



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 10**

1200 Sixth Avenue, Suite 155  
Seattle, WA 98101

AIR & RADIATION  
DIVISION

September 30, 2021

Mr. Paul Anderson  
Director of Industrial Degassing Services  
Vapor Point LLC  
1306 West F Street  
La Porte, Texas 77571

Re: Alternative Monitoring Plan and Performance Testing Waiver – Hydrogen Sulfide Monitoring for Vapors Combusted in Portable Thermal Oxidizers under New Source Performance Standards for Petroleum Refineries, Subparts J and Ja – Vapor Point LLC – Various Refineries Located in Region 10

Dear Mr. Anderson:

This letter is in response to your written application, dated June 7, 2021, pertaining to the use of portable temporary thermal oxidizer units, such as vapor combustors, for emissions control during tank degassing that are subject to 40 CFR Part 60, Subpart J, Standards of Performance for Petroleum Refineries, and Subpart Ja, Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 2007 (NSPS Subparts J or Ja). Based on the information provided, the United States Environmental Protection Agency, Region 10 conditionally approves your alternative monitoring plan and grants a performance testing waiver for degassing activities that use portable temporary TOUs at refineries located within the EPA, Region 10 states<sup>1</sup>, as explained below and further delineated in this letter. This conditional approval does not constitute an authorization to construct or operate the TOUs. Such construction and operation must comply with the regulations and permitting requirements of the applicable permitting authority.

## **Background**

Vapor Point LLC (“Vapor Point”) performs degassing services for tanks, vessels, and pipes at petroleum refineries. The use of portable TOUs to combust vapors that are refinery fuel gas vent streams renders the TOUs as fuel gas combustion devices subject to either NSPS Subpart J or Subpart Ja, depending on the refinery-specific requirements.<sup>2</sup> 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 H<sub>2</sub>S per dry standard cubic meter (mg/dscm), per 40 CFR 60.104(a)(1).
- 2) 162 parts per million by volume (ppmv) H<sub>2</sub>S determined hourly on a 3-hour rolling average basis, and 60 ppmv H<sub>2</sub>S determined daily on a 365-day successive calendar day rolling average basis, per 40 CFR 60.102a(g)(1)(ii).

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<sup>1</sup> The AMP conditional approval is limited to states within the EPA, Region 10 (Alaska, Idaho, Oregon, and Washington).

<sup>2</sup> “Fuel gas” and “Fuel gas combustion device” are defined in 40 C.F.R. §§ 60.101 and 60.101a. NSPS Subparts J and Ja affected facilities are identified in 40 C.F.R. §§ 60.100 and 60.100a.

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 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 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 would be technically impractical to implement.

## **Regulatory Background**

The EPA, Region 10 has the authority under 40 CFR 60.13(i) to approve alternatives to any monitoring procedures or requirements of part 60 after considering a written application. In addition, the EPA, Region 10 has the authority under 40 CFR 60.8(b)(4) to waive the requirement for performance tests because the owner or operator of a source has demonstrated by other means to the EPA, Region 10's satisfaction that the affected facility is in compliance with the standard.

## **Determination**

Based upon the information provided, the EPA, Region 10 agrees that, for the specific portable and temporary combustion devices used, as described in your written application, 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), the EPA, Region 10 conditionally approves Vapor Point's AMP. In addition, based on Vapor Point's proposed alternate testing protocols to be used during each degassing event, pursuant to 40 CFR 60.8(b)(4), the EPA, Region 10 waives performance testing required by 40 CFR 60.8; 60.106, and 60.104a. 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 conditions listed below. Nothing in this approval relieves Vapor Point or the owner and operator of the petroleum refinery of the obligations to comply with the requirements of NSPS Subparts J and Ja or any other applicable regulations, including, but not limited to the following:

- 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);
- 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; and
- Applicable State Implementation Plan or permitting requirements.

## **AMP Approval Conditions**

The EPA, Region 10's approval of this AMP is subject to Vapor Point's compliance with the following conditions:

1. Approval of this AMP is limited to monitoring H<sub>2</sub>S in fuel gas when degassing tanks, vessels, systems of pipes, and other enclosed equipment at petroleum refineries subject to NSPS J or Ja located in the EPA, Region 10 and combusting the vapors in portable combustion devices. When

operating under this AMP, the requirement under 40 CFR 60.105(a)(4) or 60.107a(a)(2) to install and operate a CMS to monitor H<sub>2</sub>S concentration in fuel gas is waived for each discrete degassing event.

2. If the refinery has a plan in place for the control and monitoring of degassing operations, the refinery's plan shall remain in effect. These AMP Approval Conditions shall apply in addition to the refinery's plan.
3. Prior to commencing degassing operations, Vapor Point shall obtain the following information from each refinery where Vapor Point conducts degassing operations:
  - (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 Vapor Point 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) or Safety Data Sheets (SDS) 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.
4. Vapor Point shall use length of stain tubes (e.g., Draeger) with a minimum detection limit of 200 ppm H<sub>2</sub>S to determine the concentration of H<sub>2</sub>S in gases entering each Vapor Point portable TOU (i.e., a "grab sample"), as described in additional information furnished for the June 7, 2021, AMP written application. Each grab sample shall be taken at the inlet of the mobile TOU. If the concentration of the vent gas stream entering the TOU is less than 100 ppm H<sub>2</sub>S, as measured by length of stain tubes, then Vapor Point's handheld portable H<sub>2</sub>S monitor may be used to measure concentration in subsequent grab samples. If Vapor Point wishes to exercise the option of using a handheld monitor in lieu of using stain tubes for initial grab samples, the H<sub>2</sub>S sensor in the monitor must be capable of detecting a concentration up to 200 ppm.
5. For each discrete degassing event, Vapor Point must collect a grab sample (the "initial grab sample") for H<sub>2</sub>S measurement within 30 minutes of startup of each portable TOU. No monitoring is required during operating periods when the TOU does not combust gases generated by degassing and cleaning events.<sup>3</sup>
6. 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.
7. 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

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<sup>3</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.

40 C.F.R. 60.104(a)(1) and the 162 ppmv limit of 40 C.F.R. 60.102a(g)(1)(ii). Vapor Point will immediately stop venting until an H<sub>2</sub>S scrubber has been connected and is operational to comply with the applicable H<sub>2</sub>S concentration limits of the vent gas stream. After implementation of scrubbing or other concentration reduction measures, Vapor Point will conduct additional testing 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), by collecting and averaging three valid grab samples as follows<sup>4</sup>:

- (i) the initial grab sample;
- (ii) a second grab sample taken between 61 and 120 minutes after startup of the mobile thermal oxidizer unit; and,
- (iii) a third grab sample taken between 121 and 180 minutes after startup of the mobile TOU.

8. During each discrete degassing event, Vapor Point shall record the following on the forms included in the AMP written application to the EPA, Region 10:
  - (i) the dates, times, locations, and results of each grab sample,
  - (ii) the key activities completed with each degassing operation, and other relevant information, Vapor Point and the petroleum refinery shall keep the records of all grab samples and degassing events for at least five years.
9. Within 5 business days after completion of each discrete degassing event, Vapor Point 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) (excess emissions reporting for NSPS sources), 40 CFR 70.6(a)(3)(iii)(A) (semiannual monitoring reports for title V sources), 40 CFR 70.6(a)(3)(iii)(B) (prompt reporting of deviations of title V sources), and 40 CFR 70.6(c)(5)(i) (annual compliance certification for title V sources).
10. Vapors from degassing operations shall be vented only to a TOU which is in full operation as described in the AMP written application, and in compliance with any applicable air permitting requirements established by the State or local jurisdiction where the refinery is located, and in compliance with the implementation plan of the state in which it is operating.
11. Refineries must comply with the other applicable requirements of NSPS Subpart J or Ja that apply to the refinery fuel gas when Vapor Point conducts degassing operations. The use of Vapor Point's portable TOUs 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.
12. Vapor Point shall follow its internal Standard Operating Procedures for operation of the TOUs, as furnished with the company's June 7, 2021, AMP written application. Vapor Point shall review and update the SOP at least once annually to ensure consistency with requirements of the AMP

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<sup>4</sup> Vapor Point 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.

conditional approval, current air permits and authorizations, and applicable federal/state air emission rules. Vapor Point shall also update the list of TOUs used for degassing operations annually to add or remove units as appropriate.

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 similar approvals issued by the EPA. 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 Vapor Point's use of portable TOUs during degassing operations changes from the representations made in the AMP written application, 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 this letter, then the refinery must document the change(s) so that Vapor Point 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.

The EPA, Region 10's conditional approval should be referenced and attached to each air permit authorization issued for Vapor Point's TOUs in each Region 10 state, where applicable. This conditional approval does not relieve Vapor Point nor the owner or operator of the petroleum refinery where Vapor Point operates from any other applicable requirement, including the applicable general provisions of 40 CFR part 60 or the requirement to obtain permits to construct and/or operate the TOUs. The permitting authority may incorporate the AMP Approval Conditions contained herein into the permit to construct the TOUs, if a construction permit is required. The permitting authority should incorporate the AMP Approval Conditions contained herein into the applicable petroleum refinery's Title V operating permit as the monitoring and related recordkeeping and reporting requirements corresponding to the applicable requirements in 40 CFR 60.104(a)(1) or 40 CFR 60.102a(g)(1)(ii).

If you have any questions about this conditional approval, please contact Bryan Holtrop of my staff at (206) 553-4473 or by email at [holtrop.bryan@epa.gov](mailto:holtrop.bryan@epa.gov).

Sincerely,

McFadden,  
Kelly

Digitally signed by  
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Kelly McFadden, Chief  
Air Permits and Toxics Branch

cc: Mr. Jim Plosay  
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