

How EPA's New Methane Emissions Control Rule Will Affect Midstream Operators

■ Purpose of the revision

The purpose of this revision is to minimize the effect of climate change by reducing greenhouse gas emissions. The EPA is concerned about climate change as an issue that directly affects the lives of all Americans. In particular, methane which is said to account for one-third of human GHG emissions, has been identified as one of the causes of climate change. The EPA's proposed new regulations are aimed at curbing climate change and the resulting health risks to the public by tightening regulations on the oil and gas industry, the largest methane emitting industry in the US.

■ Enforcement date

EPA plans to publish a finalized rule by the end of 2022, and as of March 7, 2022, the effective date has not been determined.

■ Affected Midstream facilities

The Midstream-related facilities affected by the EPA's proposed new regulations are as follows:

- Natural gas processing plants
- Compressor stations
- Storage tank batteries

■ Key Points of Regulations

1. Existing facilities become subject to regulation for the first time.

The existing OOOOa only regulated certain types of facilities that were built, modified, or reconstructed after September 18, 2015. In response, the EPA is proposing to expand the scope of regulation to existing facilities with the EG (Emission Guideline) OOOOc, which is the first emission guideline to require state governments across the U.S. to develop regulations to control methane leaks from existing oil and gas facilities. The EPA is supposed to approve the proposed regulations submitted by the state governments, but if the state governments fail to develop regulations at a level that can be approved by the EPA, the EPA is supposed to set the regulations for that state.

2. Changes in rules for natural gas processing plants

The following changes to the rules for natural gas processing plants are being proposed.

- Definition of affected facilities :

The current OOOOa covers "all equipment, except compressors, that is in contact with a process fluid containing methane or VOCs, the standards apply only to equipment in VOC service" in natural gas processing plants. The term "in VOC service" is defined as the piece of equipment containing or contacting a process fluid that is at least 10 percent VOC by weight. However, this threshold will be eliminated in the proposed regulation.

- Inspection methods :

Bi-monthly OGI inspections will be required for pumps, valves, and connectors in the facility. (Method 21, which is required by current regulations, is still allowed as an alternative method, but the EPA has stated that inspections using OGI are more cost effective.)

- Repair standard :

The first repair attempt work must be done within 5 days from the day the leak is detected by the OGI camera, and the repair work must be completed within 15 days from the detection.

3. Expansion of the definition of Storage Vessels

The existing OOOOa requires a 95 percent reduction in emissions for "a single storage vessel" that produces more than 6 tons of VOCs per year. However, under the proposed OOOOb, the regulation would also apply to "tank batteries" that produce more than 6 tons of VOCs per year. Tank batteries are defined as "a group of storage vessels that are physically adjacent and that receive fluids from the same source".

On the other hand, in OOOOc, EPA proposes a presumptive standard that includes a 95 percent reduction of the methane emissions from existing tank batteries with potential methane emissions of 20 tpy or greater.

4. OGI inspections at compressor stations remains unchanged from OOOOa

In both OOOOb and EG OOOOc, the rules for inspecting compressors using OGI cameras retain the standards of OOOOa, as follows;

- Inspection Frequency: Quarterly
- Initial Monitoring: Within 90 days from the start of operation of the facility. (OOOOa requires within 60 days from the start of operation, but that is scheduled to be changed as well.)

- Repair Requirements: The first repair attempt should be carried out within 30 days after the leak is detected. Repair work should be completed within 30 days from the start of the first repair attempt.

5. Guidelines for the use of OGI cameras developed

The EPA has made OGI cameras a BSER (Best System of Emission Reduction) for well and compressor inspections since 2016. The proposed amendments include guidelines that must be followed when using OGI cameras. The requirements in the guidelines include the following

- The OGI camera used in the inspection must meet the specifications described in Appendix K.
- A monitoring plan must be established prior to the test.
- If a leak is found, a minimum of 10 seconds of video data must be kept.

6. The use of advanced measurement technologies is now allowed as an alternative.

The EPA allows fugitive emissions components located at well sites and compressor stations to be screened using advanced measurement technologies as an alternative to OGI cameras.

Only technologies that meet the criteria can be used as advanced measurement technologies. The frequency of the screening inspection should be twice a month, and if a leak is found during the screening, a ground inspection using an OGI camera must be conducted within 14 days. Even if no leak is found, an annual inspection using the OGI camera is required.

EPA is proposing to establish requirements for the use of advanced measurement technologies that include the following:

- General description of each site to be monitored, including latitude and longitude coordinates of the asset in decimal degrees to an accuracy and precision of five decimals of a degree using the North American Datum of 1983;
- Verification that the technology meets the 10 kg/hr methane detection threshold, including supporting data to demonstrate the sensitivity of the measurement technology as applied;
- Standard operating procedures consistent with EPA's guidance and to include safety considerations, measurement limitations, personnel qualification/responsibilities, equipment and supplies, data and record management, and quality assurance/quality control (i.e., initial and ongoing calibration procedures, data quality indicators, and data quality objectives);

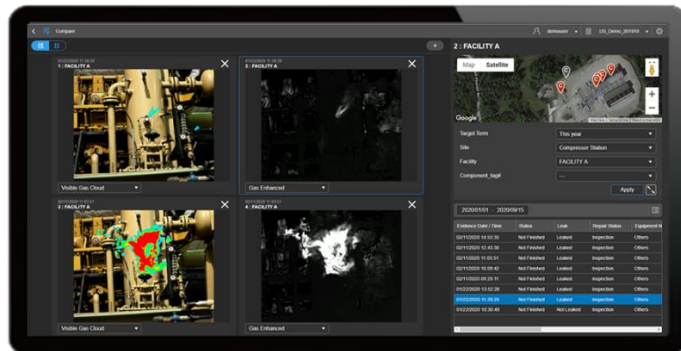
Summary

The following are the major key points in the EPA's proposed amendment:

- **Existing facilities will be subject to regulation.**
- **Stricter regulations for natural gas processing plants**
- **Existing regulations for Storage Vessels will be expanded to cover tank batteries.**
- **OGI inspections at compressor stations at the same frequency as before**
- **Clarifying the requirement for inspections using OGI cameras**
- **Allowing the application of the latest technology and clarifying requirements for use.**

Midstream operators will have to spend more time on the regulatory compliance process than before as a result of additional facilities being brought into scope and the whole process becoming more complicated.

Konica Minolta offers solutions that meet the needs for simplified inspections and data management. And recently, a new OGI camera GMP02 that makes finding leaks very easily has been released.



Find out more followings.

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