



# Unihose Dispenser Requirement

July 22, 2004

Monitoring and Laboratory Division

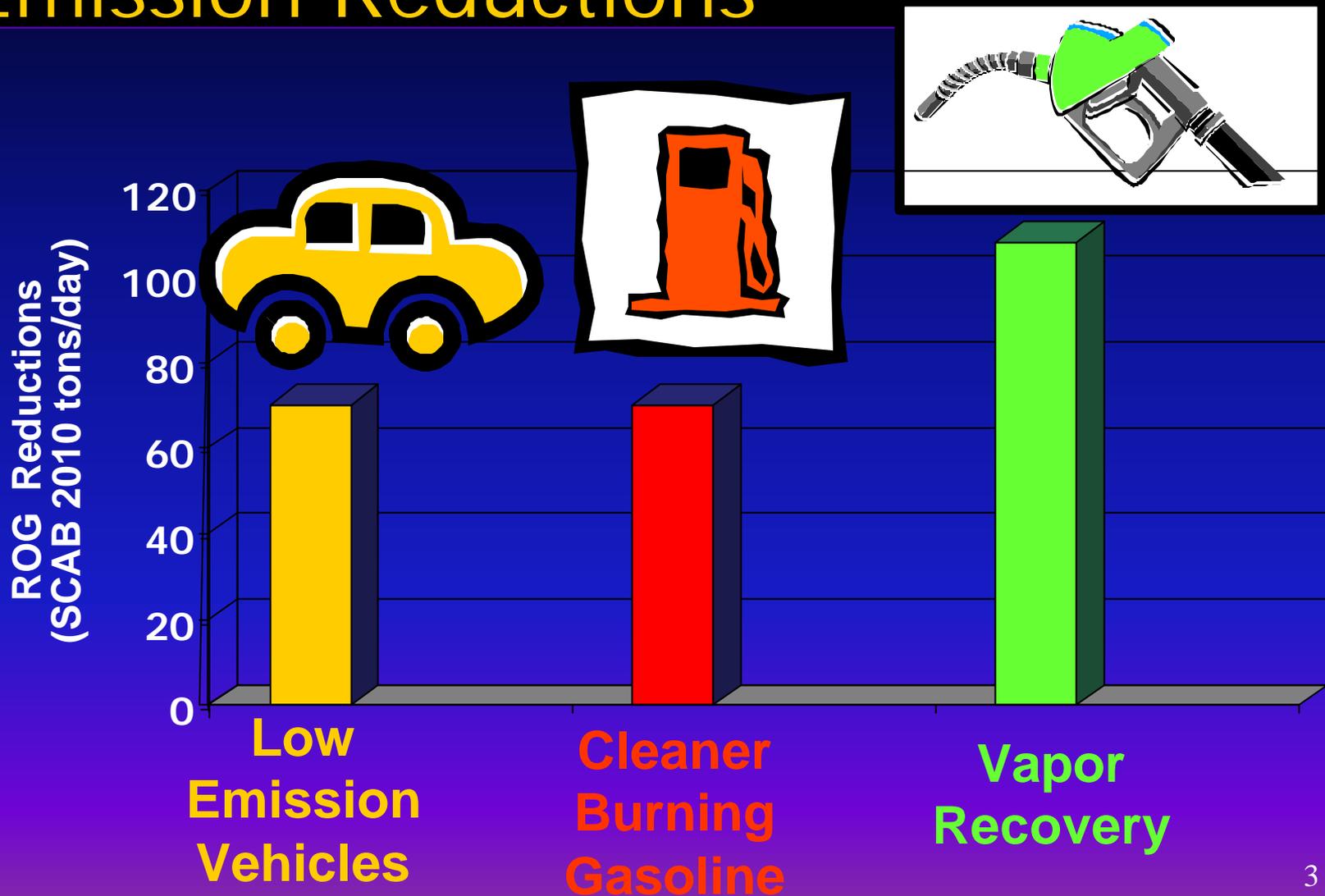
Air Resources Board

California Environmental Protection Agency

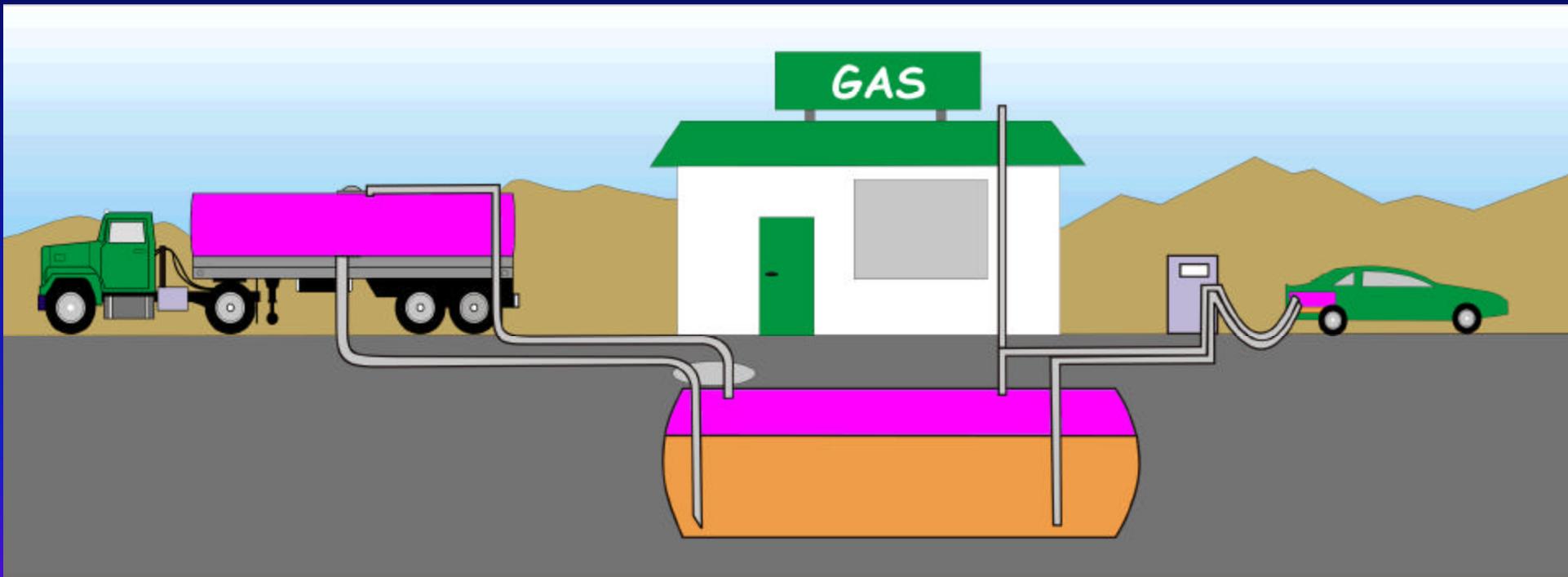
# Outline

- Vapor Recovery Program Background
- Enhanced Vapor Recovery (EVR)
- Relationship between ORVR Compatibility and Unihose Requirement
- Proposed Regulatory Amendments
- Economic Impact & Cost-Effective Analysis
- Stakeholder Comments
- Future EVR Actions

# Vapor Recovery Provides Large Emission Reductions



# Vapor Recovery at Gasoline Dispensing Facilities (GDFs)



Phase I

Phase II

# EVR Modules

## **PHASE I SYSTEM**

Module 1: Phase I vapor recovery

## **PHASE II SYSTEM**

Module 2: Phase II standards & specs

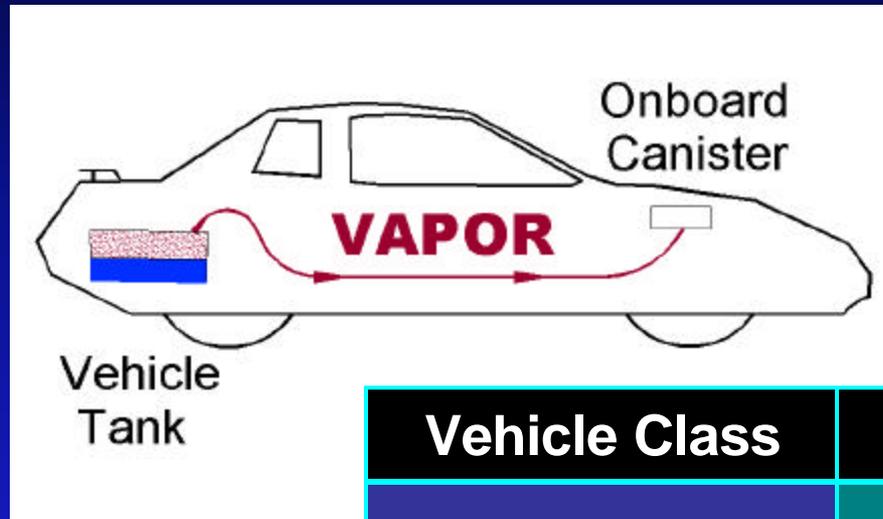
Module 3: ORVR compatibility

Module 4: Liquid retention and nozzle  
spitting

Module 5: Spillage and dripless nozzles

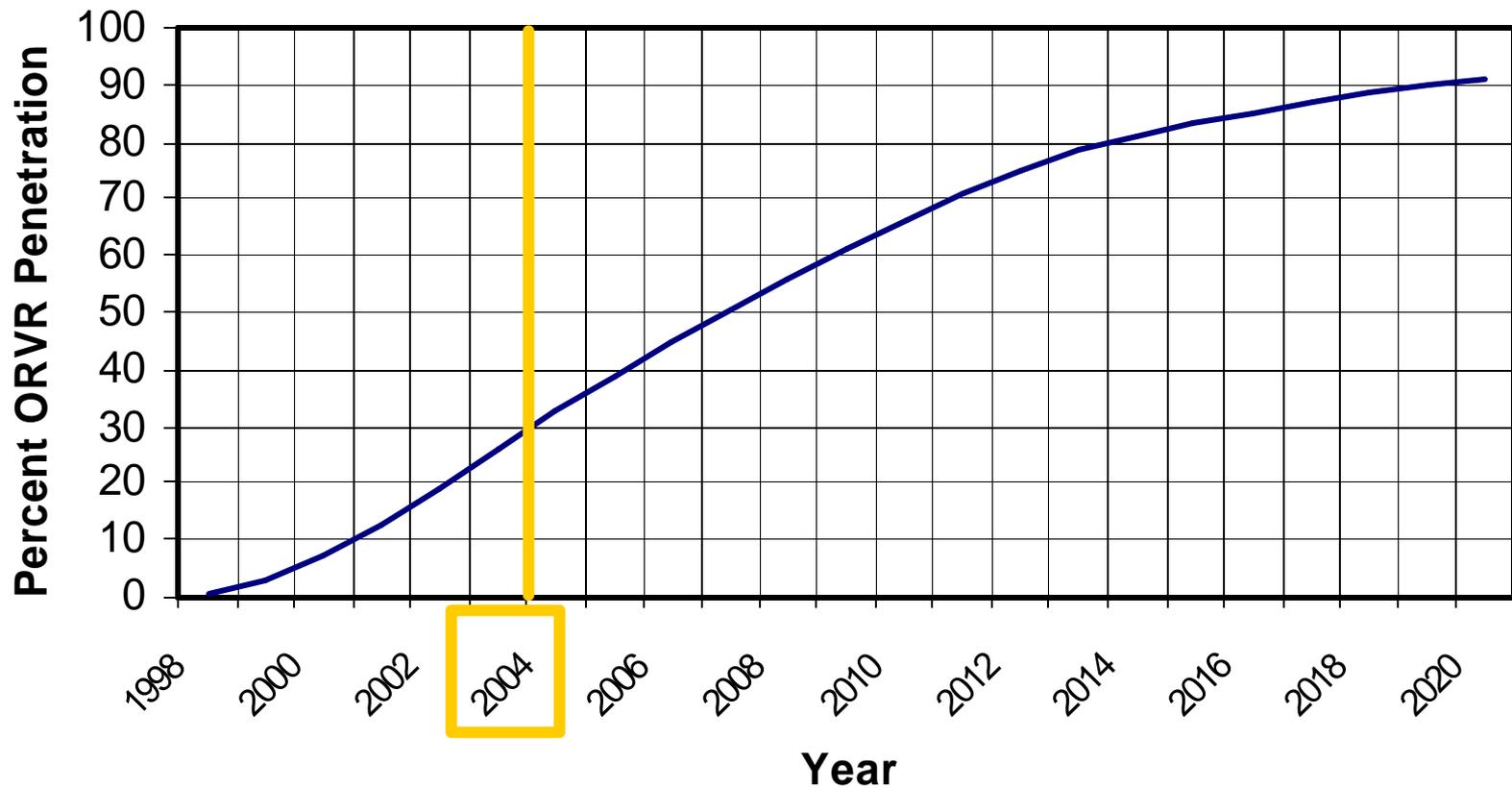
Module 6: In-station diagnostics

# Onboard Refueling Vapor Recovery or "ORVR"

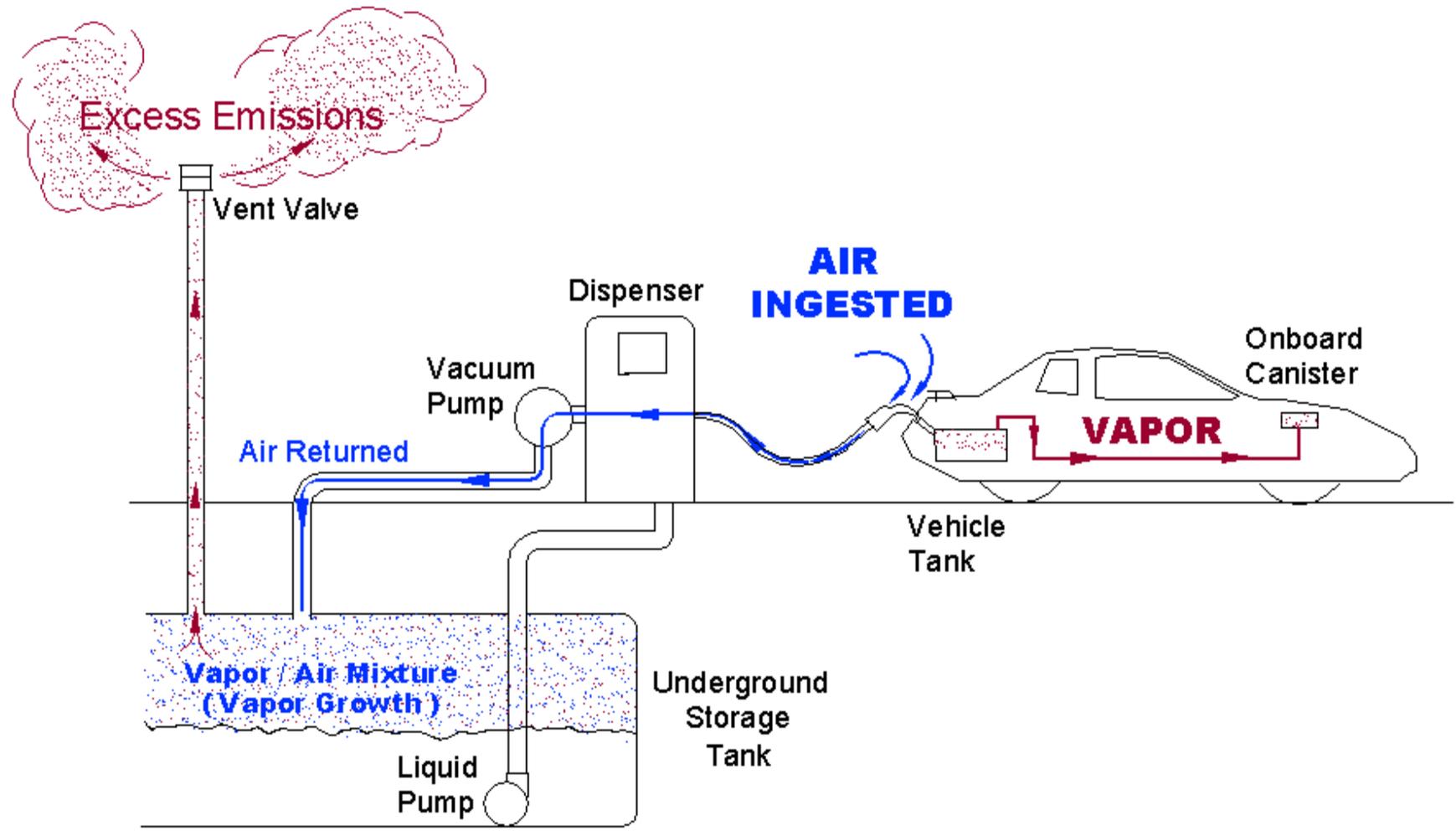


Vehicle Class	40%	80%	100%
Passenger	1998	1999	2000
LD Trucks & MDV (<6000 lbs)	2001	2002	2003
MD Vehicles (6001-8500 lbs)	2004	2005	2006

# ORVR Fleet Penetration



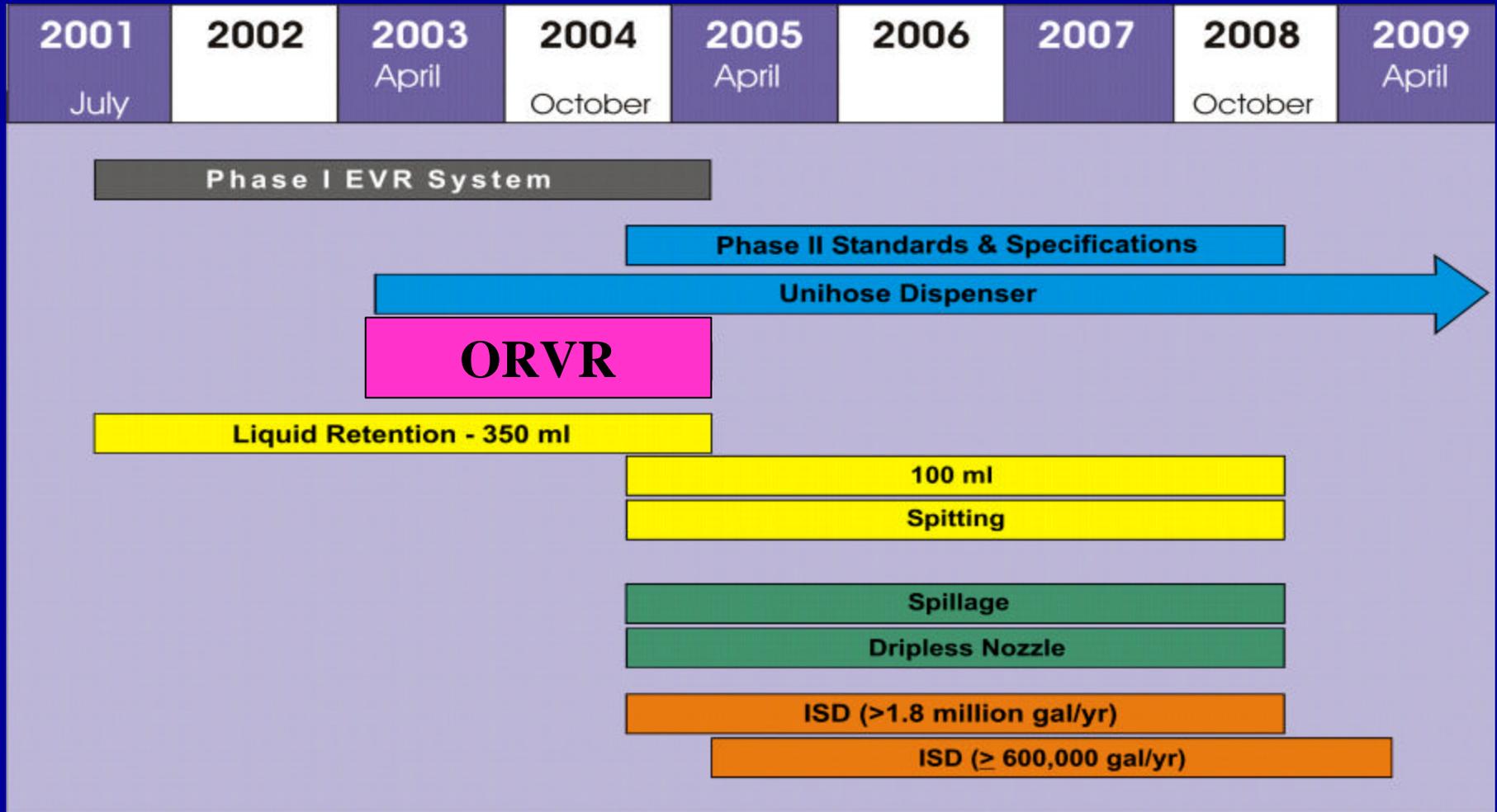
# ORVR - Phase II Incompatibility



# EVR Emission Reductions

Module	Description	2010 ROG Reductions Statewide, tons/day
1	Phase I	5.5
2	Phase II	3.1
<b>3</b>	<b>ORVR Compatibility</b>	<b>4.5</b>
4	Liquid Retention	0.2
5	Spillage/Dripless Nozzle	3.9
6	In-Station Diagnostics	8.5
	Total	25.7

# EVR Implementation Timeline



- Start of solid bar: date required for new or modified facilities (operative date)
- ← End of solid bar: date required for existing facilities (installed before start of bar)
- Not required for dispensers installed before April 2003

# Gasoline Dispenser Configurations: Unihose vs. Six-pack



# Emission Impact

- Unihose configuration reduces number of possible leak paths - less potential for fugitive emissions
- Emissions due to continued use of six-packs are limited by existing leak standards
- No SIP impacts

# Cost Estimates\* to Convert Gilbarco 6-pack to ORVR-compatible System

	Ending System Type	Cost Per Station to Upgrade to ORVR Compatible System
<b>Existing Regulation</b>	ORVR Unihose	\$6,100 - \$80,000
<b>Staff's Proposal</b>	ORVR 6-pack	\$4,700 - \$30,300

\*provided by WSPA/CIOMA in January 2004 comments

# Cost-Effectiveness Summary

Cost-Effectiveness = \$/lb of emissions reduced

	ORVR Compatibility Cost-Effectiveness (\$/lb)
Existing Regulation	\$7.05
Staff's Proposal	\$3.99

# Outreach

- Air Pollution Control Districts
- State Water Resources Control Board
- Vapor Recovery Equipment Manufacturers
- Petroleum Marketers & Associations
- Service Station Operators & Associations
- Vapor Recovery Web Page

# Stakeholder Comments

- Support for unihose proposal
- Several stakeholders request delay of April 1, 2005 deadline for ORVR compliance
  - Gasoline retailers; CAPCOA
  - Outside scope of this notice - can't address today
  - Other stakeholders might have interest
    - Equipment manufacturers; environmentalists

# Issue - ORVR Deadline

- 5,000 stations need to be modified by April 2005
  - Delay up to 1 year may be needed to complete ORVR installations
  - Additional staff assessment needed
    - Air quality impact
    - Need for increments of progress?
- Proposal to Board in November 2004

# Summary - Unihose Proposal

- Provides lower cost compliance
- No opposition
- Approve as an emergency regulation to expedite implementation