

Public Workshop

Draft Regulation Proposal for Greenhouse Gas Emission Standards for Crude Oil and Natural Gas Facilities

**California Air Resources Board
Sacramento, California**

April 27, 2015

Agenda

- **Background**
- **Draft Regulation Proposal**
- **Next Steps**



Background

Background

- This proposed regulation addresses fugitive and vented methane emissions from new and existing oil and gas operations.
- ARB working with air districts, US EPA, industry, and environmental groups to evaluate different control strategies, and to estimate emissions and reductions.
- ARB also working with air districts to craft ways to implement and enforce the new standards.

Background

- **August 2014 workshop**
 - Background
 - Kick off
- **December 2014 workshop**
 - Source category control concepts
 - Standardized Regulatory Impact Assessment (SRIA)
 - Environmental Analysis (EA)

Program Goals

- To obtain the maximum methane emission reductions possible from the oil and gas sectors, in a technically feasible and cost-effective manner.
- To promote statewide uniformity of methane emission controls by promulgating a statewide regulation.
- To minimize the administrative burden on the local air districts by promulgating a statewide regulation.

Program Goals

- To harmonize state requirements with current local and federal requirements to the extent feasible.
- To achieve co-benefits that protect public health from toxic emissions from well stimulation or other sector sources.
- To support the State Implementation Plan we administer by designing a regulation that attends to criteria pollutant goals.

Methane Update

- **Short Lived Climate Pollutant Plan**
- **US EPA's Proposed Actions on Methane**
- **Environmental Defense Fund and Jet Propulsion Laboratory studies**
- **Super Emitters**



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Applicability:

- Applies to new and existing facilities.
- Applies to Onshore and Offshore facilities.
 - Crude Oil and Natural Gas Production, Processing, and Storage; and,
 - Natural Gas Underground Storage; and,
 - Natural Gas Transmission Compressor Stations.

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Primary & Secondary Vessels:

- Applies to separators and tanks without a vapor collection system.
- Requires annual testing to determine annual methane emissions rate:
 - Annual testing reduced to every 5 years for systems with no change in emissions.
- Testing results submitted to ARB and applicable local air district.

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Primary & Secondary Vessels:

- Test results above 10 metric tons/year required to install vapor collection system.
- Required to route gas to an existing fuel gas or sales gas system or underground injection; or route to an existing control device as long as added emissions do not exceed permit limits.
- Facilities unable to route gas to existing system required to apply for a permit to install a new control device according to district NOx requirements.

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Flash Test Procedure:

- Requires one crude oil and one produced water sample from a pressurized separator.
- Two sampling methods specified:
 - Seeking comments on techniques, procedures.
- Laboratory method specifies flashing from separator to storage conditions:
 - Seeking comments on lab methods such as constant temperature testing, etc.

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Circulation Tanks:

- Applies to tanks used for well stimulation treatments only.
- Requires tanks to be controlled for vapors.
- Several options available for controlling vapors:
 - Existing vapor collection or casing gas system,
 - Compress and transport to processing facility,
 - Combust on site in some cases.

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Reciprocating Compressors:

- All units required to install or identify rod packing or seal measurement access ports.
- Units below 500 rated horsepower subject to leak detection and repair testing and 1000 ppmv standard per Method 21.
- Units above 500 rated horsepower must measure annual flow rate and are subject to 2 scfm replacement standard.

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Centrifugal Compressors:

- Compressors with wet seals required to collect vented gases and route to existing sales gas or fuel gas system or existing control device; or,
- Install a dry seal system.

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Pneumatic Devices and Pumps:

- No bleed or no vent required; or,
- Connect to existing sales gas or fuel gas system or existing control device; or,
- Use compressed air or electricity to operate.
- Subject to leak detection and repair testing with 1000 ppmv standard per Method 21.
- Intermittent leak devices below 1000 ppmv when idle.

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Liquids Unloading of Natural Gas Wells:

- Annual reporting required:
 - Measured or calculated volume of gas vented to remove liquids; and,
 - Equipment installed in each well vented.
- In lieu of reporting, collect vented natural gas using a vapor collection system.

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Leak Detection and Repair:

- Integrate methane components into existing air district inspection programs for VOCs.
- Applies to all oil and gas facilities regardless of size or annual throughput:
 - Annual Method 21 testing; or,
 - Quarterly Optical Gas Imaging with Method 21 measurements.
- 1000 ppmv minor leak threshold.

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Leak Detection and Repair:

- Local air districts may implement lower leak threshold or require more frequent inspections.
- Local air districts with or without existing leak detection and repair programs may choose to adopt proposed program.

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Implementation & Enforcement:

- Local air districts provided with flexibility to update existing permits or registrations for specific equipment or entire facilities.
- Permits or registrations to be updated during next permit renewal date or a date to be specified.
- ARB to implement a registration program in lieu of local air district program where appropriate.

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Implementation & Enforcement:

- Rules apply to covered sources regardless of permitting or registration status
- ARB has continuing authority to enforce the standards; air districts may enforce as well. ARB and districts may further define shared enforcement and implementation plans in MOAs, as necessary and appropriate



Next Steps



Next Steps

- Requesting feedback on this draft proposal by **May 15, 2015.**
- 45-day comment period with Staff Report and Environmental Analysis begins **August 7, 2015**
- Board Meeting **September 24, 2015**
- Second Board Meeting tentatively **March 2016**
 - Addresses EA comments

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