TORABRIEF

EPA'S PROPOSED REVISIONS TO 40 CFR PART 60, SUBPART OOOOA.

19 SEPTEMBER 2018

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OVERVIEW

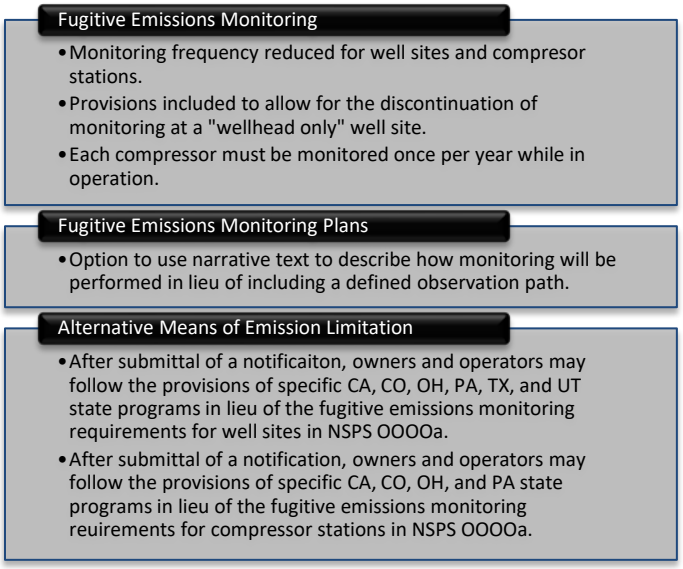
On 03 June 2016, the EPA published a final rule titled *Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources* (81 FR 35824). The rule, codified at 40 CFR Part 60, Subpart OOOOa (NSPS OOOOa), established emission standards for methane and volatile organic compounds (VOC) from the oil and natural gas sector. Based on petitions received after promulgation of the final rule, the EPA granted reconsideration on three specific issues: (1) fugitive emissions requirements; (2) well site pneumatic pump standards, and (3) the requirements for certification of closed vent systems by a professional engineer. On 11 September 2018, the Environmental Protection Agency (EPA) sent a proposed revision of NSPS OOOOa for publication in the Federal Register. The proposed rule addresses the issues for which the EPA granted reconsideration and proposes a few other key changes.

BRIEFING ON PROPOSED REVISIONS

In large part, the proposed revision to NSPS OOOOa is an information collection request under the guise of a proposed rule revision. Based on a limited amount of information received during the reconsideration process, the EPA now believes the analysis underpinning the current version of NSPS OOOOa may have been flawed. However, the information that they have received to date is not sufficient to determine the appropriate resolution to many of the issues. Thus, EPA is proposing select revisions to the rule while at the same time soliciting additional information that can be used to bolster their analyses and support other options under consideration.

Detailed summaries of the major aspects of the proposed rule as compared to the current version of NSPS OOOOa are provided in **Attachment A** for: (i) the collection of fugitive emission components at a well site, (ii) the collection of fugitive emission components at a compressor station; (iii) well affected facilities; and (iv) closed vent systems. A brief summary of key changes in the proposed rule is provided below.

Figure 1: Key Changes in Proposed Rule



ISSUES IDENTIFIED BY TORA

The following is a summary of the issues that we identified during our initial review of the proposed revision to NSPS OOOOa. Page number references are based on the pre-publication version of the proposed rule.

Modification of Compressor Stations

In the current version of NSPS OOOOa, at §60.5365a(j), the EPA states that a modification to the collection of fugitive emission components at a compressor station occurs when:

1) *An additional compressor is installed at a compressor station; or,*

2) *One or more compressors at a compressor station is replaced by one or more compressors of greater total horsepower than the compressor(s) being replaced. When one or more compressors is replaced by one or more compressors of an equal or smaller total horsepower than the compressors being replaced, installation of the replacement compressor(s) does not trigger a modification of the compressor station.*

On page 67 of the proposed rule, the EPA confuses the second paragraph of its modification definition as: *the replacement of one or more compressors at an existing compressor station that results in a net increase in the total horsepower to drive the compressor(s) that are*

replaced at the compressor station. They go on to state that they aren't proposing any changes to the definition at this time but are soliciting comment on whether the engine horsepower is the correct measure of increased emissions from the collection of fugitive emission components.

"MODIFICATION" IS, AND SHOULD CONTINUE TO BE, BASED ON THE COMPRESSOR HORSEPOWER, NOT THE HORSEPOWER OF THE EQUIPMENT USED TO DRIVE THE COMPRESSOR (ENGINE OR TURBINE).

The issue here is that the horsepower of the driver (engine or turbine) isn't mentioned at all in the current rule. Determining whether a modification has occurred is focused solely on the horsepower of the replacement compressor(s), as it should be. After all, it may be possible to increase the horsepower of the driver without increasing the horsepower of the compressor.

Monitoring Frequency for Compressor Stations

Starting on Page 49 of the proposal, the EPA enters into an extended narrative regarding the required monitoring frequency for the collection of fugitive emission components at compressor stations. EPA cites several sources of information provided during the reconsideration process that suggest less frequent monitoring is appropriate. However, in all cases, EPA states that the information provided is insufficient to determine the appropriate monitoring frequency. On the presumption that they may have overestimated the emissions reduction associated with quarterly monitoring using optical gas imaging, EPA is "co-proposing" both annual and semi-annual monitoring for compressor stations. However, the EPA only includes semi-annual monitoring requirements in the proposed rule text (except for compressor stations located on the Alaskan North Slope).

The EPA claims that information provided during the reconsideration process suggests that the operating mode of the compressor(s) is a critical factor in whether or not leaks would be found during a monitoring event. In the existing rule, there is no specific requirement for a facility to be operating or have pressurized equipment during a monitoring survey. It looks like this oversight is being addressed via the proposed revision, as one should assume that the presence or absence of gas within a piece of equipment or piping will have an influence on the effectiveness of a fugitive emissions monitoring event.

The EPA is proposing to address this issue by requiring that each compressor be surveyed while in operational mode at least once per year. In the preamble, the EPA suggests that they will require a record of the operating mode of each compressor during monitoring events; however, such recordkeeping requirement is not included in the proposed rule text. Theoretically, the proposed language would still allow for one monitoring event per year under depressurized conditions, which would be a fruitless endeavor. A better solution may be to require a single monitoring event per year while the entire station is operating at "capacity" (all compressors operational and components pressurized).

THEORETICALLY, THE PROPOSED LANGUAGE WOULD STILL ALLOW FOR ONE MONITORING EVENT PER YEAR UNDER DEPRESSURIZED CONDITIONS, WHICH WOULD BE A FRUITLESS ENDEAVOR.

Another, albeit less blatant, issue with the proposal is the focus on individual compressor operation. The probability of detecting a leak on a compressor skid increases significantly if the monitoring event is performed while the unit is operational. However, the designated affected facility is the *collection of fugitive emission components at a compressor station*, not the collection of fugitive emission components associated with a compressor. As such, monitoring surveys should be focused on identification of leaks across the entire station, not those emitted from a specific compressor.

OPERATIONAL REQUIREMENTS DURING A MONITORING EVENT SHOULD BE FOCUSED ON THE OPERATIONAL STATUS OF THE STATION AS A WHOLE, NOT AN INDIVIDUAL COMPRESSOR.

If the EPA is going to try to capture all potential leak sources within one or two monitoring events per year, it may be better to specify that the monitoring events be performed while the station's fugitive emission components are operating at a normal, pressurized, state. There could be an exception for piping and equipment that are isolated and depressurized as a part of normal operation (e.g., downstream of blowdown valve) or for routine maintenance.

INFORMATION COLLECTION REQUEST

The preamble of the proposed rule contains a significant number of "solicitations" for additional information. Such requests are to be expected during the initial proposal stage for a new rule. But, for a rule that has been final for over two years, the EPA's apparent lack of information at this late stage is concerning. For those that would like to help inform this rule making process, Tora has compiled a list of over 70 instances from the proposed rule where EPA is requesting comments or additional information. The list is included with this ToraBrief as **Attachment B**.

FOR A RULE THAT HAS BEEN FINAL FOR OVER TWO YEARS, THE EPA'S APPARENT LACK OF INFORMATION AT THIS STAGE IS CONCERNING.

CONCLUSION

Tora Consulting, LLC (Tora) is an environmental consulting firm that specializes in air quality issues impacting the oil and gas industry. Through our industry-leading expertise, we provide our clients with strategic environmental and engineering advisory services that add value to all aspects of their business. Tora professionals closely follow regulatory activity at the state and federal levels so that we can advise our clients on key issues that may impact their operations. This ToraBrief contains notes from our ongoing analysis of EPA's proposed revision to NSPS OOOOa. We encourage readers of this document to closely review the proposed rule to determine how it may impact their operations.

If you have any questions regarding the proposed rule, would like assistance evaluating potential impacts to your business, would like assistance submitting comments on the proposal or would simply like to receive future ToraBriefs, we would love to hear from you. Contact Brandon Mogan at Bmogan@toraconsulting or by phone at (803) 422-5251. You can visit our website at www.toraconsulting.com.

ATTACHMENT A

COMPARISION OF CURRENT RULE TO PROPOSED CHANGES

Collection of Fugitive Emission Components at a Well Site

Requirement Category	Current Rule Requirement	Proposed Changes
Modification Definition	A modification to a well site occurs when a new well is drilled at an existing well site, a well at an existing well site is hydraulically fractured, or a well at an existing well site is hydraulically refractured.	The EPA is proposing to add a definition of "modification" for separate tank batteries. A modification would occur at an existing separate tank battery when a well sending production to an existing separate tank battery is modified (as currently defined) or an existing well site subject to monitoring requirements becomes a wellhead only site and sends production to an existing separate tank battery.
Monitoring Frequency	• Semi-annual monitoring for the collection of fugitive emission components at a well site not located on the Alaskan North Slope. • Annual monitoring for the collection of fugitive emission components at a well site located on the Alaskan North Slope.	• Annual monitoring for non-low production well sites (≥ 15 barrels of oil equivalent (boe) per day averaged over the first 30 days of production). • Biennial (once every two years) monitoring for low-production well sites (< 15 boe per day averaged over the first 30 days of production).
Initial Monitoring Deadline	The initial monitoring survey must be performed within 60 days of the first day of production, except for wells located on the Alaskan North Slope.	No changes are proposed at this time, but the EPA is soliciting information to support an alternative deadline of 90 or 180 days.
Repair Deadline	Leaking components must be repaired within 30 days of leak identification and resurveyed within 30 days after being repaired to ensure there are no fugitive emissions.	• First repair attempt within 30 days of leak identification, final repair within 60 days of leak identification. • Definition of "first attempt at repair" added. • Definition of "repaired" updated to state that a component is not considered repaired until it has been resurveyed to verify there are no fugitive emissions.
Discontinuation of Requirements	NA – The current version of the rule does not include provisions for the discontinuation of requirements.	The EPA is proposing discontinuation of leak detection requirements after removal of all major production and processing equipment such that the well becomes a "wellhead only" site.
Definition of "Well Site"	The custody meter is currently considered part of the well site, which has caused confusion over who is responsible for compliance.	The EPA is proposing to exclude from the definition of a "well site" the flange that is upstream from the custody meter and all fugitive emission components downstream of this flange.
Monitoring Plan	The monitoring plan must include a site plan and a defined observation path.	If using optical gas imaging technology, include a sitemap or plot plan with a defined observation path OR a narrative description of how fugitive emission components will be monitored. Alternatively, you may include a list of fugitive emission components in the plan and a method for determining the location of fugitive emission components to be monitored in the field (e.g., tagging).
Alternative Means of Emission Limit	The current rule contains provisions for requesting an alternative means of emission limit, but none are specified in the rule.	The proposed rule includes provisions to allow for compliance with specific state fugitive emission monitoring, repair and recordkeeping regulations in lieu of complying with NSPS OOOOa requirements. A notification is required before implementing these alternatives. Specific state programs covered in the proposed revision include: CA, CO, OH, PA, TX, and UT.

Collection of Fugitive Emission Components at a Compressor Station

Requirement Category	Current Rule Requirement	Proposed Changes
Monitoring Frequency	Monitoring must be performed on a quarterly basis.	• Semi-Annual monitoring for compressor stations not located in the Alaskan North Slope. • Annual monitoring for compressor stations located in the Alaskan North Slope. • The EPA states that they are "co-proposing" semi-annual and annual monitoring, but the proposed rule language only describes semi-annual monitoring for compressor stations not located in the Alaskan North Slope. • Compressors must be monitored at least once per year while operational. The preamble of the proposed rule states that EPA will require records of compressor operational status during each monitoring event, but such recordkeeping requirement isn't clear in the rule text. • Despite the proposed change to semi-annual monitoring, the EPA is still requesting data to determine which monitoring frequency (quarterly, semi-annually, or annually) is most appropriate. • The EPA is proposing to remove the low temperature waiver.
Initial Monitoring Deadline	The initial monitoring survey must be performed within 60 days of startup/modification.	The EPA is proposing to give compressor stations on the Alaskan North Slope six (6) months to complete the initial survey if startup/modification occurs between September and March. No changes are proposed for other compressor stations at this time, but the EPA is soliciting information to support an alternative deadline of 90 or 180 days.
Repair Deadline	Leaking components must be repaired within 30 days of leak identification and resurveyed within 30 days after being repaired to ensure there are no fugitive emissions.	• First repair attempt within 30 days of leak identification, final repair within 60 days of leak identification. • Definition of "repaired" updated to state that a component is not considered repaired until it has been resurveyed to verify there are no fugitive emissions.
Monitoring Plan	The monitoring plan must include a site plan and a defined observation path.	If using optical gas imaging technology, include a sitemap or plot plan with a defined observation path OR a narrative description of how fugitive emission components will be monitored. Alternatively, you may include a list of fugitive emission components in the plan and a method for determining the location of fugitive emission components to be monitored in the field (e.g., tagging).
Alternative Means of Emission Limit	The current rule contains provisions for requesting an alternative means of emission limit, but none are specified.	The proposed rule includes provisions to allow for compliance with specific state fugitive emission monitoring, repair and recordkeeping regulations in lieu of complying with NSPS OOOOa requirements. A notification is required before implementing these alternatives. Specific state programs covered in the proposed revision include: CA, CO, OH, and PA.

Well Affected Facility

Requirement Category	Current Rule Requirement	Proposed Changes
Separator	With limited exceptions, a separator must be maintained onsite for the entirety of the separation flowback period.	The separator must be maintained onsite or otherwise available for use at a centralized facility or well pad that services the well.
Flowback Definition	The definition does not distinguish flowback from screenouts, coil tubing cleanouts, or plug drill-outs.	• The EPA has revised the definition of "flowback" to specifically exclude screenouts, coil tubing cleanouts, and plug drill-outs. • Proposed definition of "screenout" is *the first attempt to clear proppant from the wellbore through flowing the well to a fracture tank in order to achieve maximum velocity and carry the proppant out of the well.* • Proposed definition of "coil tubing cleanout" is *the process where an operator runs a string of coil tubing to the packed proppant within a well and jets the well to dislodge the proppant and provide sufficient lift energy to flow it to the surface*. • Proposed definition of "plug drill-out" is *the removal of a plug (or plugs) that was used to conduct hydraulic fracturing in different sections of the well*.

Closed Vent System

Requirement Category	Current Rule Requirement	Proposed Changes
Engineer Certification	The current rule requires that an assessment of the closed vent system design be performed and certified by a qualified professional engineer.	The EPA is proposing to allow the assessment to be performed and certified by an in-house engineer or a qualified professional engineer.

Pneumatic Pumps

Requirement Category	Current Rule Requirement	Proposed Changes
Exceptions to Emissions Reduction Requirement	The current version of the rule allows owners or operators of non-greenfield sites to perform an engineering assessment to demonstrate that achieving the required emissions reduction is technically infeasible.	The EPA is proposing to extend this exception to both greenfield and non-greenfield sites.

ATTACHMENT B

INFORMATION REQUESTED AS A PART OF PROPOSED REVISION TO NSPS OOOOA

The following is a concise list of information being requested by EPA with page number references based on the pre-publication version of the proposed rule. Refer to the referenced pages of the preamble for additional information.

The EPA is soliciting:

1. Comment on the scenarios described by petitioners under which control of emissions from pneumatic pumps at a greenfield site would be technically infeasible, as well as information on other site and control configurations that could present technical infeasibility scenarios for greenfield sites. (p. 22).

2. Information on the additional cost related to selecting a control that can accommodate pneumatic pump emissions in addition to the control's primary purposes at a greenfield site. (p. 22).

3. Comment on the "model plant" assumption of one controlled storage vessel per well site subject to fugitive emission requirements and data to further refine the model plant with regards to controlled storage vessel fugitive emissions. (p. 26).

4. Comment on the use of the average emission factors from EPA's 1995 *Protocol for Equipment Leak Emissions Estimates* and additional information or alternative methodologies that should be considered to refine EPA's fugitive emissions estimates. (pp. 28-29).

5. Comment and information that would support a revision of the evaluation of the Method 21 alternative, which was originally based on synthetic organic chemical manufacturing industry data, that is more representative of the oil and natural gas industry. (p. 30).

6. Information to evaluate how the percentage of fugitive emissions identified changes with monitoring frequency so that EPA can revise the model plant analysis for well sites. (p. 32).

7. Comment on the proposed annual monitoring for non-low production well sites and additional information to address uncertainties related to assumptions used in the analysis underpinning the current requirements for fugitive emissions components at a well site. Specific uncertainties include: the percent emissions reduction achieved by OGI, the occurrence rate of fugitive emissions at different monitoring frequencies, and the initial percentage of fugitive emission components identified with fugitive emissions. (p. 36).

8. Data regarding the percentage of fugitive emissions components identified with fugitive emissions at well sites for each survey performed so that EPA can understand how the percentage may change over time. The EPA is requesting information on when the well site began producing; the start of the fugitive program at the well site; the frequency of monitoring; an indication of the location of the well site; and, how the surveys are performed, including the monitoring instrument used and the regulatory program followed. (pp. 36-37).

9. Comment and supporting data on the stepped monitoring frequency for non-low production well sites, including information to determine the appropriate period for more frequency monitoring prior to stepping down to less frequent monitoring. The EPA is considering allowing a stepped monitoring frequency, or a reduction in the required monitoring frequency based on the number of components found leaking during previous surveys. (p. 37).

10. Comment whether the existing uncertainties and absences of information described in the preamble of the proposed rule support the monitoring frequencies being proposed for well sites or some other monitoring frequencies. (p. 37).

11. Information that can be used to evaluate if additional changes are necessary to the model well sites. Specifically, information from implementing fugitive emissions monitoring programs, including information on leak

concentrations where Method 21 has been used and the actual equipment counts or fugitive emissions component counts at a well site. (p. 37).

12. Comment on the proposed exemption from monitoring requirements where "major production and processing equipment" has been removed from a well site, comment on the definition of "major production and processing equipment", and comment on whether additional equipment should be included in the definition. (p. 38).

13. Comment on the proposed reporting requirements for sites that become wellhead-only sites and subsequent monitoring requirements should the wellhead only status of the well site change. (p. 39).

14. Information confirming or refuting the concern that some wells may be shut in as a result of the financial impact of having to perform fugitive emissions monitoring, including analyses of the number of wells that may be shut in and how these concerns may vary based on production level. (p. 42).

15. Comment on the proposed biennial monitoring requirement for low production well sites, data on the numbers of major production and processing equipment and fugitive emission components at these well sites, and data on the operating pressures of these well sites. (p. 48).

16. Comment on the proposed definition of a low production well site. (p. 48).

17. Comment on the proposed recordkeeping and reporting requirements for low production well sites, including alternative information that would provide the combined production of oil and natural gas for the well site. (p. 48).

18. Comment and support data on a potential exemption from fugitive emission requirements at low production well sites both with and without controlled storage vessels. (p. 48).

19. Comment on EPA's analysis of data submitted by GPA Midstream and additional data that will allow for further analyses of fugitive emissions monitoring at compressor stations, including whether or not changes are required to the model plants used in EPA's analyses. (p. 50).

20. Data on the actual equipment counts or fugitive emissions component counts at the compressor station in relation to the number of fugitive emissions identified during each monitoring survey. (p. 50).

21. Data on the costs associated with implementing fugitive emissions monitoring programs at compressor stations. (p. 50).

22. Comment related to the effect the compressor operating mode has on fugitive emissions and comment on a requirement to conduct monitoring only during times that are representative of operating conditions for the compressor station. (p. 52).

23. Comment and information regarding emissions reductions and the relationship to monitoring frequencies. (p. 54).

24. Comment on quarterly monitoring and EPA's analysis of factors that may contribute to increased fugitive emissions at compressor stations. (p. 54).

25. Data to understand how the percentage of identified fugitive emissions may change over time, including the date of construction of the compressor station; information on when the compressor station began its fugitive emissions program; the frequency of monitoring; an indication of the location of the compressor station; and how the surveys are performed, including the monitoring instrument used and the regulatory program followed. (p. 54).

26. Comment on the co-proposal of semiannual and annual monitoring at compressor stations and information related to EPA's analysis, including data that sheds further light on which monitoring frequency (annual, semiannual, or quarterly) is most appropriate. (p. 55).

27. Comment on extending the timeframe for initial monitoring of compressor stations and well sites located on the Alaskan North Slope. (p. 58).

28. Data to support an analysis of the cost-effectiveness of fugitive emissions monitoring programs for well sites and compressor stations located on the Alaskan North Slope, including the cost associated with performing annual fugitive emissions monitoring and repairs. (p. 60).

29. Comment on EPA's rationale that refracturing of an existing well will increase fugitive emissions. (p. 64).

30. Comment and data on whether emission from fugitive emissions components will increase following a refracture even if the equipment counts and operating pressures remain the same. (p. 64).

31. Comments and data about how changes in production may influence the operating pressures of the well site. (p. 64).

32. Comments and data on whether an increase in pressure alone (without additional equipment) would result in more fugitive emissions. (p. 64).

33. Comment and information on other factors, such as changes in the gas gathering system, that may influence the operating pressures of the well site. (p. 64).

34. Comment on the proposed amendments to the definition of modification for the collection of fugitive emissions components located at a well site, including the treatment of separate tank batteries as well sites for the purposes of fugitive emissions requirements. (p. 66).

35. Comment on other options for the definition of modification with respect to fugitive emissions monitoring of tank batteries. (p. 66).

36. Information related to the permitting of such separate tank batteries and information related to how states have regulated these sources when a well is not located at the site. (p. 66).

37. Comment on whether engine horsepower is the correct measure of increased emissions from the collection of fugitive emissions components at a compressor station. (p. 67).

38. Data that supports or refutes claims by petitioners that 180 days are necessary for proper installation of equipment before conducting initial monitoring. (p. 69).

39. Comment and data to support changing the initial monitoring deadline from 60 days to 90 days after startup of production for well sites and the startup or modification for compressor stations. (p. 70).

40. Comment on how cold weather may impact the ability to comply with the 60-day initial monitoring deadline for well sites and compressor stations. (p. 70).

41. Comment and supporting data that would indicate EPA needs to maintain the low temperature waiver (waiver from one quarterly monitoring event if the average temperature is below 0°F for two consecutive quarters). EPA is proposing to remove this waiver as a part of the rulemaking since monitoring is moving from quarterly to, at most, semiannually (p. 70).

42. Comment on the new definition of repair and first attempt at repair as well as the proposed repair requirements. (p. 72).

43. Comment on instances when equipment cannot be isolated during vent blowdowns, compressor station shutdowns, well shutdowns, and well shut-ins to allow for repair of components with fugitive emissions. (pp. 72-73).

44. Comment and supporting information on the instances where delayed repairs cannot be conducted during any of the events listed in the rule and under what event or time frame delayed repairs can be conducted for such instances. (p. 73).

45. Comment for any instance when delaying repair on a thief hatch may be necessary. (p. 73).

46. Comment on whether changes to the regulatory text are necessary to clarify that opening a thief hatch is not considered a vent blowdown in the context of repairing a component on delay of repair. (p. 73).

47. Comment on the 2-year deadline for completion of delayed repairs. (p. 73).

48. Comment on the proposed change to the definition of "well site", the proposed definition of "custody meter", the proposed definition of "custody meter assembly", and suggestions for other ways to provide a clear separation to distinguish third-party equipment at a well site for the purposes of fugitive emissions monitoring. (p. 76).

49. Comment on the proposed definition of "well site" related to the exemption for UIC Class II wastewater disposal wells and disposal facilities from fugitive emissions monitoring and repair requirements, as well as data to support or refute EPA's current understanding that these wells have limited fugitive emissions components. (p. 78).

50. Comment on the proposed amendment to the definition of "startup of production" as it relates to wells that are not hydraulically fractured. (p. 79).

51. Comment on the accuracy of EPA's assumption that preparation of site plans incorporated into fugitive emission monitoring plans would be a one-time effort. (p. 81).

52. Information on the cost to develop and revise a site plan, including the cost to document an observation path; the cost to revise the site plan an observation path; and the frequency with which the site plan and observation path need to be updated. (p. 81).

53. Comment on EPA's proposed alternatives to the observation path requirement (i.e., in lieu of include a site plan and observation path, EPA is proposing to allow narrative descriptions of how monitoring will be performed). (p. 82).

54. Comment on EPA's cost estimates related to PE certification of closed vent systems. (p. 84).

55. Comment on the use of engineers, other than in-house engineers or qualified professional engineers, to perform the closed vent assessments and certifications. (p. 85).

56. Comment on whether groups of sites within a specific area that are operated by the same operator could be grouped under a single alternative means of emissions limitation. (p. 87).

57. Comment on the proposed revisions to the applicable requirements for technology-based alternative means of emissions limits. (p. 87).

58. Comment on the requirements necessary to document that an owner or operator is following an alternative state, local, or tribal fugitive emissions monitoring program. (p. 91).

59. Comment on the appropriateness of the requirement to submit a notification 90 days prior to using an alternative fugitive emissions monitoring program (e.g., an approved state program). (p. 91).

60. Comment on the proposed requirements for application of additional existing state fugitive emissions standards (other than those listed in the proposed rule), the proposed alternative fugitive emission standards (including compliance monitoring), and information to support the inclusion of additional alternative fugitive emission standards. (pp. 91-92).

61. Comment on the proposed definitions for “screenouts” and “coil tubing cleanouts”. (p. 94).

62. Comments on the proposed revisions to recordkeeping requirements where flowback is routed to a permanent separator and additional ways to streamline reporting and recordkeeping. (p. 94).

63. Comment on EPA’s proposed amendment to the equation in the definition of “capital expenditure”. (p. 96).

64. Comment and information to help inform EPA whether the current capital expenditure definition should be revised based on a ratio of consumer price indices. (p. 96).

65. Comment on the proposed amendments for closed vent systems associated with pneumatic pumps and other methods that could be employed as an alternative to monthly audible, visual, and olfactory (AVO) monitoring to ensure the close vent systems operate with no detectable emissions. (p. 98).

66. Comment regarding the requirements for covers, thief hatches and other openings on storage vessel affected facilities, including whether covers and openings on the cover should be viewed as part of the closed vent system and thus subject to the no detectable emissions limit. (pp. 98-99).

67. Comment on whether a work practice standard would be more effective at assuring compliance than subjecting thief hatches to a no detectable emissions standard as determine through monthly AVO monitoring. (p. 99).

68. Comment and supporting data on capture systems which are at least equivalent to the current systems and could negate the necessity to capture emissions under negative pressure. (p. 100).

69. Comment on the proposed clarification that “maximum average daily throughput” refers to the maximum average daily throughput for an individual storage vessel over the days that production is routed to that storage vessel during the 30-day evaluation period. EPA is clarifying that they did not intend for averaging the throughput over the entire 30-day period, which would potentially include days that no production is routed to the vessel. Also, EPA is clarifying that they did not intend for production to be split evenly across multiple storage vessels in the evaluation where there is no legally or practically enforceable limit requiring operation in this manner. (p. 102).

70. Comment on whether a different term would better describe the maximum potential throughput through each individual storage vessel other than the currently-used term “maximum average daily throughput”. (p. 102).

71. Comment on the specific recordkeeping requirements to support the applicability determination for each individual storage vessel regardless of whether that storage vessel is determined to be an affected facility, including the type of records to be maintained; records to document the operational configuration of each tank battery; and records to document which storage vessel(s) production was routed to for each day in the 30-day evaluation period. (p. 106).

72. Comment on the recordkeeping burden associated with the requisite storage vessel emissions evaluation. (p. 106).

73. Comment on EPA’s proposed change to the definition of “certifying official”. (p. 107).

74. Comment on the proposed revisions related to streamlining of recordkeeping and reporting requirements, including the content, layout, and overall design of the reporting template and additional ways to streamline recordkeeping and reporting. (p. 108).