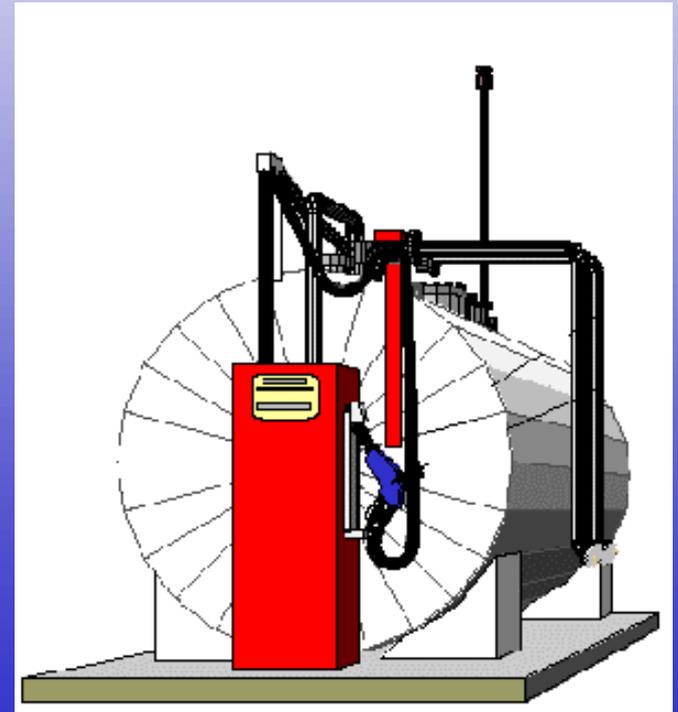


# AST EVR WORKGROUP MEETING

April 17, 2002

Pat Bennett  
Engineering Evaluation Section  
Monitoring and Laboratory Division  
California Air Resources Board



# Workshop Agenda

- Welcome
- What's New in Vapor Recovery
- Defining ASTs
- Status of AST Monitoring Effort
- Status of Test Procedure Development
- AST Inventory and Emission Data
- Planned Activities
- Open Discussion and Schedule Next Meeting
- Close

# What's New

- ARB Hearing for AST EVR Rulemaking rescheduled for early 2003.
- Hirt and Oldcastle AST Executive Orders forwarded for signature.
  - Certify Hirt VCS400-7 System for use on ASTs
  - Certify 7 existing Oldcastle Fuel Vaults

# Defining ASTs

- ARB's Interim Certification Guidelines defines an AST as a gasoline storage tank that is intended for fixed installation, without backfill, and is located above or below grade.
- There is concern that this definition is not consistent with tank definitions used by the State Water Resources Control Board (SWRCB) and other agencies.

# Possible Nomenclature

- Emergency Vented Tanks (EVTs)
  - Simplifies identification
  - New nomenclature does not change which tanks are subject to the “AST EVR” rulemaking
  - Clearly defines which tanks are subject to the original EVR rulemaking and this rulemaking

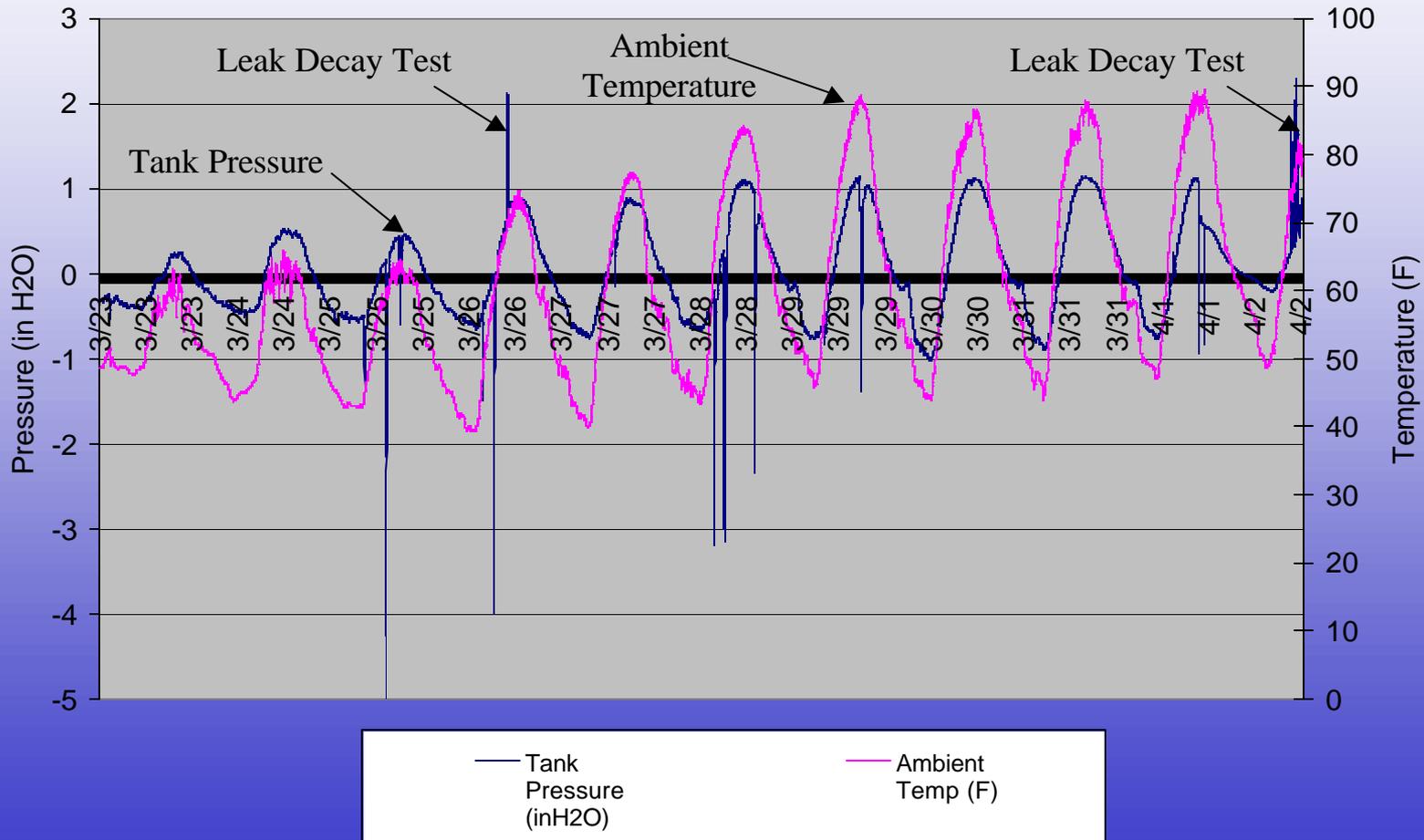
# Status of AST Monitoring Effort

- Monitored second 1,000 gallon balance, single dispenser AST system
- Monitoring 6,000 gallon and 3,000 gallon balance, single dispenser ASTs
- Monitored 3-10,000 gallon balance, manifolded ASTs w/remote mounted dispensers.

# 1,000 Gallon Balance w/Top-Mounted Dispenser

## 1,250 gal/mo throughput

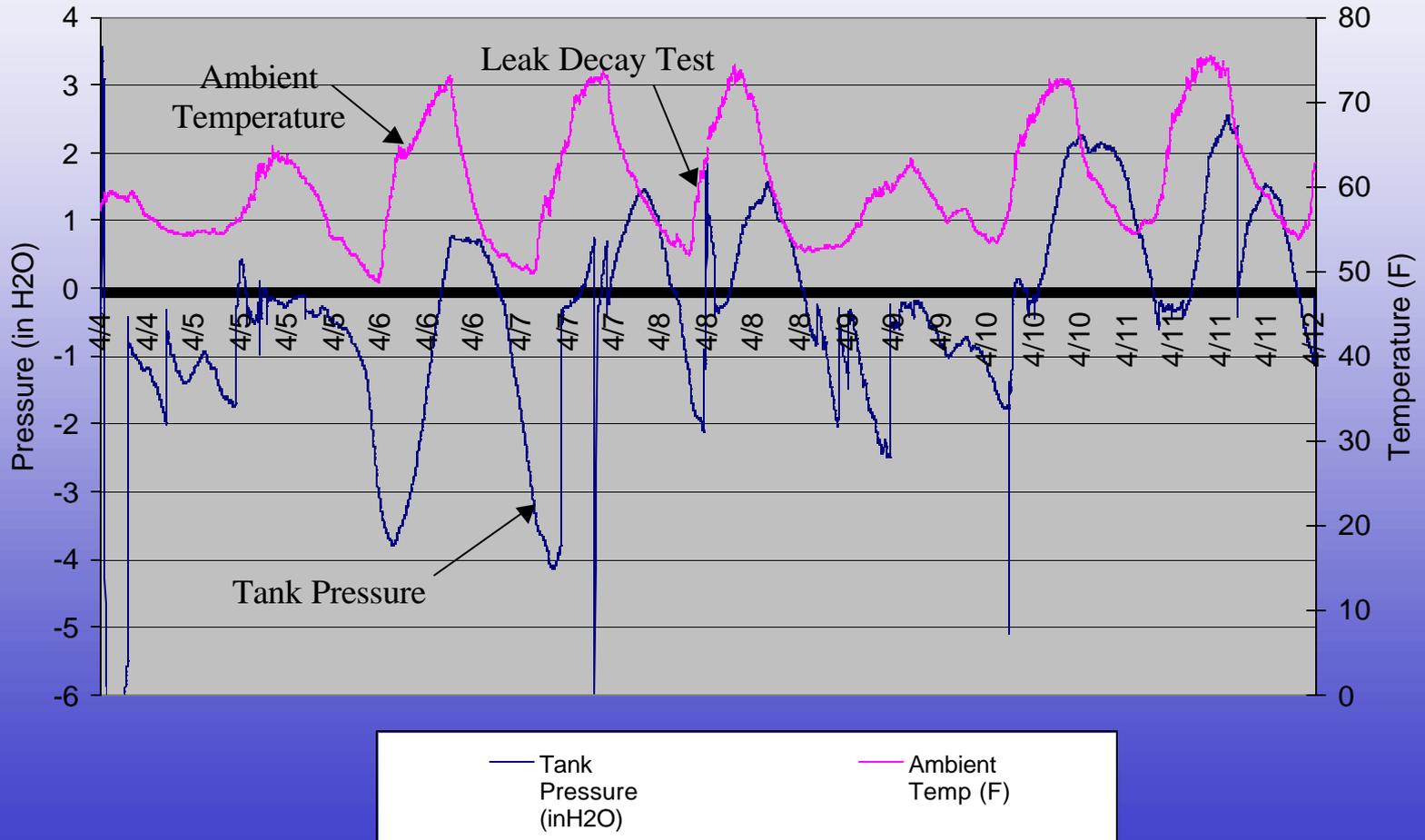
### 3/23/02 - 4/2/02



# 3,000 Gallon Balance w/Side-Mounted Dispenser & Canopy

## 1,600 gal/mo throughput

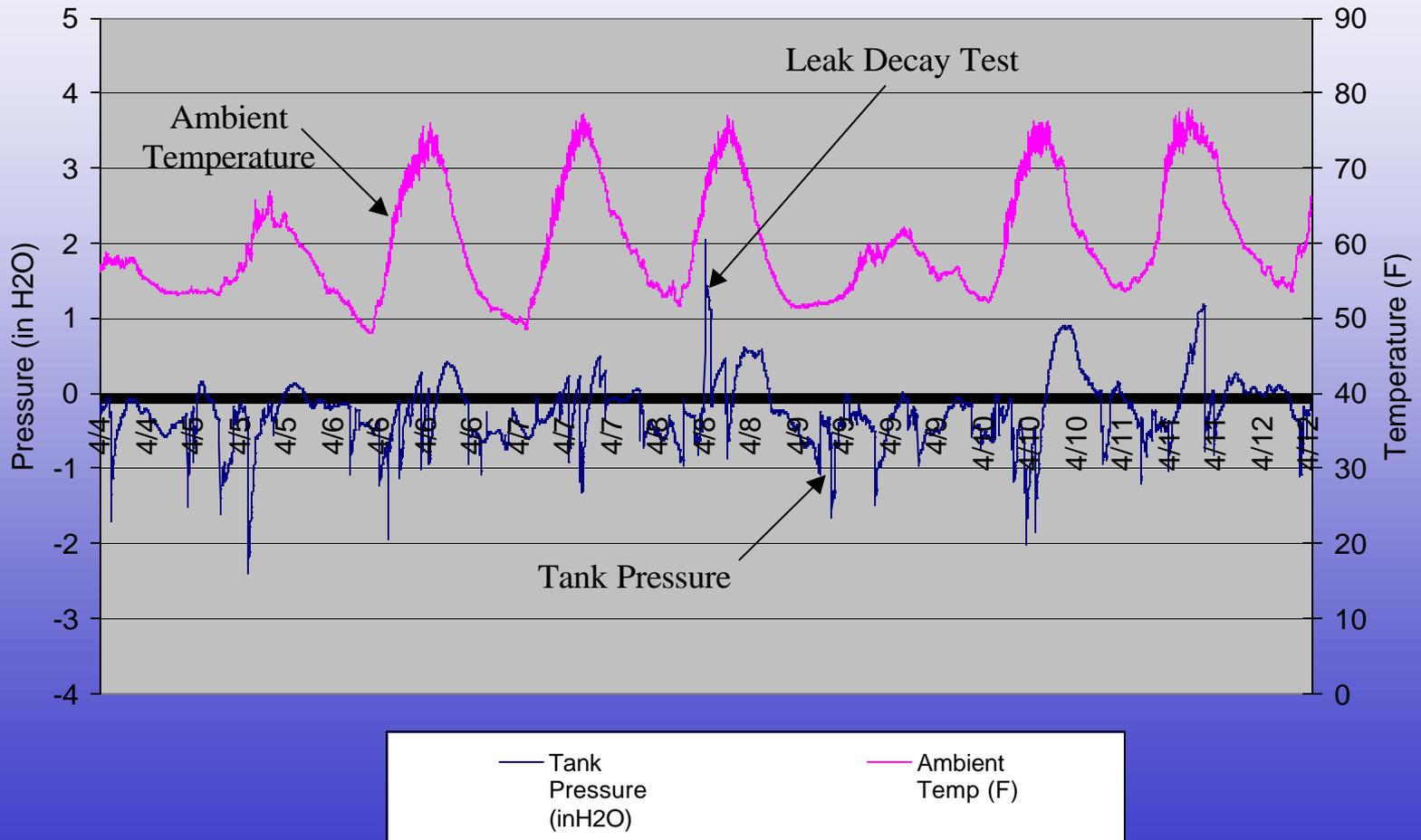
### 4/4/02 - 4/12/02



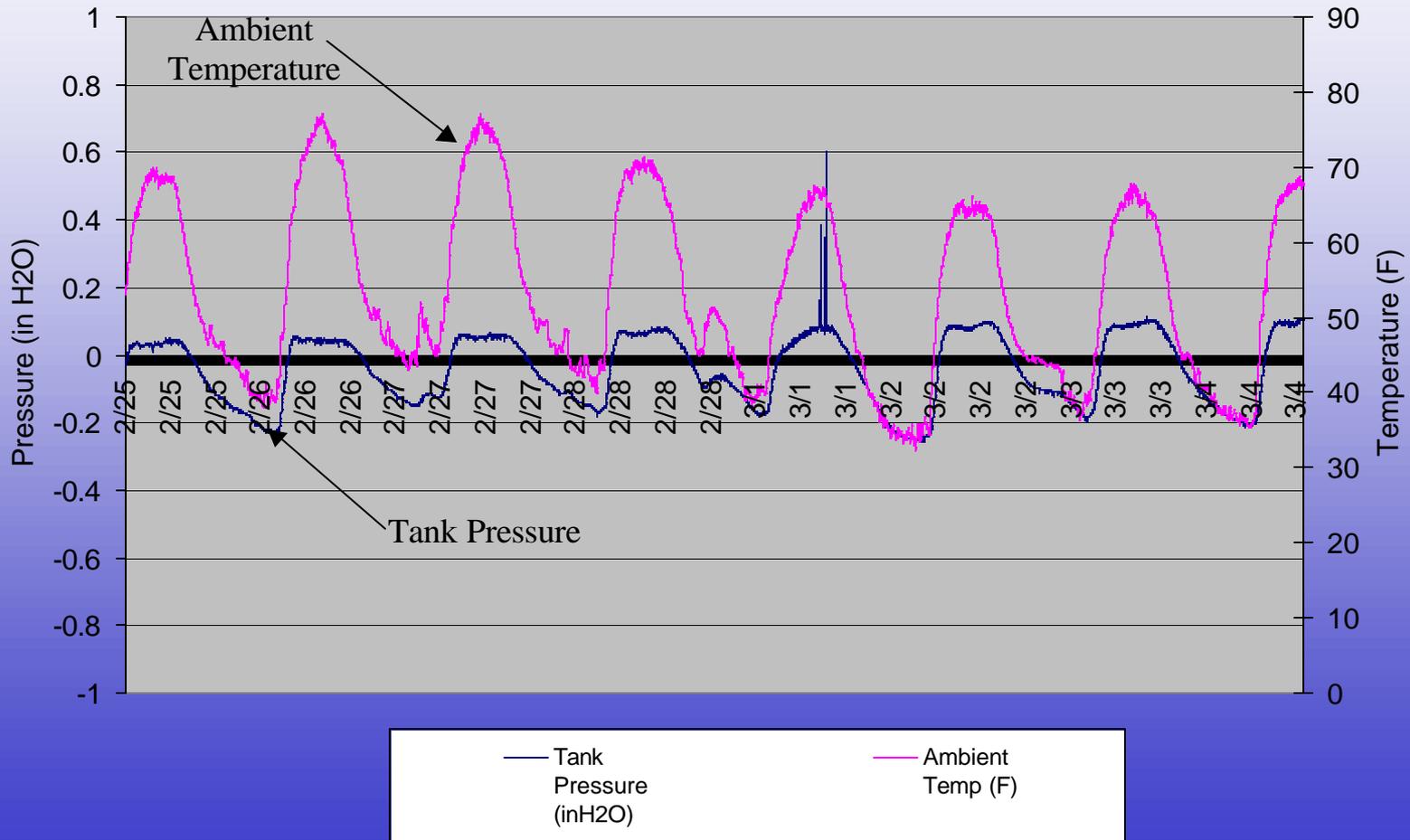
# 6,000 Gallon Balance w/Side-Mounted Dispenser

## 5,000-7,000 gal/mo throughput

### 4/4/02 - 4/12/02



# 3-10,000 Gallon Manifolded Balance w/Remote-Mounted Dispensers 2/26/02 - 3/4/02





A Long-Bolt Manhole Cover  
Used for Emergency Venting



# Status of Test Procedure Development

- Preliminary 2 inch H<sub>2</sub>O steady state leak decay test conducted on a 1,000 gallon capacity AST w/top-mounted dispenser.
- Prior to steady state leak decay, conducted leak decay per TP-201.3B.
- Results:
  - Passed TP-201.3B
  - Steady state leakrate @ P=2.03 inch H<sub>2</sub>O was 2.7 cfh (pressure and temperature not corrected)

# AST Inventory

- CA. Energy Commission database shows 3,161 ASTs in CA. (includes retail, fleet, private, and diesel fueling tanks >660 gallons or >1,320 gallons total site capacity). Actual number could be two times larger.
- Steel Tank Institute statistics show approximately 2/3 ASTs are used for diesel
- Estimation: 1,053-2,106 ASTs > 660 gal.

# AST Inventory

- ARB is requesting information on the number of gasoline storage tanks in California that are used for fueling motor vehicles.
- Need:
  - Number of gasoline ASTs in California
  - Distribution of AST sizes
  - Gasoline throughput information
  - Estimate of ASTs used in agriculture

# Phase I and Phase II Operations

## AST Baseline Emissions

	2000	2005	2010	2015	2020
ROG	0.3	0.4	0.4	0.4	0.4

- Assume 1% of total gasoline throughput
- 90% control of vapor emissions
- 95% control → 0.2 tons/day reductions

# Pressure-Related Fugitives

## AST Baseline Emissions

- Pressure-related fugitive emissions are caused from positive pressures in the AST.
- Pressure-related fugitive emissions are not included in the current AST emissions estimate.
- Total AST emissions include pressure-related fugitives and emissions from Phase I and II operations.

# Planned Activities

- Determine pressure-related fugitive emissions through field testing and monitoring data.
- Conduct Phase I and Phase II efficiency testing.
- Continue monitoring effort.

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