

## Executive Vapor Recovery Committee Meeting

July 13, 1998

### Summary

The following is a summary of the action items which were raised along with their current status.

- 1) *Priority of issues submitted by CAPCOA.*

Refer to Attachment A.

- 2) *Implementation schedule for the Dresser Wayne retro-fit kits to correct dispenser piping problem.*

Modified dispenser kits have been manufactured and delivered to California and Arizona. Wayne has been providing training to service personnel to carry out this conversion. Some installations have been completed in the South Coast basin. Work in the Bay Area and San Joaquin Valley is tentatively scheduled to begin the week of July 27, after which the San Diego area will be serviced.

- 3) *Progress of field replacement for the OPW 11VAI aluminum spout.*

CARB has been informed by OPW that the aluminum spouts for the 11VAI series bootless nozzle were removed from distributor inventories by May 15. Only stainless steel spouts can be used as a field replacement.

- 4) *State inventory of vapor recovery equipment installed at gasoline dispensing facilities.*

This information will be obtained from the districts. CARB will be requesting a detailed list of the specific systems and equipment currently being utilized in each district along with a generic set of Permit to Operate conditions.

5) *Emission inventory data for gasoline dispensing facilities.*

The baseline emission value of approximately 48 tons/day illustrated in the EVR presentation accounts for the Phase I & II activities. Implementation of EVR is intended to improve each emission source at the service station. As was noted, the refueling emissions (vehicle vapor displacement loss) contribute almost 20 tons/day. The complete breakdown is:

Storage Tank Working Loss	13.65 tons/day
Vehicle Vapor Displacement Loss	19.64
Storage Tank Breathing Loss	2.84
Spillage Loss	<u>11.74</u>
	47.87 tons/day

6) *Possibility of a vehicle-based fix for Phase II/ORVR incompatibility.*

Testing will be scheduled for the week of July 20 to evaluate the interaction between a vacuum assist type system and an ORVR design which utilizes a mechanical seal. This combination may prevent the generation of excess emissions at the service station. Representatives from the automobile manufacturers associations will be contacted and requested to participate in this workgroup.

7) *Criteria for In-Station Diagnostic.*

A more detailed description of the proposed diagnostic specification will be provided at the August 11 workshop.

## Attachment A

### Issues Submitted by CAPCOA

CARB is proposing to address the current issues in the following order:

- i) **Request for ARB to prohibit the draining of liquid from vapor return hoses prior to conducting A/L testing or A-V/L vacuum tests. It is suggested that this requirement be added to TP-201.5- 1(j).**

The Air to Liquid test procedure does not allow for any type of maintenance, such as draining of the vapor line, prior to conducting the test.

- ii) **Request that industry Adopt the Bag Test to verify that air is not being ingested into the nozzles - 1(e).**

Bagging of nozzles during Air to Liquid Ratio testing, as a troubleshooting method for a low reading, will be included in the package of test procedures presented at the Board Hearing in August.

- iii) **Request for ARB to add a requirement to the applicable Executive Orders that no dispenser be used following a drive-off until the dispenser hose passes an ARB-approved vacuum test or the hose is disassembled and inspected for damage, reassembled and the hose and dispenser piping checked for leaks- 1(d).**

As the Executive Orders are modified, they will include provisions for examining the nozzle/hose assembly prior to reconnecting a breakaway that has been pulled apart. In addition an Air to Liquid ratio test will be required to verify compliance before the nozzle is put back in operation. Another possibility could be to allow only the use of non-reconnectable breakaways and require that the hose be replaced after a drive-off.

- iv) **Recommendation that ARB require systems to be installed and maintained gas-tight between the nozzle spout and**

**vacuum pump. Leaks can be detected using soap solution backed by a system pressure of 10 inches water column gauge (wcg) or an equivalent vacuum test approved by ARB- 1(f).**

On July 16 & 17, in San Diego, CARB and district personnel conducted field evaluations and comparisons of a number of test methods to determine their effectiveness for detecting vapor leaks. Leak decay tests were performed at two and ten inches water column. We will address this as soon as the results from the tests are analyzed.

- v) **ARB prohibit further installation of hoses with internal vapor tubes that are prone to kinking- 1(c).**

A modification to the hose loop arrangement has been proposed to include a hose with a rubber vapor return line, swivels at both the nozzle and dispenser ends of the hose, and a wider retractor clamp. Test sites with this configuration, in Sacramento and San Diego, are scheduled to begin operation during the week of July 13. ARB staff will be monitoring the Sacramento facility to ensure that the vapor paths do not temporarily or permanently pinch when the hose is stretched out during fueling. ARB is not aware of other hose and retractor assemblies that are prone to kinking.

- vi) **Decertification of p/v valves that are prone to leakage- 1(m).**

Before decertification of the p/v valves can proceed, supporting data of the commonly found defects must be developed. If districts can provide data on leak-prone valves, it will allow us to address the issue more quickly.

- vii) **Request that ARB require the primary system manufacturer to develop a 'pressure drop budget' for their systems at a standard flow rate determined by ARB, CAPCOA and industry- 1(h).**

The Gasoline Petroleum Manufacturers Association (GPMA) has assembled a committee consisting of vapor recovery equipment manufacturers for the purpose of developing a pressure drop budget standard for systems. Incorporating such a specification in the ARB certifications is one of the goals of EVR.

viii) **Recommendation that ARB require maintenance logs to be kept- 1(k).**

WSPA has submitted an outline for the development of a pilot program that would gather, process and report information about the frequency of maintenance, repair and replacement of vapor recovery equipment at a select set of retail service stations. This standardized method should provide the most consistent data from across the State. A copy of the outline is included. ARB is considered to be the primary customer for the information that this tracking program would supply. The pilot is projected to run for approximately one year.

ix) **Recommendation dealing with manufacturers' installation guidelines, industry-trained installation and service contractors, and on-going maintenance programs. It was recommended the maintenance programs be referenced in the applicable Executive Orders- 1(I).**

A number of manufactures have begun training programs for installing and servicing of their systems. Once the maintenance program is established, it will be referenced in the applicable Executive Order. ARB will develop a protocol for certifying contractors after the current set of proposed test procedures is finalized.

x) **Request that ARB prohibit further installations of retrofit vacuum assist systems that manifold the storage tank vapor spaces through the atmospheric vents- 1(I).**

Manifolding at the tanks is the preferred and recommended method. Presently, manifolding of the vent pipe openings is

allowed only for installation of Phase II vacuum assist type systems at existing facilities which have already been plumbed for vapor recovery. In this case, we do not believe that excavating the storage tanks solely for manifolding the vapor spaces is warranted. The ingestion of air as a result of manifolding at the vent pipe openings may be solved through EVR by eliminating the common Phase I leak sources.