

Storage Tank Facilities

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COLORADO
Air Pollution Control Division
Department of Public Health & Environment



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Agenda

- Storage Tanks Regulatory Highlights
- Storage Tank Vapor Control System Guidelines
- Division observations and recurring issues at Storage Tank Facilities
- Questions



Storage Tanks at a Glance

- 2002 – Condensate storage tanks required to file an APEN and/or obtain a permit under AQCC Regulation No. 3
- 2004 – Control requirements introduced for certain condensate storage tanks in DJ Basin under Regulation No. 7 as part of the Early Action Compact Ozone Action Plan
- 2006- Establish control requirements state wide for condensate storage tanks as part of overall ozone reduction strategy
- 2014 – Introduction of Leak Detection and Repair (LDAR) monitoring and Storage Tank Emissions Management (STEM) applying to hydrocarbon liquid storage tanks
- 2017 – Revisions to Regulation No. 7, and revising the definition of venting for certain hydrocarbon liquid storage tanks



Regulatory Background

... be designed, operated and maintained so as to minimize emissions to the **maximum extent practicable.**

Regulation Number 7, Section XII.C.1.b

... be designed, operated and maintained so as to minimize emissions to the **extent reasonably practicable.**

Regulation Number 7, Section XVII.B.1.a

... operate **without venting.**

Regulation Number 7, Section XVII.C.2.a



Regulatory Background

- Statewide Management of Emissions from Storage Tanks
 - Improve performance of vapor control systems on storage tanks
 - Address issues related to over pressurization and lack of capture
 - Create transparency in expectations for Design, Operation and Maintenance
 - Address multitude of regulatory standards and provide best practices
- Regulatory language
 - Regulation Number 7, Sections XII.C.1.b, XVII.B.1.a, XVII.C.2.a
 - Regulation Number 7, Sections XII.L and XVII.F



Storage Tank Vapor Control System Guidelines

- Industry (COGA and CPA) approached the Division about developing a collaborative effort in May 2016
- Began active work with Division staff in mid-2016
- Guidelines published May 4, 2018



Guidelines:

Purpose

- Air quality protection and ozone mitigation for all Coloradans
- Clarity and certainty for operators and division
- These guidelines:
 - ARE voluntary,
 - are NOT rules or regulations, and
 - do NOT modify, limit, or expand existing rules and regulations.



Guidelines: Documentation and Written Procedures

- Written procedures for:
 - Inspections conducted to comply with Regulation Number 7
 - Preventative maintenance
 - Predictive analysis
 - Facility changes requiring design updates
 - Emission response practices
 - Critical operating parameter selection and monitoring
- Training plan
- Design protocol and design analyses for facilities
- STEM plan



Guidelines: Recordkeeping

- Emissions observation and corrective action
- Follow-up maintenance actions
- Dates of inspections outlined in operator's written procedures
- Any other records identified in the operator's written procedures
- Any records required by state or federal regulation or permit



Guidelines: Implementation

- **Publication: May 4, 2018**
- Internal APCD training
- Outreach & Education to Industry Members
- Compliance assistance
 - Operator support from division and STWG members.
 - Operators who choose to follow guidelines should make a plan for implementation.
 - Encouraged to meet with division to discuss.

Note: Emission response should be handled as soon as possible and in accordance with regulation during this implementation period.



Guidelines: Implementation Plan

- Timeline and schedule for developing written procedures
- Timeline and schedule for completing outstanding design analyses for existing facilities
- Timeline and schedule for implementing operation and maintenance changes
- Number of facilities affected (no names of facilities needed)



Guidelines: Implementation Timeline

- July – October 2018:
 - Additional operator training
 - Internal inspector training
 - Develop consistent guidelines/written procedures review process
- November 1, 2018:
 - Division to provide common questions to be asked of operators
- October 1 – December 1, 2018:
 - Division available for consultation on written procedures
- January 1, 2019
 - Full implementation of guidelines



Guidelines : Written Procedure Consultation

Operators are encouraged to request the Division review and provide comment on written procedures – within the constraints of implementing the guidelines.

- By July/August:
 - Operator to notify the Division of intent to follow guidelines (through website)
- By October 1:
 - Operator to provide the Division copies of written procedures and implementation plan
- By December 1:
 - Division to provide comments/feedback on written procedures
- By January 1:
 - Operator to achieve full implementation of guidelines



Storage Tank Field Observations at a Glance

- In 2017, approximately one of ten facilities inspected had emissions observations from at least one piece of equipment on site, or 12% of all inspected*
 - Downward trend in observation rate since IR program inception in 2013
- Emissions response time decreasing
- Observations of open thief hatches and vent lines decreased dramatically

*includes facilities that were reported as shut in at the time of the inspection



Storage Tank Areas for Improvement

- Approximately half of 2017 emissions observations were from a thief hatch or PRV
- Missing auto-ignitors on Enclosed Combustion Devices
- Unable to observing the pilot flame in the enclosed combustion device for proper observation



Questions?

- Guidelines have been published
 - www.colorado.gov/cdphe/air-oilandgas-storagetankguidelines
- Sign up for the APCD “Oil and Gas Air Emissions Regulatory Information” Listserv to get updates
 - www.colorado.gov/pacific/cdphe/air-mailing-lists