



Permitting Section Memo 15-03

To: Stationary Sources Program, Local Agencies and Regulated Community
From: Stefanie Rucker
Date: January 31, 2019
Subject: Oil & Gas Air Pollution Control Equipment Requirements of Regulation Number 7, Section XVII

This document is intended to answer frequently asked questions concerning oil and gas industry storage tank emission management requirements. These requirements are from Colorado Air Quality Control Commission Regulation Number 7, Section XVII.

The information in this document does not address alternative emissions control requirements for equipment covered by Regulation Number 7, Section XII.

Revision History	
September 23, 2015	Initial issuance from Stefanie Rucker
This Issuance	Revision to Questions 2.2, 2.3 and addition of Questions 2.6 and 2.7 on the use of open flares for separator venting. Edits by Stefanie Rucker and Chris Laplante

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1. Control and Design Efficiency

- 1.1. *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 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.

- 1.2. *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.

- 1.3. *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.

2. Alternative Emissions Control Requirements

- 2.1. *What alternative emissions control equipment is allowed under Section XVII.B.2.e.?*

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 request should include sufficient technical documentation for the Division to make this determination.

If there are circumstances where an operator would need to utilize alternative emissions control equipment, they must get approval from the Division prior to use. 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.)

2.2. *How should operators request to utilize alternative emissions control equipment and when can the alternative emission control equipment be constructed and operated?*

Operators should use the Division's request form, located on our website. This form should be submitted with a permit application prior to construction of the source and control equipment. Approval of the alternative emissions control equipment, if granted, will be reflected in the permit. Construction and operation of the alternative emissions control equipment may commence only upon issuance of the permit granting the approval.

Exception: An operator of a new exploration and production (E&P) source with separator venting where the operator is able to submit an application up to 90 days after the date of first production, in accordance with Regulation Number 3, Part A, Section II.D.1.III may construct and operate an open flare as alternative emissions control equipment prior to official Division approval where the operation meets all of the considerations in Questions 2.3 and 2.6, below. In these limited circumstances, the request should be submitted with the permit application no later than 90 days after the date of first production and approval, if granted, will be reflected in the construction permit for the separator. Please note that the source assumes all of the risks associated with the project, which could include necessary modifications to the equipment and site design among others.

2.3. *When will the Division consider approving open flares as alternative emissions control equipment for emissions units located at new, modified, or recompleted sites?*

In addition to case by case technical considerations, the Division will strongly consider approval of an open flare as alternative emissions control equipment if:

- The open flare is not the primary means to control emissions (i.e. it is used as a backup to the primary emissions control). Examples of a primary emissions control devices include, but are not limited to: enclosed combustion devices, vapor recovery units or routing natural gas to a gathering pipeline; and
- The open flare is used as a backup emission control on a temporary basis, not to exceed 1 month in a calendar year; and
- The open flare is not being requested as an alternative emissions control equipment for emissions from a condensate, crude oil or produced water storage tank; and
- The source has provided a request and technical justification to the Division; and
- The open flare will have a minimum control efficiency of 95% for hydrocarbon emission and have a manufacturer's design guarantee of 98% destruction efficiency for hydrocarbons; and

- The open flare will operate with no visible emissions, be equipped with an autoigniter (by the dates in the rule), and otherwise be able to comply with the requirements of Section XVII.B.

Meeting the criteria above does not grant presumptive approval, and the Division may at its discretion deny open flare alternative emissions control equipment requests even if they meet these considerations. Approval and permission to construct and operate any alternative emissions control equipment must be granted by the Division prior to construction and operation in accordance with Question 2.2.

2.4. *What should operators do if a facility already has an open flare (i.e. prior to May 1, 2014)?*

If an operator has an open flare controlling equipment as required under Section XVII, the Division has approved these devices as alternative emissions control equipment, where:

- 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 when utilizing an open flare as approved alternative emissions control equipment, sources are subject to the requirements to: employ an auto-igniter (per Section XVII.B.2.d.(ii)), operate with no visible emissions (per Section XVII.B.2.b.), have a manufacturer's design destruction efficiency of at least 98%, and control hydrocarbon emissions with at least a 95% control efficiency.

2.5. *What happens when an operator modifies an existing storage tank controlled by an open flare (i.e. an open flare allowed as it was installed and operated prior to May 1, 2014)?*

A modification to existing storage tanks utilizing open flares requires that the source must either: replace the open flare with an enclosed combustion device capable of meeting all of the requirements of Section XVII, or request and receive approval for continued use of the open flare as approved alternative emissions control equipment from the Division prior to the modification.

A storage tank will be considered modified if any of the following, without limitation, has occurred:

- New tanks have been installed at the site;
- An existing tank was replaced;
- A new well was drilled and connected to the battery (E&P site only);

- A well was re-piped (E&P site only);
- A significant change (e.g., replacement of a separator) in the physical components of the tank or the equipment related to the functioning of the tank has occurred; or
- An existing well was recompleted, refractured, or otherwise stimulated (see Regulation Number 7, Section XII.B.10).

The following are not considered modifications for this purpose:

- Removal of a well from a tank battery; or
- Addition of a control device.

2.6. *What revisions have been made to the allowance of open flares as alternative emissions control devices for separators subject to control requirements in Regulation Number 7, Section XVII.G?*

This guidance memo (initial Issuance date of September 23, 2015) previously allowed for operators to presumptively construct (see exception language in question 2.2) open flares as alternative emissions control equipment on a temporary basis of less than 6 months of operation from the date of first production (see question 2.3) for separators constructed, modified or recompleted after August 1, 2014.

With this memo revision the Division intends to minimize the use of open flares as alternative emissions control equipment for gas venting from separators and ensure operators either use enclosed combustion devices (i.e. enclosed flares) as required in Regulation Number 7, Section XVII.B.2.b or route natural gas to a gas gathering pipeline to preserve the resource.

To ease the transition of this change in guidance the allowance for up to six months of temporary use of an open flare is being phased out. Therefore, open flares will only be presumptively approved as a temporary backup to primary emissions control for separator venting according to the following schedule:

- For separators with a date of first production (DOFP) before February 1, 2019, open flares may be used on a temporary basis for no more than 6 months from the DOFP;
- For separators with a DOFP on or after February 1, 2019 and before April 1, 2019, open flares may be used on a temporary basis for no more than 3 months from the DOFP;
- For separators with a DOFP on or after April 1, 2019, open flares may be used on a temporary basis for no more than 1 month from the DOFP.

2.7. *Can alternative emissions control equipment be approved for equipment (i.e. storage tanks) registered under a general permit?*

No. Approval of alternative emissions control equipment must be obtained through the issuance of a traditional construction permit.

3. Additional Resources

Questions concerning this memo may be directed to the Air Pollution Control Division at:

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