



GRETCHEN WHITMER  
GOVERNOR

STATE OF MICHIGAN  
DEPARTMENT OF  
ENVIRONMENT, GREAT LAKES, AND ENERGY  
JACKSON DISTRICT OFFICE



PHILLIP D. ROOS  
DIRECTOR

January 18, 2024

VIA EMAIL ONLY

Anthony Falbo, Senior Vice President-Operations  
OPAL Fuels  
Arbor Hills Energy, LLC  
5087 Junction Road  
Lockport, NY 14094

SRN: N2688, Washtenaw County

Dear Anthony Falbo:

**VIOLATION NOTICE**

On October 17, 18, and 19, 2023, the Department of Environment, Great Lakes, and Energy (EGLE), Air Quality Division (AQD), conducted on-site observations of scheduled required performance testing at Arbor Hills Energy (AHE) located at 10611 West Five Mile Road, Northville, Michigan. The purpose of the observations was to determine AHE's compliance with the requirements of the federal Clean Air Act; Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Act 451); the Air Pollution Control Rules; the conditions of Permit to Install (PTI) number 68-23; and the conditions of Renewable Operating Permit (ROP) number MI-ROP-N2688-2011a.

During the observations, staff observed the following:

<b>Process Description</b>	<b>Rule/Permit Condition Violated</b>	<b>Comments</b>
FGTURBINES consisting of (3) EGT-Typhoon turbines and associated duct burners that use landfill gas as fuel for the generation of electricity.	R 336.1201 (Rule 201), PTI 68-23, Conditions II.1., and III.1.	Use of diesel fuel to operate turbines during routine operation. Diesel fuel is limited to use only during start-up of a turbine.
FGTURBINES	PTI 68-23, Condition III. 3.	Diesel fuel use is limited to not exceed 10 minutes per hour for FGTURBINES when starting the turbine on diesel fuel.
FGTURBINES	PTI 68-23, FGTURBINES, Condition V.1., and 40 CFR Part 60, 60.355(b)(2), Subpart GG Standards of Performance for Stationary Gas Turbines	Failure to verify NOx emission rates from each turbine in accordance with Department requirements and Subpart GG. Failure to test at multiple loads as required in Subpart GG

The PTI 68-23 Condition II. 1. limits the material use of diesel fuel to 19,000 gallons per year based on a 12-month rolling time period as determined at the end of each calendar month. That condition, and Condition III.1. state diesel fuel shall only be used during startup of a turbine. In addition, Condition III. 3. states the permittee shall not exceed 10 minutes per hour for FGTURBINES when starting the turbine on diesel fuel.

On October 17, AQD observed visible emissions of black smoke from Turbines 1 & 2 for a period greater than 10 minutes and learned this was due to the sudden switching of fuels from landfill gas to diesel during turbine operation. AQD was made aware of another event that occurred on October 18<sup>th</sup> (without our observation of visible emissions). In emails dated November 2, and November 10, AQD requested and received from AHE additional details regarding these events, along with their explanation and confirmation of the observed turbine process operation.

Arbor Hills Energy's email stated *"The operators pointed out that shutdown conditions and abnormal operating conditions (such as the sudden and unexpected loss of the STS treated gas feed system) may occasionally require the operators to transition to supplemental fuel for brief periods to protect the turbine equipment until the root cause of the malfunction can be clarified and either the treated landfill gas feed restored or a unit shutdown can be properly initiated. This is what happened during testing.*

- *On 10/17/23, the Sulfur Treatment System had an unexpected outage at 10:06, isolating AHE turbines from landfill gas. To avoid a complete shutdown, GT1 & GT2 auto switched to diesel and load was reduced, operating until 10:31 before being switched back to landfill gas.*
- *On 10/18/23, during a shutdown, GT1 tripped offline due to a flame failure fault at 09:38. It was restarted at 09:57 on diesel fuel and was switched back to landfill gas at 10:03."*

Based on AQD's test date observations, discussions with facility representatives including AHE's testing consultant, and additional information received from AHE, it is noted that AHE has commenced operation of an unpermitted turbine process operation at this facility. The AQD is advising AHE that this is a violation of Rule 201 of the administrative rules promulgated under Act 451.

A program for compliance may include a completed PTI application for the revision of the PTI 68-23, FGTURBINES process equipment. AQD is aware a recent permit revision application has been submitted by AHE.

Be advised that Rule 201 requires that a permit be obtained prior to installation, construction, operation, reconstruction, relocation, or alteration of any process or process equipment which may be a source of an air contaminant.

Lastly, in an email dated October 13, 2023, AQD's Technical Program Unit sent AHE a protocol approval letter. AQD's approval included the requirement to conduct the FGTURBINES NOx testing pursuant to 40 CFR Part 60, 60.335(b)(2) (Subpart GG), which specifies testing at multiple turbine loads generally between the base load and maximum load. AHE's performance test results report was submitted to AQD on December 18, 2023; it demonstrates that

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FGTURBINES NOx testing was conducted at each turbine's maximum load only. Therefore, this portion of the testing is unacceptable and incomplete.

Please initiate actions necessary to correct the cited violations and submit a written response to this Violation Notice by February 8, 2024 (which coincides with 21 calendar days from the date of this letter). The written response should include: the dates the violations occurred; an explanation of the causes and duration of the violations; whether the violations are ongoing; a summary of the actions that have been taken and are proposed to be taken to correct the violations and the dates by which these actions will take place; and what steps are being taken to prevent a reoccurrence.

Please submit the written response to Diane Kavanaugh Vetort at EGLE, AQD, Jackson District, at 301 Louis Glick Highway, Jackson, Michigan 49201 or [kavanaughhd@michigan.gov](mailto:kavanaughhd@michigan.gov) and submit a copy to Jenine Camilleri, Enforcement Unit Supervisor at EGLE, AQD, P.O. Box 30260, Lansing, Michigan 48909-7760.

If AHE believes the above observations or statements are inaccurate or do not constitute violations of the applicable legal requirements cited, please provide appropriate factual information to explain your position.

Thank you for your attention to resolving the violations cited above and for the cooperation that was extended to me during my inspection of AHE. If you have any questions regarding the violations or the actions necessary to bring this facility into compliance, please contact me at the number listed below.

Sincerely,



Diane Kavanaugh Vetort  
Senior Environmental Quality Analyst  
Air Quality Division  
517-416-3537

cc: Suparna Chakladar, OPAL  
David Seegert, GFL  
Brad Myott, EGLE  
Jenine Camilleri, EGLE  
Scott Miller, EGLE  
Jeremy Howe, EGLE  
Ambrosia Brown, EGLE