40 CFR 60 Subpart OOOOa
Fugitive Monitoring Requirements

Requirements - Equipment leaks (Fugitive Emissions at Well Sites and Compressor Stations)

- Compliance Deadline: **facilities producing before June 3, 2017 have one year, facilities after June 3, 2017, have 60 days**
- The leak definition for valves in gas/vapor service and in light liquid service is 500 ppm.
- Monitor all fugitive emission components with an optical gas imaging (OGI) device capable of taking photographs or collecting video images.
- Fugitive components are those in VOC or wet gas service. Components that have less than 10% VOC content by weight, are not required (e.g. water dump lines, water transfer lines)
- Develop a company defined area-wide leak detection and repair program (LDAR), one plan that incorporates all required elements in 60.5397a. (Company defined area refers to a specific area under the control of a single field office). The monitoring plan must include the following when OGI equipment is used to comply with the monitoring requirements:
  - Frequency for conducting surveys
  - Techniques for determining fugitive emissions
  - Manufacturer and model number of fugitive emissions detection equipment
  - Sitemap
  - Defined observation path ensuring all fugitive emission components are viewed
  - Procedures and timeframes for identifying and repairing fugitive emissions components
  - Procedures and timeframes for verifying repairs
  - Records to be kept, location, and duration of record retention
  - Verification that OGI meets the following specifications
    - Capability of imaging gases in spectral range of highest concentration gas in fugitive emission
    - Capability to image a gas that's 50% methane, 50% propane at a concentration of 10,000 ppm, at a flow rate of <60g/hr, from a quarter inch diameter orifice
  - Procedure for daily verification check
  - Procedure for determining the operators max viewing distance and how this distance will be maintained
  - Procedures for determining max wind speed during which monitoring can be performed and how the operator will ensure monitoring will only occur below is threshold
  - Procedures for ensuring adequate thermal background during monitoring events
  - Procedures discussing how operator will handle adverse monitoring conditions, including interference
  - Training and experience requirements of operator
  - Procedures for calibration and maintenance of equipment at manufacturers recommendations
  - List of all difficult-to-monitor sources and the reason for this classification
    - Location
    - Identification
    - Note: all difficult-to-monitor sources must be surveyed once per calendar year
  - List of all unsafe-to-monitor sources and reason for this classification

        - Location
        - Identification
- Conduct initial survey within 60 days of the first well completion at a new site, or
- If modifying a well site, conduct survey within 60 days of the modification(s)
- Normal source repairs must be resurveyed within 30 days
- Repairs requiring facility shutdowns cannot exceed 2 years from detection (e.g. wellhead leaks)
- Conduct surveys semi-annually after the initial survey.
    - Recordkeeping requirements include:
        - Date of Survey
        - Beginning and end time of survey
        - Name of Operator performing survey, including training and experience of the operator
        - Ambient Temperature, sky conditions and maximum wind speed
        - Deviations from the monitoring plan
        - Documentation of each source of fugitive emissions
            - Including tagging or digital photographs
        - One or more digital photographs of each monitoring survey
        - The instrument used to resurvey repaired components
        - Deviations from the monitoring plan
        - Location information of each fugitive emission found
        - Number of type of component for which fugitive emissions were detected
        - Repair methods utilized during inspection
- Digitally photograph leaking components for identification purposes. Photographs must contain date and latitude/longitude of component or other identifying information
- Annual reporting include:
    - Date of survey
    - Beginning and end time of survey
    - Name of operator and training
    - Ambient temperature, sky conditions, and maximum wind speed durin survey
    - Monitoring instrument used
    - Deviation from monitoring plan or statement there were no deviations
    - Number and type of fugitive emissions components not repaired
    - Number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components
    - Date of successful repair
    - Number and type of fugitive components placed on delay of repair and explanation of cause
    - Type of instrument used to resurvey a repaired component

Summary of NSPS Subpart OOOOa Regulation

Proposed - September 18, 2015
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Effective - August 2, 2016

Source Category	Affected Discipline	Requirement	Compliance Date	Impact to MPO
Hydraulically fractured and refractured well completions, non-wildcat & non-delineation	Drilling & completions	Use reduced emission completion (REC) and combustion device Rule suggests using initial non-salable gas to re-inject into nearby well or burn as fuel on location. We'll have to certify why we're not willing to do this.	11/30/2016	Minimal - notifications w/i 2 days of completion, pics of flowback set-up
Hydraulically fractured and refractured well completions, wildcat & delineation	Drilling & completions	Use reduced emission completion (REC) and combustion device	11/30/2016	None yet
Centrifugal compressors	Gathering, Transmission, Storage	Reduce CH4 and VOC by 95% in wet seal systems	8/2/2016	None
Reciprocating compressors	Gathering, Transmission, Storage	Replace rod packing every 26K hours or route emissions to closed vent system (doesn't apply to recips on well sites)	8/2/2016	None
Continuous bleed pneumatic controllers	Production, Gathering, Transmission, Storage	<6 scf/hr bleed rate	8/2/2016	None
	Processing Plants	Zero bleed rate	8/2/2016	None
Pneumatic pumps	Production sites	Reduce CH4 and VOC by 95% using control device, if present on location. If no control device is present, document presence	11/30/2016	None
	Processing Plants	Zero emissions pumps are required	11/30/2016	None
Storage vessels	Production, Gathering, Transmission, Storage, Processing Plants	For tanks with VOC emission rate >6.0 tpy, reduce VOC by 95% within 60 days of startup HT temp and pressure has important impact on tank emissions.	8/2/2016	None due to permitting strategy
Sweetening units	Processing Plants	Emission reduction efficiency requirements listed in Table 1 based on sulfur feed rates and sulfur content of feed gas	8/2/2016	None
Fugitive emission components	Well sites	Initial FLIR inspection within 60 days, then semi-annual there after	60 days from startup, after 8/2/2016, or 1 year	**Significant**
	Compressor stations	Quarterly FLIR inspections	60 days from startup, after 8/2/2016, or 1 year	None