



THE FOLLOWING ARE INITIAL RESPONSES TO SOME OF THE QUESTIONS THAT THE AIR POLLUTION CONTROL DIVISION HAS RECEIVED REGARDING THE FEBRUARY 2014 REVISIONS TO REGULATIONS NOS. 3, 6, AND 7. THE DIVISION WILL CONTINUE TO WORK WITH STAKEHOLDERS ON RULE IMPLEMENTATION ISSUES AND THESE RESPONSES MAY BE REVISED OVER TIME. ADDITIONALLY, THESE RESPONSES ARE NOT LEGALLY BINDING INTERPRETATIONS OF THE ACTUAL REGULATORY PROVISIONS, BUT MERELY SERVE AS A CURRENT GUIDE TO ASSIST OWNERS, OPERATORS AND OTHER INTERESTED PARTIES.

IF YOU HAVE ADDITIONAL OR SPECIFIC QUESTIONS, PLEASE SEND AN EMAIL WITH YOUR QUESTION AND CONTACT INFORMATION TO CDPHE.COMMENTSAPCD@STATE.CO.US.

REGULATION NUMBER 3

APEN and Permitting Changes

1. Do operators now have to file APENs for methane and ethane?

No new APEN requirements have been established for reporting methane and/or ethane. APENs continue to be required for reporting criteria air pollutants and non-criteria reportable pollutants.

2. Non criteria reportable pollutants:
 - a. HAP reporting changes – when do these become effective?
 - b. What do operators do to estimate HAP emissions and what should operators do if they no longer need to report HAPs?

See PS Memo 14-01 – 2014 Regulation No. 3 Changes.

3. Crude oil storage tank reporting and permitting

For more information, see PS Memo 14-01 – 2014 Regulation No. 3 Changes.

- a. How is crude oil defined?

Condensate is defined as hydrocarbon liquids that remain liquid at standard conditions (68 degrees Fahrenheit and 29.92 inches Mercury) and are formed by condensation from, or produced with, natural gas, and which have an American Petroleum Institute gravity ("API gravity") of 40 degrees or greater. (See AQCC Common Provisions Regulation)

Crude oil is defined as a hydrocarbon liquid that has an American Petroleum Institute (API) gravity less than 40° API at 60° F, based on an annual average of all samples. The annual average is based on the most recent 12 contiguous months. If the site did not operate at all times during the most recent 12 months, samples from previous months shall be included in the average such that 12 complete months of data is included. If the site has been in operation for less than 12 months, all available samples shall be used; the annual average shall be determined upon reaching 12 months of operation.



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(See Permit Section Memo 05-01, Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance)

- b. If an operator now needs a permit for a crude oil tank, what should the operator do?

Operators have the option of submitting a traditional construction permit application or an application for coverage under the General Permit 08 (GP08) for storage vessels. Sources electing coverage under GP08 will immediately have the authority to construct new crude oil storage tanks and will immediately have legally and practically enforceable limits on controlled emissions for use in calculating the controlled potential to emit under NSPS OOOO. More information on GP08 can be found in the forthcoming PS Memo and GP08 permit document, expected in the near future.

Operators submitting a traditional construction permit application should include the APEN filing fee of \$152.90 with the permit application. Operators applying for coverage under GP08 should submit the permit fee with the permit application.

- c. How should operators calculate emissions for crude oil tanks?

Emission calculations for crude oil tanks can be completed in one of two ways. Effective April 14, 2014, sources can use the statewide default emission factors found in the table below.

Crude Oil Storage Tank State Emission Factors (lb/bbl)		
VOC	Benzene	n-Hexane
3.2	0.046	0.245

Sources may also develop site-specific emission factors. See PS Memo 05-01, Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance, for more information. Generally, default emission factors should not be retroactively applied. If currently using an emission factor authorized by the Division for compliance purposes (i.e. site specific or otherwise), the source should continue to do so.

- 4. What should an operator do if the operator has a permit only due to NSPS or MACT applicability (i.e. catchall provisions)?

Sources can elect to cancel their permit by submitting a cancellation form to the Division, which can be found on the Division's website. Sources may also elect to maintain their permit.

Sources that remain subject to the APEN reporting requirements of Regulation Number 3 should continue to update their APEN every five years and remain responsible for any annual emission fees.

For more information, see PS Memo 14-01 – 2014 Regulation No. 3 Changes.



REGULATION NUMBER 6

NSPS OOOO

5. What should operators do if their storage tanks are subject to both NSPS OOOO and Regulation Number 7, Sections XII and XVII?

Sources are required to comply with all applicable requirements. It is possible for storage tanks to be subject to both NSPS OOOO and Regulation Number 7. In these circumstances, both the federal and the state rules will apply to you. To the extent that there are conflicting requirements, please notify the Division at cdphe.commentsapcd@state.co.us so that we can work to address those situations.

You can limit applicability of NSPS OOOO by establishing enforceable emission limits below NSPS OOOO thresholds relying on compliance with Regulation Number 7, Sections XII and XVII. For more information on how the Division interprets “practically enforceable” limits for storage vessels, see the M. McMillan memo dated October 15, 2013 posted on the Division website under Hot Topics.

REGULATION NUMBER 7

Definitions – Section XVII.A.

6. How does the Division define the term “stationary source” in the definition of “well production facility”?

Please refer to the definition of stationary source in Regulation Number 3, Part A. If you are unsure for your specific situation, please contact the O&G permitting section at the Division.

7. How does “well production facility” differ from the previously defined “exploration and production facility”? Is this definition meant to be more specific or to encapsulate new types of facilities that aren’t covered under E&P?

The definition of well production facility is narrower in concept than the exploration and production (E&P) sector. A well production facility is a facility within the E&P sector.

8. What is a Division approved instrument monitoring method (AIMM)?

AIMM includes an infra-red camera or EPA Method 21.

- a. How should an operator request an alternative?

An operator can seek approval for another type of AIMM by submitting a request to the Division. Such a request should demonstrate that the requested device or method is capable of reliably detecting leaks from components.



General Provisions – Section XVII.B.

9. Air pollution control equipment
 - a. Alternative emissions control
 - i. If an operator would like to permit planned downtime of a primary control device (i.e. RTO), would the operator be allowed to route the emissions during the planned downtime to an emergency flare, which is not enclosed?
 - ii. What should an operator do if the operator needs to use an open flare for separator venting or other equipment?
 - iii. How will the Division handle alternative emission control where separator and/or tank emissions are routed to an onsite generator?

If there are circumstances where an operator would need to utilize alternative emissions control equipment, they must get approval from the Division. The Division has authority to approve alternative emissions control equipment, which may be used in lieu of or in combination with air pollution control equipment (Regulation Number 7, Section XVII.B.2.e.). For example, an alternative emission control may be requested in a permit application and any approval would be represented in the construction permit.

The Division will consider, on a case by case basis, alternative emissions control equipment that achieves the most effective reduction of hydrocarbon emissions for the specific situation. The permit application should include sufficient technical documentation for the Division to make this determination.

- b. What should operators do if a facility already has an open flare?

If an operator has an open flare controlling equipment as required under Section XVII, the flare may not need to be enclosed, if:

- the open flare was permitted prior to May 1, 2014;
- the operator has commenced operation of the E&P facility with an open flare prior to May 1, 2014 and has submitted a permit application to the Division in a timely manner, but has not yet received a permit; or
- the operator has commenced operation of a crude oil storage tank controlled by an open flare prior to May 1, 2014.

Even with an open flare, sources are subject to the requirements to employ an auto-igniter (per Section XVII.B.2.d.(ii)), to operate with no visible emissions, and to control emissions with at least a 95% efficiency.

Storage Tank Control and Capture – Section XVII.C.1. and XVII.C.2.a.

10. Sources are required to control emissions under Section XVII with at least a 95% control efficiency but also to use a combustion device designed to have a destruction efficiency of 98%. Why does the Division distinguish between the two percentages?

Sources are required to meet a 95% control efficiency. The Division requires that the combustion device used be designed to have a 98% destruction efficiency, because it recognizes that



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combustion devices designed to meet a 98% control efficiency may not actually meet this percentage in practice, given the variability of field conditions, downtime, etc.

- a. Should operators be using 95% or 98% for emission calculation and permitting purposes? In other words, are operators required to use 98%, or is 95% still appropriate to use for permitting?

Operators should be using the 95% for emission calculation and permitting purposes. The Division's permitting unit may approve other emission control efficiencies, where requested and justified.

- b. How does the Division plan to confirm design efficiency?

Operators are required to keep records of the manufacturer's specifications or equivalent for air pollution control equipment. See Section XVII.B.2.a.

11. Do well production facility operators have to comply with the first 90 day control requirement in Section XVII.C.1.c. if they begin/began operation prior to May 1, 2014, but the 90 day clock ends after May 1, 2014?

No. The 90 day requirement affects only those operations whose date of first production occurs on or after May 1, 2014.

12. How do operators estimate emissions for produced water, crude oil, and condensate tanks? For APEN/permitting? For comparison to the 6 tpy threshold?

For more information on calculation of uncontrolled actual emissions, sources should refer to:

- PS Memo 09-02: Oil & Gas Produced Water Tank Batteries Regulatory Definitions and Permitting Guidance
- PS Memo 05-01: Oil & Gas Atmospheric Condensate Storage Tank Batteries Regulatory Definitions and Permitting Guidance
- PS Memo 14-01: 2014 Regulation No. 3 Changes
- GP08 Guidance - PENDING

- a. Regarding applicability of the storage tank requirements, they seem to apply to "storage tanks with uncontrolled actual emissions of VOCs equal to or greater than six (6) tons per year based on a rolling twelve-month total..." How does this apply to storage tanks that are "permitted" for VOC emissions greater than six (6) tons per year but have "actual" emissions less than six (6) tons per year based on a rolling twelve-month total. Are those tanks exempt from the requirements based upon their "actual" emissions or are they subject to the rule based upon their permitted PTE greater than six (6) tons per year?

The rule's threshold is not based on permitted emissions or PTE. The rule's threshold is based upon uncontrolled actual emissions. The Division will rely on uncontrolled actual emissions to determine compliance with this control requirement. For new facilities applying for permits, the Division will use the requested permit limits to establish the requirements for control in a permit.



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- b. What happens if my permit requires control in accordance with Section XVII, but my uncontrolled actual emissions fall below the threshold?

Sources can request a permit modification if regulatory applicability changes.

13. Are the uncontrolled actual VOC emissions described in both Table 1 (storage tank inspection for STEM) and Table 4 (well production facility inspection for LDAR) both tied to the highest emitting storage tank?

For purposes of STEM and determining the inspection frequency in Table 1 of Section XVII.C.2.b.(ii), operators need to look at the uncontrolled actual VOC emissions of each storage tank. If there is more than one storage tank at a particular site, the operator has the discretion to employ the inspection frequency set by the highest emitting storage tank at that particular site, or to monitor each storage tank per its own individual monitoring frequency. This is a good example of an operator policy that should be expressed in and dictated by the operator's STEM plan for those storage tanks.

For purposes of LDAR and determining the inspection frequency in Table 4 of Section XVII.F.4., operators need to look at the uncontrolled actual VOC emissions of the highest emitting crude oil or condensate storage tank located at each well production facility. The monitoring frequency for well production facilities without crude oil or condensate tanks should be set using the "Well production facilities without storage tanks" threshold.

14. Can the Division provide some clarification on what "construction" of a well production facility, compressor station, dehydrator or storage tank means as used in Section XVII?

Per the Common Provisions Regulation, construction means "the fabrication, erection, installation, or modification of an air pollution source." This definition holds true for the use of construction within the text of Section XVII. For constructed, commence construction, construction - refer to the Common Provisions definition and the definition of "commence construction" in Regulation No. 3. These are being used interchangeably.

15. Interplay between when a storage tank "commences operation" and the "date of first production."

- a. Section XVII.C.1.b.(i)(a) provides that storage tanks constructed on or after May 1, 2014, must be in compliance with storage tank control requirements within 90 days of commencing operation. Section XVII.C.1.c.(i) provides that storage tanks constructed on or after May 1, 2014, must capture and control emissions during the first 90 days after the date of first production. Can the Division please clarify how these rules operate in conjunction with one another and which dates or activities trigger control requirements?

These provisions should be read to be consistent with each other. Under Section XVII.C.1.c, all non-temporary storage tanks at well production facilities must be controlled during the first 90 days after the "date of first production." After this first 90 day period the controls must remain in place pursuant to Section XVII.C.1.b. if the uncontrolled actual VOC emissions from the tank will be 6 tons per year or greater.



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- b. Does the obligation to develop a STEM plan in accordance with Section XVII.C.2. start when the tank commences operation?

If the storage tank is constructed on or after May 1, 2014, the operator must have a STEM plan in place within 90 days of the date that the storage tank commences operation. A storage tank constructed before May 1, 2014 must have a STEM plan in place by May 1, 2015. See Section XVII.C.2.b.(ii)(a) and (b).

- c. How should operators determine the compliance dates for storage tanks at multi-well pad sites?

Section XVII.C. is tied to storage tanks, regardless of location. Multiple storage tanks at the same well pad may have varying dates of first production, depending on the well feeding the storage tank.

16. Does the Division interpret “within the first 90 days of production” to mean 3 months or exactly 90 days? For example, for requirements starting 90 days after May 1, 2014 are operators obligated to be in compliance by July 30, 2014 (exactly 90 days) or by August 1, 2014 (3 months)?

Operators should be in compliance within a 90 calendar day period. Using the example above for provisions requiring compliance “within the first 90 days” after May 1, 2014, operators should be in full compliance by July 30, 2014.

17. Are storage tanks at well production facilities with VOC emissions less than 6 tpy only required to meet the LDAR requirements as listed in Section XVII.F.4. or do they need to also implement the STEM requirements?

Components associated with storage tanks with uncontrolled actual emissions below 6 tpy are included in LDAR but are not subject to STEM requirements.

Storage Tank Control Monitoring and Recordkeeping – Sections XVII.C.1. and XVII.C.3.

18. What is involved in audio-visual-olfactory (AVO) monitoring under Section XVII.C.1.d.?

Consistent with NSPS OOOO, AVO monitoring involves the following:

- An audio inspection of the storage tank and associated equipment to determine if you can hear any noises indicating the presence of emissions.
- A visual inspection to determine if there are any emissions visible to the naked eye from the tank or associated equipment (this is different than “visible emissions” which is defined as smoke observable for 1 minute in any 15 minute period).
- An olfactory inspection to determine if you can smell any odors indicating emissions from the tank or associated equipment.

Pursuant to Section XVII.C.1.d., storage tanks are subject to additional visual inspections, during which it is important for operators to pay special attention to the open/closed status of thief hatches, the pilot light, auto-igniters and valves on combustion devices and the piping to combustion devices, and to the presence of smoke from combustion devices.



19. Can the Division clarify that the obligation for AVO in Section XVII.C.1.d. is meant to only include storage tank thief hatches (or other access points) and pressure relief devices, and not separators or other equipment?

The AVO requirement under Section XVII.C.1.d. is additional to the requirements of both STEM and LDAR. It includes an inspection of all equipment associated with storage tanks, including at a minimum separators, air pollution control equipment, or other pressure reducing equipment. The Division expects that operators will include this equipment in their AVO monitoring for compliance with this requirement.

20. What visual monitoring requirements should be followed for operators with condensate storage tanks subject to the requirements of Section XVII.C.1.a. (i.e. condensate tanks with emissions \geq 20 tpy)?

Operators with these storage tanks, already being controlled in compliance with Section XVII.C.1.a., should begin following the revised monitoring requirements in Section XVII.C.1.d. beginning April 14, 2014, the effective date of the new rule revisions.

21. When do the obligation to conduct AVO and additional visual inspections begin?

AVO monitoring must commence in accordance with the schedule set forth in Section XVII.C.1.b.(i)(a) – (c). Therefore, for storage tanks constructed on or after May 1, 2014, AVO monitoring must commence within 90 days of the date that the storage tank commences operation. This is consistent with the requirement that operators must control storage tanks during the first 90 days after the date of first production.

22. Section XVII.C.3 states "the owner or operator must maintain records of any required monitoring." Are AVO inspections and visual inspections considered monitoring and thus subject to the recordkeeping requirements?

Yes, the recordkeeping requirements of Section XVII.C.3. apply to the AVO inspection and visual monitoring requirements of Section XVII.C.1.d.

Storage Tank STEM Monitoring and Recordkeeping – Sections XVII.C.2.b. and XVII.C.3.

23. Does the Division intend that operators will be conducting AIMM prior to developing a STEM plan and prior to the "without venting" requirements of Section XVII.C.2.a being effective?

It depends on when the storage tank was constructed and the storage tank's emission levels.

For storage tanks constructed after May 1, 2014, operators must comply with the "without venting" requirement by the date the tank commences operation. Operators of these tanks must implement AIMM and develop a STEM plan within 90 days of the date the tank commences operation.

For storage tanks constructed before May 1, 2014, operators must comply with the "without venting" requirement and develop a STEM plan by May 1, 2015. Operators of these tanks must implement AIMM in accordance with a specified number of days of the schedule set forth in Table 1, depending on the tank's emission levels. For example, an existing storage tank with 10 tpy



VOC emissions must have a STEM plan and comply with the “without venting” requirement by May 1, 2015, and must implement AIMM within 90 days of January 1, 2016. An existing storage tank with 100 tpy VOC emissions must also have a STEM plan and comply with the “without venting” requirement by May 1, 2015, but must implement AIMM within 30 days of January 1, 2015.

Glycol Natural Gas Dehydrators – Section XVII.D.

24. Sections XVII.D.1 and D.3 do not specifically include glycol dehydrators at well production facilities? Should well production facilities should be listed?

Glycol natural gas dehydrators at well production facilities are subject to the requirements of Section XVII.D. Both Sections XVII.D.1. and XVII.D.3. expressly apply to dehydrators at an “oil and gas exploration and production operations.” Well production facilities are included in the E&P sector and are thus included within the scope of this requirement.

LDAR Applicability and Monitoring – Section XVII.F.1. – XVII.F.7.

25. When are the allowances under Section XVII.F.1. and XVII.F.2. (i.e. LDAR for existing RACT conditions and use of Table 2-8 for emission factors) effective for sources?

Operators should continue to follow the prescribed inspection requirements in their permits for RACT until the compliance date for that facility in either Section XVII.F.3. or XVII.F.4. Similarly, sources should continue to calculate emissions for compliance and APEN/permit applicability determinations until the compliance dates in Section XVII.F.3. and XVII.F.4. allow otherwise.

Well Unloading – Section XVII.H.

26. Section XVII.H.1.b. requires the owner or operator to be present on-site during any planned maintenance or liquids unloading event. Is a contractor employed by the owner or operator sufficient to meet the requirement to have an owner or operator on site for the purposes of this Section? Is the owner or operator required to document the person on-site during these events?

A contractor, with the operator’s permission, can attend an unloading event in lieu of an owner/operator. The operator is not required to document the presence of an authorized individual during the unloading process.

27. What are the well unloading best management practices approved by the Division?

The Division is in the process of developing an answer to this question, and requests that interested operators submit pertinent information to the Division to assist in identifying best management practices. This information, questions and comments should be sent to cdphe.commentsapcd@state.co.us.