



**UNITED STATES ENVIRONMENTAL PROTECTION  
AGENCY**

**REGION 6  
1201 ELM STREET, SUITE 500  
DALLAS, TEXAS 75270-2102**

March 9, 2021

TRANSMITTED VIA EMAIL

Randolph (Randy) Roberts  
Senior EHS Specialist  
BASF Corporation,  
602 Copper Road  
Freeport, TX 77541  
randolph.roberts@basf.com

Re: BASF Corporation-Freeport, Texas-Caprolactam and Intermediates Complex (C&IC) Facility (BASF)-Request for Temporary Deviation from Approved Alternative Monitoring Plan (AMP) Conditions-EPA Approved AMP for Catalytic Incinerator R-170, Dated 07/16/2004, Revised 02/24/2005-Engineering Testing to Evaluate Alternate Operating Parameters-New Source Performance Standards (NSPS) 40 Code of Federal Regulations (CFR) Part 60 Subpart NNN-Standards of Performance for Volatile Organic Compound (VOC) Emissions from Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations

Dear Mr. Roberts:

The United States Environmental Protection Agency (EPA) issues this letter in response to BASF's email request to the Texas Commission on Environmental Quality (TCEQ), dated January 5, 2021, for approval to deviate from operating conditions specified in the EPA-approved AMP for BASF's C&IC facility in Freeport, Texas, on a temporary basis to conduct an engineering testing study. Based upon a review of all available information that you have submitted, EPA approves your request for temporary deviation for the time period requested, as explained in this response.

The AMP requires the following conditions for vent gas streams that are routed to catalytic incinerator R-170:

- Minimum outlet temperature in degrees Centigrade (°C);
- Minimum temperature differential (Delta T) across the incinerator catalyst bed in °C;
- Minimum organic loading (i.e. vent gas flow) to the catalyst bed in pounds per hour; and,
- Establishing alarms at a 15°C differential to allow time for corrective action.

BASF has been operating the incinerator in compliance with the requirements of the AMP and TCEQ Permit No. 1733A, with a minimum Destruction and Removal Efficiency (DRE) of 98 percent (%) for volatile organic compounds (VOCs). EPA notes that the TCEQ has also performed a review of the request and has expressed no objections to EPA's approval.

BASF proposes to conduct engineering testing during a continuous thirty-two (32) hour period on March 23-24, 2021, to gather data for demonstrating 98% DRE while operating at a lower minimum outlet temperature, and/or maintaining a lower temperature differential across the R-

170 incinerator catalyst bed than that required by the AMP. Maintaining the present temperature differential across the catalyst bed currently requires that BASF intentionally add raw material to the R-170 catalytic incinerator. BASF also wants to test lowering the required raw material feed rate, specified as vent gas flow rate from organic loading in the AMP, while maintaining the 98% VOC DRE at the incinerator outlet, as required by section 40 CFR 60.662(a) of NSPS NNN and Permit No.1733A. This will allow BASF to evaluate if the default monitoring requirements already in NSPS NNN (and NSPS III) are reasonable for BASF to comply with. By comparison, the default monitoring requirements of 40 CFR 60.665(c) are 80 percent of the Delta T and an inlet temperature of no more than 28°C below the average vent stream temperature during the most recent stack test. The default conditions of NSPS III and NNN do not require minimum organic loading rates or alarms. However, BASF will maintain the proper alarms, as installed in the incinerator control system, and which meet AMP requirements.

EPA notes that no deviations from EPA-approved test methods are included in the testing plan submitted to BASF by its testing contractor. BASF indicated that the testing contractor will use on site direct interface analytical equipment during the testing to ensure that BASF continues to meet the 98% DRE for VOC, pursuant to the emission standard of NSPS NNN at 40 CFR 60.662(a). This monitoring and process parameter data collection are also described in the testing plan. If there is any indication that the R-170 incinerator will not meet the NSPS emission standard or the required 98% DRE during conditions of the testing while deviating from the AMP requirements, BASF will take prompt corrective action to change the operating parameters to ensure compliance with the standards. Therefore, since BASF will conduct the engineering testing during a limited time period, and with proper monitoring safeguards to ensure the 98% DRE and VOC emission standard of NSPS NNN will continue to be met, EPA approves the request for deviation from AMP requirements during the testing.

BASF must continue to meet other conditions of the revised AMP, Permit No. 1733A, and other applicable requirements of NSPS NNN during the testing. After the testing is conducted during the time period and days specified in its current request, BASF must return to operation under the terms of the approved AMP. If BASF wishes to conduct additional testing with deviation from AMP conditions on future dates other than the dates specified in the current request, the company must obtain approval from EPA in advance of such testing, and inform TCEQ in accordance with the terms of Permit 1733A. If BASF determines that it can meet the default conditions of the NSPS without the AMP, or if BASF wishes to modify the currently approved AMP conditions, then the company may submit a request to EPA that the AMP be voided or revised, as appropriate. In separate email correspondence, EPA provided instructions for submitting an AMP modification request via the Region 6 electronic application system used for such requests.

EPA requests that BASF provide an emailed electronic copy of the complete engineering testing report to Region 6, along with any relevant operating data collected, at the same time that the report is submitted to TCEQ. EPA reminds BASF that any emission levels and conditions that occur from not meeting the NSPS NNN emission standard or the 98% DRE requirements during the testing must be reported as excess emissions and permit deviations, in accordance with 40 CFR Part 60 Subpart A, NSPS NNN, and EPA-approved TCEQ rules and requirements.

The EPA acknowledges that the COVID-19 pandemic may impact your business. If that is the case, please contact us regarding any specific issues you need to discuss. Questions regarding EPA's response to BASF's request may be directed to Diana Lundelius of my staff at 214-665-7468 or [Lundelius.diana@epa.gov](mailto:Lundelius.diana@epa.gov).

Sincerely,

STEVEN  
THOMPSON

Digitally signed by STEVEN THOMPSON  
DN: c=US, o=U.S. Government, ou=Environmental  
Protection Agency, cn=STEVEN THOMPSON,  
0.9.2342.19200300.100.1.1=68001003652657  
Date: 2021.03.09 10:18:26 -0600

Steve Thompson  
Chief  
Air Enforcement Branch

Ecc: Mark Kolkmeier, TCEQ, [Mark.Kolkmeier@tceq.texas.gov](mailto:Mark.Kolkmeier@tceq.texas.gov)  
Ming Yuan Wei, TCEQ, [Mingyuan.Wei@tceq.texas.gov](mailto:Mingyuan.Wei@tceq.texas.gov)