



REGION 5

CHICAGO, IL 60604

ELECTRONIC MAIL
DELIVERY RECEIPT REQUESTED

Terry Wendorff
Plant Manager
Heartland Corn Products
terryw@heartlandcorn.com

RE: Request for Operating Limits / Monitoring Petitions under 40 C.F.R. Part 63, Subpart YYYY
NESHAP for Stationary Combustion Turbines
Heartland Corn Products, Winthrop, Minnesota

Dear Terry Wendorff:

The U.S. Environmental Protection Agency has received a petition from Merjent on behalf of Heartland Corn Products (HCP or you), for operating limitations dated July 29, 2025 ("the Petition"). HCP proposes that % Load and Inlet Air Temperature (T1) be continuously measured and limited to demonstrate compliance with the formaldehyde limits under 40 C.F.R. § 63.6125(b) for a lean premix gas-fired combustion turbine at HCP's facility in Winthrop, Minnesota. In summary, the EPA partially approves and partially denies the Petition to use % Load and T1 as operating limits under the regulations at 40 C.F.R. Part 63, Subpart YYYY. This determination supersedes all % Load limits previously approved by the EPA in its determination letter issued to HCP on April 22, 2025.

Regulatory Background

40 C.F.R. Part 63, Subpart YYYY of the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Combustion Turbines (Subpart YYYY) establishes national emission limitations and operating limitations for hazardous air pollutants (HAP) emissions from stationary combustion turbines located at major stationary sources of HAP emissions, and requirements to demonstrate initial and continuous compliance with the emission and operating limitations.

40 C.F.R. § 63.6095(a)(3) requires the owner or operator of a new or reconstructed lean premix gas-fired stationary combustion turbine or a diffusion Combustion Chamber gas-fired stationary combustion turbine that started up on or before March 9, 2022, to comply with the emissions limitations and operating limitations of Subpart YYYY no later than March 9, 2022.

40 C.F.R. § 63.6100 requires that each new or reconstructed lean premix gas-fired stationary combustion turbine must comply with the emission limitations and operating limitations in Table 1 and Table 2 of Subpart YYYYY. Table 1 provides that each new or reconstructed lean premix gas-fired stationary combustion turbine must comply with an emission limitation of 91 ppbvd formaldehyde or less at 15% O₂, except during turbine startup. The period for turbine startup is subject to the limitations specified at 40 C.F.R. § 63.6175. Table 2 provides that each stationary combustion turbine that is required to comply with the formaldehyde emissions limitation and is not using an oxidation catalyst must maintain any operating limitations approved by the Administrator.

40 C.F.R. § 63.6120(e) states that if the owner or operator's stationary combustion turbine is not equipped with an oxidation catalyst, the owner or operator must petition the Administrator for operating limitations that it will monitor to demonstrate compliance with the formaldehyde emission limitation in Table 1. The owner or operator must measure these operating parameters during the initial performance test and continuously monitor thereafter. 40 C.F.R. § 63.6120(f) lists the specific information that must be included in a petition to the Administrator for approval of additional operating limitations to demonstrate compliance with the formaldehyde emission limitation in Table 1.

40 C.F.R. § 63.6125(b) requires that the owner or operator of a stationary combustion turbine that is required to comply with the formaldehyde emission limitation and is not using an oxidation catalyst must continuously monitor any parameters specified in the approved petition to comply with operating limitations specified in Table 2 and Table 5 of Subpart YYYYY.

All terms used in this letter have their ordinary meaning unless such terms are defined in the Clean Air Act, 42 U.S.C. §§ 7401 *et seq.*, or Subpart YYYYY, in which case they have the meaning ascribed to them in those authorities.

HCP's Petition

HCP owns and operates a gas-fired lean premix stationary combustion turbine. The turbine was constructed after March 9, 2022, is not equipped with an oxidation catalyst, and is an "affected source" under Subpart YYYYY; therefore, the deadline to comply with emissions and operating limitations under Subpart YYYYY was the turbine's startup date of February 15, 2024.

On July 29, 2025, HCP submitted the Petition under 40 C.F.R. § 63.6120(e) for operating limitations it proposed to monitor to demonstrate compliance with the formaldehyde emission limitation. HCP requests that the EPA accept monitoring and limiting of % Load and T1 as parameters to meet the Subpart YYYYY monitoring requirements for lean premix combustion equipped gas-fired turbines, instead of utilizing an oxidation catalyst.

On page 2 of the Petition, HCP states: "The facility proposes a percent load up to 105%, based on test results showing compliance with the formaldehyde standard above 100% load. Representatives from Solar Turbines have confirmed that the T60 turbine's percent load adjusts for on-site conditions, including elevation and inlet air temperature (T1); therefore, the maximum load may surpass 100% at elevated inlet air temperatures. As noted in the facility's initial Operating Parameter Monitoring Petition, the lean premix combustion mode (i.e., SoLoNox mode) operates at all loads over 50%, without a maximum load limit."

The EPA's Analysis

The Petition includes the required information described in 40 C.F.R. § 63.6120(f)(1) through (5), as summarized below. The EPA makes the following determinations regarding HCP's premixed gas-fired combustion turbine under Subpart YYYY, which is operating without oxidation catalysts and is subject to emission and operating limitations.

Based on the information provided by HCP, the EPA makes the following findings:

(1) HCP's Petition proposes that two parameters be continuously monitored to measure compliance with formaldehyde limits in Subpart YYYY: 1) the % Load, and 2) the inlet air temperature (T1) of the turbine.

(2) HCP's discussion in its Petition of the relationship between % Load and T1, and formaldehyde emissions, and how limitations on these parameters will serve to limit formaldehyde emissions, is insufficient to support the requested parameters. The fact that a gas turbine is lean premix does not demonstrate that it will meet the 91 ppbvd formaldehyde standard. The EPA therefore is making its determination based on the emissions testing and the % Load and T1 parameters.

The emissions testing conducted at HCP on July 16, 2024, September 24, 2024, December 11, 2024, February 25, 2025, and July 1 2025, showed formaldehyde emissions below 91 ppbvd within parts of the proposed ranges of % Load and T1, with the exception of a single 112 ppbvd test run on December 11, 2024.

(3) HCP proposed values for its % Load and T1 parameters (see table below), with the only change being to the upper % Load limit. HCP demonstrated that the proposed upper % Load limit would demonstrate compliance with the 91 ppbvd limit.

Parameter	T1 (°F)	% Load
HCP Proposed Limits	No Change	N/A – 105%
Test Conditions	8.1 – 84.7	90.0 – 100.9%
Approved Limits	8.1 – 104.8	85.0 – 105.0%

(4) In its Petition, HCP described the methods it would use to measure and the instruments it would use to monitor the proposed parameters, as well as the relative accuracy and precision of these methods and instruments. HCP provided the manufacturer documentation requested by the EPA.

(5) In its Petition, HCP described the frequency and methods of instrument recalibration it would use. HCP provided the manufacturer documentation requested by the EPA.

The EPA therefore approves the Petition for HCP to operate between a T1 of 8.1-104.8 °F when operating between 85.0-105.0 % Load.

We have coordinated this determination with the Office of Enforcement and Compliance Assurance (OECA) and the Office of Air Quality Planning and Standards (OAQPS). If you have any further questions, please contact Jacob Herbers of my staff at Herbers.Jacob@epa.gov.

Sincerely,

CAROLYN
PERSOON

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CAROLYN PERSOON
Date: 2025.09.09
08:45:05 -05'00'

Carolyn Persoon
Acting Division Director
Enforcement and Compliance Assurance Division
U.S. Environmental Protection Agency, Region 5

cc: Rachel Studanski, Manager
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