



State of Mississippi

TATE REEVES

Governor

MISSISSIPPI DEPARTMENT OF ENVIRONMENTAL QUALITY

CHRIS WELLS, EXECUTIVE DIRECTOR

October 28, 2025

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

Principal Consultant

Trinity Consultants

1701 Centerview Drive Suite 109 Little Rock, AR 72211

Re: MZX Tech LLC - Modeling Protocol for Greenfield Simple Cycle Combustion Turbine Project

Dear Mr. Lynn,

Thank you for your organization's submission of the modeling protocol associated with the construction of three simple cycle combustion turbines in Southaven, Mississippi. The following are MDEQ's observations and review comments on the MZX Tech LLC Modeling Protocol dated October 2025, provided for your review and/or consideration. After careful review, we have identified areas that require further clarification or revision.

Section 2.1 Modeled Sources Scenarios

- In this section, MZX Tech will use the "worst case" operating load scenario.
 - MDEQ is requesting that MZX Tech to define the "worst case" for load operations to ensure the facility is modeling the "worst case" scenario in the modeling.
 - Per [Appendix W](#):
 - *"As a minimum, the source **should** be modeled using the design capacity (100% load). If a source operates at a greater than design capacity for periods that **could result** in violations of the NAAQS or PSD increments, this load **should** be modeled. Where the source operates at substantially less than design capacity, and the changes in the stack parameter associated with the operating conditions **could** lead to higher ground level concentrations, loads such as 50% and 75% **should** also be modeled."*
- Also, the facility describes the methodology on the modeling of start/shutdown (SUSD) emissions, however the facility does not provide adequate justification for this methodology.

- MDEQ is requesting additional justification for this modeling methodology on SUSD emissions.
- While MDEQ has no objection to the modeling methodology for SUSD, MDEQ is making the facility aware that only five of each type of turbine can go into startup or shutdown in any given hour will be the permit limit for the facility.

2.4.2 Ambient Background Monitors

- MZX Tech has selected to use the LH Polk and Colonial Dr., Marion Site for NO₂ background monitor. However, Table 1-1 Proposed Project Emissions shows that this project will trigger PSD for other pollutants. MDEQ is requesting the facility to provide background monitors for PM_{2.5} and ozone (NO_x and VOC as both exceed 100 tpy).
 - Note that there is no de minimis air quality level is provided for ozone. However, any net emissions increase of 100 tpy or more of volatile organic compounds (VOCs) or nitrogen oxides subject to PSD would be required to perform an ambient impact analysis, including the gathering of ambient air quality data ([40 CFR 52.21\(i\)\(5\)\(i\)\(K\)](#)).
 - Per [40 CFR 51.166\(i\)\(5\)](#) and 40 CFR 52.21(i)(5)(i)(K), there are no exemptions available for PM_{2.5} for significant monitoring concentration (SMC). Thus, the facility will be required to establish a pre-construction monitor(s) or must select a representative background monitor(s).
 - In addition, MDEQ recommends that both a PM_{2.5} and an ozone monitor be selected for transparency with the public.
- Per the “[Ambient Monitoring Guidelines for Prevention of Significant Deterioration \(PSD\)](#)” the following cases monitoring can be required even though the air quality or background air quality may be less than the concentrations if the proposed source or modification will impact:
 - Class 1 Area
 - Nonattainment Area
 - Or area where the PSD increment is violated.
 - In addition, post-construction monitoring may be required from large source(s) whose impacts will **threaten** standards of PSD Increments.
 - For VOCs, the document also states that continuous ozone monitoring data must be used to establish existing air quality concentration in the vicinity of the proposed source or modification.

2.2 Monitoring Objective and Data Uses:

- (a) To establish background air quality concentrations in the vicinity of the proposed source or modification. These background levels are important in determining whether the air quality before or after construction are or will be approaching or exceeding the NAAQS or PSD increment.
- 2.3 VOC and O₃ Monitoring Requirements:
 - While this section of the guidance stated the monitoring of VOC will not be required, any new source or modified existing source located in an unclassified or attainment area for ozone that is equal to or greater than 100 tpy of VOC emissions will be required to monitor for ozone.
- While the Memphis MSA in which MZX Tech is located is not currently designated as nonattainment for any NAAQS criteria pollutants, several monitors in the area are currently violating the 2015 ozone standard of 70 ppb, and the Hernando monitor in DeSoto County is exceeding the 2024 PM_{2.5} annual standard of 9 µg/m³. Given this, it is recommended that MZX Tech select monitoring stations for both PM_{2.5} and ozone to establish the existing air quality conditions for the region.

MZX Tech may respond to these comments with either a resubmittal of the dispersion modeling protocol addressing all deficiencies, or with a comment letter addressing all deficiencies.

These comments do not include any questions, comments, or concerns that the MDEQ or EPA Permitting sections may have. We appreciate MZX Tech's attention to these matters and look forward to receiving the requested clarifications. Should you have any questions or need further information, please do not hesitate to contact myself PBradley@mdeq.ms.gov or Rodney Cuevas RCuevas@mdeq.ms.gov

Cc:

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Jaricus Whitlock

From: Preston Bradley
Sent: Tuesday, October 28, 2025 11:11 AM
To: Shannon Lynn
Cc: Rodney Cuevas; Katherine Mertes; Jaricus Whitlock; Jeffrey Bland; Jon Hill; mrao@trinityconsultants.com; Brian Ketchum; Slater Smith
Subject: MZX Tech Revised Modeling Protocol Comment Letter 10-28-25
Attachments: MZX Tech Comment Letter Revised Modeling Protocol 10-28-2025.pdf

Good morning,

MDEQ has reviewed the Revised Modeling Protocol submitted for the simple combined combustion turbines for MZX Tech LLC in Southaven, MS. Our comments are in the comment letter that is attached. If you have any questions, comments, or concerns, please feel free to reach out.

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Air Division

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