



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 6  
1201 ELM STREET, SUITE 500  
DALLAS, TEXAS 75270

January 19, 2021

**TRANSMITTED VIA EMAIL**

Brandon Jeffcoat  
Director of Industrial Degassing Services  
Shelton Services Corporation  
2111 Old Atascocita Road  
Crosby, TX 77532  
Email: [bjeffcoat@j2sservices.com](mailto:bjeffcoat@j2sservices.com)

Re: Alternative Monitoring Plan (AMP) and Performance Testing Waiver – Hydrogen Sulfide (H<sub>2</sub>S) Monitoring for Vapors Combusted in Portable Thermal Oxidizers and Internal Combustion Engines under New Source Performance Standards (NSPS) for Petroleum Refineries, Subparts J and Ja – Shelton Services Corporation (Shelton) – Various Refineries Located in Region 6.

Dear Mr. Jeffcoat:

This letter is in response to your request, dated October 29, 2020, and revised November 19, 2020, pertaining to the use of portable temporary thermal oxidizer units (TOUs) and internal combustion engines (ICE) for emissions control during tank degassing and similar vapor control projects at various petroleum refineries that are subject to NSPS Subparts J or Ja. Upon review of information provided, the United States Environmental Protection Agency (EPA) conditionally approves your AMP and grants a performance testing waiver for degassing activities that use portable temporary TOUs and ICE at refineries located within Region 6 states<sup>1</sup>, as explained below and further delineated in the Enclosure to this letter.

Specifically, Shelton performs degassing services for tanks, vessels, and pipes at petroleum refineries. The use of portable TOUs/ICE to combust vapors that are refinery fuel gas vent streams result in the TOUs/ICE being considered fuel gas combustion devices subject to either NSPS Subpart J or Subpart Ja, depending on the refinery-specific requirements. NSPS Subparts J and Ja prohibit the owner or operator of a fuel gas combustion device from burning vent gas generated at a petroleum refinery that contains H<sub>2</sub>S in excess of the following limits:

- 1) 230 milligrams per dry standard cubic meter (mg/dscm), per 40 CFR § 60.104(a)(1).
- 2) 162 parts per million by volume (ppmv) determined hourly on a 3-hour rolling average basis, and 60 ppmv determined daily on a 365-day successive calendar day rolling average basis, per 40 CFR § 60.102a(g)(1)(ii).

NSPS Subparts J and Ja require the owner or operator of a fuel gas combustion device to install, calibrate, maintain, and operate a continuous emission monitoring system (CEMS) to monitor and record the concentration of H<sub>2</sub>S in the fuel gases before being burned in a combustion device, per 40 CFR §§ 60.105(a)(4) and 60.107a(a)(2). Since your portable TOUs/ICE are used on a temporary basis at each facility, you contend that installation of an H<sub>2</sub>S CEMS would not be economically feasible and technically impractical to implement.

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<sup>1</sup> The AMP conditional approval is limited to refineries located within Texas, Oklahoma, Louisiana, New Mexico, and Arkansas.

Based upon the information provided, EPA agrees that, for the specific portable and temporary combustion devices used, as described in your request, it is impractical to require monitoring via an H<sub>2</sub>S CEMS as specified by NSPS Subparts J and Ja. Therefore, in accordance with 40 CFR § 60.13(i), EPA conditionally approves Shelton's AMP. In addition, based on Shelton's proposed alternate testing protocols to be used during each degassing event, EPA waives performance testing pursuant to 40 CFR § 60.8(b)(4). Our conditional approval is limited to the monitoring of H<sub>2</sub>S for the operations described in your AMP and delineated in the Enclosure to this letter, and does not alter Shelton's or a particular refinery's obligations to meet all other applicable NSPS requirements, including, but not limited to, the following NSPS general provisions:

- 1) the requirement to maintain and operate affected facilities and associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions, per 40 CFR § 60.11(d); and,
- 2) the prohibition against concealing emissions which would otherwise constitute a violation of an applicable standard, including the use of gaseous diluents to achieve compliance with a standard which is based on the concentration of a pollutant in the gases discharged to the atmosphere, per 40 CFR § 60.12.

This conditional approval is based upon prior consultation with our Office of Air Quality Planning and Standards and our Office of Enforcement and Compliance Assurance, and is consistent with similar approvals issued by our office. This conditional approval will automatically expire on the effective date of any change to NSPS Subparts J or Ja that directly affects the requirements to monitor H<sub>2</sub>S concentrations in fuel gases burned in portable combustion devices. In addition, if Shelton's use of portable TOUs during degassing operations changes from the representations made in the AMP, this approval will become null and void. Furthermore, if an affected refinery's operations change such that the sulfur content of the off-gas vent streams increases beyond levels specified in the Enclosure to this letter, then the refinery must document the change(s) so that Shelton may follow appropriate steps in either 40 CFR §§ 60.105(b)(3)(i)-(iii) or 60.107a(b)(3)(i)-(iii), based upon refinery-specific requirements.

EPA's conditional approval should be referenced and attached to each air permit authorization obtained by, claimed, or issued to Shelton in each Region 6 state (e.g., TCEQ Permit By Rule Registrations), to ensure federal enforceability, as specified in the Enclosure.

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. If you have any questions about this conditional approval, please contact Diana Lundelius of my staff at (214) 665-7468 or by email at [lundelius.diana@epa.gov](mailto:lundelius.diana@epa.gov).

Sincerely,

STEVEN  
THOMPSON

Digitally signed by STEVEN THOMPSON  
DN: cn=US, o=U.S. Government,  
ou=Environmental Protection Agency,  
cn=STEVEN THOMPSON,  
c=US, email=STEVEN.THOMPSON@epa.gov,  
Date: 2021.01.19 11:24:56 -0600

Steve Thompson  
Chief  
Air Enforcement Branch

Enclosure

Ecc: Alistair (Andy) Goodridge, TCEQ Region 12, [Andy.Goodridge@tceq.texas.gov](mailto:Andy.Goodridge@tceq.texas.gov)

## ENCLOSURE

### **Alternative Monitoring Plan (AMP) and Testing Waiver Evaluation For Monitoring H<sub>2</sub>S in Vapors Combusted in Portable Thermal Oxidizer Units and Internal Combustion Engines During Degassing of Tanks, Vessels, and Piping at Various Petroleum Refineries**

Shelton Services Corporation (Shelton) proposed an alternative monitoring plan (AMP) on October 29, 2020 (revised November 19, 2020), for monitoring hydrogen sulfide (H<sub>2</sub>S) in vapors that are combusted in portable thermal oxidizer units (TOUs) and Internal Combustion Engines (ICE). Under the AMP, Shelton will perform degassing of tanks, vessels, and piping at various refineries using portable temporary TOUs and ICE as emission control devices. Since Shelton's portable TOUs and ICE will combust vapors that may be considered refinery fuel gas, the TOUs and ICE are combustion devices subject to New Source Performance Standards (NSPS) for Petroleum Refineries, Title 40 Code of Federal Regulations (C.F.R.) Part 60, Subpart Ja. While the TOUs/ICE are subject to NSPS Ja, the incoming fuel gas streams from degassing at various refineries may be subject to either NSPS J or Ja. Since the TOUs/ICE are portable units that are used on a temporary basis, and are not permanent equipment owned or operated by the petroleum refineries, EPA agrees that it is not economically feasible and is technically impractical to install H<sub>2</sub>S CEMS as currently required under NSPS Subparts J or Ja. Additionally, in accordance with Shelton's alternate testing protocol, EPA waives the requirement to conduct performance testing for each degassing event, consistent with 40 CFR § 60.8(b)(4).

Based upon Shelton's representations of the degassing operations that will be covered by the AMP, the operation of the portable combustion devices, and other information furnished in the company's revised AMP request of November 19, 2020, the following conditions must be met as part of this AMP approval:

1. Each refinery where Shelton conducts degassing operations shall provide Shelton the following information:
  - (i) a list of the tanks, vessels and piping where degassing operations may occur;
  - (ii) a site plan diagram showing the locations and orientation of the tanks, vessels, and piping where degassing operations will occur, and the locations where Shelton may locate the portable thermal oxidizers and other equipment necessary for the degassing operations;
  - (iii) the names and titles of responsible refinery individuals who will review and approve degassing grab sample records and log sheets for the refinery;
  - (iv) a list of the materials stored in each tank, vessel, or piping area, and Material Safety Data Sheets (MSDS) for each material;
  - (v) a list of operating restrictions, if any, to ensure that degassing operations conform to special conditions in the refinery's air permits; and,
  - (vi) if applicable, a copy of the refinery's AMP for degassing operations that includes the use of portable control and combustion devices.
  
2. Shelton shall use a portable H<sub>2</sub>S meter to determine the concentration of H<sub>2</sub>S in gases entering each Shelton portable TOU/ICE (i.e. a "grab sample"), as described in additional information furnished for the November 19, 2020, revised AMP petition. Each grab sample shall be taken at the inlet of the mobile TOU or ICE.

3. For each discrete degassing event, Shelton shall collect a grab sample for H<sub>2</sub>S within 30 minutes of startup of each portable TOU/ICE (the "initial grab sample"). No monitoring is required during operating periods when the TOU/ICE does not combust gases generated by degassing and cleaning<sup>2</sup> events.
4. If the initial grab sample indicates an H<sub>2</sub>S concentration equal to or less than 162 ppmv, then the inlet gas stream is deemed to meet the H<sub>2</sub>S limits of NSPS J and Ja, and no further monitoring is required for that discrete degassing event.
5. If the initial grab sample indicates a H<sub>2</sub>S concentration more than 162 ppmv, then for that discrete degassing event, the inlet gas stream is deemed to have exceeded the 230 mg/dscm limit of 40 C.F.R. § 60.104(a)(1) and the 162 ppmv limit of 40 C.F.R. § 60.102a(g)(1)(ii). However, Shelton may opt to collect additional samples to demonstrate compliance with the H<sub>2</sub>S limits specified in 40 C.F.R. §§ 60.104(a)(1) and 60.102a(g)(1)(ii), but only by collecting and averaging three valid grab samples as follows<sup>3</sup>:
  - (i) the initial grab sample;
  - (ii) a grab sample taken between 61 and 120 minutes after startup of the mobile thermal oxidizer unit; and,
  - (iii) a grab sample taken between 121 and 180 minutes after startup of the mobile thermal oxidizer unit.
6. Shelton shall record the results of each grab sample, the key activities completed with each degassing operation, and other relevant information, on the form(s) furnished for approval to EPA Region 6. Shelton shall keep the records of all grab samples and degassing events for at least five years.
7. Within 5 business days after each discrete degassing event, Shelton shall provide the owner or operator of the petroleum refinery where the discrete degassing event is performed the results of each grab sample, as well as a list of all dates and times when any grab sample indicated an H<sub>2</sub>S concentration exceeded 162 ppmv. The purpose of this reporting requirement is to provide the owner or operator of the petroleum refinery with the data necessary for inclusion in excess emission reports and monitoring system performance reports required by 40 C.F.R. § 60.7(c).
8. Vapors from degassing operations shall be vented only to a TOU/ICE which is in full operation as described in the AMP petition, and which has been issued an air permit, or for which other appropriate air emissions authorization is claimed, in the State where the refinery is located.

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<sup>2</sup> For example, sampling would not be required during time periods that commercially purchased propane is combusted for the purposes of heating up the TOU/ICE to operating temperature prior to treatment of degassing and cleaning emissions, or during equipment cool down after the device is no longer needed to treat emissions from degassing and cleaning events.

<sup>3</sup> Shelton can use this alternative averaging method of demonstrating compliance only if three valid grab samples are taken as specified and within the designated time periods.

9. Refineries must comply with the other applicable requirements of NSPS Subpart J or Ja that apply to the refinery fuel gas when Shelton conducts degassing operations. The use of Shelton's portable TOUs/ICE for control of H<sub>2</sub>S and other refinery fuel gas vent stream pollutants at processes other than the degassing operations represented is not covered or authorized by this conditional AMP.
10. Shelton shall follow its internal Standard Operating Procedures (SOP) for operation of the TOUs and ICE, as furnished with the company's November 19, 2020, revised AMP petition. Shelton shall review and update the SOP at least once annually to ensure consistency with requirements of the AMP conditional approval, current air permits and authorizations, and applicable federal/state air emission rules. Shelton shall also update the list of TOUs/ICEs used for degassing operations annually to add or remove units as appropriate.
11. In states where Shelton claims a Permit By Rule (PBR), an exemption, or other air permit authorization under EPA-approved delegated state rules which do not require registration or notification to the state, Shelton is required to document the basis for claiming such authorization, including emission calculation estimates and other information necessary for demonstrating compliance. This AMP must be attached to the documentation, and the documentation must be made available upon request by a refinery, or by any regulating authority with jurisdiction over a facility where Shelton will operate. If a state requires registration or an air permit, or if Shelton voluntarily registers or obtains an air permit from a state, a complete copy of this AMP must be attached to such authorization or permit for federal enforceability.
12. Since the approved air rules and permitting mechanisms under State Implementation Plans for states in other EPA Regions may vary, this AMP conditional approval applies only within EPA Region 6 states where Shelton will operate (Texas, Louisiana, Arkansas, New Mexico, Oklahoma). For all other states and territories outside EPA Region 6, Shelton must seek approval of a separate AMP petition from each EPA Region, or approval of a global AMP from EPA's Office of Air Quality Planning and Standards.

Shelton Services Equipment List

<b>Equipment Type</b>	<b>Manufacturer</b>	<b>Model Number</b>	<b>Date of Construction / Initial Operation</b>	<b>Shelton Services Equipment ID</b>
Thermal Oxidizer	Mako Industries	3000 MAKOTHERM	Feb. 2020	VCU-1
Thermal Oxidizer	Mako Industries	3000 MAKOTHERM	June.2020	VCU-2
Internal Combustion Engine System	Innovative Environmental Solutions, D/B/A Remediation Service, Int'l	V-4	March.2020	VCU-11
Internal Combustion Engine System	Innovative Environmental Solutions, D/B/A Remediation Service, Int'l	V-4	Nov. 2008	VCU-343
Internal Combustion Engine System	Innovative Environmental Solutions, D/B/A Remediation Service, Int'l	V-4	Nov.2008	VCU-327