low sulfur diesel (ULSD) is 3798 mmBtu/hr.□ □ Combined cycle combustion turbines w/ heat recovery steam generator (HRSG). Turbine inlets will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output.	Nitrogen Oxides (NOx)	Selective catalytic reduction (SCR) and low-NOx combustion technology (dry low-NOx combustion technology for natural gas; water injection for ULSD)	2	PPMV @ 15% O2	3-UNIT OPERATING HOURS	LAER		Emission Limit 1 is for natural gas. Emission Limit 2 is for ULSD. □ □ Emission Limits 1 & 2 are effective beginning 36 months after commissioning. Limits 1 & 2 are not applicable during startup, shutdown, tuning and commissioning. Permit limits are as follows, applicable on a per-turbine basis, 3-hr average.□ □ For natural gas: □ □ Without duct burner: 25.2 lb/hr□ With duct burner: 32.0 lb/hr□ Other periods (incl. startup/shutdown): 228 lb/hr□ Extended startup: 228 lb/hr□ Tuning: 228 lb/hr□ □ For ULSD: □ □ Normal Operation: 83.6 lb/ hr□ Extended startup: 277 lb/hr□ Tuning: 277 lb/hr□ □ See also Condition 2.1.6(a)(iv) of the issued permit for operation during transition.
IL-0130	JACKSON ENERGY CENTER	JACKSON GENERATION, LLC	Combined-Cycle Combustion Turbine	15.21	Natural Gas	3864	mmBtu/hr	Combined-cycle combustion turbines with heat recovery steam generator (HRSG). Turbines will have inlet evaporative cooling systems to cool inlet air during warm weather to increase power output.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction (SCR) and low-NOx technology (dry low-NOx combustion technology)	2	PPMV	3-UNIT OPERATING HOURS @ 15% O2	LAER		Emission Limit 1 is applicable for first 36 months of operation.□ Emission Limit 2 is applicable beginning 36 months after commissioning of turbines. Pounds/hour limits without duct burner are: 30.5 (normal operation), 180.3 (startup/shutdown/commissioning) and 91.5 (tuning). Pounds/hour limits with duct burner are: 33.9 (normal operation, 33.9 (startup/shutdown/commissioning) and 91.5 (tuning). All pounds/hour limits for normal operation apply on a 3-hour average. Pounds/hour limits for startup/shutdown/commissioning and tuning apply on a 1-hour average. See also Condition 2.1.6(a)(iv) of the issued permit.
IL-0133	LINCOLN LAND ENERGY CENTER	LINCOLN LAND ENERGY CENTER (A/K/A EMBERCLEAR)	Combined-Cycle Combustion Turbines	15.21	Natural Gas	3647	mmBtu/hour	Combined-cycle comustion turbines and heat recovery steam generators (HRSG) with a 35 mmBtu/hr duct burner. Turbine inlets would have evaporative cooling systems to cool the inlet air during warm weather to increase power output.	Nitrogen Oxides (NOx)	Dry low-NOx combustion with ultra-low NOx combustors; low-NOx duct burners; and selective catalytic reduction (SCR)	2	PPMV @ 15% O2	SEE NOTES	BACT-PSD	NSPS	Emission limit 1 is applicable during normal operation, excluding startup and shutdown; averaging time: 3-operating hour, rolled hourly. Beginning 36 months after completion of shakedown, the averaging time: 1-operating hour.□ □ Emission Limit 2 is applicable during startup and shutdown: 130 pounds/hour (cold start/shakedown); 71 pounds/hour (non-cold start); 55 pounds/hour (shutdown). Limits for startup and shutdown are applicable for each clock hour that includes a startup, shutdown or shakedown.□ □ Compliance demonstrated using a continuous emissions monitoring system (CEMS)
KY-0106	RIVERSIDE GENERATING CO LLC	RIVERSIDE GENERATING CO LLC	Five Combined Cycle Generation Turbines (CCGT) with Duct burners and HRSG	11.31	Natural Gas	1700	MW	Five natural gas-fired turbines for electric generation, rated 2,076 MMBtu/hr each.□ □ New Project: □ Five Combined Cycle Generation Turbines (CCGT)□ (EU 01B-05B) - Five New Natural Gas-Fired Duct Burners for Five New Heat Recovery□ Steam Generators (HRSG) providing heat for Two New Steam Turbine Generators (STG)□ System (1) â€˜ Three CTG/ HRSG combined cycles to one STG□ System (2) â€˜ Two CTG/ HRSG combined cycles to one STG□ □ Maximum Rated Capacity: EU 01B-05B Duct Burners for HRSGs, 660 MMBtu/ hr each STG, 3x1 â€˜ 500MW, 2x1 â€˜ 350 MW□ Construction Commenced: EU01B-05B proposed 2016	Nitrogen Oxides (NOx)	Water injection, dry low NOX burners and Selective□ Catalytic Reduction (SCR)	2	PPM	15% OXYGEN, DRY BASIS, 1- HOUR AVG	BACT-PSD	NSPS	
LA-0364	FG LA COMPLEX	FG LA LLC	Cogeneration Units	15.21	Natural Gas	2222	mm btu/h	Throughput is maximum operating rate. 2139 MM BTU/hr normal operating rate.	Nitrogen Oxides (NOx)	Dry low NOx combustor design along with SCR.	2	PPMVD	12-MONTH ROLLING AVERAGE	BACT-PSD	NESHAP , NSPS	BACT limit is corrected to 15% oxygen.
LA-0391	MAGNOLIA POWER GENERATING STATION UNIT 1	MAGNOLIA POWER LLC	Combined Cycle Gas Turbine w/ Duct Burners and HRSG	15.21	Natural Gas	5081	mm BTU/h	Normal operating rate is 4930 MMBTU/h.	Nitrogen Oxides (NOx)	Dry low-NOx combustor design, selective catalytic reduction (SCR), and good combustion practices.	2	PPMVD	24-HR ROLLING AVG BASED ON 1-HR AVG	BACT-PSD	NSPS	Units are ppmvd@15% O2 on a 24-hour rolling average based on a one-hour average.
MA-0039	SALEM HARBOR STATION REDEVELOPMENT	FOOTPRINT POWER SALEM HARBOR DEVELOPMENT LP	Combustion Turbine with Duct Burner	15.21	Natural Gas	2449	MMBTU/H	two 315 MW (nominal) GE Energy 7F Series 5 Rapid Response Combined Cycle Combustion Turbines with Duct Burners and 31 MW (estimated) steam turbine generators	Nitrogen Oxides (NOx)	Dry Low NOx Combustors &□ Selective Catalytic Reduction	2	PPMVD @ 15% O2	1 HR BLOCK AVG/DO NOT APPLY DURING SS	LAER	NSPS , SIP , OPERATING PERMIT	during start-ups (â‰¤ 45 minutes): NOx â‰¤ 89 lb per event□ during shutdowns (â‰¤ 27 minutes): NOx â‰¤ 10 lb per event□ □ the project is subject LAER for NOx as ozone precursor, and BACT-PSD for NOx as NO2 precursor.
MA-0041	MEDICAL AREA TOTAL ENERGY PLANT	MATEP LIMITED PARTNERSHIP	Combustion Turbine with Duct Burner	16.21	Natural Gas	203.4	MMBTU/H	a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing, 158.8MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (38.8MMBtu/hr NG firing only).□ Max. ULSD usage: 878,400 gallons per 12-month rolling period	Nitrogen Oxides (NOx)	Dry Low NOx Combustor & Selective Catalytic Reduction	2	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	NSPS , SIP , OPERATING PERMIT	NOx limits are determined as BACT under 310 CMR 7.02(8).□ NOx(firing NG): â‰¤0.0074 lb/MMBtu, â‰¤1.21 lb/hr(no duct firing), â‰¤1.51 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤36.2 lb per event, during shutdowns (â‰¤1 hr): â‰¤ ¤11.2 lb per event. □ NOx(turbine firing ULSD): â‰¤0.0233 lb/MMBtu(no duct firing), â‰¤0.0231 lb/MMBtu(with duct firing), â‰¤3.70 lb/hr(no duct firing), â‰¤4.56 lb/hr(with duct firing); during start-ups(â‰¤3 hrs): â‰¤112.6 lb per event, during shutdowns(â‰¤1 hr): â‰¤34.2 lb per event.

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Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MA-0043	MIT CENTRAL UTILITY PLANT	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Combustion Turbine with Duct Burner	16.21	Natural Gas	353	MMBtu/hr	two nominal 22 Megawatt (MW) Solar Titan 250 Combustion Turbine Generators (219MMBtu/hr for NG firing, 212MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (134MMBtu/hr NG firing only). Max. ULSD usage: 279,216 gallons per 12-month rolling period per CTG	Nitrogen Oxides (NOx)	Dry Low NOx combustor for CTG & Selective Catalytic Reduction	2	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	NSPS , SIP , OPERATING PERMIT	NOx limits are determined as BACT under 310 CMR 7.02(8). NOx(firing NG): â‰¤0.0074 lb/MMBtu, â‰¤1.65 lb/hr(no duct firing), â‰¤2.65 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤32.0 lb per event, during shutdowns (â‰¤1 hr): â‰¤12.4 lb per event. NOx(turbine firing ULSD): â‰¤9.0ppmvd@15% O2, â‰¤0.035 lb/MMBtu&â‰¤8.02 lb/hr(no duct firing); â‰¤6.8ppmvd@a5% O2,â‰¤0.026 lb/MMBtu&â‰¤9.50 lb/hr(with duct firing); during start-ups(â‰¤3 hrs): â‰¤65 lb per event, during shutdowns(â‰¤1 hr): â‰¤25 lb per event.
MD-0041	CPV ST. CHARLES	CPV MARYLAND, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	725	MEGAWATT	TWO GENERAL ELECTRIC (GE) F-CLASS ADVANCED COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 725 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST	Nitrogen Oxides (NOx)	DRY LOW-NOX COMBUSTOR DESIGN AND SELECTIVE CATALYTIC REDUCTION (SCR)	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER	NSPS	EMISSION # 1 IS WITH AND WITHOUT DUCT FIRING□ □ EMISSION #2 IS FOR EACH STARTUP/SHUTDOWN EVENT
MD-0042	WILDCAT POINT GENERATION FACILITY	OLD DOMINION ELECTRIC CORPORATION (ODEC)	2 COMBINED CYCLE COMBUSTION TURBINES, WITH DUCT FIRING	15.21	NATURAL GAS	1000	MW	TWO MITSUBISHI ‘‘G‘‘ MODEL COMBUSTION TURBINE GENERATORS (CTS) WITH A NOMINAL GENERATING CAPACITY OF 270 MW CAPACITY EACH, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), OXIDATION CATALYST	Nitrogen Oxides (NOx)	USE OF DRY LOW-NOX COMBUSTOR TURBINE DESIGN , USE OF PIPELINE QUALITY NATURAL GAS DURING NORMAL OPERATION AND SCR SYSTEM	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		WITH AND WITHOUT DUCT FIRING. NOX EMISSION DURING SHUTDOWNS IS 100 LB/EVENT. THE STARTUP AND SHUTDOWN LIMITS ARE FOR BOTH CTS COMBINED
MD-0045	MATTAWOMAN ENERGY CENTER	MATTAWOMAN ENERGY, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	286	MW	TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□ □ HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Nitrogen Oxides (NOx)	GOOD COMBUSTION PRACTICES, DRY LOW-NOX COMBUSTOR DESIGN AND SELECTIVE CATALYTIC REDUCTION (SCR)	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE (EXCLUDING SU/SD)	BACT-PSD	NSPS	WITH AND WITHOUT DUCT FIRING
MD-0046	KEYS ENERGY CENTER	KEYS ENERGY CENTER, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	235	MW	TWO SIEMENS F-CLASS (SGT6-500FEE) SERIES COMBUSTION TURBINES (CTS) WITH DUCT BURNERS, WITH A NOMINAL GENERATING CAPACITY OF 735 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), DRY LOW-NOX COMBUSTORS, SCR, OXIDATION CATALYST, AND FUELED EXCLUSIVELY ON PI PELINE QUALITY NATURAL GAS.□ □ HEAT INPUT LIMITED TO 6,802 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR KEYS TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS KEYS PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Nitrogen Oxides (NOx)	GOOD COMBUSTION PRACTICES, DRY LOW-NOX COMBUSTOR DESIGN AND SELECTIVE CATALYTIC REDUCTION	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	BACT-PSD	NSPS	WITH AND WITHOUT DUCT FIRING, EXCEPT DURING PERIODS OF STARTUP/SHUTDOWN
MI-0432	NEW COVERT GENERATING FACILITY	NEW COVERT GENERATING COMPANY, LLC	FG-TURB/DB1-3 (3 combined cycle combustion turbine and heat recovery steam generator trains)	15.21	Natural gas	1230	MW	Three (3) combined-cycle combustion turbine (CT) / heat recovery steam generator (HRSG) trains. Each CT is a natural gas fired Mitsubishi model 501G, equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG includes a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity and a dry low NOx burner.	Nitrogen Oxides (NOx)	Good combustion practices, DLN burners and SCR.	2	PPMVD	AT 15%O2; EACH INDIV. CT/HRSG TRAIN	BACT-PSD	NSPS , SIP	Each emission limit is per each individual CT/HRSG train in FG-TURB/ DB1-3.□ □ The emission limits above DO NOT include startup/shutdown.□ □ There are 4 NOx emission limits, including an NSPS limit. They are all as follows: □ Em. Limit 1 = 2.0 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour.□ □ Em. Limit 2 = 22.4 lb/h based on a 24-hour rolling average as determined each operating hour.□ □ Em Limit 3 = 15 ppmvd at 15%O2 based on a 30-day rolling average as determined each operating day. This limit is per NSPS KKKK.□ □ Em Limit 4 = 116 ton/yr based on a 12-month rolling time period as determined at the end of each calendar month.

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR with DLNB (Selective catalytic reduction with dry low NOx burners).	2	PPMV	AT 15%O2; 24-HR ROLL AVG NOT S.S.	BACT-PSD	NSPS , SIP	The estimated efficiency of SCR with DLNB is a range of 80-90%.□ □ There are 4 NOx emission limits in the permit, as follows: □ □ Emission Limit 1 = 2 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour except during startup and shutdown (S.S.).□ □ Emission limit 2 - 15 ppmvd at 15%O2 based on a 30-day rolling average as determined each operating day (not including startup and shutdown) per NSPS KKKK.□ □ Emission limit 3 = 29.7 LB/H based on a 24-hour rolling average as determined each operating hour except during startup and shutdown.□ □ Emission limit 4 = 126.5 LB/H based on each operating hour during startup or shutdown.□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/ hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR with DLNB (Selective catalytic reduction with Dry Low NOx burners).	2	PPMVD	AT 15%O2; 24-H ROLL AVG; NOT S.S.	BACT-PSD	NSPS , SIP	There are 4 NOx emission limits for EUCTGHRSG as follows: □ Emission limit 1 = 2 ppmvd at 15%O2 based on a 24-hour rolling average as determined each operating hour except during startup and shutdown.□ □ Emission Limit 2 = 29.7 lb/h based on a 24-hour rolling average as determined each operating hour except during startup and shutdown.□ □ Emission Limit 3 = 15 ppmvd at 15%O2 based on a 30-day rolling average as determined each operating day. This limit is from NSPS KKKK.□ □ Emission limit 4 = 126.5 lb/h each operating hour during startup or shutdown.□ □ Estimated efficiency of SCR with DLNB is a range of 80-90%□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level shall be described in
MI-0435	BELLE RIVER COMBINED CYCLE POWER PLANT	DTE ELECTRIC COMPANY	FGCTGHRSG (EUCTGHRSG1 & EUCTGHRSG2)	15.21	Natural gas	0		Two (2) combined-cycle natural gas-fired combustion turbine generators, each with a heat recovery steam generator (CTGHRSG).□ □ Plant nominal 1,150 MW electricity production. Turbines are each rated at 3,658 MMBTU/H and HRSG duct burners are each rated at 800 MMBTU/H. □ □ The HRSGs are not capable of operating independently from the CTGs.	Nitrogen Oxides (NOx)	SCR with DLNB (Selective catalytic reduction with dry low NOx burners).	2	PPMVD	AT 15%O2; 24-H ROLL AVG; EACH UNIT;	BACT-PSD	NSPS , SIP	There are 4 NOx emission limits in the permit, described below:□ □ Emission limit 1 = 2 ppmvd at 15% O2 based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown (S.S.). The limit applies to each unit.□ □ Emission limit 2 = 28.90 LB/H based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown (S.S.). The limit applies to each unit.□ □ Emission limit 3 = 15 ppmvd at 15% O2 based on a 30-day rolling average as determined each operating day. The limit applies to each unit and is from NSPS KKKK.□ □ Emission limit 4 = 262.4 LB/H each operating hour during startup or shutdown (S.S.). The limit applies to each unit.□ □ The estimated efficiency of SCR with DLNB is a range of 80-90%.□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the

Table C-1: RBLC Search Results for Turbines

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RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0442	THOMAS TOWNSHIP ENERGY, LLC	THOMAS TOWNSHIP ENERGY, LLC	FGCTGHRSG	15.21	Natural gas	625	MW	Two (2) combined-cycle natural gas-fired combustion turbine generators (CTGs), each with a heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG). Each CTGHRSG has a combined nominal 625 MW electricity production (ISO) and a maximum combined heat input rating of 4,200 MMBTU/hr (HHV). Each HRSG is equipped with a natural gas-fired duct burner with a maximum rating of 560 MMBTU/hr (HHV) (ISO) to provide heat for additional steam production.	Nitrogen Oxides (NOx)	Good combustion practices, dry low NOx burners and selective catalytic reduction (SCR).	2	PPM	EACH; 24-HR ROLL.AVG EXCEPT START/SHUT	BACT-PSD	NSPS	There are 3 emission limits within the permit and each limit applies to each unit.□ □ Emission Limit 1 = 2 ppmvd based on a 24-hour rolling average as determined each hour, except during startup and shutdown. Table 1 of 40 CFR Part 60 Subpart KKKK allows 96 ppmvd NOx at 15 percent O2 when the turbines are operating at less than 75 percent of peak load, or at temperatures less than 0 deg. F.□ □ Emission Limit 2 = 190 lb/hour and applies hourly, including startup or shutdown. Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the combustion process ends at flame-off. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in special condition (SC) III.2 of the permit.□ □ Emission Limit 3 = 15 ppmvd, each unit and is based on a 30-day rolling average, except during operation less than 75 percent of peak load. Does not include startup and shutdown. Table 1 of 40 CFR Part 60 Subpart KKKK allows 96 ppmvd NOx at 15 percent O2 when the turbines are operating at less than 75 percent of peak
MI-0452	MEC SOUTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	3064	MMBTU/H	Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/ H (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR with DLNB [Selective Catalytic Reduction with Dry Low NOx Burners]	2	PPM	24-HR ROLLING AVG	BACT-PSD	NSPS , SIP	There are 4 NOx emission limits, all 4 will be described below:□ □ Emission limit 1 = 2 ppmvd based on a 24-hour rolling average as determined each operating hour, except during startup and shutdown. The applicable requirement is BACT.□ □ Emission limit 2 = 29.2 lbs/hr based on a 24-hour rolling average as determined each operating hour except during startup and shutdown. The applicable requirements are BACT, NAAQS and PSD increment.□ □ Emission limit 3 = 15 ppmvd at 15%O2 based on a 30-day rolling average as determined each operating day. The applicable requirement is NSPS KKKK.□ □ Emission limit 4 = 126.5 lbs/hr based on an operating hour during startup or shutdown. The applicable requirements are BACT, NAAQS and PSD increment.□ □ Estimated efficiency of SCR with DLNB is a range of 80-90%□ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent
MI-0455	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	EUCTGHRSG1	15.21	Natural gas	4197.6	MMBTU/H		Nitrogen Oxides (NOx)	Selective catalytic regeneration	2	PPM	PPMVD AT 15%O2; 24-HR ROLL AVG EXC SU/SD	BACT-PSD	NSPS	There are 4 NOx emission limits, all listed below:□ □ Emission limit 1 = 2.0 ppmvd at 15% oxygen on a 24-hour rolling average except during SU/ SD.□ □ Emission limit 2 = 39.6 lb/hr on an hourly basis except during SU/ SD.□ □ Emission limit 3 = 15 ppmvd at 15% oxygen on a 4-hour rolling average except during operations less than 75% of peak load. This is a BACT + NSPS limit.□ □ Emission limit 4 = 851.2 lb/hr during SU/SD.
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine -Siemens turbine without Duct Burner	15.21	Natural gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each Siemens combustion turbine will be 2,356 MMBtu/hr(HHV)	Nitrogen Oxides (NOx)	Selective Catalytic Reduction and Dry Low NOx	2	PPMVD@ 15% O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	LAER		
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - SIEMENS	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two Siemens turbines and two associated duct burners) □ The heat input rate of the Siemens turbine will be 2,356 MMBtu/hr(HHV) with a 62.1 duct burner MMBtu/hr(HHV).	Nitrogen Oxides (NOx)	Selective Catalytic Reduction System (SCR)	2	PPMVD	3-HR ROLLING AVE BASED ON 1-HR BLOCK AVE	LAER	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - GENERAL ELECTRIC	15.21	Natural gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion each turbine will be 2,312 MMBtu/hr(HHV) with a 164.4 MMBtu/hr duct burner	Nitrogen Oxides (NOx)	Selective Catalytic Reduction Systems(SCR) and Dry Low NOx	2	PPMVD@15 %O2	3-HR BLOCK AVERAGE BASED ON 1-HR BLOCK	LAER	NSPS , OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITHOUT DUCT BURNER - GENERAL ELECTRIC	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion turbine will be 2,312 MMBtu/hr(HHV)	Nitrogen Oxides (NOx)	Selective Catalytic Reduction System (SCR) and Dry Low NOx	2	PPMVD@15 %O2	3-HR ROLLING AVERAE BASED ON 1 HR BLOCK	LAER	NSPS , OPERATING PERMIT	
NJ-0082	WEST DEPTFORD ENERGY STATION	WEST DEPTFORD ENERGY ASSOCIATES	Combined Cycle Combustion Turbine without Duct Burner	15.21	Natural Gas	20282	MMCF/YR	This is a 427 MW Siemens Combined Cycle Turbine with duct burner□ Heat Input rate of the turbine = 2276 MMbtu/ hr (HHV)□ Heat Input rate of the Duct burner= 777 MMbtu/hr(HHV)□ □ The fuel use of 20,282 MMCF/YR is for three turbines and three Duct burner.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction System (SCR) and use of natural gas a clean burning fuel	2	PPMVD@15 %O2	3-HR ROLLING AVE BASED ON 1-HR BLOCK	LAER	NSPS , OPERATING PERMIT	

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NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine with Duct Burner firing natural gas	15.11	Natural Gas	0			Nitrogen Oxides (NOx)	SCR and use of natural gas a clean burning fuel	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK	LAER	NSPS , OPERATING PERMIT	
NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine without Duct Burner Firing Natural Gas	15.11	Natural Gas	28169501	MMBTU/YR	Natural Gas Usage: <=28,169,501 MMBtu/year which includes maximum ultra low sulfur distillate oil usage of =2,371,943 MMBTU/year	Nitrogen Oxides (NOx)	SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK	LAER	NSPS , OPERATING PERMIT	
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner	15.21	natural gas	4000	h/yr		Nitrogen Oxides (NOx)	SELECTIVE CATALYTIC REDUCTION AND DRY LOW NOX	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK AV	LAER	NSPS , OPERATING PERMIT	COMPLIANCE BY CEMS AND STACK TESTING
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner	15.21	Natural Gas	8040	H/YR		Nitrogen Oxides (NOx)	Selective Catalytic Reduction System and Dry Low NOx	2	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK AV	LAER	OPERATING PERMIT , NSPS	COMPLIANCE BY CEMS AND STACK TESTING
NY-0103	CRICKET VALLEY ENERGY CENTER	CRICKET VALLEY ENERGY CENTER LLC	Turbines and duct burners	15.11	natural gas	228	mw		Nitrogen Oxides (NOx)	dry low NOx burners in combination with selective catalytic reduction	2	PPMVD @ 15% O2	1 H	LAER		Applies to all operating loads, except during startup and shutdown.
OR-0050	TROUTDALE ENERGY CENTER, LLC	TROUTDALE ENERGY CENTER, LLC	Mitsubishi M501-GAC combustion turbine, combined cycle configuration with duct burner.	15.21	natural gs	2988	MMBTU/H	or ULSD; Duct burner 499 MMBtu/hr, natural gas	Nitrogen Oxides (NOx)	Utilize dry low-NOx burners when combusting natural gas; □ Utilize water injection when combusting ULSD; □ Utilize selective catalytic reduction (SCR) with aqueous ammonia injection at all times except during startup and shutdown;□ Limit the time in startup or shutdown.	2	PPMDV AT 15% O2	3-HR ROLLING AVERAGE ON NG	BACT-PSD		
PA-0305	SHELL CHEM APPALACHIA/PETROCHEMICALS COMPLEX	SHELL CHEMICAL APPALACHIA	Combustion turbine wih duct burner and heat recovery steam generator	15.11	Natural Gas	0	Three 40.6 MW turbines	Three (3) General Electric Frame 6B NG fired turbine with duct burners and heat recovery steam generators. Total electric generating capacity will be 250.4 MW from cogeneration three turbines at 40.6 MW and two HRSG at 84.3 MW. Excess electricity generated will be sold to the grid in quantities sufficient to classify the facility as an electric utility.	Nitrogen Oxides (NOx)		2	PPMDV @ 15% O2	1 HOUR AVG EX DURING STARTUP AND SHUTDOW	LAER		113 lb/hr during startup and shutdown
PA-0306	TENASKA PA PARTNERS/WESTMORELAND GEN FAC	TENASKA PA PARTNERS LLC	Large combustion turbine	15.21	Natural Gas	0		This process entry is for operations with the duct burner. Limits entered are for each turbine.	Nitrogen Oxides (NOx)	SCR, DLN, and good combustion practice	2	PPMVD@15 % O2		LAER	NSPS	At no time may a unit exceed 340 lb/hr from each combined cycle combustion turbine to ensure compliance with 1 hr NO2 NAAQS.
PA-0307	YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT	CALPINE MID-MERIT, LLC	Two Combine Cycle Combustion Turbine with Duct Burner	15.21	Natural Gas	3001.57	MCF/hr	Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner)	Nitrogen Oxides (NOx)	SCR, Dry Lo-NOx combustor, good combustion practices and low sulfur fuels	2	PPVDM @ 15 O2		LAER		Tons per year limit is for cumulative emissions from both CCCT in any 12-month period
PA-0309	LACKAWANNA ENERGY CTR/JESSUP	LACKAWANNA ENERGY CENTER, LLC	Combustion turbine with duct burner	15.21	Natural gas	3304.3	MMBtu/hr	Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr.	Nitrogen Oxides (NOx)	Dry low-NOx burners, SCR, exclusive natural gas	2	PPMDV @15% O2		LAER	NSPS	NOx CEMS 1-hour average
PA-0310	CPV FAIRVIEW ENERGY CENTER	CPV FAIRVIEW, LLC	Combustion turbine and HRSG with duct burner NG only	15.21	Natural Gas	3338	MMBtu/hr	Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□ Each CCCT and duct burner have 5 operational scenarios: □ 1 CCCT with duct burner fired - fueled by NG only:□ 2 CCCT with duct burner fired - fueled by NG blend with ethane:□ 3 CCCT without duct burner fired - fueled by NG only:□ 4 CCCT without duct burner fired - fueled by NG blend with ethane:□ 5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only)	Nitrogen Oxides (NOx)	Dry Low NOx combustion technology, SCR at all steady state operating loads, good combustion and operating practices	2	PPMDV @ 15% O2		LAER	NSPS	ppmdv limit is for each turbine with duct burner, TPY is a cumulative total.
PA-0311	MOXIE FREEDOM GENERATION PLANT	MOXIE FREEDOM LLC	Combustion Turbine With Duct Burner	15.21	Natural Gas	3727	MMBtu/hr	DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□ Emissions limits are for each combustion turbine/duct burner block.	Nitrogen Oxides (NOx)	DLN burner, SCR, good engineering practice	2	PPMDV @ 15% O2		LAER	NSPS	106.2 tpy 12-month rolling basis
PA-0311	MOXIE FREEDOM GENERATION PLANT	MOXIE FREEDOM LLC	Combustion Turbine without Duct Burner	15.21		0			Nitrogen Oxides (NOx)	DLN burners, SCR, good engineering practice	2	PPMDV @15% O2		LAER	NSPS	106.2 tpy on 12-month rolling basis
PA-0333	ESC TIOGA COUNTY POWER LLC/ELEC PWR GEN FAC	ESC TIOGA COUNTY POWER, LLC	COMBUSTION TURBINE/DUCT BURNER	15.21	Natural Gas	4469	MMBtu/Hr		Nitrogen Oxides (NOx)	SCR, Catalytic Oxidizer	2	PPMVD	@ 15% O2 / 1 HR	LAER		
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #2 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR, CATALYTIC OXIDIZER	2	PPMVD	@ 15% O2 / 1 HR	LAER		
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #1 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Nitrogen Oxides (NOx)	SCR, Catalytic Oxidizer	2	PPMVD	@ 15% O2 / 1 HR	LAER		
TN-0162	JOHNSONVILLE COGENERATION	TENNESSEE VALLEY AUTHORITY	Natural Gas-Fired Combustion Turbine with HRSG	15.21	Natural Gas	1339	MMBtu/hr	Turbine throughput is 1019.7 MMBtu/hr when burning natural gas and 1083.7 MMBtu/hr when burning No. 2 oil. Duct burner throughput is 319.3 MMBtu/hr. Duct burner firing will occur during natural gas combustion only.	Nitrogen Oxides (NOx)	Good combustion design and practices, selective catalytic reduction (SCR)	2	PPMVD @ 15% O2	30 UNIT-OPERATING-DAY MOVING AVERAGE	BACT-PSD	NSPS	Emission limit #1 is for natural gas combustion, emission limit #2 is for No. 2 oil combustion.

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0660	FGE TEXAS POWER I AND FGE TEXAS POWER II	FGE POWER LLC	Alstom Turbine	15.21	Natural Gas	230.7	MW	Four (4) Alstom GT24 CTGs, each with a HRSG and DBs, max design capacity 409 MMBtu/hr	Nitrogen Oxides (NOx)	Selective catalytic reduction	2	PPMVD	CORRECTED TO 15% O2, ROLLING 24 HR AVE	BACT-PSD		
TX-0666	PINCREST ENERGY CENTER	PINECREST ENERGY CENTER, LLC	Combined-cycle gas turbine electric generating facility	11.31	natural gas	637	MW	three possible turbines: General Electric 7Fa.05, Siemens SGT6-5000F(4), or Siemens SGT6-5000F(B).	Nitrogen Oxides (NOx)	aqeuous ammonia-based SCR	2	PPMVD @ 15% O2	ROLLING 24-HR AVERAGE	BACT-PSD	NSPS , MACT	
TX-0678	FREEPORT LNG PRETREATMENT FACILITY	FREEPORT LNG DEVELOPMENT LP	Combustion Turbine	15.21	natural gas	87	MW	The exhaust heat from the turbine will be used to heat a heating medium which is used to regenerate rich amine from the acid gas removal system.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	15@ O2, 3 HOUR ROLLING AVERAGE	BACT-PSD		The turbine is fuelad by what is technically natural gas but contains enough nitrogen to affect the Wobbe Index of the turbine fuel gas compared to typical pipeline gas.
TX-0689	CEDAR BAYOU ELECTRIC GENERATION STATION	NRG TEXAS POWER	Combined cycle natural gas turbines	15.21	Natural Gas	225	MW		Nitrogen Oxides (NOx)	DLN, SCR	2	PPM	24HR ROLLING AVG.	BACT-PSD		
TX-0702	UTILITIES TURBINES	FORMOSA PLASTICS CORPORATION	Turbines for Steam and Electricity Generation	15.25	natural gas, hydrogen, tail gas	35000	LB/H	Turbines will use sweet natural gas, hydrogen, olefins tail gas to generate electricity and steam in support of the proposed expansion to the Olefins Plant. Turbines will be equipped with dry lo-NOx burners, SCR and heat recovery steam generators	Nitrogen Oxides (NOx)	Dry lo-NOx burners with SCR and good engineering/combustion practices will be used to control NOx emissions from turbines will achieve maximum 2ppmvd at 15% oxygen.	2	PPMVD	AT 15% OXYGEN	BACT-PSD		
TX-0704	UTILITY PLANT	M & G RESINS USA LLC	cogeneration turbine	16.21	natural gas	49	MW	General Electric LM6000 natural gas-fired combustion turbine equipped with lean pre-mix low-NOx combustors.□ □ One heat recovery steam generator (HRSG) with 263 million British thermal units per hour (MMBtu/hr) natural gas-fired duct burner system containing a selective catalytic reduction system (SCR)	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0710	VICTORIA POWER STATION	VICTORIA WLE L.P.	combined cycle turbine	15.21	natural gas	197	MW	General Electric 7FA.04 at 197 MW nominal ouput. The duct burners will be capable of a maximum natural gas firing rate of up to 483 MMBtu/hr (HHV). The duct burners may be fired additional hours; however, total annual firing will not exceed the equivalent of 4,375 hours at maximum capacity per duct burner. The available capacity of the existing steam turbine will be increased from 125 MW in its existing 1x1x1 configuration to approximately 185 MW in the 2x2x1 configuration.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0712	TRINIDAD GENERATING FACILITY	SOUTHERN POWER COMPANY	combined cycle turbine	15.21	natural gas	497	MW	The facility will consist of a Mitsubishi Heavy Industries (MHI) J model gas fired combustion turbine nominally rated at 497 megawatts (MW) equipped with a HRSG and DB with a maximum design capacity of 402 million British thermal units per hour (MMBtu/hr). The gross nominal output of the CTG with HRSG and DB is 530 MW.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		7 ppm ammonia slip limit
TX-0713	TENASKA BROWNSVILLE GENERATING STATION	TENASKA BROWNSVILLE PARTNERS, LLC	(2) combined cycle turbines	15.21	natural gas	274	MW	Each CTG is site-rated at 274 MW gross electric output at 62Â°F ambient temperature. At this condition, two HRSGs with full duct burner firing produce enough steam to generate an additional 336 MW, for a total of 884 MW gross, or with about 5% losses, about 840 MW net electric output. Under summertime conditions, the net output is approximately 800 MW with the 2x1 CCGT configuration or about 400 MW with the 1x1 CCGT configuration.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0714	S R BERTRON ELECTRIC GENERATING STATION	NRG TEXAS POWER LLC	(2) combined cycle turbines	15.21	natural gas	240	MW	The gas turbines will be one of three options: □ □ (1) Two Siemens Model F5 (SF5) CTGs each rated at nominal capability of 225 megawatts (MW). Each CTG will have a duct fired HRSG with a maximum heat input of 688 million British thermal units per hour (MMBtu/ hr).□ □ (2) Two General Electric Model 7FA (GE7FA) CTGs each rated at nominal capability of 215 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 523 MMBtu/hr. □ □ (3) Two Mitsubishi Heavy Industry G Frame (MHI501G) CTGs each rated at a nominal electric output of 263 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 686 MMBtu/hr.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		7 ppm ammonia slip limit
TX-0730	COLORADO BEND ENERGY CENTER	COLORADO BEND II POWER, LLC	Combined-cycle gas turbine electric generating facility	15.21	natural gas	1100	MW	combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02	Nitrogen Oxides (NOx)	SCR and oxidation catalyst	2	PPMVD @ 15% O2	24-HR AVERAGE	BACT-PSD	NSPS	NSPS KKKK
TX-0751	EAGLE MOUNTAIN STEAM ELECTRIC STATION	EAGLE MOUNTAIN POWER COMPANY LLC	Combined Cycle Turbines (>25 MW) â€" natural gas	15.21	natural gas	210	MW	Two power configuration options authorized:□ Siemens â€" 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner:□ GE â€" 210 MW + 349.2 MMBtu/hr duct burner	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM	ROLLING 24-HR AVERAGE	LAER	SIP , NSPS	
TX-0767	LON C. HILL POWER STATION	LON C. HILL, L.P.	Combined Cycle Turbines (>25 MW)	15.21	natural gas	195	MW	Two power configuration options authorized:□ Siemens â€" 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner:□ GE â€" 195 MW + 670 MMBtu/hr duct burner	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM	ROLLING 24-HR AVERAGE	BACT-PSD	NSPS	
TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM	24-HR AVERAGE	BACT-PSD	NSPS	
TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM	24-HR AVERAGE	BACT-PSD	NSPS	
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM		BACT-PSD	NSPS	NSPS KKKK AND TTTT
TX-0789	DECORDOVA STEAM ELECTRIC STATION	DECORDOVA II POWER COMPANY LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr.	Nitrogen Oxides (NOx)	Selective Catalytic Reduction	2	PPM		BACT-PSD	NSPS	KKKK AND TTTT
TX-0819	GAINES COUNTY POWER PLANT	SOUTHWESTERN PUBLIC SERVICE COMPANY	Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator	15.21	NATURAL GAS	426	MW	Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators	Nitrogen Oxides (NOx)	Selective Catalytic Reduction (SCR) and Dry Low NOx burners	2	PPMVD	15% O2 3-H AVG	BACT-PSD		

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0834	MONTGOMERY COUNTY POWER STATIOIN	ENTERGY TEXAS INC	Combined Cycle Turbine	15.21	NATURAL GAS	2635	MMBTU/HR/UNIT	Two Mitsubishi M501GAC turbines (without fast start)	Nitrogen Oxides (NOx)	SCR and Dry Low NOx burners	2	PPMVD	15% O2 1-HOUR AVERAGE	LAER	NSPS , MACT	NSPS KKKK & TTTT, MACT YYYY
VA-0325	GREENSVILLE POWER STATION	VIRGINIA ELECTRIC AND POWER COMPANY	COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3)	15.21	natural gas	3227	MMBTU/HR	3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration.	Nitrogen Oxides (NOx)	SCR	2	PPMVD	1 HR AVG	N/A		Turbine: 2.0 ppmvd @ 15% O2 (1-hour average)
VA-0328	C4GT, LLC	NOVI ENERGY	GE Combustion Turbine - Option 1 - Normal Operation	15.21	natural gas	34000	MMCF/YR	Option 1: □ Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Nitrogen Oxides (NOx)	dry, low NOx burners and selective catalytic reduction	2	PPMVD @ 15% O2	1 H AV	BACT-PSD	NSPS , SIP	Alternative emission limits apply during tuning, water washing, startup and shutdown. CEMS required.
VA-0328	C4GT, LLC	NOVI ENERGY	Siemens Combusion Turbine - Option 2 - Normal Operation	15.21	Natural Gas	35000	MMCF/YR	Option 2: □ Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Nitrogen Oxides (NOx)	DRY, LOW NOx BURNERS & SCR	2	PPMVD @ 15% O2	1 H AV	BACT-PSD	NSPS , SIP	Alternative emission limits apply during tuning, water washing, startup and shutdown. CEMS required.
VA-0332	CHICKAHOMINY POWER LLC	CHICKAHOMINY POWER LLC	Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators	15.21	natural gas	35000	MMCF/YR	One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines.	Nitrogen Oxides (NOx)	Controlled by dry, low NOx burners and selective catalytic reduction (SCR).	2	PPMVD 15% O2	1 HR AVG	BACT-PSD	NSPS , SIP	Alternative short-term emission limits apply during tuning, startup and shutdown. CEMS required.
WI-0300	NEMADJI TRAIL ENERGY CENTER	NEMADJI TRAIL ENERGY CENTER	Natural-Gas-Fired Combined-Cycle Turbine (P01)	15.21	Natural Gas	4671	MMBTU/H	One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b)	Nitrogen Oxides (NOx)	Selective Catalytic Reduction (SCR), low-NOx burners, Water injection when firing diesel fuel oil.	2	PPM AT 15% O2	24-HR ROLLING AVG., NATURAL GAS	BACT-PSD		Except during start-up and shutdown
TX-0878	LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	NATURAL GAS	26.92	MMTON/Y	Eight GE Frame 7E gas turbines for refrigeration and compression at the site.	Nitrogen Oxides (NOx)	Dry low NOx burners and good combustion practices.	0	PPM	24-HR AVG	BACT-PSD	NSPS	
TX-0660	FGE TEXAS POWER I AND FGE TEXAS POWER II	FGE POWER LLC	Alstom Turbine	15.21	Natural Gas	230.7	MW	Four (4) Alstom GT24 CTGs, each with a HRSG and DBs, max design capacity 409 MMBtu/hr	Particulate matter, total & <2.5 µm (TPM2.5)	Low sulfur fuel, good combustion practices	2	PPMVD		BACT-PSD		
LA-0331	CALCASIEU PASS LNG PROJECT	VENTURE GLOBAL CALCASIEU PASS, LLC	Combined Cycle Combustion Turbines (CCCT1 to CCCT5)	15.21	Natural Gas	921	MM BTU/h		Sulfur Dioxide (SO2)	Exclusive Combustion of Low Sulfur Fuel and Proper Engineering Practices	4	PPMV	ANNUAL AVERAGE	BACT-PSD	OPERATING PERMIT	BACT limit is 4 PPMV H2S; Annual Average Content in Fuel.
MA-0039	SALEM HARBOR STATION REDEVELOPMEN T	FOOTPRINT POWER SALEM HARBOR DEVELOPMENT LP	Combustion Turbine with Duct Burner	15.21	Natural Gas	2449	MMBTU/H	two 315 MW (nominal) GE Energy 7F Series 5 Rapid Response Combined Cycle Combustion Turbines with Duct Burners and 31 MW (estimated) steam turbine generators	Sulfur Dioxide (SO2)		0.3	PPMVD@15 % O2	1 HR AVG, DOES NOT APPLY DURING SS	OTHER CASE-BY-CASE	NSPS , SIP , OPERATING PERMIT	SO2 limits are determined as BACT under 310 CMR 7.02(8).□ □ during start-ups (â‰¤45 minutes): SO2 â‰¤2.0 lb per event.□ during shutdown (â‰¤ 27 minutes): SO2 â‰¤ 0.3 lb per event
MA-0041	MEDICAL AREA TOTAL ENERGY PLANT	MATEP LIMITED PARTNERSHIP	Combustion Turbine with Duct Burner	16.21	Natural Gas	203.4	MMBTU/H	a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing, 158.8MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (38.8MMBtu/hr NG firing only).□ Max. ULSD usage: 878,400 gallons per 12-month rolling period	Sulfur Dioxide (SO2)	clean fuels - using natural gas as primary fuel and ultra low sulfur diesel as backup fuel.	0.6	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	NSPS , SIP , OPERATING PERMIT	SO2 limits are determined as BACT under 310 CMR 7.02(8).□ SO2(firing NG): â‰¤0.0029 lb/MMBtu, â‰¤0.48 lb/hr(no duct firing), â‰¤0.58 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤1.8 lb per event, during shutdowns (â‰¤1 hr): â‰¤0.6 lb per event; □ SO2(turbine firing ULSD): â‰¤0.0016 lb/MMBtu, â‰¤0.25 lb/hr(no duct firing), â‰¤0.36 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤1.2 lb per event, during shutdowns (â‰¤1 hr): â‰¤0.4 lb per event.
MA-0041	MEDICAL AREA TOTAL ENERGY PLANT	MATEP LIMITED PARTNERSHIP	Combustion Turbine with Duct Burner	16.21	Natural Gas	203.4	MMBTU/H	a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing, 158.8MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (38.8MMBtu/hr NG firing only).□ Max. ULSD usage: 878,400 gallons per 12-month rolling period	Sulfuric Acid (mist, vapors, etc)	clean fuels - using natural gas as primary fuel and ultra low sulfur diesel as backup fuel.	0.4	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	SIP , OPERATING PERMIT	H2SO4 limits are determined as BACT under 310 CMR 7.02(8).□ H2SO4(firing NG): â‰¤0.0029lb/MMBtu, â‰¤0.47 lb/hr(no duct firing), â‰¤0.58 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤1.8 lb per event, during shutdowns (â‰¤1 hr): â‰¤0.6 lb per event; □ H2SO4(turbine firing ULSD):â‰¤0.2ppmvd@15% O2(no duct firing), â‰¤0.22ppmvd@15% O2(with duct firing), â‰¤0.0016 lb/MMBtu(no duct firing), â‰¤0.0018 lb/MMBtu(with duct firing), â‰¤0.25 lb/hr(no duct firing), â‰¤0.36 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤1.2 lb per event, during shutdowns (â‰¤1 hr): â‰¤0.4 lb per event.
*LA-0324	COMMONWEALT H LNG FACILITY	COMMONWEALTH LNG, LLC	Refrgeration Turbines and Generator Turbines (EQT0001 - EQT0006 and EQT0013 - EQT0015)	15.11	natural gas	575	mm btu/hr		Volatile Organic Compounds (VOC)	Good combustion practices and use of clean fuel.	3	PPMVD	@15% O2	BACT-PSD		
*MI-0445	INDECK NILES, LLC	INDECK NILES, LLC	FGCTGHRSG	15.21	Natural gas	3421	MMBTU/H	3421 MMBTU/ H for each turbine□ 740 MMBTU/H for each duct burner for a combined throughput of 4161 MMBTU/ H or 8322 MMBTU/ H for both trains.□ □ Two combined-cycle natural gas-fired combustion turbine generators (CTGs) with Heat Recovery Steam Generators (HRSG) (EUCTGHRSG1 & EUCTGHRSG2 in FGCTGHRSG). The total hours for startup and shutdown for each train shall not exceed 500 hours per 12-month rolling time period.	Volatile Organic Compounds (VOC)	Good combustion practices, inlet air conditioning, and the use of pipeline quality natural gas.	4	PPM	PPMVD@15%O2, HOURLY; EACH	BACT-PSD		The emission limit above is 4 ppmvd at 15% O2, hourly basis, for each CTGHRSG.□ □ Startup and shutdown operations are limited to 500 hours per 12-month rolling time period for each CTGHRSG train. Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the startup and shutdown emission minimization plan. The efficiency range is 85-90 percent.
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 8 / EQUI 8	16.11	Natural Gas	174.1	megawatts		Volatile Organic Compounds (VOC)		4.6	PPM	3 HOUR AVERAGE AS METHANE	BACT-PSD	OPERATING PERMIT	VOC <= 8.64 tpy 12-mo rolling sum (as methane) (SUSD) limited to 86 lb/SUSD event SU 23 min SD 11 min VOC <= 24.95 tpy 12-mo rolling sum (as methane) (emergency operation) limited to 1040 lb/hr
*MN-0095	BLUE LAKE	XCEL ENERGY	Turbine 7 / EQUI 7	16.11	Natural Gas	174.1	megawatts		Volatile Organic Compounds (VOC)		4.6	PPM	3 HOUR AVERAGE AS METHANE	BACT-PSD	OPERATING PERMIT	VOC <= 8.64 tpy 12-mo rolling sum (as methane) (SUSD) limited to 86 lb/SUSD event SU 23 min SD 11 min VOC <= 24.95 tpy 12-mo rolling sum (as methane) (emergency operation) limited to 1040 lb/hr

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
*PA-0298	FUTURE POWER PA/GOOD SPRINGS NGCC FACILITY	FUTURE POWER PA INC	Turbine, COMBINED CYCLE UNIT (Siemens 5000)	15.21	Natural Gas	2267	MMBTU/H		Volatile Organic Compounds (VOC)	CO Catalyst	2	PPMVD	@ 15% OXYGEN	BACT-PSD	NSPS	
*PA-0314	BEECH HOLLOW	ROBINSON POWER COMPANY, LCC	COMBUSTION TURBINE without DUCT BURNERS UNIT	16.11	Natural Gas	2433	MMBtu/hr	CEMS for NOx, CO	Volatile Organic Compounds (VOC)		1.3	PPMDV	CORRECTED TO 15 % O2	LAER		
*PA-0315	HILLTOP ENERGY CENTER, LLC	HILLTOP ENERGY CENTER, LLC	Combustion Turbine without Duct Burner	15.21	Natural Gas	3509	MMBtu/hr		Volatile Organic Compounds (VOC)		1	PPMDV	CORRECTED TO 15% O2	LAER		
*PA-0315	HILLTOP ENERGY CENTER, LLC	HILLTOP ENERGY CENTER, LLC	Combustion Turbine With Duct Burner	15.21	Natural Gas	4367	MMBtu/hr		Volatile Organic Compounds (VOC)		2	PPMDV	CORRECTED TO 15% O2	LAER		
*PA-0316	RENOVO ENERGY CENTER, LLC	RENOVO ENERGY CENTER, LLC	Combustion Turbine Firing NG	15.21	Natural Gas	0		General Electric model 7AH.02 lean premix DLN natural-gas/ultra-low diesel-fired combustion turbine (CT) and steam turbine (ST), where the CT and ST train is configured in a single shaft alignment and drive one common electric generator capable of producing approximately 500 megawatts (MW) of electricity, shall be equipped with dry-low-NOx (DLN) combustors.	Volatile Organic Compounds (VOC)		1	PPMDV	CORRECTED TO 15% O2	LAER		
*PA-0319	RENAISSANCE ENERGY CENTER	APV RENAISSANCE PARTNERS	COMBUSTION TURBINE UNIT w/o DUCT BURNERS UNIT	15.21	Natural Gas	2665.9	MMBtu/hr		Volatile Organic Compounds (VOC)	Oxidation Catalyst	1	PPMDV	@15% O2	LAER		
*PA-0319	RENAISSANCE ENERGY CENTER	APV RENAISSANCE PARTNERS	COMBUSTION TURBINE UNIT with DUCT BURNERS UNIT	15.21	Natural Gas	0			Volatile Organic Compounds (VOC)		1.4	PPMDV	@15% O2	LAER		
*PA-0340	HELIX IRONWOOD LLC/LEBANON	HELIX IRONWOOD LLC	001 Turbines	16.11	Natural Gas	3	MMCF/HR		Volatile Organic Compounds (VOC)	Oxidation catalyst	2	PPM	ONE-HOUR AVERAGE DRY VOLUME CORRECTED T	LAER		
*TX-0975	FREESTONE PEAKERS PLANT	FPEC, LLC	Simple Cycle Gas Turbines	15.11	NATURAL GAS	221	MW	General Electric 7FA.05.	Volatile Organic Compounds (VOC)	Good combustion practices	2	PPMVD	15% O2	BACT-PSD	NSPS , MACT , OPERATING PERMIT	
*TX-0986	JACK COUNTY GENERATION FACILITY	JACK COUNTY POWER LLC	COMBUSTION TURBINES	15.11	NATURAL GAS	180.2	MW	Each Siemens V84.3a simple cycle gas turbine is limited to 2,500 hours of operation per year (29% capacity factor) and has a maximum gross power output of 180.2 MW.	Volatile Organic Compounds (VOC)	Each turbine is limited to 2 ppmvd at 15% O2, which meets Tier I BACT. Good combustion practices are used. MSS - Limited to 50 startups and 50 shutdowns per year for each turbine. Startup and shutdown events are each expected to last less than an hour in duration.	2	PPMVD	15% O2	BACT-PSD	NSPS	
*VA-0335	PANDA STONEWALL LLC	PANDA STONEWALL LLC	Combustion Turbines, Two (2) and HRSG Duct Burners	15.21	Natural Gas	2.55	MMBTU/H	2x1 natural gas-only configuration: Two Siemens SGT6-5000F5 CTs at 2554 MMBtu/hr and two 430 MMBtu/hr duct burners	Volatile Organic Compounds (VOC)	Catalytic Oxidizer	1.5	PPMVD AT 15% O2	NORMAL OPERATIONS W DUCT BURNER/W/O DB	LAER		Emission Limit 1: 1.5/1.0 ppmvd at 15% O2 - normal operations with duct burner/ without duct burner□ Emission Limit 2: 210/175/140/35 lb/event - cold start/warm start/hot start/shutdown
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3.875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Volatile Organic Compounds (VOC)	good combustion practices and oxidation catalyst	1	PPMDV @ 15% O2	AVG OF 3 1-HR TEST RUNS (W/O DUCT FIRING	BACT-PSD	N/A	Concentration and Mass limits apply at all times excluding startup and shutdown events.
*WV-0033	MAIDSVILLE	MOUNTAIN STATE CLEAN ENERGY, LLC	Combustion Turbine & Duct Burner (CT-01/HRSG1 & CT-02/HRSG2)	15.21	Pipeline Natural Gas	1275	mw	CT - 3.875 MMBtu/hr DB - 586 MMBtu/hr Gross Generation - 1275 MW	Volatile Organic Compounds (VOC)	good combustion practices and oxidation catalyst	1	PPMDV @ 15% O2	AVG OF 3 1-HR TEST RUNS (W/O DUCT FIRING	BACT-PSD	N/A	Concentration and Mass limits apply at all times excluding startup and shutdown events.
AK-0082	POINT THOMSON PRODUCTION FACILITY	EXXON MOBIL CORPORATION	Turbines	16.15	Fuel Gas	7520	kW	Four 7.52 MW Solar Turbines with SoLoNOx Technology burning natural gas on the North Slope of Alaska, north of the Artic Circle. Two of the turbines are dual fired units that can combust ULSD as well as Fuel Gas	Volatile Organic Compounds (VOC)		2.5	PPMV		BACT-PSD		
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Four Combined Cycle Gas-Fired Turbines	15.21	Natural Gas	384	MMBtu/hr	EUs 7 - 10 are combined cycle gas turbines used for power generation at LNG facility	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	2	PPMV @ 15% O2	3-HOURS	BACT-PSD		Allowed 40 hours per year per turbine of operation without SCR and OxCat.
AK-0088	LIQUEFACTION PLANT	ALASKA GASLINE DEVELOPMENT CORPORATION	Six Simle Cycle Gas-Fired Turbines	15.11	Natural Gas	1113	MMBtu/hr	EUs 1 - 6 are simple cycle gas turbines used for gas compression at LNG facility	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	2	PPMV @ 15% O2	3-HOURS	BACT-PSD		Allowed 40 hours per year per turbine of operation without SCR and OxCat.
AL-0282	LENZING FIBERS, INC.	LENZING FIBERS, INC.	Gas Turbine with HRSG	16.21	Natural Gas	25	MW		Volatile Organic Compounds (VOC)	CO oxidation catalyst and good combustion practices.	1.6	PPM	PPM VD @15% O2 WITH DUCT BURNERS	BACT-PSD	OPERATING PERMIT	
CT-0157	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/12 months		Volatile Organic Compounds (VOC)	Oxidation Catalyst	1	PPMVD @15% O2		BACT-PSD	OPERATING PERMIT	Emission 1: turbine w/o duct firing□ Emission 2: turbine w/ duct firing
CT-0158	CPV TOWANTIC, LLC	CPV TOWANTIC, LLC	Combined Cycle Power Plant	15.21	Natural Gas	21200000	MMBtu/yr		Volatile Organic Compounds (VOC)	Oxidation Catalyst	1	PPMVD @15% O2		BACT-PSD	OPERATING PERMIT	Emission 1: turbine w/o duct firing □ Emission 2: turbine w/ duct firing
CT-0161	KILLINGLY ENERGY CENTER	NTE CONNECTICUT, LLC	Natural Gas w/o Duct Firing	15.21	Natural Gas	2969	MMBtu/hr	Throughput is for turbine only	Volatile Organic Compounds (VOC)	Oxidation Catalyst	0.7	PPMVD @15% O2		BACT-PSD	OPERATING PERMIT	
CT-0161	KILLINGLY ENERGY CENTER	NTE CONNECTICUT, LLC	Natural Gas w/Duct Firing	15.21	Natural Gas	2639	MMBtu/hr	Duct burner MRC is 946 MMbtu/hr	Volatile Organic Compounds (VOC)	Oxidation Catalyst	1.6	PPMVD @15% O2		BACT-PSD	OPERATING PERMIT	
FL-0356	OKEECHOBEE CLEAN ENERGY CENTER	FLORIDA POWER & LIGHT	Combined-cycle electric generating unit	15.21	Natural gas	3096	MMBtu/hr per turbine	3-on-1 combined cycle unit. GE 7HA.02 turbines, approximately 350 MW per turbine. Total unit generating capacity is approximately 1,600 MW. Primarily fueled with natural gas. Permitted to burn the base-load equivalent of 500 hr/yr per turbine on ULSD.	Volatile Organic Compounds (VOC)	Complete combustion minimizes VOC	1	PPMVD@15 %O2	GAS OPERATION	BACT-PSD		Method 18 or 25A. Initial test only -- CO used as proxy thereafter.
FL-0363	DANIA BEACH ENERGY CENTER	FLORIDA POWER AND LIGHT COMPANY	2-on-1 combined cycle unit (GE 7HA)	15.21	Natural gas	4000	MMBtu/hr	Two nominal 430 MW combustion turbines, coupled to a steam turbine generator	Volatile Organic Compounds (VOC)	Clean fuels	1	PPMVD@15 % O2	FOR NATURAL GAS OPERATION	BACT-PSD		Initial stack test only; CO used as proxy thereafter
FL-0364	SEMINOLE GENERATING STATION	SEMINOLE ELECTRIC COOPERATIVE, INC.	2-on-1 natural gas combined-cycle unit (GE 7HA.02)	15.21	Natural gas	3514	MMBtu/hr	Two GE 7HA.02 combustion turbines, each rated at 415 MW. Total unit capacity is approximately 1,183 MW (gross) and 1,050 MW (net). Due to netting, triggered PSD only for VOC.	Volatile Organic Compounds (VOC)	Oxidation catalyst	1	PPMVD@15 % O2	WITHOUT DUCT BURNER FIRING	BACT-PSD		Methods 18 and 25A are permitted. Compliance by stack test upon Title V permit renewal. Separate tests with and without duct burner firing are required.
IA-0107	MARSHALLTOW N GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #1 - combined cycle	15.21	natural gas	2258	mmBtu/hr	two identical Siemens SGT6-5000F combined cycle turbines without duct firing, each at 2258 mmBtu/hr generating approx. 300 MW each.	Volatile Organic Compounds (VOC)	catalytic oxidizer	1	PPM	AVG. OF 3 ONE HOUR TEST RUNS	BACT-PSD		

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Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
IA-0107	MARSHALLTOWN GENERATING STATION	INTERSTATE POWER AND LIGHT	Combustion turbine #2 -combined cycle	15.21	natural gas	2258	mmBtu/hr		Volatile Organic Compounds (VOC)		1	PPM	AVERAGE OF 3 ONE-HOUR TEST RUNS	BACT-PSD		71.2 ton/yr limit includes startup, shutdown and malfunction
IN-0173	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES	16.21	NATURAL GAS	283	MMBTU/H, EACH	NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY	Volatile Organic Compounds (VOC)	GOOD COMBUSTION PRACTICES AND PROPER DESIGN	2.5	PPMVD AT 15% OXYGEN	1-HR AVERAGE	BACT-PSD		
IN-0180	MIDWEST FERTILIZER CORPORATION	MIDWEST FERTILIZER CORPORATION	TWO (2) NATURAL GAS FIRED COMBUSTION TURBINES	16.21	NATURAL GAS	283	MMBTU/H, EACH	NATURAL GAS FIRED, OPEN-SIMPLE CYCLE COMBUSTION TURBINES WITH HEAT RECOVERY	Volatile Organic Compounds (VOC)	GOOD COMBUSTION PRACTICES AND PROPER DESIGN	2.5	PPMVD AT 15% OXYGEN	1-HR AVERAGE	BACT-PSD		
KY-0106	RIVERSIDE GENERATING CO LLC	RIVERSIDE GENERATING CO LLC	Five Combined Cycle Generation Turbines (CCGT) with Duct burners and HRSG	11.31	Natural Gas	1700	MW	Five natural gas-fired turbines for electric generation, rated 2,076 MMBtu/hr each.□ □ New Project: □ Five Combined Cycle Generation Turbines (CCGT)□ (EU 01B-05B) - Five New Natural Gas-Fired Duct Burners for Five New Heat Recovery□ Steam Generators (HRSG) providing heat for Two New Steam Turbine Generators (STG)□ System (1) â€˜ Three CTG/ HRSG combined cycles to one STG□ System (2) â€˜ Two CTG/ HRSG combined cycles to one STG□ □ Maximum Rated Capacity: EU 01B-05B Duct Burners for HRSGs, 660 MMBtu/ hr each STG, 3x1 â€˜ 500MW, 2x1 â€˜ 350 MW□ Construction Commenced: EU01B-05B proposed 2016	Volatile Organic Compounds (VOC)	Catalytic oxidation	3.6	PPM	15% OXYGEN, DRY 3-HR AVG WITH BURNERS	BACT-PSD	NSPS	
LA-0316	CAMERON LNG FACILITY	CAMERON LNG LLC	Gas turbines (9 units)	15.11	natural gas	1069	mm btu/hr		Volatile Organic Compounds (VOC)	good combustion practices and fueled by natural gas	1.6	PPMVD	@15%O2	BACT-PSD		
LA-0331	CALCASIEU PASS LNG PROJECT	VENTURE GLOBAL CALCASIEU PASS, LLC	Combined Cycle Combustion Turbines (CCCT1 to CCCT5)	15.21	Natural Gas	921	MM BTU/h		Volatile Organic Compounds (VOC)	Catalytic Oxidation, Proper Equipment Design and Good Combustion Practices.	1.1	PPMV	3 HOUR AVERAGE	BACT-PSD	OPERATING PERMIT , NSPS	Units are in ppmv @ 15% O2; Averaging Time 3-Hour Average During Normal Operations.
LA-0364	FG LA COMPLEX	FG LA LLC	Cogeneration Units	15.21	Natural Gas	2222	mm btu/h	Throughput is maximum operating rate. 2139 MM BTU/hr normal operating rate.	Volatile Organic Compounds (VOC)	Good combustion practices and catalytic oxidation	4	PPMVD		BACT-PSD	NSPS , NESHAP	BACT limit is 4 ppmvd at 15% O2.
LA-0391	MAGNOLIA POWER GENERATING STATION UNIT 1	MAGNOLIA POWER LLC	Combined Cycle Gas Turbine w/ Duct Burners and HRSG	15.21	Natural Gas	5081	mm BTU/h	Normal operating rate is 4930 MMBTU/h.	Volatile Organic Compounds (VOC)	Catalytic oxidation and good combustion practices.	1	PPMVD	3 1-HR TEST AVERAGE	BACT-PSD	NSPS	1.0 and 2.0 ppmvd at 15% O2 based on a three one-hour test average without and with duct firing, respectively.
MA-0039	SALEM HARBOR STATION REDEVELOPMENT	FOOTPRINT POWER SALEM HARBOR DEVELOPMENT LP	Combustion Turbine with Duct Burner	15.21	Natural Gas	2449	MMBTU/H	two 315 MW (nominal) GE Energy 7F Series 5 Rapid Response Combined Cycle Combustion Turbines with Duct Burners and 31 MW (estimated) steam turbine generators	Volatile Organic Compounds (VOC)	Oxidation catalyst	1	PPMVD@15 % O2	1 HR AVG EXCLUDING SS/NO DUCT FIRING	OTHER CASE-BY-CASE	SIP , OPERATING PERMIT	VOC limits are determined as BAT under 310 CMR 7.02(8).□ VOC(no duct firing): â‰¤0.0013 lb/MMBtu (1 hr avg excluding SS)□ VOC(duct firing): â‰¤0.0022 lb/MMBtu (1 hr avg excluding SS)□ □ during start-ups (â‰¤ 45 minutes): VOC as CH4 â‰¤ 23 lb per event□ during shutdowns (â‰¤ 27 minutes): VOC as CH4 â‰¤ 29 lb per event
MA-0041	MEDICAL AREA TOTAL ENERGY PLANT	MATEP LIMITED PARTNERSHIP	Combustion Turbine with Duct Burner	16.21	Natural Gas	203.4	MMBTU/H	a nominal 14.4 Megawatt (MW) Solar Titan 130 Combustion Turbine Generator (164.6MMBtu/hr for NG firing, 158.8MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (38.8MMBtu/hr NG firing only).□ Max. ULSD usage: 878,400 gallons per 12-month rolling period	Volatile Organic Compounds (VOC)	Oxidation Catalyst	1.7	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	OPERATING PERMIT , SIP	VOC limits are determined as BAT under 310 CMR 7.02(8).□ VOC as CH4(firing NG): â‰¤0.0022 lb/MMBtu, â‰¤0.36 lb/hr(no duct firing), â‰¤0.45 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤11.4 lb per event, during shutdowns (â‰¤1 hr): â‰¤ 3.3 lb per event □ VOC as CH4(turbine firing ULSD): â‰¤0.0095 lb/MMBtu(no duct firing), â‰¤0.0094 lb/MMBtu(with duct firing), â‰¤1.51 lb/hr(no duct firing), â‰¤1.86 lb/hr(with duct firing); during start-ups (â‰¤3 hrs): â‰¤85.4 lb per event, during shutdowns (â‰¤1 hr): â‰¤33.4 lb per event.
MA-0043	MIT CENTRAL UTILITY PLANT	MASSACHUSETTS INSTITUTE OF TECHNOLOGY	Combustion Turbine with Duct Burner	16.21	Natural Gas	353	MMBtu/hr	two nominal 22 Megawatt (MW) Solar Titan 250 Combustion Turbine Generators (219MMBtu/hr for NG firing, 212MMBtu/hr for ULSD firing) with Heat Recovery Steam Generator including a Duct Burner (134MMBtu/hr NG firing only). Max. ULSD usage: 279,216 gallons per 12-month rolling period per CTG	Volatile Organic Compounds (VOC)	Oxidation Catalyst	1.7	PPMVD@15 % O2	1 HR BLOCK AVG/EXCLUDING SS, NG FIRING	OTHER CASE-BY-CASE	SIP , OPERATING PERMIT	VOC limits are determined as BACT under 310 CMR 7.02(8). VOC as CH4(firing NG):â‰¤1.70 ppmvd@15% O2, â‰¤0.0022 lb/MMBtu & â‰¤0.49 lb/hr(no duct firing); â‰¤4.0 ppmvd@15% O2, â‰¤0.0052lb/MMBtu & â‰¤1.86 lb/hr(with duct firing); VOC as CH4(turbine firing ULSD):â‰¤6.5 ppmvd@15% O2, â‰¤0.0088 lb/MMBtu & â‰¤2.02 lb/hr(no duct firing), â‰¤7.0 ppmvd@15% O2, â‰¤0.0093 lb/MMBtu & â‰¤3.40 lb/hr (with duct firing); VOC emissions during start-up and shutdown events are not expected to be elevated.
MD-0041	CPV ST. CHARLES	CPV MARYLAND, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	725	MEGAWATT	TWO GENERAL ELECTRIC (GE) F-CLASS ADVANCED COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 725 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST	Volatile Organic Compounds (VOC)	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	1	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		EMISSIN LIMIT # 1 IS WITHOUT DUCT FIRING□ EMISSIN LIMIT #2 IS WITH DUCT FIRING
MD-0041	CPV ST. CHARLES	CPV MARYLAND, LLC	2 COMBINED CYCLE COMBUSTION TURBINES, WITH DUCT FIRING	15.21	NATURAL GAS	725	MW		Volatile Organic Compounds (VOC)	EXCLUSIVE USE OF NATURAL GAS, AND AN OXIDATION CATALYST	2	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		
MD-0042	WILDCAT POINT GENERATION FACILITY	OLD DOMINION ELECTRIC CORPORATION (ODEC)	2 COMBINED CYCLE COMBUSTION TURBINES, WITH DUCT FIRING	15.21	NATURAL GAS	1000	MW	TWO MITSUBISHI ‘‘G‘‘ MODEL COMBUSTION TURBINE GENERATORS (CTS) WITH A NOMINAL GENERATING CAPACITY OF 270 MW CAPACITY EACH, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION (SCR), OXIDATION CATALYST	Volatile Organic Compounds (VOC)	USE OF PIPELINE NATURAL GAS, GOOD COMBUSTION PRACTICES, AND USE OF AN OXIDATION CATALYST	1.6	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		4290 LB/EVENT FOR WARM STARTUP; 566 LB/EVENT FOR HOT STARTUP; AND 606 LB/EVENT FOR SHUTDOWNS. LIMITS FOR STARTUP AND SHUTDOWN ARE FOR BOTH CTS COMBINED

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RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MD-0044	COVE POINT LNG TERMINAL	DOMINION COVE POINT LNG, LP	2 COMBUSTION TURBINES	15.11	NATURAL GAS	130	MW	TWO GENERAL ELECTRIC (GE) FRAME 7EA COMBUSTION TURBINES (CTS) WITH A NOMINAL NET 87.2 MEGAWATT (MW) RATED CAPACITY, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), EQUIPPED WITH DRY LOW-NOX COMBUSTORS, SELECTIVE CATALYTIC REDUCTION SYSTEM (SCR), AND OXIDATION CATALYST	Volatile Organic Compounds (VOC)	THE USE OF PROCESS FUEL GAS AND PIPELINE NATURAL GAS, GOOD COMBUSTION PRACTICES, AND USE OF AN OXIDATION CATALYST	0.7	PPMVD @ 15% O2	3-HOUR BLOCK AVERAGE, EXCLUDING SU/SD	LAER		4.8 LBS/SHUTDOWN EVENT. LIMITS ARE TOTAL FOR BOTH FRAME 7 CTS PER STARTUP OR SHUTDOWN EVENT
MD-0045	MATTAWOMAN ENERGY CENTER	MATTAWOMAN ENERGY, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	286	MW	TWO SIEMENS H-CLASS (SGT-8000H VERSION 1.4-OPTIMIZED) COMBINED CYCLE COMBUSTION TURBINES (CTS) WITH A NOMINAL GENERATING CAPACITY OF 286 MW (EACH), COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG) EQUIPPED WITH DUCT BURNERS, DRY LOW-NOX BURNERS, SCR, OXIDATION CATALYST.□ □ HEAT RATE LIMITED TO 6,793 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR MATTAWOMAN TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS MATTAWOMAN PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Volatile Organic Compounds (VOC)	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	1	PPMVD @ 15% O2	3-HR BLOCK AVG. W/OUT DUCT FIRING	LAER		EXCLUDING SU/SD. CO CEMS USED AS SURROGATE FOR VOC EMISSIONS. A CORRELATION SHALL BE DEVELOPED BETWEEN CO AND VOC EMISSIONS BASED ON AN INITIAL STACK TEST AND VERIFIED ANNUALLY.
MD-0046	KEYS ENERGY CENTER	KEYS ENERGY CENTER, LLC	2 COMBINED-CYCLE COMBUSTION TURBINES	15.21	NATURAL GAS	235	MW	TWO SIEMENS F-CLASS (SGT6-500FEE) SERIES COMBUSTION TURBINES (CTS) WITH DUCT BURNERS, WITH A NOMINAL GENERATING CAPACITY OF 735 MW, COUPLED WITH A HEAT RECOVERY STEAM GENERATOR (HRSG), DRY LOW-NOX COMBUSTORS, SCR, OXIDATION CATALYST, AND FUELED EXCLUSIVELY ON PI PELINE QUALITY NATURAL GAS.□ □ HEAT INPUT LIMITED TO 6,802 BTU/KWH (NET) AT ALL TIMES WHEN THE CTS/HRSGS ARE OPERATING (LHV). INITIAL COMPLIANCE WITH THE HEAT RATE LIMITATION SHALL BE DEMONSTRATED USING ASME PTC-46 TEST METHOD. ANNUAL THERMAL EFFICIENCY TEST CONDUCTED ACCORDING TO ASME PTC-46, OR ANOTHER METHODOLOGY APPROVED BY MDE-ARMA, AND COMPARE RESULTS TO DESIGN THERMAL EFFICIENCY VALUE. AN EXCEEDANCE OF THE HEAT RATE LIMIT IS NOT CONSIDERED A VIOLATION OF THIS PERMIT, BUT TRIGGERS A REQUIREMENT FOR KEYS TO SUBMIT A MAINTENANCE PLAN TO MDE-ARMA WHICH SPECIFIES THE ACTIONS KEYS PLANS TO TAKE IN ORDER TO ACHIEVE THE HEAT RATE LIMIT. THE PLAN SHALL INCLUDE A TIMEFRAME THAT THE HEAT RATE LIMIT WILL BE MET NOT TO EXCEED 60 DAYS UNLESS AGREED TO BY MDE-ARMA.	Volatile Organic Compounds (VOC)	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	1	PPMVD @ 15% O2	W/OUT DUCT FIRING, 3-HR BLOCK AVG	LAER		EXCLUDING STARTUP/SHUTDOWN. INITIAL AND ANNUAL PERFORMANCE TEST USING EPA/OAR MTHD 18/25A OR EQUIVALENT METHOD APPROVED BY MDE-ARMA. CO CEMS USED AS SURROGATE FOR VOC EMISSIONS. A CORRELATION SHALL BE DEVELOPED BETWEEN CO AND VOC EMISSIONS BASED ON AN INITIAL STACK TEST AND VERIFIED ANNUALLY.
MI-0424	HOLLAND BOARD OF PUBLIC WORKS - EAST 5TH STREET	HOLLAND BOARD OF PUBLIC WORKS	FGCTGHRSG (2 Combined cycle CTGs with HRSGs; EUCTGHRSG10 & EUCTGHRSG11)	15.21	Natural gas	554	MMBTU/H, each	Two combined cycle natural gas fired combustion turbine generators (CTGs) with heat recovery steam generators (HRSG) (EUCTGHRSG10 & EUCTGHRSG11 in FGCTGHRSG). The total hours for both units combined for startup and shutdown shall not exceed 635 hours per 12-month rolling time period.	Volatile Organic Compounds (VOC)	Oxidation catalyst technology and good combustion practices.	4	PPM AT 15% O2	TEST PROTOCOL WILL SPECIFY AVG TIME	BACT-PSD		The emission limit above is 4 ppmvd at 15% O2 and is for each CTGHRSG.□ □ Startup and shutdown operations are limited to 635 hours per 12-month rolling time period combined for both CTGHRSGs.
MI-0432	NEW COVERT GENERATING FACILITY	NEW COVERT GENERATING COMPANY, LLC	FG-TURB/DB1-3 (3 combined cycle combustion turbine and heat recovery steam generator trains)	15.21	Natural gas	1230	MW	Three (3) combined-cycle combustion turbine (CT) / heat recovery steam generator (HRSG) trains. Each CT is a natural gas fired Mitsubishi model 501G, equipped with dry low NOx combustor and inlet air evaporative cooling. Each HRSG includes a natural gas fired duct burner with a 256 MMBtu/hr heat input capacity and a dry low NOx burner.	Volatile Organic Compounds (VOC)	An oxidation catalyst and good combustion practices.	1	PPMVD	HOURLY; EACH CT/HRSG TRAIN	BACT-PSD	SIP	Emission limit 1 above does not include startup and shutdown.□ □ Emission limit 2 above is 48 ton/year based on a 12-month rolling time period as determined at the end of each calendar month.
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (South Plant): A combined cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/H (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/H (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR and an oxidation catalyst.	Volatile Organic Compounds (VOC)	Oxidation catalyst technology and good combustion practices.	4	PPMVD	AT 15%O2; NOT INCL. STARTUP/SHUTDOWN	BACT-PSD	SIP	Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in Special Condition III.2 in the permit.□ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0433	MEC NORTH, LLC AND MEC SOUTH LLC	MARSHALL ENERGY CENTER LLC	EUCTGHRSG (North Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	500	MW	Nominal 500 MW electricity production. Turbine rating of 3,080 MMBTU/hr (HHV) and HRSG duct burner rating of 755 MMBTU/ hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,080 MMBTU/hr (HHV). The HRSG is equipped with a natural gas-fired duct burner rated at 755 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Volatile Organic Compounds (VOC)	Oxidation catalyst technology and good combustion practices.	4	PPMVD	AT 15%O2; HOURLY	BACT-PSD	SIP	Emission limit 1 above does not include startup and shutdown. □ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in Special Condition III.2. □ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1--A 667 MMBTU/H NG fired combustion turbine generator coupled with a heat recovery steam generator (HRSG)	15.21	Natural gas	667	MMBTU/H	A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR) and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control for each CTG/HRSG unit, good combustion practices.	3	PPM	PPMVD@15%O2; HOURLY EXC.START/SHUT; NOTE	BACT-PSD		VOC Emission Limit 1 above is 3 ppmvd at 15%O2 when the unit is in combined cycle mode. The limit is hourly except during startup and shutdown.□ □ VOC Emission Limit 2 above is 5 lb/h when the unit is in HRSG bypass mode and is hourly except during startup and shutdown.
MI-0441	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2--A 667 MMBTU/H natural gas fired CTG with a HRSG.	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2 is a nominally rated 667 MMBTU/H natural gas fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas fired duct burner rated at 204 MMBTU/h to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control and good combustion practices.	3	PPM	PPMVD@15%O2; HOURLY; SEE NOTES	BACT-PSD		Emission limit 1 is 3 ppmvd at 15% O2 and is an hourly limit except during startup and shutdown. The limit applies when the unit is in combined cycle mode.□ □ Emission limit 2 is 5 lb/h and is an hourly limit except during startup and shutdown. The limit applies when the unit is in HRSG bypass mode.
MI-0447	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG1--A nominally rated 667 MMBTU/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control for each CTG/HRSG unit, good combustion practices.	3	PPM	HOURLY EXCEPT STARTUP SHUTDOWN	BACT-PSD		There are two emission limits listed above and are described here in more detail.□ □ Emission limit 1 = 3 ppmvd at 15% O2; hourly except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 = 5 lb/hr; hourly except during startup and shutdown. Applies in HRSG bypass mode.
MI-0447	LBWL--ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2--A nominally rated 667 MMBTU/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBTU/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control for each CTG/HRSG unit, good combustion practices.	3	PPM	HOURLY; EXCEPT DURING STARTUP/SHUTDOWN	BACT-PSD		Emission limit 1 (above) = 3 ppmvd at 15% O2; hourly except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 (above) = 5 lb/hr; hourly except during startup and shutdown. Applies in HRSG bypass mode.
MI-0451	MEC NORTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (North Plant): A combined cycle natural gas fired combustion turbine generator with heat recovery steam generator	15.21	Natural gas	3064	MMBTU/H	Throughput Information: Nominal 500 MW electricity production. Turbine rating of 3,064 MMBTU/hr (HHV) and HRSG duct burner rating of 889 MMBTU/ Hr (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Volatile Organic Compounds (VOC)	Oxidation catalyst technology and good combustion practices.	2	PPM	HOURLY	BACT-PSD	SIP	The emission limit above is 2 ppmvd at 15% O2 with an underlying applicable requirement of BACT. The limit does not include startup and shutdown. □ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2. □ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0452	MEC SOUTH, LLC	MARSHALL ENERGY CENTER, LLC	EUCTGHRSG (South Plant): A combined-cycle natural gas-fired combustion turbine generator with heat recovery steam generator.	15.21	Natural gas	3064	MMBTU/H	Nominal 500 MW electricity production. Turbine rating of 3064 MMBTU/H (HHV) and HRSG duct burner rating of 889 MMBTU/ H (HHV).□ □ A combined-cycle natural gas-fired combustion turbine generator (CTG) with heat recovery steam generator (HRSG) in a 1x1 configuration with a steam turbine generator (STG) for a nominal 500 MW electricity production. The CTG is a H-class turbine with a rating of 3,064 MMBTU/hr (HHV). The HRSG is equipped with a natural gas fired duct burner, with a maximum heat input rating of 889 MMBTU/hr (HHV) and rated at 874 MMBTU/hr (HHV) at ISO conditions to provide heat for additional steam production. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with dry low NOx burner (DLNB), SCR, and an oxidation catalyst.	Volatile Organic Compounds (VOC)	Oxidation Catalyst Technology and Good Combustion Practices	2	PPM	HOURLY	BACT-PSD	SIP	Emission limit 1 above = 2 ppmvd at 15% O2 on an hourly basis. The applicable requirement is BACT. The limit does not include startup and shutdown. □ □ Startup is defined as the period of time from initiation of the combustion process (flame-on) from shutdown status and continues until steady state operation (loads greater than a demonstrated percent of design capacity) is achieved. Shutdown is defined as that period of time from the lowering of the turbine output below the demonstrated steady state level, with the intent to shut down, until the point at which the fuel flow to the combustor is terminated. The demonstrated percent of design capacity, or demonstrated steady state level, shall be described in the plan required in SC III.2. □ □ Startup and Shutdown hours are limited to 300 hours per 12 month rolling time period.
MI-0454	LBWL-ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG1	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG1- A nominally rated 667 MMBtu/hr natural gas-fired combustion turbine generator (CTG) coupled with a heat recovery steam generator (HRSG). The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a dry low NOx burner (DLNB), selective catalytic reduction (SCR), and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control for each CTG/HRSG unit, good combustion practices.	3	PPM	PPMVD AT 15%O2; HOURLY EXC SU/SD	BACT-PSD		Emission limit 1 above = 3 ppmvd at 15% O2 on an hourly basis except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 above is 5 lbs/hr on an hourly basis except during startup and shutdown. Applies in HRSG bypass mode.
MI-0454	LBWL-ERICKSON STATION	LANSING BOARD OF WATER AND LIGHT	EUCTGHRSG2	15.21	Natural gas	667	MMBTU/H	EUCTGHRSG2- A nominally rated 667 MMBtu/hr natural gas-fired CTG coupled with a HRSG. The HRSG is equipped with a natural gas-fired duct burner rated at 204 MMBtu/hr to provide heat for additional steam production. The CTG is capable of operating in combined-cycle mode where the exhaust is routed to the HRSG or in simple-cycle mode where the HRSG is bypassed. The HRSG is not capable of operating independently from the CTG. The CTG/HRSG is equipped with a DLNB, SCR, and oxidation catalyst.	Volatile Organic Compounds (VOC)	An oxidation catalyst for VOC control for each CTG/HRSG unit, good combustion practices.	3	PPM	PPMVD AT 15%O2; HOURLY EXC SU/SD. CC MOD	BACT-PSD		There are 2 VOC emission limits, both listed below.□ □ Emission limit 1 = 3 ppmvd at 15% O2 on an hourly basis, except during startup and shutdown. Applies in combined cycle mode.□ □ Emission limit 2 = 5 lb/hr on an hourly basis except during startup and shutdown. Applies in HRSG bypass mode.

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RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
MI-0455	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	MIDLAND COGENERATION VENTURE LIMITED PARTNERSHIP	EUCTGHRSG1	15.21	Natural gas	4197.6	MMBTU/H		Volatile Organic Compounds (VOC)	Oxidation catalyst	2.4	PPM	PPMVD AT 15%O2; HOURLY EXC SU/SD	BACT-PSD	SIP	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITHOUT DUCT BURNER - GENERAL ELECTRIC	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion turbine will be 2,312 MMBtu/hr(HHV)	Volatile Organic Compounds (VOC)	Oxidation Catalyst and use of natural gas a clean burning fuel	1	PPMVD@15 %O2	AVERAGE OF THREE ONE-HOUR TESTS	LAER	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - SIEMENS	15.21	Natural Gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two Siemens turbines and two associated duct burners) □ The heat input rate of the Siemens turbine will be 2,356 MMBtu/hr(HHV) with a 62.1 duct burner MMBtu/hr(HHV).	Volatile Organic Compounds (VOC)	Oxidation catalyst and pollution prevention (use of natural gas a clean burning fuel)	2	PPMVD	AVERAGE OF THREE ONE HOUR TESTS	LAER	OPERATING PERMIT	
NJ-0081	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	COMBINED CYCLE COMBUSTION TURBINE WITH DUCT BURNER - GENERAL ELECTRIC	15.21	Natural gas	33691	MMCF/YR	Natural Gas Usage < = 33,691 MMft^ 3/ yr□ per 365 consecutive day period, rolling one□ day basis (per two turbines and two duct□ burners) □ The heat input rate of each General Electric combustion each turbine will be 2,312 MMBtu/hr(HHV) with a 164.4 MMBtu/hr duct burner	Volatile Organic Compounds (VOC)	CO Oxidation Catalyst and good combustion practices and use natural gas only as a clean burning fuel	2	PPMVD@15 %O2	AVERAGE OF THREE ONE HOUR TESTS	LAER	OPERATING PERMIT	
NJ-0082	WEST DEPTFORD ENERGY STATION	WEST DEPTFORD ENERGY ASSOCIATES	Combined Cycle Combustion Turbine with Duct Burner	15.21	Natural Gas	20282	MMCF/YR	This is a 427 MW Siemens Combined Cycle Turbine with duct burner□ Heat Input rate of the turbine = 2276 MMbtu/ hr (HHV)□ Heat Input rate of the Duct burner= 777 MMbtu/hr(HHV)□ □ The fuel use of 20,282 MMCF/YR is for three turbines and three Duct burners.	Volatile Organic Compounds (VOC)	Oxidation catalyst and use of natural gas a clean burning fuel	1	PPMVD@15 %O2	AVERAGE OF THREE STACK TEST RUNS	LAER	OPERATING PERMIT	
NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine without Duct Burner Firing Natural Gas	15.11	Natural Gas	28169501	MMBTU/YR	Natural Gas Usage: <=28,169,501 MMBtu/year which includes maximum ultra low sulfur distillate oil usage of =2,371,943 MMBTU/year	Volatile Organic Compounds (VOC)	OXIDATION CATALYST AND GOOD COMBUSTION PRACTICES	1	PPMVD@15 %O2	3 H ROLLING AV BASED ON ONE H BLOCK	LAER	OPERATING PERMIT	
NJ-0084	PSEG FOSSIL LLC SEWAREN GENERATING STATION	PSEG FOSSIL LLC	Combined Cycle Combustion Turbine with Duct Burner firing natural gas	15.11	Natural Gas	0			Volatile Organic Compounds (VOC)	Oxidation Catalyst and good combustion practices	2	PPMVD	3 H ROLLING AV BASED ON ONE H BLOCK	LAER	OPERATING PERMIT	
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas without Duct Burner	15.21	Natural Gas	8040	H/YR		Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	1	PPMVD@15 %O2	AV OF THREE ONE H STACK TESTS EVERY 5 YR	LAER	OPERATING PERMIT	COMPLIANCE BY STACK TESTING
NJ-0085	MIDDLESEX ENERGY CENTER, LLC	STONEGATE POWER, LLC	Combined Cycle Combustion Turbine firing Natural Gas with Duct Burner	15.21	natural gas	4000	h/yr		Volatile Organic Compounds (VOC)	Oxidation Catalyst and good combustion practices	2	PPMVD@15 %O2	AV OF THREE ONE H STACK TESTS EVERY 5 YR	LAER	OPERATING PERMIT	
NY-0103	CRICKET VALLEY ENERGY CENTER	CRICKET VALLEY ENERGY CENTER LLC	Turbines and duct burners	15.11	natural gas	228	mw		Volatile Organic Compounds (VOC)	good combustion practices and oxidation catalyst	0.7	PPMVD @ 15% O2	1 H	LAER		EPA/ OAR 18/ 25A□ 0.7 ppm @ 15% O2 without duct burners□ 1.8 ppm @ 15% O2 with duct burners□ Applies to all operating loads, except during startup and shutdown.
OR-0050	TROUTDALE ENERGY CENTER, LLC	TROUTDALE ENERGY CENTER, LLC	Mitsubishi M501-GAC combustion turbine, combined cycle configuration with duct burner.	15.21	natural gs	2988	MMBTU/H	or ULSD; Duct burner 499 MMBtu/hr, natural gas	Volatile Organic Compounds (VOC)	Oxidation catalyst; □ Limit the time in startup or shutdown.	2	PPMDV AT 15% O2	3-HR ROLLING AVERAGE ON NG	BACT-PSD		
PA-0305	SHELL CHEM APPALACHIA/PETROCHEMICALS COMPLEX	SHELL CHEMICAL APPALACHIA	Combustion turbine wih duct burner and heat recovery steam generator	15.11	Natural Gas	0	Three 40.6 MW turbines	Three (3) General Electric Frame 6B NG fired turbine with duct burners and heat recovery steam generators. Total electric generating capacity will be 250.4 MW from cogeneration three turbines at 40.6 MW and two HRSG at 64.3 MW. Excess electricity generated will be sold to the grid in quantities sufficient to classify the facility as an electric utility.	Volatile Organic Compounds (VOC)		1	PPMDV @ 15% O2	1 HR AVERAGE	LAER		
PA-0306	TENASKA PA PARTNERS/WESTMORELAND GEN FAC	TENASKA PA PARTNERS LLC	Large Combustion turbine	15.11	Natural gas	0		This process entry is for the VOC emissions of turbine operation without the duct burner. Limit entered is for one turbine	Volatile Organic Compounds (VOC)	Ox Cat and good combustion practices	1.4	PPMVD @ 15% O2		LAER		
PA-0307	YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT	CALPINE MID-MERIT, LLC	Two combined cycle turbines with out duct burner	15.21	Natural Gas	2291.64	MCF/hr	Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypass from the CT to HRSG the CT will always be in combined cycle mode, the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. (Operational limits are for each CCCT NG-fired without duct burner)	Volatile Organic Compounds (VOC)	Oxidation catalyst, good combustion practices and low sulfur fuels	1.5	PPMDV @ 15% O2		LAER		Tons per year limit is for cumulative Emissions from both CCCT in any 12-month period
PA-0307	YORK ENERGY CENTER BLOCK 2 ELECTRICITY GENERATION PROJECT	CALPINE MID-MERIT, LLC	Two Combine Cycle Combustion Turbine with Duct Burner	15.21	Natural Gas	3001.57	MCF/hr	Two (2) Combustion Turbine, 235 MW / 2512.5 MMBtu/hr, will fire NG and with the design having no bypasss from the CT to HRSG the CT will always be in combined cycle mode the HRSG with NG-fired Duct Burner maximum rated heat input capacity 722 MMBtu/hr. CT will employ dry low NOx burner technology (NG firing), controled by SCR and oxidation catalyst. . (Operational limits are for each CCCT NG-fired with duct burner)	Volatile Organic Compounds (VOC)	Oxidation catalyst, good combustion practices and low sulfur fuels	1.9	PPMDV @ 15% O2		LAER		Tons per year limit is for cumulative emissions from both CCCT in any 12-month period. VOC limit expressed as methane.
PA-0309	LACKAWANNA ENERGY CTR/JESSUP	LACKAWANNA ENERGY CENTER, LLC	Combustion turbine with duct burner	15.21	Natural gas	3304.3	MMBtu/hr	Limits are for each CCCT and yearly limits are for cumulative turbine and duct burner. Duct burner throughput is 637.9 MMBtu/hr.	Volatile Organic Compounds (VOC)	Oxidation catalyst, combustion controls, exclusive natural gas	1.5	PPMDV @ 15% O2		LAER	NSPS	CO CEMS (as surrogate)
PA-0310	CPV FAIRVIEW ENERGY CENTER	CPV FAIRVIEW, LLC	Combustion turbine and HRSG without duct burner NG only	15.21	Natural gas	0		Emission limits are for each turbine fueled by NG and operating without duct burner being fired and do not include startup/shutdown emissions.	Volatile Organic Compounds (VOC)		1	PPMDV @ 15% O2		BACT-PSD	NSPS	Limit is for each turbine and HRSG with the duct burner not fired.
PA-0310	CPV FAIRVIEW ENERGY CENTER	CPV FAIRVIEW, LLC	Combustion turbine and HRSG with duct burner NG only	15.21	Natural Gas	3338	MMBtu/hr	Emission limits are for each turbine operating with duct burner and do not include startup/shutdown emissions. Tons per year limits is a cumulative value for all three CCCT. CEMS for NOx, CO, and O2.□ Each CCCT and duct burner have 5 operational scenarios: □ 1 CCCT with duct burner fired - fueled by NG only□ 2 CCCT with duct burner fired - fueled by NG blend with ethane□ 3 CCCT without duct burner fired - fueled by NG only□ 4 CCCT without duct burner fired - fueled by NG blend with ethane□ 5 CCCT without duct burner fired - fueled by ULSD (Limited to emergency use only)	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	1.5	PPMDV @ 15% O2		LAER	NSPS	ppmdv limit is for each turbine and duct burner, TPY is a cumulative total

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
PA-0311	MOXIE FREEDOM GENERATION PLANT	MOXIE FREEDOM LLC	Combustion Turbine With Duct Burner	15.21	Natural Gas	3727	MMBtu/hr	DLN burner, SCR, Oxidation Catalyst and shall maintain and operate the sources and associated air cleaning devices in accordance with good engineering practice. shall install, certify, maintain and operate continuous emission monitoring systems (CEMS) for nitrogen oxides, carbon monoxide, carbon dioxide, and ammonia emissions on the exhaust of each combined-cycle powerblock.□ Emissions limits are for each combustion turbine/duct burner block.	Volatile Organic Compounds (VOC)	Oxidation catalyst and good engineering practice	1.5	PPMDV @ 15% O2		LAER	NSPS	38.5 tpy on 12-month rolling basis
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #2 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Volatile Organic Compounds (VOC)	SCR, CATALYTIC OXIDIZER	1.6	PPMVD	@ 15% O2 / 1 HR	LAER		
PA-0334	RENOVO ENERGY CENTER LLC/RENOVO PLT	RENOVO ENERGY CENTER LLC	COMBUSTION TURBINE w DUCT BURNER #1 (Natural Gas)	15.21	Natural Gas	4546	MMBtu/Hr	The air contaminants from each power block will be controlled by a selective catalytic reduction (SCR) system and an oxidation catalyst.	Volatile Organic Compounds (VOC)	SCR, Catalytic Oxidizer	1.6	PPMVD	@ 15% O2 / 1 HR	LAER		
TX-0660	FGE TEXAS POWER I AND FGE TEXAS POWER II	FGE POWER LLC	Alstom Turbine	15.21	Natural Gas	230.7	MW	Four (4) Alstom GT24 CTGs, each with a HRSG and DBs, max design capacity 409 MMBtu/hr	Volatile Organic Compounds (VOC)	Oxidation catalyst, good combustion practices	2	PPMVD	CORRECTED TO 15% O2, ROLLING 3 HR AVE	BACT-PSD		
TX-0666	PINCREST ENERGY CENTER	PINECREST ENERGY CENTER, LLC	Combined-cycle gas turbine electric generating facility	11.31	natural gas	637	MW	three possible turbines: General Electric 7Fa.05, Siemens SGT6-5000F(4), or Siemens SGT6-5000F(B).	Volatile Organic Compounds (VOC)	good combustion practices	2	PPMVD @ 15% O2	ROLLING 3-HR AVERAGE	BACT-PSD	NSPS , MACT	
TX-0678	FREEPORT LNG PRETREATMENT FACILITY	FREEPORT LNG DEVELOPMENT LP	Combustion Turbine	15.21	natural gas	87	MW	The exhaust heat from the turbine will be used to heat a heating medium which is used to regenerate rich amine from the acid gas removal system.	Volatile Organic Compounds (VOC)	oxidation catalyst	2	PPMVD	1 HOUR BASED ON STACK TEST	BACT-PSD		
TX-0702	UTILITIES TURBINES	FORMOSA PLASTICS CORPORATION	Turbines for Steam and Electricity Generation	15.25	natural gas, hydrogen, tail gas	35000	LB/H	Turbines will use sweet natural gas, hydrogen, olefins tail gas to generate electricity and steam in support of the proposed expansion to the Olefins Plant. Turbines will be equipped with dry lo-NOx burners, SCR and heat recovery steam generators	Volatile Organic Compounds (VOC)	Good combustion practices to limit VOC emissions to 4 ppmvd at 15% oxygen when firing natural gas.	4	PPMVD	AT 15% OXYGEN WHEN FIRING NATURAL GAS	BACT-PSD	NSPS , NESHAP , MACT , SIP	
TX-0704	UTILITY PLANT	M & G RESINS USA LLC	cogeneration turbine	16.21	natural gas	49	MW	General Electric LM6000 natural gas-fired combustion turbine equipped with lean pre-mix low-NOx combustors.□ □ One heat recovery steam generator (HRSG) with 263 million British thermal units per hour (MMBtu/hr) natural gas-fired duct burner system containing a selective catalytic reduction system (SCR)	Volatile Organic Compounds (VOC)	oxidation catalyst	4	PPMVD	@15% O2, 24-HR ROLLING AVERAGE	BACT-PSD		
TX-0710	VICTORIA POWER STATION	VICTORIA WLE L.P.	combined cycle turbine	15.21	natural gas	197	MW	General Electric 7FA.04 at 197 MW nominal ouput. The duct burners will be capable of a maximum natural gas firing rate of up to 483 MMBtu/hr (HHV). The duct burners may be fired additional hours; however, total annual firing will not exceed the equivalent of 4,375 hours at maximum capacity per duct burner. The available capacity of the existing steam turbine will be increased from 125 MW in its existing 1x1x1 configuration to approximately 185 MW in the 2x2x1 configuration.	Volatile Organic Compounds (VOC)	oxidation catalyst	4	PPMVD	@15% O2, 3-HR ROLLING AVERAGE	BACT-PSD		
TX-0712	TRINIDAD GENERATING FACILITY	SOUTHERN POWER COMPANY	combined cycle turbine	15.21	natural gas	497	MW	The facility will consist of a Mitsubishi Heavy Industries (MHI) J model gas fired combustion turbine nominally rated at 497 megawatts (MW) equipped with a HRSG and DB with a maximum design capacity of 402 million British thermal units per hour (MMBtu/hr). The gross nominal output of the CTG with HRSG and DB is 530 MW.	Volatile Organic Compounds (VOC)	oxidation catalyst	4	PPMVD	@15% O2 1-HR	BACT-PSD		
TX-0713	TENASKA BROWNSVILLE GENERATING STATION	TENASKA BROWNSVILLE PARTNERS, LLC	(2) combined cycle turbines	15.21	natural gas	274	MW	Each CTG is site-rated at 274 MW gross electric output at 62Â°F ambient temperature. At this condition, two HRSGs with full duct burner firing produce enough steam to generate an additional 336 MW, for a total of 884 MW gross, or with about 5% losses, about 840 MW net electric output. Under summertime conditions, the net output is approximately 800 MW with the 2x1 CCGT configuration or about 400 MW with the 1x1 CCGT configuration.	Volatile Organic Compounds (VOC)	oxidation catalyst	2	PPMVD	@15% O2, 3-HR AVERAGE	BACT-PSD		
TX-0714	S R BERTRON ELECTRIC GENERATING STATION	NRG TEXAS POWER LLC	(2) combined cycle turbines	15.21	natural gas	240	MW	The gas turbines will be one of three options: □ □ (1) Two Siemens Model F5 (SF5) CTGs each rated at nominal capability of 225 megawatts (MW). Each CTG will have a duct fired HRSG with a maximum heat input of 688 million British thermal units per hour (MMBtu/ hr).□ □ (2) Two General Electric Model 7FA (GE7FA) CTGs each rated at nominal capability of 215 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 523 MMBtu/hr. □ □ (3) Two Mitsubishi Heavy Industry G Frame (MHI501G) CTGs each rated at a nominal electric output of 263 MW. Each CTG will have a duct fired HRSG with a maximum heat input of 686 MMBtu/hr.	Volatile Organic Compounds (VOC)	oxidation catalyst	1	PPMVD	@15% O2	BACT-PSD		
TX-0730	COLORADO BEND ENERGY CENTER	COLORADO BEND II POWER, LLC	Combined-cycle gas turbine electric generating facility	15.21	natural gas	1100	MW	combined cycle power plant that uses two combustion turbines and one steam turbine, model GE 7HA.02	Volatile Organic Compounds (VOC)	SCR and oxidation catalyst	4	PPMVD @ 15% O2	3-HR AVERAGE	BACT-PSD	NSPS	
TX-0751	EAGLE MOUNTAIN STEAM ELECTRIC STATION	EAGLE MOUNTAIN POWER COMPANY LLC	Combined Cycle Turbines (>25 MW) â€" natural gas	15.21	natural gas	210	MW	Two power configuration options authorized:□ Siemens â€" 231 MW + 500 million British thermal units per hour (MMBtu/hr) duct burner□ GE â€" 210 MW + 349.2 MMBtu/hr duct burner	Volatile Organic Compounds (VOC)	Oxidation catalyst	2	PPM		LAER	NSPS , SIP	
TX-0767	LON C. HILL POWER STATION	LON C. HILL, L.P.	Combined Cycle Turbines (>25 MW)	15.21	natural gas	195	MW	Two power configuration options authorized:□ Siemens â€" 240 MW + 250 million British thermal units per hour (MMBtu/hr) duct burner□ GE â€" 195 MW + 670 MMBtu/hr duct burner	Volatile Organic Compounds (VOC)	oxidation catalyst	2	PPM		BACT-PSD	NSPS	
TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Volatile Organic Compounds (VOC)	Oxidation Catalyst	2	PPM		BACT-PSD		
TX-0773	FGE EAGLE PINES PROJECT	FGE EAGLE PINES, LLC	Combined Cycle Turbines (>25 MW)	15.21	natural gas	321	MW	Alstom GT36 combustion turbines (321 MW)+ 799 million British thermal units per hour (MMBtu/hr) duct burner	Volatile Organic Compounds (VOC)	Oxidation Catalyst	2	PPM		BACT-PSD		

Table C-1: RBLC Search Results for Turbines

Search Basis
Permit Date Between 01/01/2014 And 01/23/2025 And Process Type = 15.210 And Process Contains 'turbine' Results refined to exclude simple cycle units and units combusting other fuel types (landfill gas, USLD, etc).

RBLCID	FACILITY NAME	CORPORATE OR COMPANY NAME	PROCESS NAME	PROCCESS TYPE	PRIMARY FUEL	THROUGHPUT	THROUGHPUT UNIT	PROCESS NOTES	POLLUTANT	CONTROL METHOD DESCRIPTION	EMISSION LIMIT 1	EMISSION LIMIT 1 UNIT	EMISSION LIMIT 1 AVG TIME CONDITION	CASE-BY-CASE BASIS	OTHER APPLICABLE REQUIREMENTS	POLLUTANT COMPLIANCE NOTES
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Large Combustion Turbines > 25 MW	15.11	natural gas	232	MW	4 Simple cycle CTGs, 2,500 hr/ yr operational limitation.□ Facility will consist of either 232 MW (Siemens) or 220 MW (GE)	Volatile Organic Compounds (VOC)	good combustion practices	2	PPM		BACT-PSD	NSPS	SUBPARTS KKKK AND TTTT
TX-0788	NECHES STATION	APEX TEXAS POWER LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE) Simple cycle operations limited to 2,500 hr/yr.	Volatile Organic Compounds (VOC)	OXIDATION CATALYST	2	PPM		BACT-PSD	NSPS	NSPS KKKK AND TTTT
TX-0789	DECORDOVA STEAM ELECTRIC STATION	DECORDOVA II POWER COMPANY LLC	Combined Cycle & Cogeneration	15.21	natural gas	231	MW	2 CTGs to operate in simple cycle & combined cycle modes. 231 MW (Siemens) or 210 MW (GE). Simple cycle operations limited to 2,500 hr/yr.	Volatile Organic Compounds (VOC)	OXIDATION CATALYST	2	PPM		BACT-PSD	NSPS	KKKK AND TTTT
TX-0790	PORT ARTHUR LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	natural gas	10	M TONNES/YR	Four GE Frame 7E gas turbines for refrigeration and compression at the site	Volatile Organic Compounds (VOC)	Dry low NOx burners and good combustion practices	2	PPM	3-HR AVG	BACT-PSD		
TX-0817	CHOCOLATE BAYOU STEAM GENERATING (CBSG) STATION	INEOS USALLC	Combined Cycle Cogeneration	15.21	NATURAL GAS	50	MW	2 UNITS EACH 50 MW GE LM6000	Volatile Organic Compounds (VOC)	OXIDATION CATALYST	1	PPMDV		BACT-PSD	NSPS	NSPS KKKK
TX-0819	GAINES COUNTY POWER PLANT	SOUTHWESTERN PUBLIC SERVICE COMPANY	Combined Cycle Turbine with Heat Recovery Steam Generator, fired Duct Burners, and Steam Turbine Generator	15.21	NATURAL GAS	426	MW	Four Siemens SGT6-5000F5 natural gas fired combustion turbines with HRSGs and Steam Turbine Generators	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	3.5	PPMVD	15% O2	BACT-PSD		
TX-0833	JACKSON COUNTY GENERATORS	SOUTHERN POWER	Combustion Turbines	15.11	natural gas	920	MW	4 identical units, each limited to 2500 hours of operation per year	Volatile Organic Compounds (VOC)	Good combustion practices	2	PPMVD		BACT-PSD	NSPS	NSPS KKKK
TX-0834	MONTGOMERY COUNTY POWER STATIOIN	ENTERGY TEXAS INC	Combined Cycle Turbine	15.21	NATURAL GAS	2635	MMBTU/HR/UNIT	Two Mitsubishi M501GAC turbines (without fast start)	Volatile Organic Compounds (VOC)	Oxidation catalyst	2	PPMVD	15% O2 3 HOUR AVERAGE	LAER	NSPS , MACT	NSPS KKKK & TTTT, MACT YYYY
TX-0851	RIO BRAVO PIPELINE FACILITY	RIO GRANDE LNG LLC	Refrigeration Compression Turbines	15.11	NATL GAS	967	MMBTU/HR	Twelve General Electric Frame 7EA simple cycle combustion turbines to serve as drivers for refrigeration and compression at the site. There are six process trains and there are two turbines per train. One each of the pairs of turbines has a downstream heat exchanger in the exhaust stream. The heat exchanger heats oil in a closed circuit for process uses elsewhere in the natural gas liquefaction system.	Volatile Organic Compounds (VOC)	Good combustion practices	2	PPMVD	15% O2	BACT-PSD	NSPS , NESHAP	
TX-0878	LNG EXPORT TERMINAL	PORT ARTHUR LNG, LLC	Refrigeration Compression Turbines	15.21	NATURAL GAS	26.92	MMTON/Y	Eight GE Frame 7E gas turbines for refrigeration and compression at the site.	Volatile Organic Compounds (VOC)	good combustion practices.	2	PPM	3-HR AVG	BACT-PSD		
TX-0915	UNIT 5	NRG CEDAR BAYOU LLC	COMBINED CYCLE TURBINE	15.21	NATURAL GAS	0			Volatile Organic Compounds (VOC)	OXIDATION CATALYST	1	PPMVD	3-HR ROLLING	BACT-PSD	NSPS , MACT , SIP	
TX-0933	NACERO PENWELL FACILITY	NACERO TX 1 LLC	TURBINE	15.11	NATURAL GAS	0			Volatile Organic Compounds (VOC)	Oxidization catalyst, good combustion practices and the use of gaseous fuel	1.7	PPMVD		BACT-PSD		
TX-0939	ORANGE COUNTY ADVANCED POWER STATION	ENTERGY TEXAS, INC.	Combined Cycle Turbines	15.21	NATURAL GAS	1215	MW	2 Mitsubishi M501JAC combustion turbines 1,215 MW (in a 2x1 configuration) output and 6,762 Btu/kW-hr (with a 9% degradation) gross heat rate.	Volatile Organic Compounds (VOC)	Oxidation Catalyst and good combustion practices	2	PPMVD	15% O2 3-HR AVERAGE	BACT-PSD	NSPS , MACT	
VA-0325	GREENSVILLE POWER STATION	VIRGINIA ELECTRIC AND POWER COMPANY	COMBUSTION TURBINE GENERATOR WITH DUCT-FIRED HEAT RECOVERY STEAM GENERATORS (3)	15.21	natural gas	3227	MMBTU/HR	3227 MMBTU/HR CT with 500 MMBTU/HR Duct Burner, 3 on 1 configuration.	Volatile Organic Compounds (VOC)	Oxidation Catalyst and good combustion practices	1.4	PPMVD		N/A		Emission Limit 1: Turbine: 0.7 ppmvd without DB
VA-0328	C4GT, LLC	NOVI ENERGY	GE Combustion Turbine - Option 1 - Normal Operation	15.21	natural gas	34000	MMCF/YR	Option 1: □ Two on one configuration: 3,482 MMBtu/hr combustion turbine with 475 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practices	0.7	PPMVD @ 15% O2	3 HR AV/WITHOUT DB	BACT-PSD	SIP , NSPS	Alternative emission limits apply during startup and shutdown. Compliance is based on compliance with CO limits, determined by CEMS.
VA-0328	C4GT, LLC	NOVI ENERGY	Siemens Combusion Turbine - Option 2 - Normal Operation	15.21	Natural Gas	35000	MMCF/YR	Option 2: □ Two on one configuration: 3,116 MMBtu/hr combustion turbine with 991 MMBtu/hr duct-fired HRSG. Emission limits reflect the operation of one turbine with or without duct firing.	Volatile Organic Compounds (VOC)	Oxidation catalyst and good combustion practice	1	PPMVD @ 15% O2	3 H AV/WITHOUT DB	BACT-PSD	NSPS , SIP	Alternative emission limits apply during startup and shutdown. Compliance is based on compliance with CO limits, determined by CEMS.
VA-0332	CHICKAHOMINY POWER LLC	CHICKAHOMINY POWER LLC	Three (3) Mitsubishi Hitachi Power Systems combustion turbine generators	15.21	natural gas	35000	MMCF/YR	One on one configuration: 4,066 MMBtu/H combustion turbine. Emission limits reflect the operation of each of the three turbines.	Volatile Organic Compounds (VOC)	Controlled by an oxidation catalyst and good combustion practices (e.g. controlled fuel/air mixing, adequate temperature, and gas residence time)	0.7	PPMVD @ 15% O2	3 HR AVG	BACT-PSD	SIP , NSPS	Alternative emission limits apply during startup and shutdown. Compliance is based on compliance with CO limits, determined by CEMS. VOC emissions during tuning are limited by the duration of the tuning event.
WI-0300	NEMADJI TRAIL ENERGY CENTER	NEMADJI TRAIL ENERGY CENTER	Natural-Gas-Fired Combined-Cycle Turbine (P01)	15.21	Natural Gas	4671	MMBTU/H	One Natural-Gas-Fired Siemens SGT6-8000 H Combined-Cycle Turbine with Natural Gas-Fired Duct Burner and Diesel Fuel Oil Back-Up [Maximum continuous rating: 4,671 MMBtu/hr higher heating value (HHV) when combusting natural gas, 4,027 MMBtu/hr, HHV when combusting diesel fuel oil], Selective Catalytic Reduction (SCR) (C01a) and Oxidation Catalyst (C01b)	Volatile Organic Compounds (VOC)	Oxidation Catalyst, good combustion control	2.7	PPM AT 15% O2	168-HR AVG., NAT. GAS, DUCT FIRING	BACT-PSD		* Except during start-up and shutdown.□ VOC may not exceed 2.7 ppm at 15% O2 based on a 168-hour rolling average when firing natural gas and with duct firing.□ and may not exceed 0.6 ppm at 15% O2 based on a 168-hour rolling average when firing natural gas and without duct firing.□ VOC may not exceed 3.3 ppm at 15% O2 based on a 168-hour rolling average when firing diesel fuel oil and with duct firing and may not exceed 0.6 ppm at 15% O2 based on a 168-hour rolling average when firing diesel fuel oil and without duct firing

APPENDIX F. MDEQ FORMS

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

1. Name, Address, and Location of Facility

A. Owner/Company Name: MZX Tech LLC

B. Facility Name (if different than A. above):

C. Facility Air Permit No. (if known):

D. Agency Interest No. (if known):

E. Physical Address

1. Street Address: 2875 Stanton Road S
2. City: Southaven
3. State: Mississippi
4. County: DeSoto
5. Zip Code: 38671
6. Telephone No.:
7. Fax No.:

F. Mailing Address *(if different from physical address)*

1. Street Address or P.O. Box: 1450 Page Mill Road
2. City: Palo Alto
3. State: CA
4. Zip Code: 94304

G. Latitude/Longitude Data

1. Collection Point *(check one)*

[X] Plant Entrance [ ] Other:

2. Method of Collection *(check one)*

[ ] GPS Specify coordinate system (NAD 83, etc.)

[X] Map Interpolation (Google Earth etc.) [ ] Other:

3. Latitude (degrees/minutes/seconds): 34 / 59 / 03.67 N
4. Longitude (degrees/minutes/seconds): 90 / 02 / 24.82 W
5. Elevation: 284 feet

H. SIC/NAICS Codes *(primary code listed first)*

SIC: 7374

NAICS: 518210

(NAICS Code should correspond with the SIC Code directly above.)

2. Name and Address of Facility Contact

A. Name Brent Mayo Title: Manager

B. Mailing Address

1. Street Address: 1450 Page Mill Road
2. City: Palo Alto
3. State: CA
4. Zip Code: 94304
5. Email: brent@colossusx.com
6. Telephone No.: (281) 928-3123
7. Fax No.:

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

3. Name and Address of Air Contact *(if different from Facility Contact)*

A. Name: Shannon G. Lynn, PE — Title: Prinicipal Consultant

B. Mailing Address

1. Street Address: 1701 Centerview Drive, Suite 109
2. City: Little Rock — 3. State: Arkansas
4. Zip Code: 72211 — 5. Email: slynn@trinityconsultants.com
6. Telephone No.: (501) 454-6264 — 7. Fax No.:

4. Name and Address of the Responsible Official for the Facility

The Responsible Official is defined as one of the following:

a. For a corporation, a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit and the facilities employ more than 250 persons or have gross annual sales or expenditures exceeding $ 25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated in accordance with corporate procedures.

b. For a partnership or sole proprietorship: a general partner or the proprietor, respectively.

c. For a municipality, state, federal, or other public agency: either a principal executive officer or ranking elected official. For purposes of these regulations, a principal executive officer of a Federal agency includes the chief executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., a Regional Administrator of EPA). A principal executive officer of a military facility includes the facility commander, chief executive officer, or any other similar person who performs similar policy or decision-making functions for the institution.

A. Name: Brent Mayo — Title: Manager; Authorized Signatory

B. Mailing Address

1. Street Address: 1450 Page Mill Road
2. City: Pal Alto — 3. State: CA
4. Zip Code: 94304 — 5. Email: brent@colossusx.com
6. Telephone No.: (281) 928-3028 — 7. Fax No.:

C. Is the person above a duly authorized representative and not a corporate officer? [X] Yes [ ] No

If yes, has written notification of such authorization been submitted to MDEQ?

[ ] Yes [ ] No [X] Request for authorization is attached

Duly Authorized Representative (DAR) Designation Form (AIR Only)

Corporate Responsible Officials (RO's) have the option to designate a Duly Authorized Representative (DAR) to sign air regulatory documents (e.g., applications, routine reports, certifications, etc.) in accordance with the provisions of 11 Miss. Admin. Code Pt. 2, R. 2.1.C(24). and/or 11 Miss. Admin. Code Pt. 2, R. 6.1.A(26). To make such a designation, the DAR must meet the criteria outlined below and this form must be executed by the Corporate Official making the designation.

Facility Name: MZX Tech LLC Agency Interest No.: _____

I hereby certify that I meet the criteria of a Responsible Official for the subject facility in accordance with the above referenced regulations. Specifically, I Jonathan Shulkin :

(print name of Corporate Responsible Official)

Check One

☑ am an officer of the Corporation. My title is: Chief Financial Officer

☐ perform policy or decision-making functions similar to that of an officer of the corporation.

Describe: _____

I hereby designate the following individual as a DAR to act in my stead in matters pertaining to air permitting:

Name: Brent Mayo Title: Authorized Signatory

Address: 1450 Page Mill Road, Palo Alto, CA 94304

Phone: (281) 928-3028 Email: brent@colossusx.com

DAR Criteria Questions

☑ Yes ☐ No Is the above-named DAR responsible for overall operation of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in 1980 dollars)?

☑ Yes ☐ No Has authority to sign documents been assigned or delegated to the above named DAR in accordance with corporate procedures?

*Please note that if you answered "**No**" to **both** of the above questions, the individual does not meet the criteria to be a DAR.*

Signed by: BB4506D3DEE4401...

(signature of Corporate Responsible Official)

8/22/2025

(Date)

Mail Form To: Environmental Permits Division
Mississippi Department of Environmental Quality
P.O. Box 2261, Jackson, MS 39225

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

5. Type of Permit Application *(Check all that apply)*

State Permit to Construct (i.e., non-PSD or PSD avoidance)

☐ Initial Application ☐ Modification

New Source Review (NSR) Permit to Construct (includes both Prevention of Significant Deterioration (PSD) and Nonattainment)

☒ Initial Application ☐ Modification

Title V Operating Permit

☐ Initial Application

☐ Re-issuance: *Are any modification to the permit/facility being requested?* ☐ Yes ☐ No

(If yes, provide a separate sheet identifying the modification(s) and resulting change to emissions.)

☐ Modification (*Specify type*): ☐ Significant ☐ Minor ☐ Administrative

Synthetic Minor Operating Permit *(Appendix B must be completed and attached.)*

☐ Initial Application

☐ Re-issuance: *Are any modification to the permit/facility being requested? If yes, address such on a separate sheet.* ☐ Yes ☐ No

☐ Modification

State Permit to Operate a Significant Minor Source *(defined in 11 Miss. Admin. Code Pt. 2, R.2.1.C(25).)*

☐ Initial Application

☐ Re-issuance: *Are any modification to the permit/facility being requested? If yes, address such on a separate sheet.* ☐ Yes ☐ No

☐ Modification

True Minor Determination

☐ Uncontrolled potential to emit air pollutants is below the Title V thresholds

6. Process/Product Details

A. List Significant Raw Materials (*if applicable*):

B. List All Products (*if applicable*):

C. Brief Description of Principal Process(es):

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

6. Process/Product Details (continued)

D. Maximum Throughput for Raw Material(s) (*if applicable*):

Raw Materials	Throughput	Units
Natural Gas	110,246.26	MMscf/yr

E. Maximum Throughput for Principal Product(s) (*if applicable*):

Product	Throughput	Units
Electrical Power	1.2	GW

7. Facility Operating Information

A. Number of employees at the facility: _____

	Average Actual	Maximum Potential
B. Hours per day the facility will operate:		24
C. Days per week the facility will operate:		7
D. Weeks per year the facility will operate:		52
E. Months the facility will operate:		12

8. Maps

A. Attach a topographical map of the area extending to at least 1/2 mile beyond the property boundaries. The map must show the outline of the property boundaries.

B. Attach a site map/diagram showing the outline of the property, an outline of all buildings and roadways on the site, and the location of each significant air emission source.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

9. Zoning

A. Is the facility (either existing or proposed) located in accordance with any applicable city and/or county zoning ordinances? If no, please explain.

Yes

B. Is the facility (either existing or proposed) required to obtain any zoning variance to locate/ expand the facility at this site? If yes, please explain.

No

10. Risk Management Plan (RMP)

A. Is the facility required to develop and register a risk management plan pursuant to Section 112(r), regulated under 40 CFR Part 68? ☐ Yes ☒ No

B. If "yes", submit the plan to EPA via https://www.epa.gov/rmp/rmpesubmit.
Date Submitted: _____

11. *Is confidential information being submitted with this application?* ☐ **Yes** ☒ **No**

If so, please follow the procedures outlined in the Mississippi Code Ann. Sections 49-17-39 and 17-17-27(6), as outlined in MCEQ-2-"Regulation regarding the review and reproduction of public records".

12. MS Secretary of State Registration / Certificate of Good Standing

No permit will be issued to a company that is not authorized to conduct business in Mississippi. If the company applying for the permit is a corporation, limited liability company, a partnership or a business trust, the application package should include proof of registration with the Mississippi Secretary of State and/or a copy of the company's Certificate of Good Standing. The name listed on the permit will include the company name as it is registered with the Mississippi Secretary of State.

It should be noted that for an application submitted in accordance with 11 Miss. Admin. Code Pt. 2, R. 2.8.B. to renew a State Permit to Operate or in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.A(1)(c). to renew a Title V Permit to be considered timely and complete, the applicant shall be registered and in good standing with the Mississippi Secretary of State to conduct business in Mississippi.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Facility (Agency Interest) Information — **Section A**

13. Certification

Note: If approved by the MDEQ, a duly authorized representative (DAR) may sign the air permit application. The DAR must be listed in Section 4 of this application.

I certify to the best of knowledge and belief formed after reasonable inquiry; the statements and information in this application are true, complete, and accurate, and that as a responsible official, my signature shall constitute an agreement that the applicant assumes the responsibility for any alteration, additions, or changes in operation that may be necessary to achieve and maintain compliance with all applicable Rules and Regulations. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Signed by:
E516ED127204AF...

Signature of Responsible Official/DAR

1/14/2026

Date

Brent Mayo

Printed Name

Authorized Signatory

Title

Section B.0: Emission Point Descriptions & Status

This form should list all the of the Emission Points and descriptions as proposed or as otherwise identified in an existing permit. This worksheet should be updated to reflect changes to the Status of the emission points over time. Emission Point ID's should match those assigned in the current MDEQ permit. Facility ID is optional. For proposed emission points, the facility should leave the Emission Point ID blank but may complete the Facility ID (if any). Under "Status," for Emission Points that are proposed or under construction but not yet operating, indicate their status as "Proposed." For emissions points already operating or for which construction has been certified complete, indicate their status as "Operating." Include all control devices for each emission point and the pollutant(s) the device controls. Control devices may be specified in general terms (e.g., baghouse, catalytic oxidizer, fabric filter, wet ESP, etc.). When an Emission Point is removed, indicate so by changing the "Status" to "Removed." Remove the emissions on the subsequent worksheets or indicate they are removed with a "-" for all pollutants.

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
	TUR-1	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-2	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-3	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-4	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-5	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-6	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-7	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-8	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-9	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-10	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
	TUR-11	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-12	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-13	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-14	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-15	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-16	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-17	16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-18	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-19	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-20	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-21	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-22	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-23	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
	TUR-24	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-25	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-26	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-27	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-28	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-29	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-30	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-31	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-32	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-33	35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-34	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-35	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-36	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
	TUR-37	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-38	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-39	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-40	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	TUR-41	50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst	Proposed	SCR	NOX	Oxidation Catalyst	CO VOC HAP		
	PRS-1	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NO_X burners	Proposed						
	PRS-2	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-3	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-4	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-5	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-6	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-7	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-8	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						

Emission Point ID	Facility ID	Description	Status	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)	Control Device	Controlled Pollutant(s)
	PRS-9	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	PRS-10	10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners	Proposed						
	SSM-1	Start-up and Shutdown Operations of Solar PGM-130 Turbines	Proposed						
	SSM-2	Start-up and Shutdown Operations of Solar Titan 350 Turbines	Proposed						
	SSM-3	Start-up and Shutdown Operations of ProEnergy 6000PE Turbines	Proposed						

Section B.1: Maximum Uncontrolled Emissions (under normal operating conditions)

Maximum Uncontrolled Emissions are the emissions at maximum capacity and prior to (in the absence of) pollution control, emission-reducing process equipment, or any other emission reduction. Calculate the hourly emissions using the worst case hourly emissions for each pollutant. For each pollutant, calculate the annual emissions as if the facility were operating at maximum plant capacity without pollution controls for 8760 hours per year, unless operating capacity and/or hours of operation are specifically limited in an enforceable permit. (Existing limits on operating conditions, not emissions or use of a control device, may be used when determining uncontrolled emissions.) Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Emissions ≥ 0.01 ton/yr from a specific emission unit must be included. Please do not change the column widths on this table.

Emission Point ID	TSP[1] (PM)		PM_{10}[1]		$PM_{2.5}$[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead		Total HAPs	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TUR-1	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-2	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-3	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-4	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-5	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-6	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-7	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-8	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-9	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-10	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-11	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-12	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-13	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-14	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-15	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-16	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-17	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	6.55	25.20	6.64	25.57	2.09	8.05					0.07	0.29
TUR-18	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-19	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-20	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-21	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-22	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-23	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-24	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-25	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-26	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-27	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-28	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-29	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-30	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-31	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-32	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-33	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	22.89	85.34	23.23	86.59	7.31	27.26					0.15	0.59
TUR-34	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-35	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-36	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-37	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-38	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-39	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-40	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
TUR-41	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	46.71	193.32	67.10	277.75	14.32	59.29					0.18	0.80
PRS-1	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-2	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-3	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08

PRS-4	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-5	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-6	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-7	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-8	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-9	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
PRS-10	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24					0.02	0.08
SSM-1	-	-	-	-	-	-	-	-	255.00	0.13	5227.50	2.61	1275.00	0.64					7.27	0.02
SSM-2	-	-	-	-	-	-	-	-	560.00	0.28	9840.00	4.92	720.00	0.36					3.69	0.01
SSM-3	-	-	-	-	-	-	-	-	1065.20	0.53	2245.60	1.12	180.40	0.09					0.58	0.00
Totals	**4.79**	**19.56**	**4.79**	**19.56**	**4.78**	**19.53**	**35.74**	**156.53**	**2,736.26**	**3,362.80**	**18,342.67**	**4,086.79**	**2,443.09**	**1,050.85**	**0.00**	**0.00**	**0.00**	**0.00**	**16.81**	**21.54**

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM_{10} and $PM_{2.5}$, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.2: Proposed Allowable Emissions

Proposed Allowable Emissions (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard (e.g., a MACT standard); or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected. Emissions ≥ 0.01 ton/yr from a specific emission unit must be included. Additional columns may be added if there are regulated pollutants (other than HAPs and GHGs) emitted at the facility. List HAPs in Section B.3 and GHGs in Section B.4 (if applicable).

Emission Point ID	TSP[1] (PM)		PM_{10}[1]		$PM_{2.5}$[1]		SO_2		NOx		CO		VOC		TRS[2]		Lead	
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TUR-1	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-2	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-3	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-4	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-5	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-6	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-7	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-8	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-9	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-10	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-11	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-12	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-13	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-14	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-15	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-16	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-17	0.07	0.27	0.07	0.27	0.07	0.27	0.50	2.20	1.45	5.60	0.89	3.41	1.39	5.37				
TUR-18	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-19	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-20	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-21	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-22	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-23	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-24	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-25	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-26	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-27	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-28	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-29	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-30	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-31	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-32	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-33	0.14	0.55	0.14	0.55	0.14	0.55	1.05	4.61	3.05	11.38	1.86	6.93	2.93	10.91				
TUR-34	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-35	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-36	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-37	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-38	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-39	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-40	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
TUR-41	0.17	0.75	0.17	0.75	0.17	0.75	1.29	5.64	3.74	15.47	4.55	18.83	4.48	18.53				
PRS-1	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-2	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-3	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				

PRS-4	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-5	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-6	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-7	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-8	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-9	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
PRS-10	0.01	0.02	0.01	0.02	0.00	0.02	0.01	0.03	0.49	2.15	0.82	3.61	0.05	0.24				
SSM-1	-	-	-	-	-	-	-	-	255.00	0.13	5227.50	2.61	1275.00	0.64				
SSM-2	-	-	-	-	-	-	-	-	560.00	0.28	9840.00	4.92	720.00	0.36				
SSM-3	-	-	-	-	-	-	-	-	1065.20	0.53	2245.60	1.12	180.40	0.09				
Totals	**4.79**	**19.56**	**4.79**	**19.56**	**4.78**	**19.53**	**35.74**	**156.53**	**1,988.55**	**423.39**	**17,402.51**	**364.16**	**2,282.25**	**417.40**	**0.00**	**0.00**	**0.00**	**0.00**

[1] **Condensables:** Include condensable particulate matter emissions in particulate matter calculations for PM_{10} and $PM_{2.5}$, but not for TSP (PM).

[2] **TRS:** Total reduced sulfur (TRS) is the sum of the sulfur compounds hydrogen sulfide (H_2S), methyl mercaptan (CH_4S), dimethyl sulfide (C_2H_6S), and dimethyl disulfide ($C_2H_6S_2$).

Section B.3: Proposed Allowable Hazardous Air Pollutants (HAPs)

Proposed Allowable HAPs (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard (e.g., a MACT standard); or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Select an inidividual HAP from the dropdown list provided. **Emissions ≥ 0.01 ton/yr of an indiviudal HAP from a specific emission unit must be provided.** Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Fill all cells in this table with the emission numbers or a "-" symbol. A "-" symbol indicates that emissions of this pollutant are not expected or are below the reporting threshold. Select the appropriate HAP from the drop down menu in the header cell of the given column in the table below. Additional columns may be added as necessary to address each HAP.

Emission Point ID	Total HAPs		Acetaldehyde		Acrolein		Benzene		Ethylbenzene		Formaldehyde		Xylenes		Toluene			
	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr	lb/hr	ton/yr
TUR-1	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-2	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-3	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-4	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-5	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-6	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-7	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-8	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-9	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-10	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-11	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-12	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-13	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-14	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-15	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-16	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-17	0.06	0.24	0.02	0.10	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.12	0.00	0.01	0.00	0.01		
TUR-18	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-19	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-20	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-21	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-22	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-23	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-24	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-25	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-26	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-27	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-28	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-29	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-30	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-31	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-32	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-33	0.12	0.49	0.05	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.09	0.24	0.00	0.02	0.01	0.02		
TUR-34	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-35	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-36	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-37	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-38	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-39	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-40	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
TUR-41	0.18	0.80	0.06	0.26	0.00	0.01	0.00	0.01	0.00	0.01	0.11	0.46	0.00	0.02	0.01	0.03		
PRS-1	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-2	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-3	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-4	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-5	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-6	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-7	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		

PRS-8	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-9	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
PRS-10	0.02	0.08	-	-	-	-	0.00	0.00	-	-	0.00	0.00	-	-	0.00	0.00		
SSM-1	7.27	0.02	2.41	0.01	0.10	0.00	0.05	0.00	0.09	0.00	4.18	0.01	0.19	0.00	0.25	0.00		
SSM-2	3.69	0.01	1.22	0.00	0.05	0.00	0.03	0.00	0.04	0.00	2.12	0.00	0.10	0.00	0.13	0.00		
SSM-3	0.58	0.00	0.19	0.00	0.01	0.00	0.00	0.00	0.01	0.00	0.33	0.00	0.02	0.00	0.02	0.00		
Totals:	**16.18**	**19.07**	**5.51**	**6.87**	**0.22**	**0.27**	**0.12**	**0.15**	**0.20**	**0.25**	**9.36**	**9.49**	**0.43**	**0.54**	**0.57**	**0.71**		

Section B.4: Greenhouse Gas (GHG) Emissions

This form is required for facilities that have or will require a Title V Operating Permit and for all industries in the energy and oil and gas sectors (i.e., SIC codes beginning with 13, 29, 46, and 49). Proposed Allowable GHGs (Potential to Emit) are those emissions the facility is currently permitted to emit as limited by a specific permit requirement or federal/state standard; or the emission rate at which the facility proposes to emit considering emissions control devices, restrictions to operating rates/hours, or other requested permit limits that reduce the maximum emission rates. Applicants must report potential emission rates in SHORT TONS per year, as opposed to metric tons required by Part 98. Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit. Only those emission points with emissions of greenhouse gases are required to be provided on this form.

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC [3] ton/yr				Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**265**	**28**	**23,500**	**footnote 4**					
TUR-1	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-2	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-3	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-4	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-5	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-6	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-7	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-8	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-9	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-10	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-11	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-12	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-13	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-14	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-15	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-16	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-17	**mass GHG**	87560.35	-	0.17	1.65	-	-				87562.17	-
	CO_2e	87560.35	-	43.73	46.21	-	-				-	87650.29
TUR-18	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC [3] ton/yr				Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**265**	**28**	**23,500**	**footnote 4**					
TUR-19	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-20	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-21	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-22	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-23	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-24	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-25	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-26	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-27	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-28	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-29	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-30	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-31	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-32	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-33	**mass GHG**	177910.51	-	0.34	3.35	-	-				177914.20	-
	CO_2e	177910.51	-	88.85	93.88	-	-				-	178093.25
TUR-34	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-35	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-36	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-37	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-38	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-39	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-40	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-

		CO_2 (non-biogenic) ton/yr	CO_2 (biogenic)[2] ton/yr	N_2O ton/yr	CH_4 ton/yr	SF_6 ton/yr	PFC/HFC [3] ton/yr				Total GHG Mass Basis ton/yr[5]	Total CO_2e ton/yr[6]
Emission Point ID	**GWPs [1]**	**1**	**1**	**265**	**28**	**23,500**	**footnote 4**					
TUR-40	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
TUR-41	**mass GHG**	241818.77	-	0.46	4.56	-	-				241823.78	-
	CO_2e	241818.77	-	120.77	127.61	-	-				-	242067.15
PRS-1	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-2	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-3	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-4	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-5	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-6	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-7	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-8	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-9	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
PRS-10	**mass GHG**	5123.60	-	< 0.01	0.10	-	-				5123.71	-
	CO_2e	5123.60	-	2.56	2.70	-	-				-	5128.87
SSM-1	**mass GHG**	26508.26	-	0.05	0.50	-	-				26508.81	-
	CO_2e	26508.26	-	13.24	13.99	-	-				-	26535.49
SSM-2	**mass GHG**	33794.58	-	0.06	0.64	-	-				33795.28	-
	CO_2e	33794.58	-	16.88	17.83	-	-				-	33829.29
SSM-3	**mass GHG**	22967.26	-	0.04	0.43	-	-				22967.74	-
	CO_2e	22967.26	-	11.47	12.12	-	-				-	22990.85
FACILITY TOTAL	**mass GHG**	6,404,150.56	-	12.07	120.70	-	-				6,404,283.33	-
	CO_2e	6,404,150.56	-	3,198.45	3,379.50	-	-				-	6,410,728.51

[1] **GWP** (Global Warming Potential): Applicants must use the most current GWPs codified in Table A-1 of 40 CFR part 98. GWPs are subject to change, therefore, applicants need to check 40 CFR 98 to confirm GWP values.

[2] Biogenic CO_2 is defined as carbon dioxide emissions resulting from the combustion or decomposition of non-fossilized and biodegradable organic material originating from plants, animals, or micro-organisms.

[3] For **HFCs** or **PFCs** describe the specific HFC or PFC compound and use a separate column for each individual compound.

[4] For each new compound, enter the appropriate GWP for each HFC or PFC compound from Table A-1 in 40 CFR 98.

[5] Greenhouse gas emissions on a **mass basis** is the ton per year greenhouse gas emission before adjustment with its GWP. Do not include biogenic CO_2 in this total.

[6] CO_2e means Carbon Dioxide Equivalent and is calculated by multiplying the TPY mass emissions of the greenhouse gas by its GWP. Do not include biogenic CO_2e in this total.

Section B.5: Stack Parameters and Exit Conditions

Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

Emission Point ID	Orientation (H=Horizontal V=Vertical)	Rain Caps	Height Above Ground	Base Elevation	Exit Temp.	Inside Diameter or Dimensions	Velocity	Moisture by Volume	Geographic Position (degrees/minutes/ seconds)	
		(Yes or No)	(ft)	(ft)	(°F)	(ft)	(ft/sec)	(%)	Latitude	Longitude
TUR-1	Vertical	No	50.00	286	920	9.00	70.42	9.20%	770262.4	3874613.0
TUR-2	Vertical	No	50.00	269	920	9.00	70.42	9.20%	770369.4	3874613.0
TUR-3	Vertical	No	50.00	287	920	9.00	70.42	9.20%	770262.4	3874629.5
TUR-4	Vertical	No	50.00	269	920	9.00	70.42	9.20%	770369.4	3874629.5
TUR-5	Vertical	No	50.00	287	920	9.00	70.42	9.20%	770262.4	3874646.0
TUR-6	Vertical	No	50.00	271	920	9.00	70.42	9.20%	770369.4	3874646.0
TUR-7	Vertical	No	50.00	286	920	9.00	70.42	9.20%	770262.4	3874662.5
TUR-8	Vertical	No	50.00	274	920	9.00	70.42	9.20%	770369.4	3874662.5
TUR-9	Vertical	No	50.00	282	920	9.00	70.42	9.20%	770262.4	3874679.0
TUR-10	Vertical	No	50.00	278	920	9.00	70.42	9.20%	770369.4	3874679.0
TUR-11	Vertical	No	50.00	278	920	9.00	70.42	9.20%	770262.4	3874695.5
TUR-12	Vertical	No	50.00	283	920	9.00	70.42	9.20%	770369.4	3874695.5
TUR-13	Vertical	No	50.00	278	920	9.00	70.42	9.20%	770261.8	3874716.5
TUR-14	Vertical	No	50.00	289	920	9.00	70.42	9.20%	770368.8	3874716.5
TUR-15	Vertical	No	50.00	288	920	9.00	70.42	9.20%	770261.8	3874733.0
TUR-16	Vertical	No	50.00	290	920	9.00	70.42	9.20%	770368.8	3874733.0
TUR-17	Vertical	No	50.00	291	920	9.00	70.42	9.20%	770261.8	3874749.5
TUR-18	Vertical	No	50.00	290	920	9.00	70.42	9.20%	770118.3	3874628.4
TUR-19	Vertical	No	80.00	259	873	11.00	73.55	9.20%	770118.3	3874661.6
TUR-20	Vertical	No	80.00	265	873	11.00	73.55	9.20%	770118.3	3874694.8
TUR-21	Vertical	No	80.00	268	873	11.00	73.55	9.20%	770118.3	3874728.0
TUR-22	Vertical	No	80.00	288	873	11.00	73.55	9.20%	770118.3	3874761.2
TUR-23	Vertical	No	80.00	289	873	11.00	73.55	9.20%	770118.3	3874794.4
TUR-24	Vertical	No	80.00	289	873	11.00	73.55	9.20%	770262.3	3874777.6
TUR-25	Vertical	No	80.00	292	873	11.00	73.55	9.20%	770262.3	3874810.8
TUR-26	Vertical	No	80.00	292	873	11.00	73.55	9.20%	770227.4	3874618.7
TUR-27	Vertical	No	80.00	274	873	11.00	73.55	9.20%	770227.4	3874651.9
TUR-28	Vertical	No	80.00	273	873	11.00	73.55	9.20%	770227.4	3874685.1
TUR-29	Vertical	No	80.00	268	873	11.00	73.55	9.20%	770227.4	3874718.3
TUR-30	Vertical	No	80.00	277	873	11.00	73.55	9.20%	770227.4	3874751.5
TUR-31	Vertical	No	80.00	289	873	11.00	73.55	9.20%	770227.4	3874784.7
TUR-32	Vertical	No	80.00	290	873	11.00	73.55	9.20%	770363.5	3874770.6
TUR-33	Vertical	No	80.00	291	873	11.00	73.55	9.20%	770363.5	3874803.8

Section B.5: Stack Parameters and Exit Conditions

Emission Point numbering must be consistent throughout the application package and, for existing emission points, should match any MDEQ ID's in the current permit.

Emission Point ID	Orientation (H=Horizontal V=Vertical)	Rain Caps	Height Above Ground	Base Elevation	Exit Temp.	Inside Diameter or Dimensions	Velocity	Moisture by Volume	Geographic Position (degrees/minutes/ seconds)	
		(Yes or No)	(ft)	(ft)	(°F)	(ft)	(ft/sec)	(%)	Latitude	Longitude
TUR-34	Vertical	No	80.00	292	873	11.00	73.55	9.20%	770194.0	3875130.1
TUR-35	Vertical	No	70.00	289	652	10.00	78.00	9.20%	770194.0	3875150.5
TUR-36	Vertical	No	70.00	289	652	10.00	78.00	9.20%	770194.0	3875063.3
TUR-37	Vertical	No	70.00	289	652	10.00	78.00	9.20%	770194.0	3875083.2
TUR-38	Vertical	No	70.00	289	652	10.00	78.00	9.20%	770194.0	3874994.9
TUR-39	Vertical	No	70.00	289	652	10.00	78.00	9.20%	770194.0	3875016.2
TUR-40	Vertical	No	70.00	288	652	10.00	78.00	9.20%	770194.0	3874927.5
TUR-41	Vertical	No	70.00	288	652	10.00	78.00	9.20%	770194.0	3874949.9
PRS-1	Vertical	No	25.00	290	400	2.00	6.47	9.20%	770249.0	3874865.0
PRS-2	Vertical	No	25	288	400	2.00	6.47	9.20%	770159.0	3874865.0
PRS-3	Vertical	No	25	291	400	2.00	6.47	9.20%	770249.0	3874845.0
PRS-4	Vertical	No	25	289	400	2.00	6.47	9.20%	770159.0	3874845.0
PRS-5	Vertical	No	25	289	400	2.00	6.47	9.20%	770219.0	3874865.0
PRS-6	Vertical	No	25	289	400	2.00	6.47	9.20%	770219.0	3874845.0
PRS-7	Vertical	No	25	289	400	2.00	6.47	9.20%	770189.0	3874865.0
PRS-8	Vertical	No	25	288	400	2.00	6.47	9.20%	770129.0	3874865.0
PRS-9	Vertical	No	25	289	400	2.00	6.47	9.20%	770189.0	3874845.0
PRS-10	Vertical	No	25	288	400	2.00	6.47	9.20%	770129.0	3874845.0
SSM-1	Vertical	No	50	295	920	9.00	70.42	9.20%	-	-
SSM-2	Vertical	No	80	295	873	11.00	73.55	9.20%	-	-
SSM-3	Vertical	No	70	295	652	10.00	78.00	9.20%	-	-

[1] A WAAS-capable GPS receiver should be used and in the WGS84 or NAD83 coordinate system.

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Fuel Burning Equipment - External Combustion Sources — **Section C**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): PRS-1 through PRS-10 (10 identical units, info below on a per unit basis)

B. Equipment Description: 10 MMBtu/hr (2 burners @ 5.0 MMBtu/he) Natural Gas-Fired PLUM T6500 Pressure Reduction System (PRS) equipped with Lox NOX burners

C. Manufacturer: PLUM Gas Solutions

D. Model Yr and No.: 2025 GH-10MMBTU

E. Maximum Heat Input (higher heating value): 10.0 MMBtu/hr

F. Nominal Heat Input Capacity 10.0 MMBtu/hr

G. For units subject to NSPS Db, is the heat release rate >70,000 Btu/hr-ft3? ☐ Yes ☐ No

H. Use: ☐ Electrical Generation ☐ Steam ☒ Process Heat

☐ Space Heat ☐ Standby/Emergency ☐ Other (describe):

I. Heat Mechanism: ☐ Direct ☒ Indirect

J. Burner Type (e.g.pulverized coal, forced draft, atomizing oil, low-NO_X, etc.): Low-NO_X burners

K. Additional Design Controls (e.g., FGR, etc.):

L. Status: ☐ Operating ☒ Proposed ☐ Under Construction

M. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and the amount used. Specify the units for heat content, hourly usage, and yearly usage.

FUEL TYPE [1]	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1020 Btu/scf	---	---	9.80 Mscf/hr	85.88 MMscf/yr

Please list any fuel components that are hazardous air pollutants and the percentage in the fuel:

See Emission Calculations

[1] Boilers burning solid waste may be considered "solid waste incinerators" for purposes of complying with federal regulations. However, you are only required to complete Section C, not I, of this application as long as the wastes combusted are indicated in the table above.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): TUR-1 through TUR-17 (17 identical units, info below on a per unit basis)

B. Equipment Description: 16.5 MW Solar PGM-130 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst

C. Manufacturer: Solar Turbines D. Model Yr and No.: 2025 Titan 130-23001S Radial

E. Maximum Heat Input (higher heating value): 185.15 MMBtu/hr

F. Rated Power: 22,100 hp 16,480 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle [ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix [X] Other Controls (SCR, oxidation catalyst, etc.): SCR, oxidation catalyst

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	175.56 Mscf/hr	1,537.9 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): SSM-1

B. Equipment Description: Start-up and Shutdown Operations of Solar PGM-130 Turbines

C. Manufacturer: Solar Turbines D. Model Yr and No.: 2025 Titan 130-23001S Radial

E. Maximum Heat Input (higher heating value): 185.15 MMBtu/hr

F. Rated Power: 22,100 hp 16,480 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle
[ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix
[ ] Other Controls (SCR, oxidation catalyst, etc.):

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	175.56 Mscf/hr	17.91 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): TUR-18 through TUR-33 (16 identical units, info below on a per unit basis)

B. Equipment Description: 35 MW Solar Titan 350 Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst

C. Manufacturer: Solar Turbines D. Model Yr and No.: 2025 Titan 350-52500S

E. Maximum Heat Input (higher heating value): 388.52 MMBtu/hr

F. Rated Power: 56,312 hp 41,992 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle [ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix [X] Other Controls (SCR, oxidation catalyst, etc.): SCR, oxidation catalyst

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	368.40 Mscf/hr	3,227.2 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): SSM-2

B. Equipment Description: Start-up and Shutdown Operations of Solar Titan 350 Turbines

C. Manufacturer: Solar Turbines D. Model Yr and No.: 2025 Titan 350-52500S

E. Maximum Heat Input (higher heating value): 388.52 MMBtu/hr

F. Rated Power: 56,312 hp 41,992 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle
[ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix
[ ] Other Controls (SCR, oxidation catalyst, etc.):

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	368.40 Mscf/hr	23.58 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): TUR-34 through TUR-41 (8 identical units, info below on a per unit basis)

B. Equipment Description: 50 MW ProEnergy 6000PE Natural Gas-Fired Simple Cycle Combustion Turbine equipped with SCR and oxidation catalyst

C. Manufacturer: ProEnergy D. Model Yr and No.: 2025 6000 PE

E. Maximum Heat Input (higher heating value): 475.66 MMBtu/hr

F. Rated Power: 67,538 hp 50,363 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle [ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix [X] Other Controls (SCR, oxidation catalyst, etc.): SCR, oxidation catalyst

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	451.03 Mscf/hr	3,951.1 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Fuel Burning Equipment - Internal Combustion Sources — **Section D**

1. Emission Point Description

A. Emission Point Designation (Ref. No.): SSM-3

B. Equipment Description: Start-up and Shutdown Operations of ProEnergy 6000PE Turbines

C. Manufacturer: ProEnergy D. Model Yr and No.: 2025 6000PE

E. Maximum Heat Input (higher heating value): 475.66 MMBtu/hr

F. Rated Power: 67,538 hp 50,363 kW

G. Use: [X] Non-Emergency [ ] Emergency

Complete H through Q for Reciprocating (Piston) Internal Combustion Engines

H. Displacement per cylinder: [ ] < 10 Liters [ ] 10 to < 30 Liters [ ] ≥ 30 Liters

I. Engine Ignition Type: [ ] Spark Ignition [ ] Compression Ignition

J. Engine Burn Type: [ ] 4-stroke [ ] 2-stroke [ ] Rich Burn [ ] Lean Burn
(J. should be answered for Compression Ignition only)

K. Design Controls (e.g., catalytic converter, diesel particulate filter, SCR, etc.):

L. Status: [ ] Operating [ ] Proposed [ ] Under Construction

M. Engine manufactured or reconstructed date: N. Engine order date:

O. Is the engine certified by EPA to meet the applicable emissions standards? [ ] Yes [ ] No

P. If an emergency engine, can your engine be operated for Emergency Demand Response per the NERC Reliability Standard? [ ] Yes [ ] No

Q. If an emergency engine, is it used for peak shaving or non-emergency demand response? [ ] Yes [ ] No

Complete R through T for Stationary Gas Turbines

R. Turbine Type: [X] Simple Cycle [ ] Regenerative Cycle [ ] Combined Cycle
[ ] Combined Heat and Power (Cogeneration)

S. Controls: [ ] Water-Steam Injection [ ] Lean Premix
[ ] Other Controls (SCR, oxidation catalyst, etc.):

T. Date of construction, or most recent modification (for existing sources) or date of anticipated construction: 2025 - 2026

2. Fuel Type

Complete the following table, identifying each type of fuel and amount used. Specify units of measurement.

FUEL TYPE	HEAT CONTENT	% SULFUR	% ASH	MAXIMUM HOURLY USAGE	MAXIMUM YEARLY USAGE
Natural Gas	1,054.60 Btu/scf	---	---	451.03 Mscf/hr	14.43 MMscf/yr

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status — Section N

1. Summary of Applicable Requirements

Provide a list of all applicable federal standards for which your facility is or will be subject to, as well as a list of all Construction Permits establishing limits or restrictions issued to your facility. The specific emission standards and limitations applicable to each emission point shall be provided on the following pages (Parts 2 and 3).

Federal Regulations:

40 CFR Part	60	Subpart	KKKK

State Construction Permits[1]:

	MM/DD/YY[2]	PSD	PSD Avoidance[3]	Other
Permit to Construct issued:		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐
		☐	☐	☐

[1] Any Construction Permit containing requirements that are currently appplicable to the facility should be addressed in this section.

[2] If the permit has been modified, give the most recent modification date.

[3] Because permits are issued on a pollutant-by-pollutant basis, a PSD permit may be significant for one pollutant while also containing PSD avoidance limits for another pollutant. Therefore, you may check multiple boxes for each permit.

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Applicable Requirements and Status

2. Current Applicable Requirements

List all applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements. Provide the compliance status as of the day the application is signed.

EMISSION POINT NO.	APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/COMPLIANCE MONITORING	COMPLIANCE STATUS (In/Out)[1,2]
N/A; see Section N.3 - Future Applicable Requirements					

[1] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(1) for Title V sources, by specifying that the source is in compliance with the applicable requirement(s), I (the applicant) am certifying that I will continue to operate and maintain this source to assure compliance for the duration of the permit term.

[2] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(3) for Title V sources, by specifying that the source is out of compliance with the applicable requirement(s), I (the applicant) am submitting a schedule, attached herein, which includes a description of the problems and proposed solutions in accordance with 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(c).

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Applicable Requirements and Status

3. Future Applicable Requirements

List all future applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/COMPLIANCE MONITORING	COMPLIANCE DATE[1]
Facility-Wide	11 Miss. Admin Code, Pt. 2, R. 1.3.A.	Opacity	The permittee shall not cause, permit, or allow the emission of smoke from a point source into the open air from any manufacturing, industrial, commercial or waste disposal process which exceeds forty (40) percent opacity, except that startup operations may produce emissions which exceed 40% opacity for up to fifteen (15) minutes per startup in any one hour and not to exceed three (3) startups per stack in any twenty four (24) hour period.	N/A	Upon commencement of construction
Facility-Wide	11 Miss. Admin Code, Pt. 2, R. 1.3.B.	Opacity	The permittee shall not cause, allow, or permit the discharge into the ambient air from any point source or emissions, any air contaminant of such opacity as to obscure an observer's view to a degree in excess of 40% opacity, equivalent to that provided in 11 Miss. Admin. Code Pt. 2, R. 1.3.A(1). This shall not apply to vision obscuration caused by uncombined water droplets.	N/A	Upon commencement of construction
Facility-Wide	11 Miss. Admin Code, Pt. 2, R. 1.3.C.	General Nuisances	No person shall cause, permit, or allow the emission of particles or any contaminants in sufficient amounts or of such duration from any process as to be injurious to humans, animals, plants, or property, or to be a public nuisance, or create a condition of air pollution.	N/A	Upon commencement of construction
Facility-Wide	11 Miss. Admin Code, Pt. 2, R. 1.3.D(1)(b)	PM (filterable only)	Emissions from installations equal to or greater than 10 million BTU per hour heat input but less than 10,000 million BTU per hour heat input shall not exceed an emission rate as determined by the relationship: E = 0.8808 * I -0.1667 where E is the emission rate in pounds per million BTU per hour heat input and I is the heat input in millions of BTU per hour.	Emission Limit	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60, Subpart KKKK Standards of Performance for Stationary Combustion Turbines 40 CFR 60.4305, Subpart KKKK	NO_X SO_2	Applicability; TUR-1 through TUR-41 are subject to and shall comply with all applicable requirements of the Standards of Performance for Stationary Combustion Turbines, 40 CFR 60, Subpart KKKK, and the General Provisions, 40 CFR 60, Subpart A.	N/A	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4320, Table 1, Subpart KKKK	NO_X	The Table 1 applicable category for MZX is *new turbine firing natural gas* . As such, the NSPS KKKK NO_X emission limit is 25 ppm at 15 percent O_2 or 150 ng/J of useful output (1.2 lb/MWh). MZX will be using SCR to control NO_X emissions to 2 ppm NO_X at 15 percent O_2.	Emission Limit	Upon commencement of construction

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Applicable Requirements and Status

3. Future Applicable Requirements

List all future applicable state and federal requirements, including emission limits, operating restrictions, etc., and the applicable test methods or monitoring used to demonstrate compliance with each applicable requirement. Clearly identify federal regulations from state requirements.

EMISSION POINT NO.	FUTURE APPLICABLE REQUIREMENT (Regulatory citation)	POLLUTANT	LIMITS/REQUIREMENTS	TEST METHOD/COMPLIANCE MONITORING	COMPLIANCE DATE[1]
TUR-1 through TUR-41	40 CFR 60.4330(1), Subpart KKKK	SO_2	MZX will meet the SO_2 emission limit of 110 nanograms per Joule (ng/J) (0.90 pounds per megawatt-hour (lb/MWh)) gross output by only combusting natural gas.	Emission limit	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4333, Subpart KKKK	NO_X SO_2	MZX will operate and maintain its stationary combustion turbines, air pollution control equipment, and monitoring equipment in a manner consistent with good air pollution control practices for minimizing emissions at all times including during startup, shutdown, and malfunction.	Work Practice Standard	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4340(b)(2)(iii), Subpart KKKK	NO_X	As turbines use SCR to reduce NO_X emissions, MZX must continuously monitor appropriate parameters to verify the proper operation of the emission controls.	Monitoring	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4355, Subpart KKKK	NO_X	MZX will develop and keep on-site a parameter monitoring plan which explains the procedures used to document proper operation of the NO_X emission controls including the required elements to demonstrate compliance.	Monitoring	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4365, Subpart KKKK	SO_2	MZX will be exempt from monitoring total sulfur by maintaining documentation that the maximum total sulfur content will be 20 grains of sulfur or less per 100 standard cubic feet.	Monitoring	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4375(a), Subpart KKKK	NO_X SO_2	MZX will submit reports of excess emissions and monitor downtime semiannually, in accordance with § 60.7(c).	Reporting	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4380(c), Subpart KKKK	NO_X	MZX will determine excess emissions and monitor downtime as defined in 60.4380(c).	Monitoring, Reporting	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4395, Subpart KKKK	NO_X SO_2	All reports required under § 60.7(c) will be postmarked by the 30th day following the end of each 6-month period.	Reporting	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4410, Subpart KKKK	NO_X	MZX will monitor and record the appropriate parameters during each run of the initial performance test to establish acceptable operating ranges, for purposes of the parameter monitoring plan for the affected unit, as specified in § 60.4355.	Initial performance testing; parameter monitoring plan	Upon commencement of construction
TUR-1 through TUR-41	40 CFR 60.4415(a)(1), Subpart KKKK	SO_2	MZX will obtain a valid purchase contract, tariff sheet, or transportation contract for natural gas specifying the maximum total sulfur content annually.	SO_2 performance testing satisfied by valid purchase contract, tariff sheet, or transportation contract	Upon commencement of construction

[1] Per 11 Miss. Admin. Code Pt. 2, R. 6.2.C(8)(b)(2)., for Title V sources, for future applicable requirements which will become effective during the permit term, I (the applicant) am certifying that I will meet such requirements on a timely basis.

FORM 5	MDEQ	MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY APPLICATION FOR AIR POLLUTION CONTROL PERMIT

Air Quality Analysis Checklist — Appendix C

SUBMIT	
Yes	N/A

Note: Appendix C must be completed and included with the application for a Prevention of Significant Deterioration (PSD) Permit to Construct. All elements of the checklist should be addressed. See the Application Instructions for further information.

Yes	N/A		
☒	☐	**I.**	**Applicant and Consultant Information**

a. Name, address, and location of facility
b. Facility Air Permit Number
c. Facility contact name and phone number
d. Modeling contact name, phone number, and e-mail address

Yes	N/A		
☒	☐	**II.**	**Description of Facility Operations**

A brief description of each process to be carried out in the facility and the function of the equipment used in the process. The descriptions must be complete and particular attention must be given to explaining all stages in the process where the discharge of any materials might contribute in any way to air pollution. Control procedures must be described in sufficient detail to show the extent of control of air contaminants anticipated in the design, specifying the expected efficiencies of the capture systems and the control devices. All obtainable data must be supplied concerning the nature, volumes, particle size, weights, chemical composition and concentrations of all types of air contaminants.

Yes	N/A		
☒	☐	**III.**	**Project Description**

A written description of the proposed project to include, but not limited to, a description of the project purpose and scope, general geographical location, types of emission sources and scenarios, pollutants evaluated, applicable averaging periods, and any special considerations (e.g., startup and shutdown operations, varying operational loads, operating restrictions, alternative operating scenarios) that will be included in the compliance demonstration modeling.

Yes	N/A		
☒	☐	**IV.**	**Modeling Protocol**

Prior to submitting the PSD application and prior to performing any significant air dispersion modeling, the applicant is required to submit a modeling protocol to MDEQ for review. Upon review, the applicant will receive notification of acceptance of the modeling approach as well as guidance on any outstanding issues. Please be advised, an approved modeling protocol does not necessarily limit the extent of the modeling that will be required to demonstrate compliance with the applicable standards.

Submittal Date: **July 28, 2025** **Approval Date:** _____

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Air Quality Analysis Checklist — Appendix C

SUBMIT		
Yes	N/A	
☒	☐	**V. Model Selection**

The Preferred/Recommended dispersion models are listed in 40 CFR 51Appendix W and are required to be used. All air quality analyses should be performed using the most currently available versions of EPA guideline models. Access to all current models is possible through the EPA Web Page http://www.epa.gov/scram/.

a. Discuss the general modeling approach (e.g., project impacts vs. cumulative impacts) and highlight any unique items.
b. Identify the dispersion model(s), including the version number that was used in the modeling analysis.
c. Discuss modeling options used and why they were considered appropriate for the proposed project.
d. List the time-averaged pollutants modeled.
e. Discuss any other modeling parameters or considerations used in the modeling analysis.

Alternative Model or Modeling Technique
Any deviation from an EPA preferred air quality model or development of an alternative modeling technique is subject to the alternative modeling requirements of Appendix W – Guideline on Air Quality Models, Section 3.2. Appropriate justification for the proposed alternative model or modeling technique must be provided to the EPA Regional Office for consideration and approval with concurrence of the EPA Model Clearinghouse.

☒	☐	**VI. Meteorological Data**

The meteorological data should be the most recent available and adequately representative. It may be site-specific data, data from a nearby National Weather Service (NWS) or comparable station, or prognostic meteorological data.

The use of five (5) years of adequately representative NWS or comparable meteorological data, at least one (1) year of site-specific data, or at least three (3) years of prognostic meteorological data are required. If one (1) year or more (up to 5 years) of site-specific data are available, these data are preferred for use in air quality analyses, provided that the data meets quality-assurance requirements. The submittal must include a discussion of meteorological site representation based on recommendations in Appendix W, Guideline on Air Quality Models, Section 8.4.2(b).

☒	☐	**VII. Receptor and Terrain Discussion**

Receptor grids may be polar, cartesian, or discrete with receptor placement along the property boundary of the land owned or controlled by the facility and precluded from access by the general public through physical barriers or other measures and extending sufficiently outward to identify the maximum impacts from both the onsite and offsite emission sources for each pollutant and pollutant averaging periods evaluated. Receptor resolution may vary; however, receptors near the facility fenceline and in the area of controlling concentrations must be no greater than 100-meters. Controlling concentrations are those receptors that indicate a predicted concentration greater than 90% of an applicable standard.

The most recent version of AERMAP should be used to import terrain and source elevations.

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Air Quality Analysis Checklist — Appendix C

SUBMIT Yes	SUBMIT N/A	
☒	☐	**VIII. Emission Source Information**

Tables are required for identifying all baseline and increment sources used in the modeling, including all applicable stack parameters (UTM coordinate locations, emission rate, stack height, exit velocity, exit temperature and inner diameter), area source parameters (emission rate, southwest coordinates, height, width), and volume source parameters (emission rate, center coordinates, height, horizontal and vertical dimensions).

a. Identify all emission units included in the modeling analysis. Provide a listing of the identifiers assigned to these sources for modeling purposes.

b. Identify maximum potential short-term emission rates for all modeled pollutants in lb/hr and the associated g/sec emission rate. The maximum short-term emission rates for each source should be used to demonstrate compliance with all short-term averaging standards and guidelines.

c. Identify maximum potential long-term emission rates for all modeled pollutants in ton/yr and the associated g/sec emission rate.

d. Identify any operational limitation assumed for an emission unit.

☒	☐	**IX. Modeling Analysis**

a. Significant Impact Analysis

The preliminary analysis evaluates the potential increase in emissions from the project or the net increase in emissions associated with the modification. The results of the preliminary analysis determines whether or not a full impact analysis is required. If predicted concentrations from the project are below the applicable PSD Significant Impact Levels, a Full Impact Analysis is not required.

b. Preconstruction Monitoring Analysis

The initial screening modeling analysis must address pre-construction monitoring requirements for all proposed sources whose predicted ambient impact exceeds any of the PSD De Minimis Impact Levels (to support ambient monitoring exemption).

c. Full Impact Analysis

A full impact analysis consists of separate analysis for the National Ambient Air Quality Standards (NAAQS) and PSD Increments and will consider emissions from the proposed source or source modification, any existing on-site sources, off-site sources, and for the NAAQS analysis, background concentrations. The full impact analysis is conducted for Class II and Class I Areas. Each of these topics are discussed in detail in the EPA New Source Review Workshop Manual.

i. NAAQS Analysis
ii. PSD Increment Analysis

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Air Quality Analysis Checklist — Appendix C

SUBMIT Yes	SUBMIT N/A	
		IX. Modeling Analysis (continued)

iii. Additional Impact Analysis

Discuss the impacts the proposed project will have on residential, commercial, and industrial growth in the area, and on soils, vegetation and visibility in the vicinity of the proposed project location.

1. Vegetation and Soils Impact
2. Associated Growth Impact
3. Class I Area Impact Analysis

Comprised of the Class I Increment Analysis and the Air Quality Related Value (AQRV) Analysis. When a Class I AQRV Analysis is required, the National Parks Service (NPS) - Air Resources Division, FWS - Air Quality Branch and FS - Air Quality Program have produced a guidance document entitled Federal Land Managers' Air Quality Related Values Workgroup (Flag) Phase I Report – Revised (2010). The guidance set forth in this document is followed in PSD review for Class I area impacts.

☒	☐	**X. Figures, Maps, Electronic Data, etc.**

Figures and maps should be inserted with the narrative, when possible. Large maps, data CD's, etc., should be referenced in the text and included in the appendices.

a. The Air Quality Analysis should include or reference a scaled site plan showing:
   - i. Emission release locations
   - ii. Nearby buildings
   - iii. Property lines
   - iv. Fence lines
   - v. Roads
   - vi. Coordinates (preferably UTM). If UTM coordinates are used, the datum should be specified (e.g., NAD27 or NAD83)
   - vii. True North arrow
   - viii. Other pertinent items (as applicable)

b. The Air Quality Analysis Should include a topographic map and/or aerial photograph showing:
   - i. Source location
   - ii. Facility boundaries
   - iii. Terrain features
   - iv. Nearby buildings, roads, and adjacent facilities (e.g., other major existing sources, other major sources subject to PSD requirements
   - v. NWS meteorological tower/observations (surface and upper air)
   - vi. On-site/local meteorological tower/observations (surface and upper air)
   - vii. State/local/on-site air quality monitoring stations
   - viii. Pre-construction monitoring site (if applicable)
   - ix. Nearby Class I Areas

c. Provide an electronic file of the facility plot plans (e.g., GIS or other mapping file)

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Air Quality Analysis Checklist — Appendix C

SUBMIT		
Yes	N/A	
		X. Figures, Maps, Electronic Data, etc. (continued) d. Provide all electronic modeling files, including: i. "Readme" textfile that describes the submitted files, including any files that are provided in a compressed format. ii. Model Input/Output files iii. BPIP Input/Output files iv. Meteorological data files v. Post processing programs and files (including spreadsheets)

APPENDIX G. MISSISSIPPI SECRETARY OF STATE CERTIFICATE OF GOOD STANDING

Michael Watson
SECRETARY OF STATE

This is not an official certificate of good standing.

Name History

Name	Name Type
MZX Tech LLC	Legal

Business Information

Business Type:	Limited Liability Company
Business ID:	1490276
Status:	Good Standing
Effective Date:	05/16/2025
State of Incorporation:	WY
Principal Office Address:	2110 Ranch Road 620 S., #341886 Lakeway, TX 78734

Registered Agent

Name

Registered Agent Solutions, Inc.
8927 Lorraine Rd., Ste. 204-A
Gulfport, MS 39503

Officers & Directors

Name	Title
Jared Birchall 2110 Ranch Road 620 S., #341886 Lakeway, TX 78734	Secretary