



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Mr. Tim Goedeker
Senior Principal Environmental Consultant
Phillips 66
2331 CityWest Blvd, S685
Houston, TX 77042

Dear Mr. Goedeker:

I am writing in response to your letter dated September 26, 2018, requesting approval for alternatives to requirements in 40 CFR 63, Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries (Subpart CC), and by reference, 40 CFR 60, Appendix B, Performance Specification 9 (PS 9) for determining Net Heating Value (NHV). You request using ± 10 percent agreement of the total calibration cylinder NHV as an alternative to the PS 9 requirement that specifies calibration and calibration check individual compound agreement of ± 10 percent with cylinder certified tag values. You are requesting this alternative for broad application to affected facilities which use Gas Chromatograph (GC) and/or Mass Spectrometer (MS) technology for composition and corresponding NHV determinations required under Subpart CC.

In your letter, you request the following specific alternatives to the quality assurance procedures required in PS 9 and §§63.671(e)(2) and (e)(3) when you demonstrate compliance with Subpart CC:

- 1) Single daily mid-level calibration check error to be calculated based on the total NHV of a certified calibration gas mixture. The instrument response for NHV shall not vary by more than 10 percent from the total NHV of the certified calibration gas mixture.
- 2) Quarterly multi-point calibration (see Table 13 of Subpart CC) error to be calculated against the total NHV of the certified calibration gas mixtures (i.e., low-, mid-, high-level). The average instrument response for total NHV shall not vary by more than 10 percent from the total NHV of any of the certified gas mixtures.

Your rationale for proposing these alternative procedures is based on the tenant that NHV is the factor utilized to determine compliance with the Subpart CC flare combustion efficiency requirement. These alternative procedures also simplify the calibration procedures for sites that elect to use them. You provided calibration check data for both GC and MS NHV determinations that show the comparability of quality control on a per compound basis with quality control on a total NHV basis.

You request these alternative procedures for use at Phillips 66 BP facilities subject to Subpart CC and provide example facilities including: Billings Refinery located at 401 S 23rd Street, Billings, MT, 59101; Ponca City Refinery located at 1000 S Pine Street, Ponca City, OK, 74601; and the Wood River Refinery located at 900 S. Central Avenue, Roxana, IL, 62084.

With this letter, we are approving your request to use the relative percent error of total NHV measured versus the certified cylinder tag value for total NHV as the measure of agreement for both the daily calibration and quarterly multi-point audits when using GC or MS for flare fuel feed NHV requirements in Subpart CC with the following provisos:

- 1) Certified gas standards must be prepared consistent with the requirements in §63.671(e)(2).
- 2) You must use certified calibration gases that meet the requirement in Section 7.1 of PS 9 for daily calibration checks.
- 3) You must use performance audit gases that meet the requirements in Section 7.2 of PS 9 for your quarterly multi-point calibration audits.
- 4) The measured NHV relative error for quarterly multi-point calibration audits must be within 10 percent of the certified cylinder gas tag value for NHV. NHV calculations must be based on the individual component properties in Table 12 of Subpart CC. This requirement replaces the compound-specific relative error requirement for performance audits in Section 7.2 of PS 9.
- 5) Mid-level daily calibration standard measurements must also be within 10 percent of the certified of the cylinder gas tag value for NHV. This requirement replaces the compound-specific relative error requirement for daily calibration in Section 10.2 of PS 9.

You must include a copy of this approval letter in the report for each testing program or periodic reporting period where these alternative testing procedures are applied.

Since this alternative test method approval under 40 CFR 63, Subpart CC, is appropriate for use at all facilities subject to Subpart CC that must determine flare combustion efficiency, we will announce on EPA's website (at <https://www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods>) that our approval of this alternative is broadly applicable to 40 CFR 63, Subpart CC. Should the alternative approvals authorized in this letter be superseded by formal actions to revise 40 CFR 63, Subpart CC, this approval may be rescinded.

If you have any questions regarding this approval or need further assistance, please contact Ray Merrill at (919) 541-5225 or merrill.raymond@epa.gov.

Sincerely,



Steffan M. Johnson, Group Leader
Measurement Technology Group

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