## BlueCrest Alaska Operating LLC

Zach,

Attached are BlueCrest comments on the draft AQ1385TVP02. Thank you for the opportunity to comment on the draft permit. If you have any questions, please contact me at the numbers below.

Jacki Rose

Regulatory Permitting & Compliance Coordinator

BlueCrest Energy – Alaska Operating LLC

3301 C Street, Suite 202

Anchorage, AK 99503

O: 907-754-9558



## BlueCrest Alaska Operating LLC

3301 C Street, Suite 202 Anchorage, AK 99503

June 6, 2023

Zachary Boyden
Alaska Department of Environmental Conservation
Air Permits Program
555 Cordova Street
Anchorage, AK 99501

Subject: Comments Addressing Preliminary Air Quality Title V Permit AQ1385TVP02

BlueCrest Alaska Operating, LLC - Cosmopolitan Project

Dear Mr. Boyden,

BlueCrest Alaska Operating, LLC (BlueCrest) is submitting to the Alaska Department of Environmental Conservation the enclosed comments addressing preliminary Air Quality Title V Operating Permit AQ1385TVP02 and the associated preliminary Statement of Basis.

If you have questions concerning the comments, please feel free to contact Jacki Rose at (907)-754-9558 or by email at <a href="mailto:irose@bluecrestenergy.com">irose@bluecrestenergy.com</a>.

Sincerely,

Geoff Merrell HSE Manager

BlueCrest Alaska Operating, LLC

### **Enclosure:**

- 1. Comments Addressing Preliminary Air Quality Title V Operating Permit No. AQ1385TVP02 and the Associated Statement of Basis.
- 2. Attachment A. NSPS Subpart OOOOa Conditions 43 through 46 Edits

cc: Jacki Rose, BlueCrest

Chelsea Normand, Boreal Environmental Services

# BlueCrest Alaska Operating, LLC Cosmopolitan Project

# Comments Addressing Preliminary Air Quality Operating Permit No. AQ1385TVP02 and the Associated Statement of Basis

Suggested language to be included is underlined. Suggested language to be removed is crossed out. Please note that condition and footnote numbers may need to be updated for proposed edits that affect numbering within the permit. In addition, BlueCrest is providing a redline strikeout copy of requested changes to New Source Performance Standards (NSPS) Subpart OOOOa conditions that are provided in Attachment A.

## Comments Addressing Preliminary Air Quality Operating Permit No. AQ1385TVP02

- 1. Cover Page, Issue, Expiration, and Effective Dates Please correct the Issue Date and Expiration date to be the actual date the final air quality Title V operating permit is issued. Please correct the effective date to be 30 days after the date the final permit is issued.
- Table A, Onshore Emissions Unit Inventory, Page 2 Please amend the rating/size units for horsepower to be "hp" instead of "Hp" throughout Emissions Unit (EU) Inventory Tables A and B. In addition, please amend the rating/size units for brake-horsepower to be "bhp" instead of "bHp" throughout the EU Inventory Tables A and B.
- 3. Table A, Onshore Emissions Unit Inventory, Page 2 For accuracy, please amend the Emissions Unit Description for EU ID 12 to be TEG Dehydrator w/electrical reboiler.
- 4. Table A, Onshore Emissions Unit Inventory, Page 3 Please amend the footnotes associated with Table A for accuracy as indicated below. Please remove EU ID 71 from Footnote 1 and add this EU ID 71 to Footnote 3. The portable heaters identified as EU ID 71 are not subject to NSPS or National Emission Standards for Hazardous Air Pollutants (NESHAPs) requirements but are subject to a Title I permit requirement to burn only ultra-low sulfur diesel (ULSD.) In addition, please remove Footnote 6 because this footnote is not accurate and is not relevant to the permit. EU ID 9a becoming fully operational and triggering the requirement for BlueCrest to submit a complete and timely Title V permit application is memorialized in the Statement of Basis for the permit.

The Table A notes with suggested changes are:

1. EU IDs 12, 71, 87, and 88 are considered insignificant on an emission rate basis under 18 AAC 50.326(e). These emission units are listed in Table A because they are subject to federal NSPS and/or NESHAP requirements.

- EU IDs 1a, 1b, and 12a are insignificant on an emission rate basis under 18 AAC
   50.326(e). These emission units are listed in Table A because they are subject to federal NSPS and/or NESHAP requirements and to a Title I permit requirement.
- 3. EU IDs 15, 16, <u>71</u>, 89 91 and T1 T10 are insignificant on an emission rate basis under 18 AAC 50.326(e). These emission units are listed in Table A because they are subject to Title I permit requirements.
- 4. Construction for EU ID 87 commenced in 2011. EU ID 87 was installed in 2018.
- 5. Construction for EU ID 88 commenced in 2015. EU ID 88 was installed in 2019.
- 6. The Permittee decommissioned EU ID 9, a C600 Capstone Microturbine, which was replaced by EU ID 9a, a C1000 Capstone Microturbine, in AQ1385MSS03.
- 7. Nonroad engines (NRE) with applicable limits (EU IDs 17 22, 69, and 70) are listed in this table.
- 5. Condition 1.2, Page 5 Please remove EU ID 12 from Condition 1.2 for accuracy. EU ID 12 is a TEG dehydration unit with an electric fired reboiler. As a result, this EU is not subject to the visible emissions monitoring provisions of Condition 1.2.
  - 1.2 For EU IDs  $\frac{12}{12}$ , 12a, 15, 16, 37 40, 71a and 89 91, monitoring shall consist of an annual compliance certification under Condition 86 for the visible emissions standard based on reasonable inquiry.
- 6. Condition 1.3, Page 5 Please amend the VE schedule for EU IDs 49 and 50. While EU IDs 49 and 50 are permitted as dual fuel fired EUs, these EUs are currently configured to burn only diesel. BlueCrest requests for EU IDs 49 and 50 to follow the provisions of the Liquid-Fired VE requirements Condition 2 through 4 in Standard Permit Condition IX. BlueCrest will plan to submit an amendment application for the Title V operating permit if (and when) EU IDs 49 and 50 are configured to burn gas as the primary fuel.
- 7. Condition 5.1a, Flare Visible Emissions MR&R, Page 10 Please amend Condition 5.1a to allow for the initial flare observation on EU ID 36 to be conducted within 12 months of mobilizing the offshore drill rig. BlueCrest does not know (and has no way of knowing) if a planned flare event would occur during the first 30 days of mobilizing the rig. The requested proposed language is aligned with the Standard Permit Condition Language IX, which allows for the initial flare event to be conducted within 12-months after permit issuance. Because the offshore activities have not yet commenced, BlueCrest believes that requiring the initial visible emissions observation on EU ID 36 within 12-months of mobilizing the offshore drill rig would meet the intent of Condition 5.1a. In addition, requiring a visible emission for a flare event at each new well site would be overly burdensome. Monitoring subsequent visible emissions observations under Condition 5.1b would provide adequate monitoring of planned flare event visible emissions at different applicable well sites. Suggested revised language is provided below.

- 5.1 Observe flare events on EU IDs 13a, 13b, and 36, for visible emissions following 40 C.F.R. 60, Appendix A-4, Method 9 for 18 minutes to obtain 72 consecutive 15-second opacity observations according to the following schedule:
  - a. Conduct an initial visible emissions observation on EU ID 36 within 30 days 12 months of mobilizing the offshore drill rigto each new well site.
  - Conduct subsequent visible emissions observations within 14 months of, but not earlier than three months after, the preceding flare event visible emissions observation.
  - c. If there are no flare events that meet the requirements of Condition 5.1.a or 5.1.b, the Permittee shall observe the next daylight flare event.
- 8. Condition 13 through 15 PM MR&R, Page 15– Please amend or remove Conditions 13 through 15 for consistency with Comment 6 that notes EU IDs 49 and 50 are currently configured to operate only on diesel fuel.
- 9. Condition 33 NSPS Subpart A Control Device Flares, Page 33 Please revise Condition 33 to also include EU ID 13b, the high-pressure flare, as a control device subject to the provisions in 40 CFR 60.18. The process vents on EU IDs 12 and 12a, TEG dehydrators, are subject to the control requirements because these units are a part of a process unit at a natural gas processing facility under NSPS Subpart OOOOa.
  - 33. **NSPS Subpart A Control Device Flares.** The low pressure flare (EU ID 13a) <u>and high pressure flare (EU ID 13b)</u> used as a control device required by Condition 44.3.i. for process vent emissions shall be designed and operated in accordance with 40 C.F.R 60.18(b). The Permittee shall monitor and record in accordance with 40 C.F.R 60.18(c) through (f).
- 10. Footnote 25 NEHSAP Subpart ZZZZ, Page 64 Please amend Footnote 25 to include the correct NEHSAP ZZZZ permit condition reference to Condition 51.
  - The provisions of NESHAP Subpart ZZZZ listed in Condition 51s52 through 56 are current as amended through August 10, 2022. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.
- 11. Footnote 17 NSPS Subpart OOOOa, Page 38 Please correct the footnote to reference NSPS Subpart OOOOa instead of NSPS Subpart IIII for Conditions 43 through 46 as follows and as indicated in the redline strikeout copy of the NSPS Subpart OOOOa conditions in Attachment A.
  - The provisions of NSPS Subpart IIII-OOOOa listed in Conditions 43 through 46 are current as amended through November 16, 2020. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.
- 12. Condition 44.1, NSPS Subpart OOOOa Emission Standards, Page 39 Please remove Condition 44.1 and the associated sub conditions from the permit for consistency with the Permit No.

AQ1385MSS04 (that removed the well stimulation equipment from the emissions unit inventory) and the Title V operating permit application. This requested change is consistent with the ADEC statement on Page 18 of the preliminary Statement of Basis factual basis for the NSPS Subpart OOOOa conditions. No fracturing or refracturing will be performed at the Cosmopolitan Project. As a result, no conditions are needed to address well completion operations under NSPS Subpart OOOOa in the Title V permit. The requested change is also in Attachment A.

- 13. Condition 44.2.d, NSPS Subpart OOOOa Emissions Standards, Page 41 Please amend Condition 44.2.d for accuracy to clarify the first attempt at repair shall be made no later than 30 calendar days after detection of the fugitive emissions and that the repair shall be completed as soon as practicable, but no later than 30 days after the first attempt at repair in accordance with 40 CFR 60.5397a(h)(1) and (2). The requested change is also indicated in Attachment A.
- 14. Condition 44.3.b, Pumps in light liquid service, Page 43 Please remove reference to the incorrect regulatory citation in Condition 44.3.b as indicated in Attachment A.
- 15. Condition 44.3.c, Pressure relief devices, Page 44 Please add to Condition 44.3.c a reference to the exemption allowed in 40 C.F.R 60.5401a(b) that clarifies each pressure relief device in gas/vapor service may be monitored quarterly and within five days after pressure release to detect leaks as indicated in Attachment A.
- 16. Condition 44.3.d, Sampling connection systems, Page 44 Please remove the requirements for Sampling Connection Systems of 40 CFR 60.482.5a per the exemption in 40 CFR 60.5401a(c). The requested change is indicated in Attachment A.
- 17. Condition 45.2, NSPS Subpart OOOOa Recordkeeping, Page 51 Please remove Condition 45.2 and associated sub-conditions consistent with Comment 12. Because no fracturing or refracturing will be performed at the Cosmopolitan Project, no conditions addressing well completion operations under NSPS Subpart OOOOa are needed in the Title V permit. The requested change is indicated in Attachment A.
- 18. Condition 45.3, Fugitive Emissions, Pages 52 Please streamline the recordkeeping requirements for collection of fugitive emissions components in Conditions 45.3.a through c by removing the associated sub-conditions and directly referencing the applicable NSPS Subpart OOOOa regulatory citations for consistency with recently issued Title V Operating Permit No. AQ0070TVP04 (Hilcorp Beaver Creek Production Facility) to reduce complexity of the NSPS Subpart OOOOa requirements in the BlueCrest Title V Operating Permit. BlueCrest has prepared a fugitive emissions monitoring plan and has been submitting the applicable NSPS Subpart OOOOa reports (i.e., collection of fugitive emissions at a well site and equipment leaks at an onshore natural gas processing plant.) In addition, the majority of the records and information required to be maintained are identified on the EPA NSPS Subpart OOOOa reporting forms required to be reported in CEDRI. The requested change is indicated in Attachment A.

- 19. Condition 45.4, Equipment Leaks, Pages 56 Please streamline the recordkeeping requirements for equipment leaks at onshore natural gas processing plants collection of fugitive emissions components in Condition 45.4 by removing the associated sub-conditions and referencing the applicable NSPS Subpart OOOOa regulatory citations for consistency with the rationale provided in Comment 18 to reduce complexity of the NSPS Subpart OOOOa requirements in the BlueCrest Title V Operating Permit. The requested change is also provided in Attachment A.
- 20. Condition 46.2, NSPS Subpart OOOOa Reporting, Page 59 Please revise Condition 46.2 as indicated in Attachment A to clarify certain exceptions allowed for NSPS Subpart OOOOa reporting. In addition, please streamline the reporting requirements in Condition 46.2.a, Condition 46.2.c, and Condition 46.2.d by removing the associated sub-conditions and directly referencing the applicable NSPS Subpart OOOOa regulatory citations for consistency with Comment 18 and recently issued Title V Operating Permit No. AQ0070TVP04 (Hilcorp Beaver Creek Production Facility) to reduce complexity of the NSPS Subpart OOOOa requirements in the BlueCrest Title V Operating Permit.
- 21. Condition 46.2.b, NSPS Subpart OOOOa Reporting, Page 59 Please remove Condition 46.2.b and the associated sub-conditions consistent with Comment 12. Because no fracturing or refracturing will be performed at the Cosmopolitan Project, no conditions addressing well completion operations under NSPS Subpart OOOOa are needed in the Title V operating permit. The requested change is also indicated in Attachment A.
- 22. Condition 46.2.e, NSPS Subpart OOOOa Reporting, Page 62– Please remove Condition 46.2.e because the collection of fugitive emissions components at a well site are not subject to the requirements for 40 CFR 60.542a(b)(1). Those requirements were applicable from June 2, 2017, until August 31, 2017, which has passed.

## **Comments Addressing Preliminary Statement of Basis**

23. Page 5, Compliance History – For accuracy, please revise the first paragraph of the Compliance History to reflect that the Permittee has addressed and taken corrective actions for all known violations of procedural aspects of reporting and recordkeeping, as well as violations of excess emissions/permit deviations as follows:

The stationary source has operated at its current location since 2015. Review of the permit files for this stationary source, which includes the past inspection reports and compliance evaluations, indicates that the Permittee had several violations on procedural aspects of reporting and recordkeeping, as well as violations on excess emissions/permit deviations, most of which. Tehe Permittee has already addressed and taken corrective actions to address these issues.

24. Page 9, Conditions 1, 2 through 5, and 13, Visible Emissions Standard and MR&R, Dual Fuel-Burning Equipment – Please amend this section for EU IDs 49 and 50 for consistency with

Comment 6 to allow these emissions units to follow the liquid fired EU requirements in Standard Permit Condition IX.

- 25. Page 10, Conditions 1, 2 through 5, and 13, Visible Emissions Standard and MR&R, Flares Please amend this section of the statement of basis for consistency with Comment 7 to allow for EU ID 36 to follow the initial flare VE requirements in Standard Permit Condition IX.
- 26. Page 12, Conditions 6 and 7 through 12 & 13, PM Standard and MR&R, Dual Fuel-Burning Equipment Please amend this section for EU IDs 49 and 50 for consistency with Comment 6 to allow these emissions units to follow the liquid fired EU requirements in Standard Permit Condition IX.
- 27. Pages 16 and 17, Conditions 28 through 32, NSPS Subpart A Requirements For accuracy, please amend the conditions header of this section to include Conditions 28 through 33. In addition, please amend the legal basis for Condition 33 to also reference EU ID 13b, the high pressure flare, as a control device subject to the requirements of 40 CFR 60.18. The requested changes are provided below.

Condition 9 - The low pressure flare EU 13a and the high pressure flare EU ID 13b are is subject to 40 C.F.R 60.18 because it-these EUs are control devices as well as safety devices, that control emissions from NSPS Subpart OOOOa regulated emissions units.

28. Page 19, Conditions 48 through 50, NESHAP Subpart HH Requirements – Please revise the factual basis for EU IDs 12 and 12a for accuracy. The process vent emissions from EU IDs 12 and 12a are routed to a control device (EU ID 13b) and are required to be controlled under NSPS Subpart OOOOa as part of the natural gas process unit requirements. As a result, the control requirements s on EU IDs 12 and 12a are federally enforceable. In addition, please revise the third paragraph of this section in the preliminary Statement of Basis to clarify the requirement for when the Permittee is required to update its major source determination. This requirement is based on actual emissions of the stationary source and not potential emissions. The requested changes are provided below.

**Legal Basis:** NESHAP Subpart HH applies to owners and operators of triethylene glycol (TEG) dehydration units located at oil and natural gas production facilities that are area sources. The Cosmopolitan Project is an area source oil and natural gas production facility that owns and operates a TEG dehydration unit.

**Factual Basis:** These conditions incorporate the NESHAP Subpart HH requirements applicable to EU IDs 12 and 12a. The Cosmopolitan Project is not located within an urbanized area as defined by 40 C.F.R 63.761.

The Permittee has indicated that the process vent emissions (regenerator, flash tank during an overpressure event) from EU ID 12 and 12a are routed to a control device (EU ID 13b), per requirements under NSPS Subpart OOOOa, and as such is but there is no

justification to make the control a federally enforceable requirement. Controlled benzene emissions from EU IDs 12 and 12a, determined using GRI-GLYCalc TM Version 4.0, indicate that the facility will meet the criteria of 40 C.F.R 63.764(e)(1)(ii). As long as actual average benzene emissions from the process vent of EU ID 12 to the atmosphere are less than 0.90 megagrams per year, the Permittee is exempt from the requirements of 40 C.F.R 63.764(d) and reporting requirements of 40 C.F.R 63.775(c)(1)-(7).

According to 40 C.F.R 63.760(c), the Permittee is required to update its major source determination annually <u>if the stationary source has actual emissions of 5 TPY or more of a single HAP, or 12.5 tons per year or more of a combination of HAP because the source has formaldehyde emissions of 7.81 TPY, which is (i.e., greater than 50 percent of the major source thresholds) of 10 TPY for a single HAP. The annual determinations must use gas composition data measured during the preceding 12 months.</u>

## **Attachment A**

NSPS Subpart OOOOa Conditions 43 through 46 Requested Edits

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42.4. **Recordkeeping and Reporting.** For EU IDs 1a – 1c, 2, 2a – 2c, and 3, the Permittee must meet the following requirements.

[40 C.F.R 60.4245, Subpart JJJJ]

- a. Keep records of the following information:
  - All notifications submitted to comply with NSPS Subpart JJJJ and all documentation supporting any notification.
  - (ii) Maintenance conducted on the engine.
  - (iii) If the stationary SI ICE is not a certified engine, documentation that the engine meets the emission standards.

[40 C.F.R 60.4245(a)(1), (2) & (4), Subpart JJJJ]

b. Submit a copy of each performance test conducted under Condition 42.3 within 60 days after the test has been completed. Performance test reports using EPA Method 18, EPA Method 320, or ASTM D6348-03 (incorporated by reference see 40 C.F.R 60.17) to measure VOC require reporting of all QA/QC data. For Method 18, report results from sections 8.4 and 11.1.1.4; for Method 320, report results from sections 8.6.2, 9.0, and 13.0; and for ASTM D6348-03 report results of all QA/QC procedures in Annexes 1-7.

[40 C.F.R 60.4245(d), Subpart JJJJ]

 Report in accordance with Condition 84 if any of the requirements in Conditions 40 through 42 were not met.

> [18 AAC 50.040(j) & 50.326(j)(4)] [40 C.F.R 71.6(a)(3)(iii) & (c)(6)]

## Subpart OOOOa<sup>17</sup> - Standards of Performance for Crude Oil and Natural Gas Facilities

- **43.** NSPS Subpart OOOOa Applicability. The Permittee shall comply with any applicable requirement for crude oil and natural gas facilities whose construction, modification, or reconstruction commenced after September 18, 2015.
  - 43.1. Comply with the applicable provisions of Subpart A as specified in Table 3 to Subpart OOOOa.

[18 AAC 50.040((j) & 50.326(j)] [40 C.F.R 71.6(a)(1)] [40 C.F.R 60.5360a–60.5430a, Subpart OOOOa]

43.2. **Notification.** The Permittee shall comply with the following requirements for any affected facility specified in 40 C.F.R 60.5365a that was constructed, modified, or reconstructed during the reporting period.

<sup>&</sup>lt;sup>17</sup> The provisions of NSPS Subpart OOOOa HII listed in Conditions 43 through 46 are current as amended through November 16, 2020. Should EPA promulgate revisions to this subpart, the Permittee shall be subject to the revised final provisions as promulgated and not the superseded provisions summarized in these conditions.

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a. If you own or operate an affected facility<sup>18</sup> that is the group of all equipment within a process unit at an onshore natural gas processing plant, you must submit notifications required in Conditions 28.1, 28.2, 28.3, and 40 C.F.R 60.15(d).

[40 C.F.R 60.5420a(a), Subpart OOOOa]

**44. NSPS Subpart OOOOa Emission Standards**. The Permittee shall comply with the applicable emission standards for all affected facilities, as follows:

[18 AAC 50.040(j)(4) & 50.326(j)] [40 C.F.R 71.6(a)(1)] [40 C.F.R 60.5375a, 60.5397a, Subpart OOOOa]

- 44.1. Wells. For each well affected facility the Permittee shall:
  - a. Except as provided in Conditions 44.1.e, reduce GHG (methane) and VOC emissions for each stage of a well completion in accordance with the following:
    - (i) You must have a separator onsite during the entirety of the flowback period, except as provided in Conditions 44.1.a(i)(A) through 44.1.a(i)(C).
      - (A) A well that is not hydraulically fractured or refractured with liquids, or that does not generate condensate, intermediate hydrocarbon liquids, or produced water such that there is no liquid collection system at the well site is not required to have a separator onsite.
      - (B) If conditions allow for liquid collection, then the operator must immediately stop the well completion operation, install a separator, and restart the well completion operation in accordance with Condition 44.1.a.
      - (C) The owner or operator of a well that meets the criteria of Conditions 44.1.a(i)(A) or 44.1.a(i)(B) must maintain and report the records specified in Condition 45.2.
  - b. You have a general duty to safely maximize resource recovery and minimize releases to the atmosphere during flowback and subsequent recovery.
  - e. For each well affected facility with less than 300 sef of gas per stock tank barrel of oil produced, you must maintain records specified in Condition 45.2.c and submit reports specified in Condition 46.1.

[40 C.F.R 60.5375a(a) & (g), 60.5420a(b)(1) & (c)(1), Subpart OOOOa]

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<sup>&</sup>lt;sup>18</sup> If you own or operate a well, centrifugal compressor, reciprocating compressor, pneumatic controller, pneumatic pump, storage vessel, or collection of fugitive emissions components at a well site or collection of fugitive emissions components at a compressor station, you are not subject to the notification requirements of 40 C.F.R 60.7(a)(1), (3) and (4).

<sup>&</sup>lt;sup>19</sup>Well completion means the process that allows for the flowback of petroleum or natural gas from newly drilled wells to expel drilling and reservoir fluids and tests the reservoir flow characteristics, which may vent produced hydrocarbons to the atmosphere via an open pit or tank.

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44.2.44.1. Fugitive Emissions. For each collection of fugitive emissions components at a well site,<sup>20</sup> the Permittee shall reduce GHG (methane) and VOC emissions as follows:

- a. You must monitor all fugitive emissions components, in accordance with Conditions 44.1.b44.2.b and 44.1.c44.2.e. You must repair all sources of fugitive emissions<sup>21</sup> in accordance with Conditions 44.1.d44.2.d through 44.1.f44.2.f. You must keep records in accordance with Condition 45.245.3 and report in accordance with Condition 46.2.b46.2.e.
- b. You must develop an emissions monitoring plan that covers the collection of fugitive emissions components at well sites within each company-defined area in accordance with Conditions 45.245.3 and 45.2.b45.3.b.
- Each monitoring survey shall observe each fugitive emissions component<sup>22</sup> for fugitive emissions.
  - (i) You must conduct an initial monitoring survey within 90 days of the startup of production,<sup>23</sup> for each collection of fugitive emissions components at a new well site or by June 3, 2017, whichever is later. For a modified collection of fugitive emissions components at a well site, the initial monitoring survey must be conducted within 90 days of the first day of production for each collection of fugitive emission components after the modification or by June 3, 2017, whichever is later.
  - (ii) Except as provided in Condition 44.1.c(iii) 44.2.e(iii), a monitoring survey of each collection of fugitive emissions components at a well site within a company-defined area must be conducted at least semiannually after the initial survey. Consecutive semiannual monitoring surveys must be conducted at least 4 months apart.

<sup>&</sup>lt;sup>20</sup> A well site that only contains one or more wellheads is not an affected facility under NSPS Subpart OOOOa. The affected facility status of a separate tank battery surface site has no effect on the affected facility status of a well site that only contains one or more wellheads.

<sup>&</sup>lt;sup>21</sup> Fugitive emissions means any visible emission from a fugitive emissions component observed using optical gas imaging or an instrument reading of 500 ppm or greater using Method 21.

<sup>&</sup>lt;sup>22</sup> Fugitive emissions component means any component that has the potential to emit fugitive emissions of methane or VOC at a well site or compressor station, including but not limited to valves, connectors, pressure relief devices, open-ended lines, flanges, covers and closed vent systems not subject to 40 C.F.R 60.5411a, thief hatches or other openings on a controlled storage vessel not subject to 40 C.F.R 60.5395a, compressors, instruments, and meters. Devices that vent as part of normal operations, such as natural gas-driven pneumatic controllers or natural gas-driven pumps, are not fugitive emissions components, insofar as the natural gas discharged from the device's vent is not considered a fugitive emission. Emissions originating from other than the vent, such as the thief hatch on a controlled storage vessel, would be considered fugitive emissions.

<sup>23</sup> Startup of production means the beginning of initial flow following the end of flowback when there is continuous recovery of salable quality gas and separation and recovery of any crude oil, condensate or produced water.

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- (iii) Fugitive emissions components that cannot be monitored without elevating the monitoring personnel more than 2 meters above the surface may be designated as difficult-to-monitor. Fugitive emissions components that are designated difficult-to-monitor must meet the specifications of 40 C.F.R 60.5397a(g)(3)(i) through (iv).
- (iv) Fugitive emissions components that cannot be monitored because monitoring personnel would be exposed to immediate danger while conducting a monitoring survey may be designated as unsafe-to-monitor. Fugitive emissions components that are designated unsafe-to-monitor must meet the specifications of 40 C.F.R 60.5397a(g)(4)(i) through (iv).
- Each identified source of fugitive emissions shall be repaired, as defined in 40
   C.F.R. 60.5430a, or replaced as soon as practicable, but no later than 30 calendar days after detection of the fugitive emissions in accordance with 40
   C.F.R. 60.5397a(h)(1) through (2).
  - (i) A first attempt at repair shall be made no later than 30 calendar days after detection of the fugitive emissions.
  - (ii) Repair shall be completed as soon as practicable, but no later than 30 calendar days after the first attempt at repair as required in paragraph 60.5397a(h)(1).

<u>d.(i)</u>

- e. If the repair or replacement is technically infeasible, would require a vent blowdown, a well shutdown or well shut-in, or would be unsafe to repair during operation of the unit, the repair or replacement must be completed during the next well shutdown, well shut-in, after an unscheduled, planned or emergency vent blowdown or within 2 years, whichever is earlier.
- f. Each repaired or replaced fugitive emissions component must be resurveyed as soon as practicable, but no later than 30 days after being repaired, to ensure that there are no fugitive emissions.
  - (i) For repairs that cannot be made during the monitoring survey when the fugitive emissions are initially found, the operator may resurvey the repaired fugitive emissions components using either Method 21 or optical gas imaging within 30 days of finding such fugitive emissions.
  - (ii) For each repair that cannot be made during the monitoring survey when the fugitive emissions are initially found, a digital photograph must be taken of that component or the component must be tagged for identification purposes. The digital photograph must include the date that it was taken and must clearly identify the component by location within the site.

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- (iii) Operators that use Method 21 to resurvey the repaired fugitive emissions components are subject to the resurvey provisions specified in Conditions 44.1.f(iii)(A)44.2.f(iii)(A) and 44.1.f(iii)(B)44.2.f(iii)(B).
  - (A) A fugitive emissions component is repaired when the Method 21 instrument indicates a concentration of less than 500 ppm above background or when no soap bubbles are observed when the alternative screening procedures specified in section 8.3.3 of Method 21 are used.
  - (B) Operators must use the Method 21 monitoring requirements specified in Condition 45.3.a(viii)(B)40 C.F.R 60.5397a(c)(8)(i) or the alternative screening procedures specified in section 8.3.3 of Method 21.
- (iv) Operators that use optical gas imaging to resurvey the repaired fugitive emissions components, are subject to the resurvey provisions specified in Conditions 44.1.f(iv)(A)44.2.f(iv)(A) and 44.1.f(iv)(B)44.2.f(iv)(B).
  - (A) A fugitive emissions component is repaired when the optical gas imaging instrument shows no indication of visible emissions.
  - (B) Operators must use the optical gas imaging monitoring requirements specified in 40 C.F.R 60.5397a(c)(7)Condition 45.3.a(vii).

[40 C.F.R 60.5397a(a), (b), & (e)–(h), Subpart OOOOa]

- 44.3.44.2. Equipment Leak Standards. For all equipment within a process unit, except compressors, at an onshore natural gas processing plant the Permittee shall comply with Conditions 44.2.a44.3.a through 44.2.j44.3.j except as provided in 40 C.F.R 60.5401a; or you may elect to comply with the requirements of 60.483-1a and 60.483-2a, as an alternative.
  - Demonstrate compliance with the requirements of Condition 44.244.3 or 40 C.F.R 60.480a(e) for all equipment within 180 days of initial startup.
    - (i) Compliance with Conditions 44.2.a44.3.a through 44.2.i44.3.i will be determined by review of records and reports, review of performance test results, and inspection using the methods and procedures of 40 C.F.R 60.485a.
    - (ii) Equipment that is in vacuum service is excluded from the requirements of Conditions 44.2.b44.3.b through 44.2.i44.3.i if it is identified as required in 40 C.F.R 60.486a(e)(5).

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-1a(a), (b), & (d), Subpart VVa]

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- b. **Pumps in light liquid service**. Monitor each pump in light liquid service monthly to detect leaks by the methods specified in 40 C.F.R 60.485a(b), except as provided in 60.482-1a(c) and (f) and 60.482-2a(d), (e), and (f). A pump that begins operation in light liquid service after the initial startup date for the process unit must be monitored for the first time within 30 days after the end of its startup period, except for a pump that replaces a leaking pump and except as provided in 60.482-1a(c) and (f) and 60.482-2a(d), (e), and (f).
  - (i) Each pump in light liquid service shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump seal, except as provided in 40 C.F.R 60.482-1a(f).
  - (ii) The instrument reading that defines a leak is 2,000 ppm or greater.
  - (iii) If there are indications of liquids dripping from the pump seal, the owner or operator shall follow the procedure specified in either Condition 44.2.b(iii)(A)44.3.b(iii)(A) or 44.2.b(iii)(B)44.3.b(iii)(B) below. This requirement does not apply to a pump that was monitored after a previous weekly inspection and the instrument reading was less than the concentration specified in Condition 44.2.b(ii)44.3.b(ii).
    - (A) Monitor the pump within 5 days as specified in 40 C.F.R 60.485a(b). A leak is detected if the instrument reading measured during monitoring indicates a leak as specified in Condition 44.2.b(ii)44.3.b(ii). The leak shall be repaired using the procedures in Condition 44.2.b(iv)(A)44.3.b(iv)(A).
    - (B) Designate the visual indications of liquids dripping as a leak, and repair the leak using either the procedures in Condition 44.2.b(iv)(A)44.3.b(iv)(A) or by eliminating the visual indications of liquids dripping.
  - (iv) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after detection, except as provided in Condition 44.2.h44.3.h.
    - (A) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected and includes:
      - (1) tightening the packing gland nuts, and
      - (2) ensuring that the seal flush is operating at design pressure and temperature.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-2a(a)–(c), Subpart VVa]

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- c. Pressure relief devices. Each pressure relief device in gas/vapor service may be monitored quarterly and within 5 days after pressure release to detect leaks per 40 C.F.R.60.5401a. Except during pressure releases, each pressure relief device in gas/vapor service shall be operated with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, as determined by the methods specified in 40 C.F.R 60.485a(c).
  - (i) After each pressure release, the pressure relief device shall be returned to a condition of no detectable emissions as soon as practicable, but no later than 5 calendar days after the pressure release, except as provided in Condition 44.2.h44.3.h.
  - (ii) No later than 5 calendar days after the pressure release, the pressure relief device shall be monitored to confirm the conditions of no detectable emissions, by the methods specified in 40 C.F.R 60.485a(c).

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-4a(a) & (b), Subpart VVa]

- d. Sampling connection systems. Each sampling connection system shall be equipped with a closed-purge, closed-loop, or closed-vent system that complies with the following requirements:
  - Gases displaced during filling of the sample container are not required to be collected or captured.
  - (ii) Containers that are part of a closed purge system must be covered or closed when not being filled or emptied.
  - (iii) Gases remaining in the tubing or piping between the closed purge system valve(s) and sample container valve(s) after the valves are closed and the sample container is disconnected are not required to be collected or captured.
  - (iv) Each closed purge, closed loop, or closed vent system shall be designed and operated to meet requirements in either 40 C.F.R 60.482-5a(b)(4)(i), (ii), (iii), or (iv).

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-5a(a) & (b), Subpart VVa]

- e. **Open-ended valves or lines.** Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in 40 C.F.R 60.482-1a(c) and paragraphs 60.482-6a(d) & (e).
  - (i) The cap, blind flange, plug, or a second valve, shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line.
  - (ii) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

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(iii) When a double block-and-bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with Condition 44.2.e44.3.e at all other times.

> [40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-6a(a)–(c), Subpart VVa]

- f. Valves in gas/vapor service and in light liquid service. Each valve shall be monitored monthly to detect leaks by the methods specified in 40 C.F.R 60.485a(b) and shall comply with Conditions 44.2.f(ii)44.3.f(ii) through 44.2.f(v)44.3.f(v), except as provided in 40 C.F.R 60.482-7a(f), (g), and (h), 40 C.F.R 60.482-1a(c) and (f), and 60.483-1a and 60.483-2a.
  - (i) A valve that begins operation in gas/vapor service or light liquid service after the initial startup date for the process unit must be monitored according to Condition 44.2.f(i)(A)44.3.f(i)(A) or 44.2.f(i)(B)44.3.f(i)(B), except for a valve that replaces a leaking valve.
    - (A) Monitor the valve as in Condition 44.2.f44.3.f. The valve must be monitored for the first time within 30 days after the end of its startup period to ensure proper installation.
    - (B) If the existing valves in the process unit are monitored in accordance with 40 C.F.R 60.483-1a or 60.483-2a, count the new valve as leaking when calculating the percentage of valves leaking as described in 60.483-2a(b)(5). If less than 2.0 percent of the valves are leaking for that process unit, the valve must be monitored for the first time during the next scheduled monitoring event for existing valves in the process unit or within 90 days, whichever comes first.
  - (ii) If an instrument reading of 500 ppm or greater is measured, a leak is detected and the valve shall be monitored monthly until a leak is not detected for two successive months.
  - (iii) Any valve for which a leak is not detected for 2 successive months may be monitored the first month of every quarter, beginning with the next quarter, until a leak is detected.
    - (A) As an alternative to monitoring all of the valves in the first month of a quarter, an owner or operator may elect to subdivide the process unit into two or three subgroups of valves and monitor each subgroup in a different month during the quarter, provided each subgroup is monitored every 3 months. The owner or operator must keep records of the valves assigned to each subgroup.
  - (iv) When a leak is detected, it shall be repaired as soon as practicable, but not later than 15 calendar days after detection, except as provided in Condition 44.2.h44.3.h.

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- (v) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected and include the following best practices where practicable:
  - (A) Tightening of bonnet bolts;
  - (B) Replacement of bonnet bolts;
  - (C) Tightening of packing gland nuts;
  - (D) Injection of lubricant into lubricated packing.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-7a(a)–(e), Subpart VVa]

- g. Pumps, valves, and connectors in heavy liquid service and pressure relief devices in light or heavy liquid service.
  - (i) If evidence of a potential leak is found by visual, audible, olfactory, or any other detection method at pumps, valves, and connectors in heavy liquid service and pressure relief devices in light liquid or heavy liquid service, the owner or operator shall follow either one of the following procedures:
    - (A) The owner or operator shall monitor the equipment within 5 days by the method specified in 40 C.F.R 60.485a(b) and shall comply with the requirements of Condition 44.2.g(ii)44.3.g(ii).
    - (B) The owner or operator shall eliminate the visual, audible, olfactory, or other indication of a potential leak within 5 calendar days of detection.
  - (ii) If an instrument reading of 10,000 ppm or greater is measured, a leak is detected. Leaks shall be repaired as soon as practicable, but not later than 15 calendar days after detection, except as provided in Condition 44.2.h44.3.h.
    - (A) The first attempt at repair shall be made no later than 5 calendar days after each leak is detected and includes the best practices described in Conditions 44.2.b(iv)(A)44.3.b(iv)(A) and 44.2.f(v)44.3.f(v).

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-8a(a)–(d), Subpart VVa]

- h. Delay of repair. Delay of repair of equipment for which leaks have been detected will be allowed if repair within 15 days is technically infeasible without a process unit shutdown. Repair of this equipment shall occur before the end of the next process unit shutdown. Monitoring to verify repair must occur within 15 days after startup of the process unit.
  - (i) Delay of repair of equipment will be allowed for equipment which is isolated from the process and which does not remain in VOC service.
  - (ii) Delay of repair for valves and connectors will be allowed if:

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- (A) The owner or operator demonstrates that emissions of purged material resulting from immediate repair are greater than the fugitive emissions likely to result from delay of repair, and
- (B) When repair procedures are effected, the purged material is collected and destroyed or recovered in a control device complying with 40 C.F.R 60.482-10a.
- (iii) Delay of repair for pumps will be allowed if:
  - (A) Repair requires the use of a dual mechanical seal system that includes a barrier fluid system, and
  - (B) Repair is completed as soon as practicable, but not later than 6 months after the leak was detected.
- (iv) Delay of repair beyond a process unit shutdown will be allowed for a valve, if valve assembly replacement is necessary during the process unit shutdown, valve assembly supplies have been depleted, and valve assembly supplies had been sufficiently stocked before the supplies were depleted. Delay of repair beyond the next process unit shutdown will not be allowed unless the next process unit shutdown occurs sooner than 6 months after the first process unit shutdown.
- (v) When delay of repair is allowed for a leaking pump, valve, or connector that remains in service, the pump, valve, or connector may be considered to be repaired and no longer subject to delay of repair requirements if two consecutive monthly monitoring instrument readings are below the leak definition.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-9a(a)–(f), Subpart VVa]

 Closed vent systems and control devices. Owners or operators of closed vent systems and control devices shall comply with the provisions of 40 C.F.R 60.482-10a.

> [40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-10a, Subpart VVa]

j. Connectors in gas/vapor service and in light liquid service. The owner or operator shall initially monitor all connectors in the process unit for leaks by the later of either 12 months after the compliance date or 12 months after initial startup. If all connectors in the process unit have been monitored for leaks prior to the compliance date, no initial monitoring is required provided either no process changes have been made since the monitoring or the owner or operator can determine that the results of the monitoring, with or without adjustments, reliably demonstrate compliance despite process changes. If required to monitor because of a process change, the owner or operator is required to monitor only those connectors involved in the process change.

[40 C.F.R 60.5400a(a), Subpart OOOOa]

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[40 C.F.R 60.482-11a(a), Subpart VVa]

- k. Except as allowed in 40 C.F.R 60.482-1a(c), Condition 44.2.h, or as specified in Condition 44.2.k(vi) 44.3.k(vi), the owner or operator shall monitor all connectors in gas and vapor and light liquid service as specified in Conditions 44.2.j44.3.i and 44.2.k(iii)44.3.k(iii).
  - (i) The connectors shall be monitored to detect leaks by the method specified in 40 C.F.R 60.485a(b) and, as applicable, 60.485a(c).
  - (ii) If an instrument reading greater than or equal to 500 ppm is measured, a leak is detected.
  - (iii) The owner or operator shall perform monitoring, subsequent to the initial monitoring required in Condition 44.2.j44.3.j, as specified in Conditions 44.2.k(iii)(A)44.3.k(iii)(A) through 44.2.k(iii)(C)44.3.k(iii)(C), and shall comply with the requirements of Conditions 44.2.k(iii)(D)44.3.k(iii)(D) and 44.2.k(iii)(E)44.3.k(iii)(E). The required period in which monitoring must be conducted shall be determined from Conditions 44.2.k(iii)(A)44.3.k(iii)(A) through 44.2.k(iii)(C)44.3.k(iii)(C) using the monitoring results from the preceding monitoring period. The percent leaking connectors shall be calculated as specified in Condition 44.2.k(iv)44.3.k(iv).
    - (A) If the percent leaking connectors in the process unit was greater than or equal to 0.5 percent, then monitor within 12 months (1 year).
    - (B) If the percent leaking connectors in the process unit was greater than or equal to 0.25 percent but less than 0.5 percent, then monitor within 4 years. An owner or operator may comply with the requirements of this condition by monitoring at least 40 percent of the connectors within 2 years of the start of the monitoring period, provided all connectors have been monitored by the end of the 4year monitoring period.
    - (C) If the percent leaking connectors in the process unit was less than 0.25 percent, then monitor as provided in Condition 44.2.k(iii)(C)(1)44.3.k(iii)(C)(1) and either Condition 44.2.k(iii)(C)(2)44.3.k(iii)(C)(2) or 44.2.k(iii)(C)(3)44.3.k(iii)(C)(3), as appropriate.
      - (1)An owner or operator shall monitor at least 50 percent of the connectors within 4 years of the start of the monitoring period.

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- (2)If the percent of leaking connectors calculated from the monitoring results in Condition 44.2.k(iii)(C)(1)44.3.k(iii)(C)(1) is greater than or equal to 0.35 percent of the monitored connectors, the owner or operator shall monitor as soon as practical, but within the next 6 months, all connectors that have not yet been monitored during the monitoring period. At the conclusion of monitoring, a new monitoring period shall be started pursuant to Condition 44.2.k(iii)44.3.k(iii), based on the percent of leaking connectors within the total monitored connectors.
- (3)If the percent of leaking connectors calculated from the monitoring results in Condition 44.2.k(iii)(C)(1)44.3.k(iii)(C)(1) is less than 0.35 percent of the monitored connectors, the owner or operator shall monitor all connectors that have not yet been monitored within 8 years of the start of the monitoring period.
- (D) If, during the monitoring conducted pursuant to Conditions 44.2.k(iii)(A)44.3.k(iii)(A) through 44.2.k(iii)(C)44.3.k(iii)(C), a connector is found to be leaking, it shall be re-monitored once within 90 days after repair to confirm that it is not leaking.
- (E) The owner or operator shall keep a record of the start date and end date of each monitoring period under this section for each process unit.
- (iv) For use in determining the monitoring frequency, as specified in Conditions 44.2.j44.3.j and 44.2.k(iii)44.3.k(iii), the percent leaking connectors shall be calculated using the following equation:

$$\%C_L = C_L/C_t \times 100$$

Where:

- $%C_L$  = Percent of leaking connectors as determined through periodic monitoring.
  - $C_L$  = Number of connectors measured at 500ppm or greater by the method specified in 40 C.F.R 60.485a(b).
- $C_t$  = Total number of monitored connectors in the process unit or affected facility.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-11a(b)–(c), Subpart VVa]

(v) When a leak is detected, pursuant to Conditions 44.2.j44.3.j and 44.2.k44.3.k, it shall be repaired as soon as practicable, but not later than 15 calendar days after detection, except as provided in Condition 44.2.h44.3.h. A first attempt at repair shall be made no later than 5 calendar days after the leak is detected.

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- (vi) Any connector that is designated, as described in Condition 44.2.k(vii)44.3.k(vii), as an unsafe-to-monitor connector is exempt from the requirements of Conditions 44.2.j44.3.j and 44.2.k44.3.k if:
  - (A) The owner or operator of the connector demonstrates that the connector is unsafe-to-monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with Conditions 44.2.j44.3.j and 44.2.k44.3.k; and
  - (B) The owner or operator of the connector has a written plan that requires monitoring of the connector as frequently as practicable during safe-to-monitor times but not more frequently than the periodic monitoring schedule otherwise applicable, and repair of the equipment according to the procedures in Condition 44.2.k(v)44.3.k(v) if a leak is detected.
- (vii) Inaccessible, ceramic, or ceramic-lined connectors. Any connector that is inaccessible or that is ceramic or ceramic-lined (e.g., porcelain, glass, or glass-lined), is exempt from the monitoring requirements of Conditions 44.2.j44.3.j and 44.2.k44.3.k, from the leak repair requirements of Condition 44.2.k(v)44.3.k(v), and from the recordkeeping and reporting requirements of 40 C.F.R 63.1038 and 63.1039. An inaccessible connector is one that meets any of the provisions specified in paragraphs 40 C.F.R 60.482-11a(f)(1)(i) through (vi), as applicable.
  - (A) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the visual, audible, olfactory, or other indications of a leak to the atmosphere shall be eliminated as soon as practical.
- (viii) Except for instrumentation systems and inaccessible, ceramic, or ceramic-lined connectors meeting the provisions of Condition 44.2.k(vii)44.3.k(vii), identify the connectors subject to the requirements of NSPS Subpart VVa (as indicated in NSPS Subpart OOOOa). Connectors need not be individually identified if all connectors in a designated area or length of are identified as a group, and the number of connectors subject is indicated.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.482-11a(d)–(g), Subpart VVa]

1. Comply with the provisions of 40 C.F.R 60.485a, except as provided below:

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(i) You must use the following provision instead of 40 C.F.R 60.485a(d)(1): Each piece of equipment is presumed to be in VOC service or in wet gas service unless an owner or operator demonstrates that the piece of equipment is not in VOC service or in wet gas service. For a piece of equipment to be considered not in VOC service, it must be determined that the VOC content can be reasonably expected never to exceed 10.0 percent by weight. For a piece of equipment to be considered in wet gas service, it must be determined that it contains or contacts the field gas before the extraction step in the process. For purposes of determining the percent VOC content of the process fluid that is contained in or contacts a piece of equipment, procedures that conform to the methods described in ASTM E169-93, E168-92, or E260-96 (incorporated by reference as specified in 40 C.F.R 60.17) must be used.

[40 C.F.R 60.5400a(d) & (f), Subpart OOOOa]

45. NSPS Subpart OOOOa Recordkeeping. The Permittee shall comply with the following:

[18 AAC 50.040(j)(4) & 50.326(j)]

[40 C.F.R 71.6(a)(3)]

[40 C.F.R 60.5420a(c), Subpart OOOOa]

- 45.1. Maintain the records specified in 40 C.F.R 60.7(f) and in Conditions 45.2 through 45.5 45.3, as applicable. All records required by NSPS Subpart OOOOa must be maintained onsite or at the nearest local field office for at least 5 years. Any records that are submitted electronically via the EPA's CDX may be maintained in electronic format.
- 45.2. Wells. For each well affected facility, maintain records as specified in Conditions 45.2.a through 45.2.e, as applicable. For each well affected facility for which you make a claim that the well is not subject to the requirements for well completions pursuant to Condition 44.1.e, you must maintain the record in Condition 45.2.e only.
  - a. For each well affected facility for which you make a claim that it meets the criteria of Condition 44.1.a(i)(A) you must maintain the records specified in 40 C.F.R 60.5420a(c)(1)(iii)(C).

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o. For each well affected facility required to comply with Conditions 44.1.a, as an alternative to retaining the records required in Conditions 45.2.a, you must retain records of one or more digital photographs with the date the photograph was taken and the latitude and longitude of the well site imbedded within or stored with the digital file showing the equipment for storing or re injecting recovered liquid, equipment for routing recovered gas to the gas flow line and the completion combustion device (if applicable) connected to and operating at each well completion operation that occurred during the initial compliance period. As an alternative to imbedded latitude and longitude within the digital photograph, the digital photograph may consist of a photograph of the equipment connected and operating at each well completion operation with a photograph of a separately operating GPS device within the same digital picture, provided the latitude and longitude output of the GPS unit can be clearly read in the digital photograph.

- e. For each well affected facility for which you claim that the well is not subject to the well completion standards according to Condition 44.1.e you must maintain:
  - (i) A record of the analysis that was performed in order the make that claim, including but not limited to, gas/oil ratio values for established leases and data from wells in the same basin and field;
  - (ii) The location of the well; the United States Well Number;
  - (iii) A record of the claim signed by the certifying official. The claim must include a certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.
- d. For each low pressure well, as determined according to 40 C.F.R 60.5432a, you must also maintain a record of the low pressure determination and supporting inputs and calculations.

[40 C.F.R 60.5420a(c)(1), Subpart OOOOa]

- 45.3.45.2. **Fugitive Emissions Components at Well Sites.** For each collection of fugitive emissions components at a well site, maintain records as specified in Conditions 45.2.a45.3.a through 45.2.c45.3.e, as applicable.
  - a. Fugitive emissions monitoring plans must include the following elements specified in 40 C.F.R 60.5397a(c)(1) through (8), at a minimum:
    - (i) Frequency for conducting surveys.
    - (ii) Technique for determining fugitive emissions (i.e., Method 21 at 40 C.F.R part 60, appendix A 7, or optical gas imaging).
    - (iii) Manufacturer and model number of fugitive emissions detection equipment to be used.

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- (iv) Procedures and timeframes for identifying and repairing fugitive emissions components from which fugitive emissions are detected, including timeframes for fugitive emission components that are unsafe to repair. Your repair schedule must meet the requirements of Conditions 44.2.d through 44.2.f, at a minimum.
- (v) Procedures and timeframes for verifying fugitive emission component repairs.
- (vi) Records that will be kept and the length of time records will be kept.
- (vii) If you are using optical gas imaging,<sup>24</sup> your plan must also include the following:
  - (A) An initial verification, which may be performed by the facility, by the manufacturer, or by a third party, that your optical gas imaging equipment meets the following specifications:
    - (1)capable of imaging gases in the spectral range for the compound of highest concentration in the potential fugitive emissions.
    - (2)capable of imaging a gas that is half methane, half propane at a concentration of 10,000 ppm at a flow rate of ≤60g/hr from a quarter inch diameter orifice.
  - (B) Procedure for a daily verification check.
  - (C) Procedure for determining the operator's maximum viewing distance from the equipment and how the operator will ensure that this distance is maintained.
  - (D) Procedure for determining maximum wind speed during which monitoring can be performed and how the operator will ensure monitoring occurs only at wind speeds below this threshold.
  - (E) Procedures for conducting surveys, including the following:
    - (1) How the operator will ensure an adequate thermal background is present in order to view potential fugitive emissions.
    - (2)How the operator will deal with adverse monitoring conditions, such as wind.
    - (3)How the operator will deal with interferences (e.g., steam).
  - (F) Training and experience needed prior to performing surveys.

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<sup>&</sup>lt;sup>24</sup> For the purposes of complying with the fugitives emissions monitoring program with optical gas imaging, a fugitive emission is defined as any visible emissions observed using optical gas imaging.

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- (G) Procedures for calibration and maintenance. At a minimum, procedures must comply with those recommended by the manufacturer.
- (viii) If you are using Method 21<sup>25</sup> of appendix A-7 of this part, your plan must also include the following:
  - (A) Verification that your monitoring equipment meets the requirements specified in Section 6.0 of Method 21 at 40 C.F.R part 60, appendix A.7. For purposes of instrument capability, the fugitive emissions definition shall be 500 ppm or greater methane using a FID-based instrument. If you wish to use an analyzer other than a FID-based instrument, you must develop a site specific fugitive emission definition that would be equivalent to 500 ppm methane using a FID-based instrument (e.g., 10.6 eV PID with a specified isobutylene concentration as the fugitive emission definition would provide equivalent response to your compound of interest).
  - (B) Procedures for conducting surveys. At a minimum, the procedures shall ensure that the surveys comply with the relevant sections of Method 21 at 40 C.F.R part 60, appendix A-7, including Section 8.3.1.

[40 C.F.R 60.5397a(c), Subpart OOOOa]

- b. Each fugitive emissions monitoring plan must include the following elements specified in 40 C.F.R. 60.5397a(d)(1) through (3), at a minimum, as applicable:
  - (i) A sitemap.
  - (ii) A defined observation path that ensures that all fugitive emissions components are within sight of the path. The observation path must account for interferences.
  - (iii) If you are using Method 21, your plan must also include a list of fugitive emissions components to be monitored and method for determining location of fugitive emissions components to be monitored in the field (e.g. tagging, identification on a process and instrumentation diagram, etc.).
  - (iv) Your plan must also include the written plan developed for all of the fugitive emission components designated as difficult to monitor in accordance with 40 C.F.R 60.5397a(g)(3), and the written plan for fugitive emission components designated as unsafe to monitor in accordance with 40 C.F.R 60.5397a(g)(4).

[40 C.F.R 60.5397a(d), Subpart OOOOa]

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<sup>&</sup>lt;sup>25</sup> For the purposes of complying with the fugitive emissions monitoring program using Method 21, a fugitive emission is defined as an instrument reading of 500 ppm or greater.

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For each fugitive emissions monitoring survey, maintain the following records specified in 40 C.F.R 60.5420a(c)(15):

- (i) Date of the survey.
- (ii) Beginning and end time of the survey
- (iii) Name of operator(s) performing survey. You must note the training and experience of the operator.
- (iv) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
- (v) Monitoring instrument used.
- (vi) When optical gas imaging is used to perform the survey, one or more digital photographs or videos, captured from the optical gas imaging instrument used for conduct of monitoring, of each required monitoring survey being performed. The digital photograph must include the date the photograph was taken and the latitude and longitude of the collection of fugitive emissions components at a well site imbedded within or stored with the digital file. As an alternative to imbedded latitude and longitude within the digital file, the digital photograph or video may consist of an image of the monitoring survey being performed with a separately operating GPS device within the same digital picture or video, provided the latitude and longitude output of the GPS unit can be clearly read in the digital image.
- (vii) Fugitive emissions component identification when Method 21 is used to perform the monitoring survey.
- (viii) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
- (ix) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
- (x) Documentation of each fugitive emission, including the following:
  - (A) Location.
  - (B) Number and type of components for which fugitive emissions were detected.
  - (C) Number and type of difficult to monitor and unsafe to monitor fugitive emission components monitored.
  - (D) Instrument reading of each fugitive emissions component that requires repair when Method 21 is used for monitoring.
  - (E) Number and type of fugitive emissions components that were not repaired as required in Condition 44.2.d.

Permit No. AQ1385TVP02 Issued: June 7, 2023 Cosmopolitan Project Expires: June 7, 2028 Number and type of components that were tagged as a result of not being repaired during the monitoring survey when the fugitive emissions were initially found as required in Condition 44.2.f(ii). (G) If a fugitive emissions component is not tagged, a digital photograph or video of each fugitive emissions component that could not be repaired during the monitoring survey when the fugitive emissions were initially found as required in Condition 44.2.f(ii). The digital photograph or video must clearly identify the location of the component that must be repaired. Any digital photograph or video required under this condition can also be used to meet the requirements under Condition 45.3.c(vi), as long as the photograph or video is taken with the optical gas imaging instrument, includes the date and the latitude and longitude are either imbedded or visible in the picture. (H) Repair methods applied in each attempt to repair the fugitive emissions components. (I) Number and type of fugitive emissions components placed on delay of repair and explanation for each delay of repair. The date of successful repair of the fugitive emissions component. Instrumentation used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding. [40 C.F.R 60.5420a(c)(15), Subpart OOOOa] 45.4. 45.3 Equipment Leaks at Onshore Natural Gas Processing Plants. The Formatted: Font: Not Bold Permittee shall comply with the provisions of 40 C.F.R 60.486a except as provided in 60.5401a, and 60.5421a. An owner or operator of more than one affected facility may comply with the Formatted: TVCondL2 recordkeeping requirements in one recordkeeping system if the system identifies each record by each facility. The Permittee shall record the following information for each monitoring event required by Conditions 44.3.b, 44.3.f, 44.3.g, 44.3.j, and 44.3.k. Monitoring instrument identification. (ii) Operator identification. Equipment identification. (iv) Date of monitoring. Instrument reading. When each leak is detected, the following requirements apply:

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- (i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.
- (ii) The identification on a valve may be removed after it has been monitored for 2 successive months as specified in Condition 44.3.f(iii) and no leak has been detected during those 2 months.
- (iii) The identification on a connector may be removed after it has been monitored as specified in Condition 44.3.k(iii)(D) and no leak has been detected during that monitoring.
- (iv) The identification on equipment, except on a valve or connector, may be removed after it has been repaired.
- d. When each leak is detected, the following information shall be recorded in a log and shall be kept for 2 years in a readily accessible location:
- (i) The instrument and operator identification numbers and the equipment identification number, except when indications of liquids dripping from a pump are designated as a leak.
- (ii) The date the leak was detected and the dates of each attempt to repair the leak.
- (iii) Repair methods applied in each attempt to repair the leak.
- (iv) Maximum instrument reading measured by Method 21 of appendix A-7 of this part at the time the leak is successfully repaired or determined to be non-repairable, except when a pump is repaired by eliminating indications of liquids dripping.
- (v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.
- (vi) The signature of the owner or operator (or designate) whose decision it was that repair could not be effected without a process shutdown.
- (vii) The expected date of successful repair of the leak if a leak is not repaired within 15 days.
- (viii) Dates of process unit shutdowns that occur while the equipment is unrepaired.
- (ix) The date of successful repair of the leak.
- e. Information identified in 40 C.F.R 60.486a(d), pertaining to the design requirements for closed vent systems and control devices described in Condition 44.3.i, shall be recorded and kept in a readily accessible location.
- f. Information identified in 40 C.F.R 60.486a(e), pertaining to all equipment subject to the requirements of Condition 44.3, shall be recorded in a log that is kept in a readily accessible location.

## Attachment A: NSPS Subpart OOOOa Conditions 43 through 46 Requested Edits

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- g. The following information pertaining to all valves subject to the requirements of 40 C.F.R 60.482-7a(g) and (h), all pumps subject to the requirements of 60.482-2a(g), and all connectors subject to the requirements of 60.482-11a(e) shall be recorded in a log that is kept in a readily accessible location:
- (i) A list of identification numbers for valves, pumps, and connectors that are designated as unsafe to monitor, an explanation for each valve, pump, or connector stating why the valve, pump, or connector is unsafe to monitor, and the plan for monitoring each valve, pump, or connector.
- (ii) A list of identification numbers for valves that are designated as difficult tomonitor, an explanation for each valve stating why the valve is difficult to-monitor, and the schedule for monitoring each valve.

[40 C.F.R 60.5400a(e), 60.5421a(a), Subpart OOOOa]

[40 C.F.R 60.486a(a)-(f)]

45.5. For pressure relief devices subject to VOC requirements for onshore natural gas processing plants you must comply with the additional recordkeeping requirements of 40 C.F.R 60.5421a and additional reporting requirements of 40 C.F.R 60.5422a.

[40 C.F.R 60.5421a, & 60.5422a, Subpart OOOOa]

46. NSPS Subpart OOOOa Reporting. The Permittee shall comply with the following:

[18 AAC 50.040(j)(4) & 50.326(j)] [40 C.F.R 71.6(a)(3)] [40 C.F.R 60.5420a(b), 60.5397a, Subpart OOOOa]

46.1. Submit an initial annual report no later than 90 days after the end of the initial compliance period. The initial compliance period begins on August 2, 2016, or upon initial startup, whichever is later, and ends no later than 1 year after the initial startup date for your affected facility or no later than 1 year after August 2, 2016. The initial compliance period may be less than one full year. Subsequent annual reports are due no later than the same date each year as the initial annual report. If you own more than one affected facility, you may submit one report for multiple affected facilities provided the report contains all of the required information. Annual reports may coincide with Title V reports as long as all the required elements of the annual report are included.

[40 C.F.R 60.5420a(b), Subpart OOOOa]

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46.2. Submit reports to the EPA via the Compliance and Enforcement Data Reporting Interface (CEDRI), except as outlined in 40 C.F.R 60.5420a(11). You must use the appropriate electronic report in CEDRI for NSPS Subpart OOOOa or an alternative electronic file format consistent with the extensible markup language (XML) schema listed on the CEDRI web site (https://www.epa.gov/electronic-reporting-air-emissions/cedri/). If the reporting form specific to NSPS Subpart OOOOa is not available in CEDRI at the time that the report is due, you must submit the report to the Administrator at the appropriate address listed in 40 C.F.R 60.4. Once the form has been available in CEDRI for at least 90 calendar days, you must begin submitting all subsequent reports via CEDRI. Reports shall contain the information specified in Conditions 46.2.a through 46.2.c46.2.dc, as applicable.

[40 C.F.R 60.5420a(b)(11), Subpart OOOOa]

- a. The following general information specified in 40 C.F.R 60.5420a(b)(1)(i) through (iv) is required for all reports. ÷
  - (i) The company name, facility site name associated with the affected facility, US Well ID or US Well ID associated with the affected facility, if applicable, and address of the affected facility. If an address is not available for the site, include a description of the site location and provide the latitude and longitude coordinates of the site in decimal degrees to an accuracy and precision of five (5) decimals of a degree using the North American Datum of 1983.
  - (ii) An identification of each affected facility being included in the annual report.
  - (iii) Beginning and ending dates of the reporting period.
  - (iv) A certification by a certifying official of truth, accuracy, and completeness. This certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

[40 C.F.R 60.5420a(b)(1), Subpart OOOOa]

### b. For each well affected facility, include:

- (i) Records of each well completion operation conducted during the reporting period, as specified in Conditions 45.2.a through 45.2.c, if applicable. In lieu of submitting the records specified in Conditions 45.2.a through 45.2.c, the owner or operator may submit a list of the well completions with hydraulic fracturing completed during the reporting period and the records required by Condition 45.2.b for each well completion.
- (ii) Records specified in Condition 45.2.d, if applicable, that support a determination under 40 C.F.R 60.5432a that the well affected facility is a low pressure well as defined in 40 C.F.R 60.5430a

[40 C.F.R 60.5420a(b)(2), Subpart OOOOa]

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- e-b. For the collection of fugitive emissions components at each well site within the company defined area, report the information specified in 40 C.F.R 60.5420a(b)(7)(i) and (ii), as applicable. the records of each monitoring survey including the following:
  - (i) Date of the survey.
  - (ii) Beginning and end time of the survey
  - (iii) Name of operator(s) performing survey. If the survey is performed by optical gas imaging, you must note the training and experience of the operator.
  - (iv) Ambient temperature, sky conditions, and maximum wind speed at the time of the survey.
  - (v) Monitoring instrument used.
  - (vi) Any deviations from the monitoring plan or a statement that there were no deviations from the monitoring plan.
  - (vii) Number and type of components for which fugitive emissions were detected.
  - (viii) Number and type of fugitive emissions components that were not repaired as required in Condition 44.2.d.
  - (ix) Number and type of difficult to monitor and unsafe to monitor fugitive emission components monitored.
  - (x) The date of successful repair of the fugitive emissions component.
  - (xi) Number and type of fugitive emissions components placed on delay of repair and explanation for each delay of repair.
  - (xii) Type of instrument used to resurvey a repaired fugitive emissions component that could not be repaired during the initial fugitive emissions finding.

[40 C.F.R 60.5420a(b)(7), Subpart OOOOa]

- d.c. For equipment leaks at onshore natural gas processing plants, the Permittee shall submit semiannual reports to the Administrator beginning 6 months after the initial startup date.
  - (i) The initial semiannual report shall include the following information in 40 C.F.R 60.487(b):
    - (A) Process unit identification.
    - (B) Number of valves subject to the requirements of Condition 44.3.f, excluding those valves designated for no detectable emissions under the provisions of 40 C.F.R 60.482-7a(f).

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of Condition 44.3.b,

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- (C) Number of pumps subject to the requirements of Condition 44.3.b, excluding those pumps designated for no detectable emissions under the provisions of 40 C.F.R 60.482-2a(e) and those pumps complying with 40 C.F.R 60.482-2a(f).
- (D) Number of connectors subject to the requirements of Conditions 44.3.j, and 44.3.k.
- (ii) All semiannual reports shall include the following information summarized from the information in in 40 C.F.R 60.487(c):Condition
- (A) Process unit identification.
- (B) For each month during the semiannual reporting period,
- (1) Number of valves for which leaks were detected as described in Condition 44.3.f(ii) or 40 C.F.R 60.483-2a,
- (2) Number of valves for which leaks were not repaired as required in Condition 44.3.f(iv),
- (3) Number of pumps for which leaks were detected as described in Condition 44.3.b(ii), 40 C.F.R 60.482 2a(d)(4)(ii)(A) or (B), or 60.482 2a(d)(5)(iii),
- (4) Number of pumps for which leaks were not repaired as required in Condition 44.3.b(iv) and 40 C.F.R 60.482-2a (d)(6),
- (5) Number of connectors for which leaks were detected as described in Condition 44.3.k.
- (6) Number of connectors for which leaks were not repaired as required in Condition 44.3.k(v), and
- (7) The facts that explain each delay of repair and, where appropriate, why a process unit shutdown was technically infeasible.
- (C) Dates of process unit shutdowns which occurred within the semiannual reporting period.
- (D)(ii) Revisions to items reported according to Condition 46.2.d(i) if changes have occurred since the initial report or subsequent revisions to the initial report.
- (iii) An owner or operator electing to comply with the provisions of 40 C.F.R 60.483-1a or 60.483-2a shall notify the Administrator of the alternative standard selected 90 days before implementing either of the provisions.

[40 C.F.R 60.5400a(a), Subpart OOOOa] [40 C.F.R 60.487a(a)–(d), Subpart VVa] Formatted: TVCondL4

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e. The collection of fugitive emissions components at a well site are not subject to the requirements of 40 C.F.R 60.5420a(b)(1) from June 2, 2017, until August 31, 2017.

[40 C.F.R 60.5420a(b)(13), Subpart OOOOa]

- 46.3. Submit performance test results within 60 days after the date of completing each test, except testing conducted by the manufacturer as specified in 40 C.F.R 60.5413a(d), you must submit the results of the performance test following the procedure specified in either 40 C.F.R 60.5420a(b)(9)(i) or (ii).
- 46.4. For combustion control devices tested by the manufacturer, an electronic copy of the performance test results required by 40 C.F.R 60.5413a(d) shall be submitted via email to *Oil\_and\_Gas\_PT@EPA.GOV* unless the test results for that model of combustion control device are posted at the following Web site: <a href="https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry">https://www.epa.gov/controlling-air-pollution-oil-and-natural-gas-industry</a>.

[40 C.F.R 60.5420a(b)(9), & (10), Subpart OOOOa]

## 40 C.F.R. Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP) NESHAP Subpart A – General Provisions

- **47. NESHAP Subpart A Applicability.** The Permittee shall comply with the applicable requirements of 40 C.F.R. 63 Subpart A in accordance with the provisions for applicability of Subpart A in:
  - 47.1. Table 2 of Subpart HH for EU IDs 12 and 12a, listed in Table A, and
  - 47.2. Table 8 of NESHAP Subpart ZZZZ for EU IDs 1a 1c, 2, 2a 2c, 3, and 10a listed in Table A.

### Subpart HH – Glycol Dehydration Units

- **48. NESHAP Subpart HH Applicability.** For each TEG dehydration unit, EU IDs 12 and 12a, the Permittee shall comply with the applicable requirements for triethylene glycol (TEG) dehydration units located at an area source of hazardous air pollutant (HAP) emissions.
  - 48.1. The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in 40 C.F.R 63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with Conditions 48 through 50 immediately upon initial startup.