



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

**ELECTRONIC MAIL**  
**DELIVERY RECEIPT REQUESTED**

Paul Anderson  
Director of Industrial Degassing Services  
Vapor Point LLC  
PAnderson@vaporpoint.net

RE: Request for AMP and Performance Testing Waiver for H<sub>2</sub>S Monitoring for Vapors Combusted in Portable Thermal Oxidizers Subject to NSPS Subparts J and Ja, Vapor Point LLC, Various Refineries Located in Region 5

Dear Mr. Anderson:

The U.S. Environmental Protection Agency has received and reviewed a letter from Vapor Point LLC (Vapor Point, or you) located in La Porte, Texas, dated June 7, 2021, requesting an Alternative Monitoring Plan (AMP) and Performance Testing Waiver for Hydrogen Sulfide (H<sub>2</sub>S) monitoring of fuel gas in refineries controlled by a portable thermal oxidizer (TOU), for emissions control during tank degassing and similar vapor control projects at various petroleum refineries subject to Standards of Performance for Petroleum Refineries (NSPS Subpart J) or Standards of Performance for Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After May 14, 2007 (NSPS Subpart Ja), depending on the refinery. In summary, EPA approves with conditions the request for alternative monitoring and grants a performance testing waiver, as explained below.

**Background**

Vapor Point performs degassing services for tanks, vessels, and pipes at petroleum refineries. The use of portable TOUs to combust vapors that are refinery gas vent streams results in the TOUs being considered fuel gas combustion devices subject to either NSPS Subpart J or NSPS Subpart Ja.

NSPS J at 40 C.F.R. § 60.104(a)(1) prohibits the owner or operator from burning in any fuel gas combustion device any fuel gas that contains hydrogen sulfide in excess of 230 mg/dscm.

NSPS Ja at 40 C.F.R. 60.102a(g)(1)(ii) prohibits the owner or operator from burning in any fuel gas combustion device any fuel that contains hydrogen sulfide in excess of 162 ppmv determined hourly on a 3-hour rolling average basis and hydrogen sulfide in excess of 60 ppmv determined daily on a 365 successive calendar day rolling average basis.

NSPS Subpart J and NSPS Subpart Ja at 40 C.F.R. 60.105(a)(4) and 40 C.F.R. 60.107a(a)(2), respectively, 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 fuel gases before being burned in any fuel gas combustion device.

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.”

### **Vapor Point’s Request**

Vapor Point asked EPA for an AMP and Performance Testing Waiver for H<sub>2</sub>S for degassing activities that use portable temporary TOUs at refineries located within Region 5 states<sup>1</sup>. The AMP requested by Vapor Point consists of sampling and testing the vapor stream for H<sub>2</sub>S concentration at the inlet within the first 30 minutes of each discrete thermal vapor control event. The sampling will be done with a portable H<sub>2</sub>S meter or stain colorimetric tubes. If the sample has a value of over 162 ppm, Vapor Point will ensure that a liquid caustic scrubber will be installed, and additional samples will be tested.

Vapor Point’s 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. You contend that installation of an H<sub>2</sub>S CEMS as required by NSPS Subpart J and NSPS Subpart Ja would not be technically practical to implement.

### **Determination**

EPA approves your AMP with conditions and grants a performance testing waiver for degassing activities that use portable temporary TOUs at refineries located within Region 5 states.

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 C.F.R. § 60.13(i), EPA conditionally approves Vapor Point’s AMP. In addition, based on Vapor Point’s proposed alternate testing protocols to be used during each degassing event, EPA waives performance testing pursuant to 40 C.F.R. § 60.8(b)(4). Our conditional approval is limited to the monitoring of H<sub>2</sub>S for the operations described in the following AMP:

1. Each refinery where Vapor Point conducts degassing operations subject to this AMP shall provide Vapor Point 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 Vapor

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<sup>1</sup> The AMP conditional approval is limited to refineries located within Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin

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) 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. Vapor Point shall use either H<sub>2</sub>S colorimetric tube testing or a portable H<sub>2</sub>S meter capable of detecting concentrations up to 200 ppm to determine the concentration of H<sub>2</sub>S in gases entering each TOU (the Grab Sample). In the event that the measurement range of a stain tube or a portable H<sub>2</sub>S meter is exceeded, Vapor Point will resample with a length of stain tube or portable H<sub>2</sub>S meter with the appropriate measurement range to ensure that an accurate measurement is obtained. Each Grab Sample shall be taken at the inlet to each TOU.

3. For each discrete degassing event, Vapor Point shall collect a grab sample for H<sub>2</sub>S within 30 minutes of startup of each portable TOU (the "initial grab sample"). No monitoring is required during operating periods when the TOU 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 an 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). Vapor Point has a scrubber which it shall use to further reduce the H<sub>2</sub>S concentration of such a vent gas stream; Vapor Point will conduct two additional tests 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>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,

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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> 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.

- (iii) A grab sample taken between 121 and 180 minutes after startup of the mobile thermal oxidizer unit.

6. Vapor Point shall record the results of each grab sample, the key activities completed with each degassing operation, and other relevant information, on the forms furnished by Vapor Point for approval to EPA Region 5. Vapor Point 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, 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).

8. Vapors from degassing operations shall be vented only to a TOU 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.


9. 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.

This conditional approval is consistent with prior approvals issued by Region 5 and a similar approval issued by Region 6 to Vapor Point. This conditional approval will automatically expire on the effective date of any change to NSPS Subpart J or NSPS Subpart Ja that may directly affect 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, 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 AMP, then the refinery must document the change(s) so that Vapor Point may follow appropriate steps in either 40 C.F.R. §§ 60.105(b)(3)(i)-(iii) or 60.107a(b)(3)(i)-(iii), based upon refinery-specific requirements.

If you have any further questions, please contact Natalie Schulz of my staff at (312) 886-2776 or schulz.natalie@epa.gov.

Sincerely,

Harris,  
Michael

 Digitally signed by Harris,  
Michael  
Date: 2021.07.28  
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Michael D. Harris, Division Director  
Enforcement and Compliance Assurance Division

cc: Kent Mohr, Manager  
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