



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

**Bay Area Air Quality Management District  
Public Workshop  
October 6, 2008 - 9:00 am**

**Bay Area 2005 Ozone Strategy  
Control Measure SS 7**

**BAAQMD Regulation 8, Rule 33:  
Gasoline Bulk Terminals and Cargo Tanks**

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Air Quality Engineer**



# Agenda

- **Background**
- **Proposed amendments**
- **Emission reductions**
- **Costs**
- **Next Steps**



# Background

- **Regulation 8, Rule 33** adopted in 1983, last amended in 1994
- **2005 Ozone Strategy Control Measure SS-7**

## Current requirements

- **Vapor Recovery System must be CARB certified**
- **Organic emissions standard:  $\leq 0.08$  lbs non-methane organics/1000 gallons**
- **Vapor Leak standard: 100% of Lower Explosive Limit (LEL)**
- **Liquid Leak standards: 4 drops/minute, and  $\leq 10$  ml. per disconnect (averaged over 3 disconnects)**
- **Vapor Storage Tank leak standard:  $\leq 3000$  ppm organics in vapor space**



## Proposed Amendments

- **Proposed Vapor Recovery System (VRS) emissions limits**
  - ◆ **Propose standard of  $\leq 0.04$  lbs non-methane organic compounds per 1000 gallons of gasoline loaded**
  - ◆ **Intent is to set a standard consistent with the capability of all terminals**
- **Proposed VRS continuous emissions monitoring**
  - ◆ **Require continuous monitoring of VRS hydrocarbon emissions**
  - ◆ **Facility is expected to treat the parametric hydrocarbon limit as an operational guideline**



## Proposed Amendments - 2

- **Vapor and Liquid leak standards**
  - ◆ **Leak Standards – apply to the hose/cargo tank connectors**
  - ◆ **Vapor Leak Standard - 100% of Lower Explosive Limit (LEL)**
  - ◆ **Liquid Leak Standards – 3 drops/min and 10 ml. upon disconnect (averaged over 3 disconnects)**
- **VRS back-pressure monitoring**
  - **Propose continuous back-pressure monitoring at each loading rack**
  - **With an alarm or automatic shutdown system**
- **Vapor Check Valves in Vapor return piping**
  - **As close as practical to the piping / hose interface of each vapor return arm**

## Proposed Amendments - 3

- **Connector cap on VR hose connector when not in use**
- **Vapor Storage Tank continuous monitoring**
- **Sample lines to Pressure and Vacuum sides of inaccessible P/V valves**



## Proposed Amendments - 4

- **Minimize organic vapors during maintenance**
- **Reduced back-pressure on New VRS piping**
- **Monitoring, inspection, notification and emissions reporting protocol**



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## Emission Reductions

- **Current emissions are 0.52 tons per day**
- **Proposed amendments are estimated to reduce hydrocarbon emissions by 0.06 tons per day – roughly 10%,**
  - ◆ **and reduce emissions and frequency of episodic events**



## Costs

### Cost estimates for the various proposals

- **Hydrocarbon monitors: \$50K capital, \$12.5K annually**
- **Pressure monitors: \$15K capital, \$2.6K annually**
  - ◆ **Alarm: \$20K capital, \$3.3K annually**
  - ◆ **Shutdown: \$50K capital, \$8.1K annually**
- **Vapor check valves: \$1000 each**
- **Cap on Vapor Hose connector: \$500 each**
- **Vapor Tank monitors: \$22K capital, \$6.8K annually**
- **Sample lines: \$500 each**
- **Portable Maintenance Container: \$1500**
- **Larger piping for new piping systems: \$10K**



## Next Steps

- **Written comments are requested no later than Wednesday, October 15, 2008**
- **Consider input, and modify as required**
- **California Environmental Quality Act Analysis, and Socio-Economic Analysis required**
- **Public Hearing before the Board of Directors – January, 2009**



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# Public Comments

- **Please direct comments to:**  
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