



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

Flint Hills Resources – Pine Bend Refinery
Mike Westereng, Air Permit Engineer
P.O. Box 64596
Saint Paul, Minnesota 55164

Re: Request for Approval for Alternative Monitoring per 40 C.F.R. Part 60, Subpart Ja

Dear Mr. Westereng:

This letter is in response to your letter dated August 19, 2020, requesting that the U.S. Environmental Protection Agency approve alternative monitoring procedures for Flint Hills Resources' (FHR's) request for an Alternative Monitoring Plan (AMP) at the Fluid Catalyst Cracking Unit (FCCU) located at its Pine Bend Refinery. For the reasons discussed below, EPA approves with conditions your request for alternative NSPS Subpart Ja monitoring requirements at the FCCU with regard to NO_x and disapproves your request for alternative NSPS Subpart Ja monitoring requirements at the FCCU with regard to SO₂.

Regulatory Background

The FCCU is subject to the Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 at 40 C.F.R. § 60.100a *et seq.*

NSPS Subpart Ja requires an instrument for continuous monitoring and recording of NO_x and SO₂ with span values of 200 ppmv, pursuant to 40 C.F.R. § 60.105a(f)(1) and 40 C.F.R. 60.105a(g)(1). Additionally, 40 C.F.R. § 60.102a(b)(2) and 40 C.F.R. § 60.102a(b)(3) limit the discharge into the atmosphere from the FCCU of NO_x to 80 ppmv and SO₂ to 50 ppmv, each on a 7-day rolling average basis.

Under the NSPS General Provisions at 40 C.F.R. Part 60, Subpart A, EPA may approve monitoring alternatives. More specifically, 40 C.F.R. § 60.13(i) states that “[a]fter receipt and consideration of written application, the Administrator may approve alternatives to any monitoring procedures or requirements of this part.”

Flint Hills Resources' Request

FHR requested approval of span ranges for NO_x and SO₂ of 0 – 100 ppmv in comparison to the NSPS Ja CEMS Span of 0 – 200 ppmv as required by the New Source Performance Standards (NSPS) at 40 C.F.R. § 60.105a(f)(1) and 40 C.F.R. § 60.105a(g)(1). You have asserted that the purpose of this request is to provide a more accurate measurement of NO_x and SO₂ emissions expected to be emitted from the unit during typical operations. You have asserted that this

request is similar to a previous request made by FHR in January of 2014; that request pertained to the process heaters and was approved.

Your request was made in accordance with 40 C.F.R. § 60.13(i), which provides a mechanism for EPA to approve alternatives to monitoring procedures and requirements.

EPA's Response

Determination for SO₂:

The EPA disapproves your request for alternative NSPS Subpart Ja monitoring requirements at the FCCU with regard to SO₂ for the reasons specified below.

- 1) No difficulties or significant burden on the refinery in meeting the regulatorily-required CEMS span were identified in the request.
- 2) The previously approved request for alternative monitoring at FHR cited in this request pertained to the refinery heaters. The equipment in this request, the FCCU, is a much larger source of potential emissions in the refinery, and therefore the requests are not as similar as proposed by FHR.
- 3) Additionally, in comparison with the previous request, there was a lower span requirement imposed by the state on the refinery heaters that does not apply to the SO₂ emitted at the FCCU.

Therefore, because of the reasons identified above, EPA finds that FHR has not provided sufficient support for needing an alternate CEMS span as compared to the span required by NSPS Subpart Ja. Therefore, EPA disapproves the request.

Determination for NO_x:

Because a lower span should provide more accurate measurement of NO_x emissions from the FCCU during typical operations, The EPA approves your request for alternative NSPS Subpart Ja monitoring requirements at the FCCU with regard to NO_x with the following conditions:

- 1) FHR must install, maintain and operate the NO_x CEMS so that it meets the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2 and Appendix F and the manufacturer's recommendations.
- 2) The applicable NSPS emission limits for the FCCU apply to the NO_x concentrations measured by the CEMS.
- 3) If data from any NO_x CEMS show actual emissions exceeding the span value for more than 2% of the operating time in any quarter, FHR must either:
 - a) Notify the Minnesota Pollution Control Agency and EPA, and recertify and continue to operate the NO_x CEMS with a higher span value that includes the values observed during that quarter, or

- b) Install and operate a dual span NO_x CEMS and establish a dual span which includes all NO_x values observed during that quarter.

This condition differs from the previous approval of the alternative monitoring of the refinery heaters – it allowed for a 5% exceedance of the span value in comparison to this approval of a 2% exceedance. This is due to the FCCU's higher potential for emissions.

- 4) FHR must operate the NO_x CEMS at all times, including periods of process unit start-ups, shut-downs and malfunctions, as required at 40 C.F.R. § 60.13(e).
- 5) In determining compliance with the applicable emission limit set forth at 40 C.F.R. § 60.102a(g)(2), FHR must use the data obtained from the NO_x CEMS, even if it is outside the span value.

Nothing in this approval alters or waives EPA's ability to use any emissions data obtained from the NO_x and SO₂ CEMS for purposes of determining compliance with applicable emission limits, including periods when emissions exceed the span value.

If you have any questions regarding this response, feel free to contact Virginia Galinsky at (312) 353-2089.

Sincerely,

MICHAEL
HARRIS

Digitally signed by
MICHAEL HARRIS
Date: 2020.10.13
17:46:44 -05'00'

Michael D. Harris, Division Director
Enforcement and Compliance Assurance Division