



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6

1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

December 13, 2021

Ms. Elizabeth Chhapmon
Manager - HSSE
Port Arthur Refinery
Total Petrochemicals & Refining USA, Inc.
P. O. Box 849
Port Arthur, TX 77641-0849

Sent via email: elizabeth.chapmon@total.com

Re: Alternative Monitoring Plan (AMP) New Source Performance Standards (NSPS) Subpart Ja Span Gas Concentration and High Range Validation Standards for Total Reduced Sulfur (TRS) Continuous Emission Monitoring System (CEMS) at Total Petrochemicals & Refining USA, Inc. (Total) Port Arthur Refinery, Port Arthur, Texas.

Dear Ms. Chapmon:

This letter is in response to your Alternative Monitoring Plan (AMP) request dated December 14, 2020, regarding the concentration of span gas used to check daily calibration drift, and validation standards during continuous emission monitoring system (CEMS) audits under NSPS Subpart Ja. Based upon the information provided, the United States Environmental Protection Agency (EPA) conditionally approves your request, as explained below.

Under NSPS Subpart Ja, the CEMS for South, North, East, and Middle Flares at Port Arthur Refinery are subject to the compliance requirements of 40 C.F.R. § 60.107a(e), sulfur monitoring for assessing root cause analysis thresholds for affected flares. According to 40 C.F.R. § 60.13(d)(1), CEMS calibration drift checks must be conducted daily for the zero level (or a low value of 0-20 percent of span value) and span range (50-100 % of span value). Additionally, quarterly CEMS cylinder gas audits (CGA) and relative accuracy test audits (RATA) must be conducted that require the analyzer to be challenged at low (20-30% of span value) and high (50-60% of span value) level concentrations.

Total has installed or will install ATOM FGA-1000 sulfur analyzers on each of the four flares to continuously analyze and record total reduced sulfur (TRS) concentrations. ATOM has certified the linearity of the FGA-1000 analyzer over the range of sulfur concentrations of 0-100%. Therefore, to eliminate significant safety concerns associated with the handling, transportation, and storage of materials containing extremely high concentrations of hydrogen sulfide (H₂S), Total proposes using reduced calibration gas concentrations for the daily span check and the validation standard for CGAs and RATAs, while following all other monitoring requirements.

Based on the process and analyzer information submitted, EPA conditionally approves your request to reduce the concentrations of the calibration gas and validation standards on the CEMS for the four

Total Petrochemicals and Refining USA, Inc. Port Arthur Refinery – NSPS Ja Flare CEMS validation

flares, provided that all other requirements of the monitoring procedures of NSPS Subpart Ja for H2S and TRS are followed.

The reduced H2S calibration gas concentrations for the ATOM FGA-1000 analyzers are approved as follows:

Daily Calibration	Zero Check: 200 - 800 ppmv Span: 2500 – 3500 ppmv
Quarterly CGAs and RATA	Low Span: 1000 - 1500 ppmv High Span: 2,500 - 3,500 ppmv

Additionally, Total shall conduct linearity analysis on the ATOM FGA-1000 analyzers once every three years to demonstrate the detectors’linearity across the entire range of expected sulfur concentrations. The analysis must include four test gases in the following nominal ranges: zero, 5-20%, 40-60%, and 80-100% of maximum anticipated sulfur concentration. Target acceptance criteria would be results within 5% of span that is based on maximum anticipated sulfur concentration. A report of the linearity analysis shall be submitted to EPA Region 6 and the Texas Commission on Environmental Quality (TCEQ).

This conditional approval is site specific for the South, North, East, and Middle Flares at Total’s Port Arthur Refinery. If refinery operations change such that the sulfur content or H2S concentration range of the fuel gas vent stream to the four flares change from representations made in your request, then Total must document the change(s) and submit a new AMP request. This approval should also be incorporated into the facility's new source review (NSR) and Title V permits for federal enforceability. If you have any questions or concerns about this conditional approval, please contact Prince Nfodzo of my staff at (214) 665-7491 or Nfodzo.prince@epa.gov.

Sincerely,

STEVEN THOMPSON

Steve Thompson
Chief
Air Enforcement Branch

Digitally signed by STEVEN THOMPSON
DN: c=US, o=U.S. Government, ou=Environmental
Protection Agency, cn=STEVEN THOMPSON,
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