

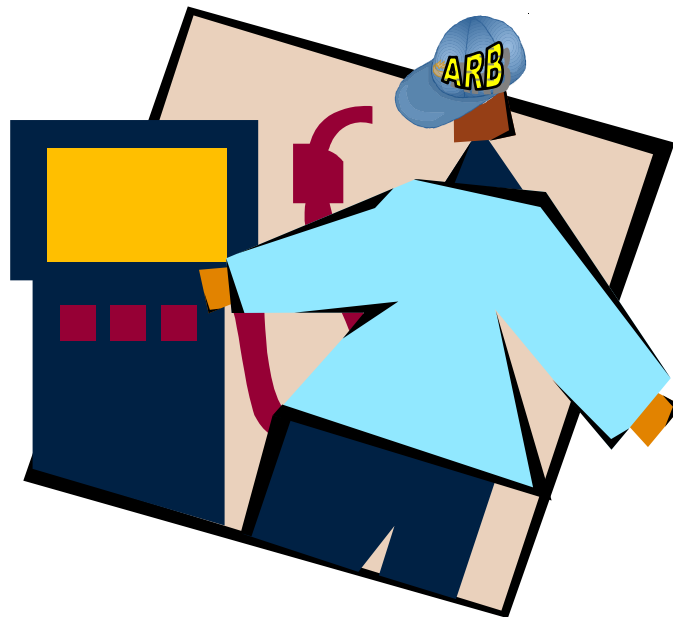
California Environmental Protection Agency



## VAPOR RECOVERY

### HEARING NOTICE AND STAFF REPORT

INITIAL STATEMENT OF REASONS FOR PROPOSED RULEMAKING,  
PUBLIC HEARING TO CONSIDER THE PROPOSED ADOPTION OF A  
TEST PROCEDURE FOR PRESSURE/VACUUM VENT VALVES AND  
PROPOSED AMENDMENTS TO THE REGULATION FOR  
CERTIFICATION OF VAPOR RECOVERY SYSTEMS AT GASOLINE  
DISPENSING FACILITIES (SERVICE STATIONS)



April 7, 2006

California Environmental Protection Agency

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 **Air Resources Board**

STAFF REPORT:

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PUBLIC HEARING TO CONSIDER THE PROPOSED ADOPTION OF A TEST  
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SYSTEMS AT GASOLINE DISPENSING FACILITIES (SERVICE STATIONS)

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*California Air Pollution Control Officers Association (CAPCOA) Vapor Recovery  
Committee*

*California Independent Oil Marketers Association*

*EBW*

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*Franklin Fueling Systems*

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*Husky*

*J.B. Dewar, Inc.*

*OPW*

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*R.S.S.E, Inc.*

*SKS, Inc.*

*Steel Tank Institute*

*Vapor Systems Technologies, Inc.*

*Veeder-Root*

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## Table of Contents

	<u>Page</u>
I. Introduction and Recommendations	1
II. Background	3
III. Rule Development Process and Public Outreach Efforts	8
IV. Reasons for, and Summary of, Proposed Amendments to the Certification and Test Procedures	9
V. Outstanding Issues	18
VI. Economic and Environmental Impacts	20
VII. Alternatives Considered	21
VIII. References	21
Appendix 1 Proposed Amendments to California Code of Regulations	
Appendix 2 Proposed Amendments to Vapor Recovery System Certification and Test Procedures	
Appendix 3 Vapor Recovery Health and Safety Code Statutes	

## I. INTRODUCTION AND RECOMMENDATIONS

### Introduction

In March 2000, the Air Resources Board (ARB or Board) approved the Enhanced Vapor Recovery (EVR) regulations. The EVR regulations established new standards for vapor recovery systems to reduce emissions during storage and transfer of gasoline at gasoline dispensing facilities (GDF) or service stations with underground storage tanks. Control of the emissions of air pollutants from GDFs is necessary to reduce hydrocarbon emissions that lead to the formation of ozone and to control emissions of benzene, a constituent of gasoline vapor that has been identified as a toxic air contaminant.

The EVR standards apply to both new and existing facilities and are being phased in from 2001 to 2010. Some of the EVR performance standards are technology forcing. The EVR regulations were updated in 2001, 2002, and 2004. Previous updates were necessary to improve test procedures for vapor recovery system certifications and to modify performance standards or implementation dates to reflect issues associated with evolving technology. Staff is now proposing additional amendments to the regulations to incorporate statutory changes, clarify certification procedures, amend some performance specifications and test procedures, update implementation dates, and provide a better organizational structure to the regulations.

Assembly Bill 2955, enacted in September 2004, requires, among other provisions, that the State Water Resources Control Board determine whether equipment undergoing certification to meet the EVR regulations also meets the underground storage tank statutory requirements as specified in Health and Safety Code section 25290.1.2. The staff proposes that the Certification Procedure for Vapor Recovery at Gasoline Dispensing Facilities (Certification Procedure or CP-201) be amended to reflect this new requirement.

Vapor recovery equipment manufacturers have requested that the EVR regulations be amended to more clearly define and simplify the process for certification. Staff has proposed changes to CP-201 to expand and clarify the certification process, particularly to address the process when equipment manufacturers wish to modify or add alternative components to certified vapor recovery systems.

Concern that the pressure/vacuum (P/V) vent valve (a component of the vapor recovery system) specifications are more stringent than necessary has prompted some stakeholders to request that the certification specifications for P/V vent valves be amended. The concern stems from the delay or termination of system certification testing when P/V vent valves have exceeded the limits of the performance specifications. Staff is proposing modifications to the current performance specifications for cracking pressure and leak rate to better reflect appropriate P/V valve performance needs under actual field conditions. Staff is also proposing to adopt a new test procedure, "Vapor Recovery Test Procedure for Leak Rate and Cracking

Pressure of Pressure/Vacuum Vent Valves” (TP-201.1E CERT). The test procedure is intended for use during certification testing and will result in a more accurate, precise, and representative test of P/V vent valves.

The Certification Procedure allows ARB’s Executive Officer to delay implementation of the scheduled phased-in of EVR standards and specifications under specified conditions. Executive Officer action in Executive Order G-70-206 delayed the implementation dates associated with some of the EVR vapor recovery requirements to April 1, 2005. Also, the effective and operative dates for in-station diagnostics in GDFs with gasoline throughput greater than 1.8 million gallons per year were changed by Executive Order to August 1, 2005 and September 1, 2005, respectively (effective and operative dates changed to August 1, 2005 by Executive Officer action in Executive Order G-70-207, and the operative date changed to September 1, 2005 by Executive Officer action in Executive Order G-70-208). These delaying actions are not currently reflected in the regulations. The proposed action would update CP-201’s schedule for the phase-in of EVR requirements.

Staff also proposes some reorganization of, and amendment to, CP-201 to improve clarity and readability. Likewise, staff proposes amendments to the definitions in D-200 to clarify and add terms used in the vapor recovery certification and test procedures.

### Recommendations

Staff recommends that the Board adopt the following:

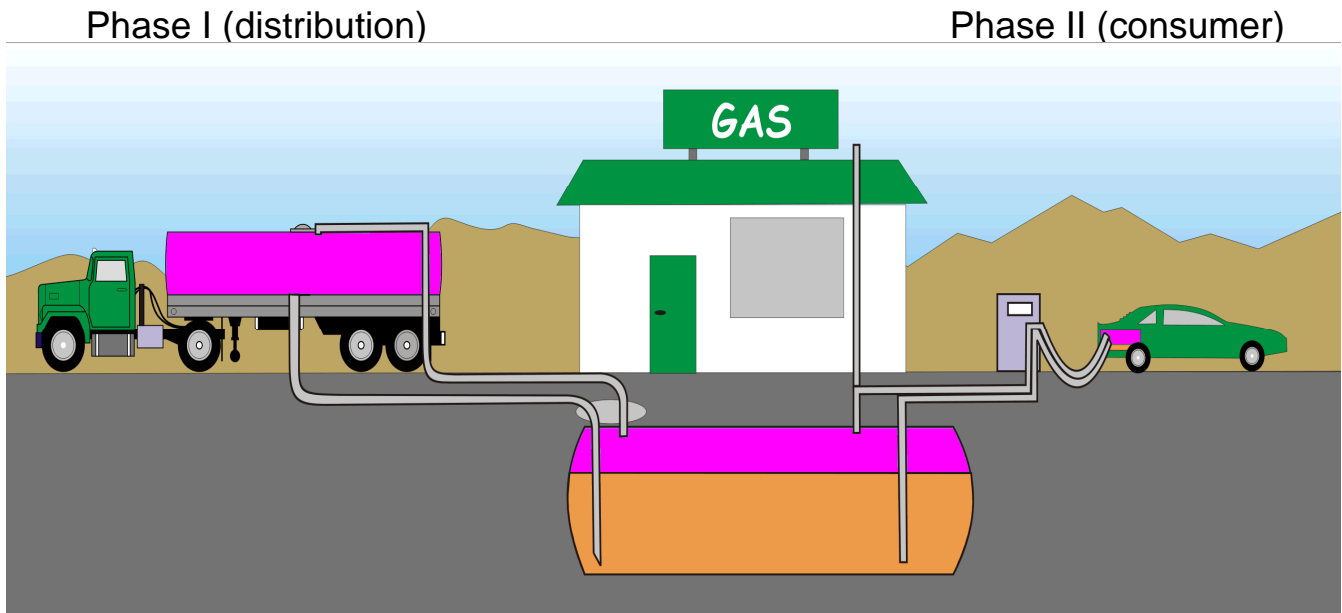
1. Amendments to the California Code of Regulations that incorporate by reference the proposed amended and adopted certification and test procedures (Appendix 1); and
2. Amendments to the incorporated vapor recovery system certification and test procedures and the adoption of a new test procedure (Appendix 2).

## II. BACKGROUND

### A. Vapor Recovery Program Overview

Gasoline vapor emissions are controlled during two types of gasoline transfer. Phase I vapor recovery collects vapors when a tanker truck fills the service station underground tank. Phase II vapor recovery collects vapors during vehicle refueling. The vapor recovery collection efficiency during both of these transfers is determined through certification of vapor recovery systems. In-station diagnostics (ISD) provides real-time monitoring of critical vapor recovery system components and signals the station operator when failure modes are detected.

**Figure II-1**  
**Phase I and Phase II Vapor Recovery Systems at Service Stations**



The ARB and the air pollution control and management districts (districts) share implementation of the vapor recovery program. The ARB's staff certifies prototype Phase I and Phase II vapor recovery systems installed at operating station test sites. State law requires that throughout California only ARB-certified systems be offered for sale, sold, and installed. District staff inspects and tests the vapor recovery system upon installation during the permit process and conducts regular inspections to check that systems are operating as certified.

The vapor recovery requirements affect a multitude of stakeholders. These include the vapor recovery equipment manufacturers, gasoline marketers who purchase this equipment, contractors who install and maintain vapor recovery systems and air districts who enforce vapor recovery rules. In addition, California certified systems are required by most other states and many countries.



The vapor recovery program is expected to achieve over 372 tons per day of reductions in reactive organic gas (ROG) emissions statewide in 2010. Of the 372 tons per day emissions reduced, EVR's contribution is 25 tons per day of reductions. Gasoline vapor contains toxic air contaminants, such as benzene, that are also controlled by EVR. Statewide benzene emission reductions are 151 pounds per day.

As part of the adoption of EVR in 2000, a detailed cost analysis was included in the staff report. This analysis was updated as part of the technology review in an October 2002, staff report. Based on the 2002 technology review and on information available to staff as the EVR regulations have been implemented, the EVR program continues to remain cost-effective with an overall cost-effectiveness of \$5.24 per pound. When EVR costs are assumed to be paid by the gasoline consumer, the increase in gasoline cost due to the EVR regulations is calculated to be less than one cent per gallon.

## B. EVR Rulemaking History

In March 2000, with the Board's approval of the EVR regulations, new, more effective standards for vapor recovery systems were set to reduce emissions during the storage and transfer of gasoline at gasoline dispensing facilities (GDF or service stations).

On October 25, 2001, the Board considered and approved the amendment of five, and the addition of two new, certification and test procedures for gasoline vapor recovery equipment. The revised and new certification and test procedures were part of the Board's ongoing effort to provide the most updated and accurate procedures for certifying systems to control gasoline vapor emissions during gasoline marketing operation and measuring the emission of air pollutants. In addition to supporting certification of vapor recovery systems and equipment, the amended procedures support emissions measurement and verification of proper operation of installed systems.

On December 12, 2002, the Board considered and approved the amendment of ten certification and test procedures and the adoption of five new test procedures. This regulatory action was called Enhanced Vapor Recovery (EVR) Technology Review and was, again, part of the Board's ongoing effort to improve the EVR program.

At a public hearing held on July 22, 2004, the Board adopted an amendment to Section 4.11 of Certification Procedure 201 (CP-201) to allow modifying vapor piping in dispensers without triggering the unihose dispenser requirement. At a public hearing on November 18, 2004, the Board approved an amendment to the regulations to extend the ORVR compatibility deadline for existing gasoline dispensing facilities (GDF) and amend other EVR regulation compliance dates to be consistent with the extensions allowed under the regulations (as authorized in Executive Orders G-70-203 and G-70-205). The effective date for in-station diagnostics (ISD) for medium throughput stations was also revised to April 1, 2006, to maintain the ISD phase-in schedule.

### C. EVR Implementation Schedule

The EVR standards are being phased in over several years and apply to both new and existing facilities. New facilities or major modifications of existing facilities must meet EVR requirements in effect at the time of installation. State law allows existing facilities to use equipment installed prior to the effective date of an amended standard for a period of up to four years after the effective date (Health and Safety Code section 41956.1). This is commonly referred to as the “four-year clock.”

Figure II-1 shows the current EVR implementation timeline. The beginning of each solid bar shows the date when new stations must comply. The final compliance date for all facilities to meet a standard is the date at the end of the solid bar.

The EVR timeline reflects a change in the EVR implementation date provided by Executive Officer action in Executive Order G-70-206, which resulted in the delay of the EVR implementation date associated with Phase II vapor recovery to April 1, 2005. In addition, the EVR timeline also reflects a change which resulted in the delay of the EVR ISD effective and operative dates (for GDFs with gasoline throughput greater than 1.8 million gallons per year) to August 1, 2005, and September 1, 2005, respectively (effective and operative dates changed to August 1, 2005, by Executive Officer action in Executive Order G-70-207, and the operative date changed to September 1, 2005, by Executive Officer action in Executive Order G-70-208). These delays were approved due to the lack of certified Phase II vapor recovery systems (as no systems were certified as of the respective operative dates).

### D. Certification and Test Procedures

Health and Safety Code (H&SC) section 41954 requires the Board to adopt procedures for certifying systems to control gasoline vapor emissions during gasoline marketing operations. Section 39607(d) of the Health and Safety Code requires ARB to adopt test methods to determine compliance with ARB’s and district’s non-vehicular emissions standards.

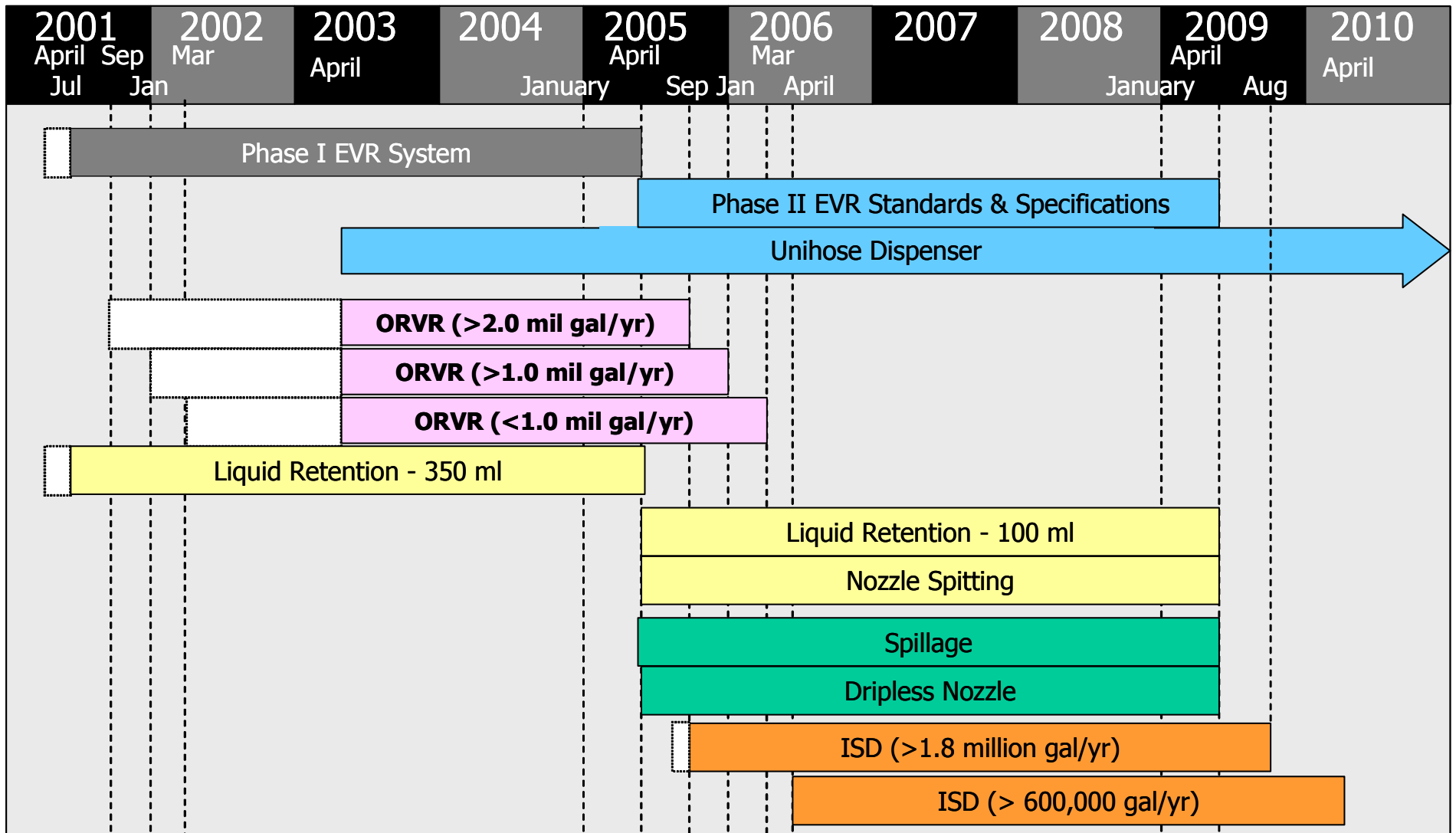
Since 1975, ARB has adopted over 63 test methods for determining emissions from non-vehicular or stationary sources. In addition, ARB adopted certification and test procedures for controlling gasoline vapor emissions from gasoline marketing operations, including transport and storage.



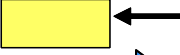

### E. Legal Authorities

Section 41954 of the Health and Safety Code (set forth in Appendix 3) requires ARB to adopt procedures and performance standards for controlling gasoline emissions from gasoline marketing operations, including transfer and storage operations to achieve and maintain ambient air quality standards. This section also authorizes ARB, in cooperation with districts, to certify vapor recovery systems that meet the performance standards and specifications. Section 39607(d) of the Health and Safety Code

Figure II-1

# EVR Timeline



-  Dotted box: time between start of 4-year clock and operative date
-  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

requires ARB to adopt test procedures to determine compliance with ARB's and districts' non-vehicular standards. State law (Health and Safety Code section 41954) requires districts to use ARB test procedures for determining compliance with performance standards and specifications established by ARB.

To comply with state law, the Board has adopted the certification and test procedures found in title 17, Code of Regulations, Sections 94110 to 94015 and 94101 to 94165. These regulations reference procedures for certifying vapor recovery systems and test procedures for verifying compliance with performance standards and specifications.

#### F. Comparable Federal Regulations

There are no comparable federal regulations that certify gasoline vapor recovery systems for service stations; however, changes to ARB vapor recovery certification regulations may have a national impact. ARB certification is required by most other states that mandate the installation of vapor recovery systems in gasoline dispensing facilities.

### **III. RULE DEVELOPMENT PROCESS AND PUBLIC OUTREACH EFFORTS**

Public participation in rule development from vapor recovery stakeholders was sought through workshops, individual meetings, letters to equipment manufacturers, and announcements via ARB's vapor recovery web page, vapor recovery list serve, and by postal mail.

#### **A. Workshops**

Staff conducted public workshops in Sacramento on October 18, 2005, and February 16, 2006. Attendees included representatives from petroleum marketers, vapor recovery equipment manufacturers and air pollution control agencies. The presentation was made available on the web in advance of the workshops and participation was made available via teleconference.

#### **B. Meetings**

Staff met with representatives from the Bay Area Air Quality Management District on September 13, 2005, in Richmond. Staff also conducted a conference call with the California Air Pollution Control Officers Association (CAPCOA) Vapor Recovery Committee Chairperson on January 3, 2006. Staff presented updates to the CAPCOA Vapor Recovery Committee at their quarterly meetings. Staff had numerous conversations with other industry stakeholders regarding the proposed amendments and comments.

#### **C. Internet and Mail**

Stakeholders have received electronic mail (e-mail) notifications via ARB's vapor recovery list serve when new materials are posted on the vapor recovery webpage ([www.arb.ca.gov/vapor/vapor.htm](http://www.arb.ca.gov/vapor/vapor.htm)). The workshop notices, agendas, and presentations, as well as the letters to the manufacturers are all available on the webpage. Stakeholders were encouraged to submit comments to staff by letter or via e-mail.

Two letters of request to vapor recovery stakeholders were issued through the vapor recovery webpage. The letters, posted on January 31, 2005, and April 20, 2005, requested comments for modification of pressure/vacuum vent valve performance specifications and test procedures. Stakeholders were notified of the letters through the vapor recovery list serve and through the vapor recovery mailing list. Numerous comments were received which formed the basis of many of the proposed changes.

#### **IV. REASONS FOR, AND SUMMARY OF, PROPOSED AMENDMENTS TO THE CERTIFICATION AND TEST PROCEDURES**

##### A. Proposed Amendments to Definitions for Vapor Recovery Systems (D-200)

D-200 provides definitions and acronyms for terms used throughout the vapor recovery certification and test procedures. New terms and definitions were added to support the proposed language for the Executive Order amendment and renewal process. Terms used in the adopted certification procedure were also defined or revised. The amendments to D-200 are in Appendix 2.

##### B. Proposed Amendments to Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities (Certification Procedure CP-201)

The Certification Procedure describes the procedure for evaluating and certifying Phase I and Phase II vapor recovery systems used at service stations. The Certification Procedure contains the system performance standards and specifications and references the test procedures (TP) used to determine compliance with the certification standards and specifications. Staff proposes revisions to both the certification specifications and the certification process. Staff proposes to reorganize CP-201 to more clearly describe the certification process, the process for renewal of certifications, and for making amendments to Executive Orders which authorize system certification. The following section summarizes the changes to CP-201.

#### **Certification Standards and Specifications**

##### **1. Amend Sections 2.1, 2.2, and 2.4, Performance Standards and Specifications**

The proposed language clarifies that an applicant may request certification to a performance standard or specification that is more stringent than the minimum performance standards or specifications required by CP-201. The proposed language regarding performance standards and specifications has been amended to clarify the difference in the consequences to presently certified systems when a certification standard is amended and when a certification specification is amended. The proposed amendments clarify that the adoption of new standards or the modification of existing standards will initiate a new “four-year clock” for continued use of previously certified systems, whereas the adoption or modification of specifications does not initiate a new four-year clock.

##### **2. Amend Table 2-1, Effective and Operative Dates**

Table 2-1 lists the operative and effective dates for the vapor recovery requirements. Table 2-1 has been updated to reflect Executive Order G-70-206, which changed the effective and operative dates for Phase II standards and specifications from January 1,

2005, to April 1, 2005. The **operative** date for ISD at stations with throughputs greater than 1.8 million gallons per year has been updated from August 1, 2005, to September 1, 2005 to reflect a change specified by Executive Order G-70-208. The **effective** date for ISD at stations with throughputs greater than 1.8 million gallons per year has been changed from August 1, 2005, to September 1, 2005, to be consistent with the operative date. The effective and operative dates for ISD at stations with throughputs greater than 600,000 gallons per year and less than 1.8 million gallons per year has been changed from April 1, 2006, to September 1, 2006, to allow a phase-in of ISD as provided in the original EVR regulations.

### 3. Amend Table 3-1 and Section 3.5, Pressure/Vacuum Vent Valve Performance Specifications

The underground storage tanks (UST) for gasoline at service stations are equipped with pressure/vacuum (P/V) vent valves on the vent pipe openings. The purpose of these valves is to limit hydrocarbon emissions from UST while also allowing the tank to “breathe” while protected from physical damage or permanent deformation caused by increases in internal pressure or vacuum. The UST’s pressures vary due to temperature fluctuations, barometric pressure changes, or variations in the vapor/liquid ratio during refueling. When the UST pressure/vacuum exceeds the design setting, the valve opens or cracks to relieve the excess pressure/vacuum condition. Additionally, the P/V valve settings for pressure/vacuum cracking act to control flow allowing the displaced vapors to flow to the tanker truck tank compartment during a Phase I gasoline delivery, also known as a Phase I drop.

Stakeholders have commented that the P/V valve cracking specifications are more stringent than needed under actual field conditions and have requested that the specifications be modified. Under the current specifications, a number of Phase I and Phase II system certification tests have been delayed or terminated specifically because of P/V vent valves exceeding the limits of the performance specifications.

Section 3.5.1 of CP-201 defines the performance specifications for P/V vent valves as 3.0 plus or minus ( $\pm$ ) 0.5 inches water (H<sub>2</sub>O) (positive pressure) and -8.0  $\pm$  2.0 inches H<sub>2</sub>O (negative pressure).

The ARB staff has determined that increasing the P/V vent valve positive pressure cracking specification to 2.5 to 6.0 inches H<sub>2</sub>O will not cause an increase in emissions from EVR systems. The ARB staff has also determined that this change to the positive pressure specification would not adversely affect the safeguarding functions of the P/V valve for USTs. The ARB staff initially proposed changing the negative pressure cracking specification to 6.0 to 19.0 inches H<sub>2</sub>O. However, communications with stakeholders have indicated that there may be possible performance and safety issues associated with a vacuum greater than 10 inches H<sub>2</sub>O. Thus, at this time, a change is proposed only for the positive pressure cracking specification.

The proposed change to the positive cracking pressure is not intended to allow systems to routinely operate at higher pressures. The CP-201 specifications for UST pressure require that the 30-day rolling average “Daily Average Pressure” and “Daily High Pressure” be less than or equal to positive ( $\leq +$ ) 0.25 and  $\leq +1.50$  inches H<sub>2</sub>O, respectively. However, certain events (e.g., Phase I drops under certain conditions) may cause temporary increases in UST pressure that do not affect the overall performance of the system. ARB staff does not believe the proposed increase to the positive cracking pressure will impact EVR system performance as long as the UST rolling average pressure requirements are met.

Staff is also proposing to change the leak rate specification when subject to a negative pressure of -4.0 inches H<sub>2</sub>O from 0.21 cubic feet per hour (CFH) to 0.63 CFH. This change will make the specification consistent with the current certification practice of allowing GDF configurations with up to three P/V valves, each with an allowable leak rate of 0.21 CFH. Thus, the total leakrate of all P/V valves certified for use with any vapor recovery system shall not exceed 0.63 CFH at -4.0 inches H<sub>2</sub>O. This may be accomplished by manifolding the tank vent pipes into a single P/V valve or, alternatively, by choosing P/V valves certified to more restrictive leak rate performance specifications. In the latter case, individual P/V valves shall be tested and certified to a maximum leak rate of 0.63 CFH at -4.0 inches H<sub>2</sub>O divided by the maximum number of valves for which the system will be certified (normally this is three valves). The applicant shall state in the certification application the leak rates to which P/V valves are to be certified. All valves will be required to conform to the leak rate specifications as specified in the applicable certification Executive Order.

Section 3.5.3 has been expanded to more clearly discuss the use of multiple P/V valves at GDFs and Section 3.5.4 has been added to stipulate that Phase I certification sites shall be configured with three P/V valves.

The following table summarizes the proposed changes to the P/V valve specifications.

<b>Specification</b>	<b>Existing</b>	<b>Proposed</b>
Positive pressure cracking	2.5 to 3.5 inches H <sub>2</sub> O	2.5 to 6.0 inches H <sub>2</sub> O
Negative pressure cracking	6.0 to 10.0 inches H <sub>2</sub> O	No Change
Positive pressure leakrate	$\leq 0.17$ CFH at +2.0 inches H <sub>2</sub> O	No Change
Negative pressure leakrate	$\leq 0.21$ CFH at -4.0 inches H <sub>2</sub> O	$\leq 0.63$ CFH at -4.0 inches H <sub>2</sub> O

#### 4. Delete Section 3.4.4, Phase I Vapor Poppet Pressure Drop

Staff proposes to delete the specification requiring verification of the dynamic pressure drop of Phase I vapor adaptors. This specification was adopted in the 2000 EVR rulemaking without the procedure necessary to conduct the test. The specification is



not necessary as Phase I efficiency determinations would identify any vapor adaptor pressure drop issues.

## **Certification Process**

### **5. Amend Section 1.1, SWRCB Certification Approval**

In 2004, State law was changed with the enactment of Assembly Bill (AB) 2955 which now requires the SWRCB determine that equipment meeting the vapor recovery regulations also meets the underground storage tank statutory requirements. Staff proposes to add the SWRCB to the Section 1.1 list of agencies from which a written determination must be received.

### **6. Amend Section 4.5, Compatibility of Phase II Systems with Phase I Systems**

The performance specification for Phase II system compatibility with Phase I systems is currently linked to “excess emissions” from the Phase I system caused by the operation of the Phase II system. However, there is no specific procedure identified to make this determination and therefore compliance demonstration is uncertain. The ARB staff is proposing to determine compatibility of the proposed Phase II system with certified Phase I systems by performing the Phase I system tests specified in Section 3. Failure of any or all Phase I system tests conducted during the Phase II system certification would require an explanation from the applicant and a determination by ARB in regard to the possible cause of the failure. Phase I system test failures would not trigger termination of the Phase II system certification unless sufficient information demonstrates that the Phase II system caused the failure(s).

During Phase II certification tests, if any Phase I component is identified as having possible performance deficiencies, then an investigation of the component performance will be initiated by ARB. Holders of all executive Orders using the component in question will be notified of the pending investigation.

### **7. Section 4.12.5, rigid piping specification, renumbered to 4.11.5**

The specification for rigid piping has been clarified as piping material with a bend radius that exceeds six feet. The bend radius specification correlates to a TP-201.2G test result of a maximum deflection distance of 9 5/8 inches, as determined by TP-201.2G.

### **8. Section 9, Additional Requirements of Certification; Section 9 provisions moved to Sections 10 and 16**

The text in Section 9.1 (Financial Responsibility) has been moved to the proposed Section 10 and Section 16.4. The text in Sections 9.2 (Warranty), 9.3 (Installation, Operation and Maintenance of the System) and 9.4 (Identification of System

Components) has been moved to the proposed Sections 16.5, 16.6, and 16.7 respectively.

9. Re-number Section 10, In-Station Diagnostic Systems, as Section 9

10. Add Section 10, Certification of Vapor Recovery Systems

The proposed Section 10 will provide an introduction and a “roadmap” for the certification process. This section will provide a transition between the sections addressing standards and specifications (Sections 1 through proposed 9) and the sections addressing the certification process (Sections 11 through 19).

11. Amend Section 11, Application Process

Section 11 provides directions for submitting certification applications. Staff proposes to add a requirement that the applicant provide proposed defects and test protocols, as described in proposed Section 12.6, to determine if the component or system failure meets the criteria for a vapor recovery equipment defect (VRED). Staff also proposes to require that the applicant provide proposed challenge modes and test protocols, as described in proposed Section 12.7, to determine if the component or system meets the standards and specifications under various GDF operating conditions. Staff also proposes to require that the applicant provide, if applicable, a bellows insertion force specification and test protocol to verify compliance with Section 5.1.3.

12. Replace Section 12.6, Failure Mode Procedures and Test Results

Staff proposes to replace the existing Section 12.6, Failure Mode Procedures and Test Results, with Section 12.6, Equipment Defect Identification.

13. Add Section 12.7, Challenge Mode Determination

This proposed Section 12.7 will address whether additional testing is needed to ensure the system will meet the applicable standards and specifications under various GDF operating conditions.

14. Amend Section 13; Vapor Recovery System Certification Testing

The purpose of conducting tests on the Phase I system during Phase II system certifications is clarified.

15. Clarify Section 13.1.1

The minimum throughput requirement (150,000 gallons per month) for the application for certification test facilities has been clarified to be the minimum throughput of the

facility over a sequential six month period.

16. Add Sections 13.1.7 and 13.1.8

These Sections have been added to clarify the number of P/V vent valves required to be installed at Phase I and Phase II certification test sites, respectively.

17. Clarify Section 13.3

The minimum testing requirements have been clarified as a minimum operational test duration of 180 days and a minimum throughput of 900,000 gallons of gasoline.

18. Replace Section 13.4, Failure Mode Testing

Staff proposes to replace the existing Section 13.4, Failure Mode Testing, with Section 13.4, Equipment Defect and Challenge Mode Testing

19. Clarify Section 14.4, Testing of Alternate Test Procedures

Section 14.4 discusses the testing necessary to demonstrate the equivalence of proposed test procedures with adopted test procedures. The equivalence testing must follow the guidelines specified in US EPA Reference Method 301, "Field Validation of Pollutant Measurement Methods from Various Waste Media." However, Method 301 is not directly applicable for some test procedures. Staff has proposed that "For situations where Method 301 is not directly applicable, the Executive Officer shall establish equivalence based on the concepts of comparison with the established method and statistical analysis of bias and variance."

20. Move Section 15, Certification of Systems; Provisions moved to Section 16

The text in Sections 15.1 (One Vapor Recovery System per UST System), and 15.2 (Certification Not Transferable), has been moved to the proposed Section 16 (Duration and Conditions of Certification).

21. Replace Section 16, Certification of Vapor Recovery Systems and Components

Section 16, as currently adopted, is intended to address the transfer of vapor recovery components from one certified system to another certified system. This section allows for a case-by-case review of applications with ARB discretion to allow abbreviated tests, e.g., a minimum of a 30-day operational test rather than the full operational test of 180 days or more, under certain conditions. Section 16 contains a discussion of "system-specific" and "non-system-specific" components and provides language addressing the review and testing process for each category. The original intent was to require more stringent testing for "system-specific" component changes than for those defined as

“non-system-specific.” However, as written, Section 16 does not provide different review or testing requirements for the two categories, i.e., abbreviated testing is allowed, or additional testing required, in both cases at the discretion of the Executive Officer. Therefore, the separation of components into the two categories is unnecessary and staff proposes that the categories be eliminated in regard to the transfer of components from one certified system to another certified system. An expanded discussion of “Amendments to Executive Orders” has been added as proposed Section 18.

22. Re-number Section 17, Documentation of Certification, as Section 15

23. Re-number Section 18, Duration and Conditions of Certification, as Section 16

The text from Sections 9.1, 9.2, 9.3, 9.4, 15.1 and 15.2 has been moved into this Section. The text in Section 18.3, Performance Monitoring, has been addressed in the proposed Section 17. Section 18.2, Duration of Component Certification, has been deleted because the ARB does not certify individual components.

24. Add Section 17, Certification Renewal

The adopted Section 18.1 specifies that “Vapor Recovery Systems shall be certified for a period of four years. The certification Executive Order shall specify the date on which the certification shall expire if it is not reissued.” However, the currently adopted section did not discuss the renewal process. Staff proposes to add Section 17, Certification Renewal, to clarify the renewal request and review process.

25. Add Section 18, Amendments to Executive Orders

Staff proposes to add Section 18 to clarify the process for amending Executive Orders. Vapor recovery equipment manufacturers have requested that the regulations be modified to provide a more clearly defined and simplified process for making amendments to certified vapor recovery systems (authorized through Executive Orders). Vapor recovery system manufacturers may need to replace components as improvements in design or durability are incorporated or may choose to add an alternate component or a replacement component in a certified system (EO). Alternate or replacement components may be modifications to originally certified components, components originally certified on another certified system, or new components. In addition, manufacturers may want to reconfigure their vapor recovery equipment or make software updates to the ISD system.

26. Amend Section 19, Certifications that Have Been Terminated

Staff proposes that the caption for the section be made more specific. Section 19.2 has been deleted. Section 19.2.1 has been moved to Section 2.4. Sections 19.2.1(a),

19.2.1(b) and 19.2.2 are no longer applicable and will be deleted.

Section 19 has also been amended to include clarifications regarding replacement parts for certifications that have been revoked, superseded, or that have expired.

## 27. Clarifying Amendments

Other minor amendments have been made to CP-201 to correct test procedure references and improve the clarity and consistency of the procedure.

### **Commercial Availability**

In response to stakeholder concerns regarding the commercial availability of equipment when only one system or one component has been certified to meet a standard, staff proposes several changes to CP201. These changes would accommodate the need for certified equipment to be commercially available by the operative date of a standard and for equipment to be obtained in a timely manner.

## 28. Add Section 2.4.4, Commercial Availability of Vapor Recovery Systems

Proposed Section 2.4.4 includes the criterion that a vapor recovery system is considered commercially available if that system can be shipped within eight weeks of the receipt of an order by the equipment manufacturer. Four to six weeks is a typical shipping schedule for gasoline dispensing components such as gasoline dispensers. However, an eight week delay in shipment would indicate that a manufacturer cannot ship the system within the normal timeframe. Eight weeks is also consistent with the amount of time typically needed to apply for and obtain air pollution and underground storage tank permits and schedule installation of gasoline dispensing equipment.

## 29. Amend and Re-number Section 9.1 to 16.4, Financial Responsibility

In order for ARB to make a determination of financial responsibility before the certification of a system, information is requested of an applicant. Staff proposes to add a provision that if no system has been certified to meet a new or amended standard, the applicant is requested to provide additional financial and manufacturing information to the Executive Officer. The Executive Officer will then determine whether the applicant can be projected to meet the market demand for a certified system by the operative date of the standard. If the Executive Officer determines that a compliant system will not be available by the operative date of a standard, Section 2.4.4 of the proposed CP-201 requires that the operative date shall be extended.

## 30. Amend Section 19.1

Staff proposes to amend Section 19.1 to include the criterion for commercial availability of a vapor recovery replacement component as commercially available if the component can be shipped within three weeks of the receipt of an order by the equipment manufacturer. From a survey of parts suppliers, staff determined that replacement components can generally be shipped within one to two weeks of a purchase order. However, a delay of three weeks would indicate that a component manufacturer cannot ship the replacement component within the normal timeframe.

### **Proposed New Test Procedure**

#### **31. Leak Rate and Cracking Pressure of Pressure-Vacuum Vent Valves (TP-201.1E CERT)**

The currently adopted test procedure TP-201.1E, *Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves*, verifies that P/V valves do not exceed the allowable cracking pressures and leak rates specified in CP-201. The adopted test procedure can be used both for certification of P/V valves and compliance testing. Staff is proposing to adopt a new test procedure, TP-201.1E CERT, which would be applicable to certification testing only.

Stakeholders have been critical of certain aspects of the adopted test procedure, TP-201.1E. The adopted procedure requires that a “sudden flow” of nitrogen be applied to the P/V vent valve to determine the cracking pressure. A gradual pressure build-up, rather than a sudden flow, may better reflect GDF operating conditions. Some commented that the 1) field versus bench test assembly volumes, and 2) manometer response time, combined with the sudden flow testing procedure may account for the variability in test results.

A more gradual increase in pressure or vacuum flow can be accomplished with the addition of a surge tank to the test assembly. The addition of a surge tank increases the volume of the test assembly. The equivalence of the proposed amendment has been demonstrated through comparison tests as outlined in US EPA Method 301. Although equivalent, proposed TP-201.1E CERT cannot be used as a compliance test because of the installation of ball valves in the vent pipe is required, making the test appropriate only for certification testing. The currently adopted TP-201.1E would continue to be used by Districts for compliance testing.

The proposed TP-201.1E CERT also includes:

- A requirement to average three test runs for cracking pressures, and
- A test-method error tolerance for data reporting.

The precision information included in Section 4 of TP-201.1E CERT may be reviewed or updated by the Executive Officer as additional information becomes available. Also,

the method precision for leak flow rates has not been estimated and may be added by the Executive Officer as additional information becomes available.

### **Proposed Modifications to Test Procedures**

#### 32. Test Procedure for In-Station Diagnostic Systems (TP-201.2I)

Staff proposes to delete Section 9.12 of TP-201.2I, *Test Procedure for In-Station Diagnostic Systems*, since that section applies to a regulatory requirement that was removed as part of the December, 2002 EVR Technology Review Rulemaking.

#### 33. Test Procedure for Bend Radius Determination for Underground Storage Tank Vapor Return Piping

Staff proposes to modify Section 7.2 of TP-201.2G, *Test Procedure for Bend Radius Determination for Underground Storage Tank Vapor Return Piping*, to correctly reference the specification in CP-201 Section 4.11.5 (as re-numbered).

### **Changes Without Regulatory Effect**

Minor editorial corrections have been made to grammar and terminology throughout the certification and test procedures. The editorial corrections do not make any substantive changes to the certification and test procedures.

## **V. OUTSTANDING ISSUES**

### Commercial Availability

#### 1. First Certified System is Sole Source until Second System is Certified

Stakeholders commented that before a vapor recovery standard becomes operative there should be a minimum of two manufacturers with certified systems.

The adopted regulations allow a standard to become operative as soon as one manufacturer certifies a system provided that the certified system is commercially available. Requiring two manufacturers to certify systems before the operative date of a standard would discourage the timely development and use of more effective emission control technologies and the implementation of regulations that are intended to be technology forcing. Since vapor recovery regulations were first adopted in the 1970s, there have been periods stretching from weeks to years when only one certified system or component was available. If ARB had to wait for the second certification of a compliant system before implementing a standard, the emission reductions resulting from that standard would be delayed for periods

lasting from weeks to years. In addition, requiring that two systems be certified before a standard is operative is a disincentive for an applicant to invest in certifying the first system, since that company will not have a market for the certified system until another company certifies a second system.

Under EVR, ARB staff has recognized the potential disruption to the construction of gasoline dispensing facilities or major modifications of existing facilities that could occur if the only certified system is not commercially available. ARB staff has in place a number of procedures to monitor the commercial availability of systems and will continue monitoring availability of EVR systems throughout the four year phase-in period of the Phase II system standards. Staff obtains periodic reports from equipment manufacturers to determine that vapor recovery systems are shipped within eight weeks of the receipt of a purchase order by the manufacturer. If delivery of vapor recovery equipment is delayed, gasoline dispensing facilities can report directly to ARB, using a form available on the internet. Finally, ARB staff communicates frequently with district staff and equipment manufacturers in order to anticipate whether there may be a shortage of certified equipment available as regulatory deadlines approach.

The existing regulations already allow the Executive Officer to delay the operative date of the new performance standards or specifications, if a certified system is not commercially available. For these reasons, no changes to existing regulations are being proposed.

## 2. Criteria for System Commercial Availability

In order to be considered commercially available, stakeholders have argued that a vapor recovery system must be available to be shipped within six weeks of placing an order with the manufacturer.

The determination of commercial availability is made by the ARB Executive Officer. However, specific criteria are not presently established to facilitate such a determination. The proposed regulation would authorize the Executive Officer to make a finding that the system is not commercially available when there is only one certified system and it cannot be shipped within eight weeks of receiving an order.

ARB staff has determined typical shipping schedules by surveying distributors, equipment manufacturers, and gasoline marketers. Based on these surveys, ARB staff found that four to six weeks is a typical shipping schedule. If the manufacturer cannot ship the system within eight weeks, this means that the typical shipping timeframe cannot be met. Staff recommends that eight weeks, not six weeks, be the appropriate timeframe for determination of commercial availability of a vapor recovery system.



### 3. Criteria for Component Commercial Availability

Stakeholders have argued that the test of commercial availability for a replacement component should be shipment of a component that meets newly operative standards within one week of the receipt of a purchase order.

As mentioned in issue #2 above, specific criteria are not presently established to facilitate a commercial availability determination by the Executive Officer. The proposal would authorize the Executive Officer to make a finding that a component is not commercially available when the newly certified component cannot be shipped within three weeks of receiving an order. From a survey of parts suppliers, ARB staff determined that replacement components are routinely shipped between one and two weeks after a purchase order has been placed with the manufacturer. A delay of three weeks indicates that a component manufacturer cannot ship the replacement component within the normal timeframe. Staff recommends that three weeks, not one week, should be the appropriate timeframe for determination of commercial availability of a vapor recovery component.

### 4. Potential for Price Gouging

Stakeholders believe that if only one manufacturer has a certified system to meet a standard, price gouging will occur.

There are currently no requirements in the adopted regulations specifying the retail costs for a certified vapor recovery system. Price gouging has not been documented for either the first certified Phase I EVR system or the first certified Phase II EVR system. There has been no price gouging reported since the Healy Phase II EVR system was certified in April 2005. Similarly, between June 2001, and October 2002, when Phil-Tite was the only manufacturer of a Phase I EVR system, the cost of this system was comparable to that of non-EVR Phase I systems. ARB staff will continue to monitor the costs of the first certified vapor recovery system until a second certified system becomes available. No changes to existing regulations are being proposed.

## **VI. ECONOMIC AND ENVIRONMENTAL IMPACTS**

### A. Economic Impact of Proposed Amendments

As indicated in Table VI-1, all of the procedures proposed for amendment or adoption are used for vapor recovery system certification by ARB staff. Manufacturers also use the certification procedures in the development of vapor recovery systems and components and to generate data for certification applications.

**Table VI-1  
Summary of Economic Impacts for Proposed Vapor Recovery Procedures**

<b>Procedure</b>	<b>Certification, Compliance or Both</b>	<b>Proposed Changes</b>	<b>Economic Impacts</b>
D-200	NA	Definitions	none
CP-201	Cert	Certification standards, certification process	Possible cost savings
TP-201.1E CERT	Cert	New procedure	Possible cost savings
TP-201.2G	Cert	minor correction	none
TP-201.2I	Cert	update	none

Cost savings for vapor recovery equipment manufacturers may occur due to: 1) proposed changes to the Phase I/Phase II compatibility requirements (potentially fewer terminated Phase II certification tests), 2) proposed changes to the P/V valve performance specifications and test procedure (potentially fewer terminated Phase I system certification tests), and 3) proposed changes to the Executive Order amendment process (more clearly defined, potentially simplified process).

Cost savings for GDF operators may occur, in regard to P/V valve compliance testing, due to proposed changes to the P/V valve performance specifications (i.e., fewer test failures and P/V valve replacements).

**B. Environmental Impacts of Proposed Amendments**

The proposed amendments are not expected to affect the emissions reductions attributed to the vapor recovery program.

**VII. ALTERNATIVES CONSIDERED**

Staff has considered, as an alternative, the option of not adopting the proposed vapor recovery proposals. Not approving the proposed amendments and adoption of the certification and test procedures would be detrimental for the following reasons:

- A. May increase the timeframe of Phase I and Phase II vapor recovery certification tests without a commensurate air quality benefit.
- B. May increase the cost of certification testing for Executive Order amendments without a commensurate air quality benefit.
- C. May lead to higher compliance costs for GDFs without a commensurate air quality benefit.
- D. May lead to less accurate, precise, and representative testing of P/V vent valves during the certification process without the proposed test procedure, TP-201.1E CERT.

E. Would not update the regulations to formalize the statutory requirements of AB 2955.

## **VIII. REFERENCES**

1. January 31, 2005 Letter from George Lew, Air Resources Board to Vapor Recovery Stakeholders Regarding Proposed Changes to P/V Valve Cracking Specifications.
2. April 20, 2005 Letter from George Lew, Air Resources Board to Vapor Recovery Stakeholders Regarding Proposed Changes to P/V Valve Cracking Specifications.

## Appendix 1

### Proposed Amendments to California Code of Regulations

## FINAL REGULATION ORDER

Note: ~~Strikeout~~ indicates deleted text; underline indicates inserted text.

### Amend Title 17, California Code of Regulations, Section 94011 to read:

§ 94011. Certification of Vapor Recovery Systems of Dispensing Facilities.

The certification of gasoline vapor recovery systems at dispensing facilities (service stations) shall be accomplished in accordance with the Air Resources Board's CP-201, "Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities" which is herein incorporated by reference. (Adopted: December 9, 1975, as last amended February 9, 2005 *[date of amendment to be inserted]*).

The following test procedures (TP) cited in CP-201 are also incorporated by reference.

TP-201.1 – "Volumetric Efficiency for Phase I Systems" (Adopted: April 12, 1996, as last amended October 8, 2003)

TP-201.1A – "Emission Factor For Phase I Systems at Dispensing Facilities" (Adopted: April 12, 1996, as last amended February 1, 2001)

TP-201.1B – "Static Torque of Rotatable Phase I Adaptors" (Adopted: July 3, 2002, as last amended October 8, 2003)

TP-201.1C – "Leak Rate of Drop Tube/Drain Valve Assembly" (Adopted: July 3, 2002, as last amended October 8, 2003)

TP-201.1D – "Leak Rate of Drop Tube Overfill Prevention Devices" (Adopted: February 1, 2001, as last amended October 8, 2003)

TP-201.1E – "Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves" (Adopted: October 8, 2003)

TP-201.1E CERT – "Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves" (Adopted: *[date of adoption to be inserted]*)

TP-201.2 – "Efficiency and Emission Factor for Phase II Systems" (Adopted: April 12, 1996, as last amended October 8, 2003)

TP-201.2A – "Determination of Vehicle Matrix for Phase II Systems" (Adopted: April 12, 1996, as last amended February 1, 2001)

TP-201.2B – "Flow and Pressure Measurement of Vapor Recovery Equipment"

(Adopted: April 12, 1996, as last amended October 8, 2003)

TP-201.2C – “Spillage from Phase II Systems” (Adopted: April 12, 1996, as last amended February 1, 2001)

TP-201.2D – “Post-Fueling Drips from Nozzle Spouts” (Adopted: February 1, 2001, as last amended October 8, 2003)

TP-201.2E – “Gasoline Liquid Retention in Nozzles and Hoses” (Adopted: February 1, 2001)

TP-201.2F – “Pressure-Related Fugitive Emissions” (Adopted: February 1, 2001, as last amended October 8, 2003)

TP-201.2G – “Bend Radius Determination for Underground Storage Tank Vapor Recovery Components” (Adopted: October 8, 2003, as last amended *[date of amendment to be inserted]*)

TP-201.2H – “Determination of Hazardous Air Pollutants from Vapor Recovery Processors” (Adopted: February 1, 2001)

TP-201.2I – “Test Procedure for In-Station Diagnostic Systems” (Adopted: October 8, 2003, as last amended *[date of amendment to be inserted]*)

TP-201.2J – “Pressure Drop Bench Testing of Vapor Recovery Components” (Adopted: October 8, 2003)

TP-201.3 – “Determination of 2 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities” (Adopted: April 12, 1996, as last amended March 17, 1999)

TP-201.3A – “Determination of 5 Inch WC Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities” (Adopted: April 12, 1996)

TP-201.3B - "Determination of Static Pressure Performance of Vapor Recovery Systems of Dispensing Facilities with Above-Ground Storage Tanks" (Adopted: April 12, 1996)

TP-201.3C – “Determination of Vapor Piping Connections to Underground Gasoline Storage Tanks (Tie-Tank Test)” (Adopted: March 17, 1999)

TP-201.4 – “Dynamic Back Pressure” (Adopted: April 12, 1996, as last amended July 3, 2002)

TP-201.5 – “Air to Liquid Volume Ratio” (Adopted: April 12, 1996, as last amended February 1, 2001)

TP-201.6 – “Determination of Liquid Removal of Phase II Vapor Recovery Systems of Dispensing Facilities” (Adopted: April 12, 1996, as last amended April 28, 2000)

TP-201.6C – "Compliance Determination of Liquid Removal Rate" (Adopted: July 3, 2002)

TP-201.7 – “Continuous Pressure Monitoring” (Adopted: October 8, 2003)

NOTE: Authority cited: Sections 25290.1.2, 39600, 39601, 39607 and 41954, Health and Safety Code. Reference: Sections 25290.1.2, 39515, 41952, 41954, 41956.1, 41959, 41960 and 41960.2, Health and Safety Code.

## Appendix 2

### Proposed Amendments of Vapor System Certification and Test Procedures



## Appendix 3

### Vapor Recovery Health and Safety Code Statutes

## **H&S 25290.1.2**

25290.1.2(a) The board and the State Air Resources Board, under the direction of the California Environmental Protection Agency, shall certify to the best of their knowledge, that the equipment that meets the requirements of Section 94011 of Title 17 of the California Code of Regulations for enhanced vapor recovery systems at gasoline dispensing facilities, as implemented by the State Air Resources Board, also meets the requirements of this chapter. The board and the State Air Resources Board shall make this certification collaboratively, using existing resources.

(b) The board and the State Air Resources Board, under the direction of the California Environmental Protection Agency, when making the certification specified in subdivision (a), shall consult with interested parties, including local implementing agencies, underground storage tank system owners and operators, equipment manufacturers, underground storage tank system installers, and environmental organizations.

(c) The board and the State Air Resources Board shall post the certification and any supporting documentation on their Web sites.

(d) This section shall be implemented by the executive directors of the board and of the State Air Resources Board, or by their designees.

SEC.4. Section 25299.51 of the Health and Safety Code is amended to read:

25299.51. The board may expend the money in the fund for all the following purposes:

(a) In addition to the purposes specified in subdivisions (c), (d), and (e), for the costs of implementing this chapter and for implementing Section 25296.10 for a tank that is subject to this chapter.

(b) To pay for the administrative costs of the State Board of Equalization in collecting the fee imposed by Article 5 (commencing with Section 25299.40).

(c) To pay for the reasonable and necessary costs of corrective action pursuant to Section 25299.36, up to one million five hundred thousand dollars (\$1,500,000) per occurrence. The Legislature may appropriate the money in the fund for expenditure by the board, without regard to fiscal year, for prompt action in response to any unauthorized release.

(d) To pay for the costs of an agreement for the abatement of, and oversight of the abatement of, an unauthorized release of hazardous substances from underground storage tanks, by a local agency, as authorized by Section 25297.1 or by any other provision of law, except that, for the purpose of expenditure of these funds, only underground storage tanks, as defined in Section 25299.24, shall be the subject of the agreement.

(e) To pay for the costs of cleanup and oversight of unauthorized releases at abandoned tank sites. The board shall not expend more than 25 percent of the total amount of money collected and deposited in the fund annually for the purposes of this subdivision and subdivision (h).

(f) To pay claims pursuant to Section 25299.57.

- (g) To pay, upon order of the Controller, for refunds pursuant to Part 26 (commencing with Section 50101) of Division 2 of the Revenue and Taxation Code.
- (h) To pay for the reasonable and necessary costs of corrective action pursuant to subdivision (f) of Section 25296.10, in response to an unauthorized release from an underground storage tank subject to this chapter.
- (i) To pay claims pursuant to Section 25299.58.
- (j) To pay for expenditures by the board associated with discovering violations of, and enforcing, or assisting in the enforcement of, the requirements of Chapter 6.7 (commencing with Section 25280) with regard to petroleum underground storage tanks.

### **H&S 41950 Vapor Recovery Systems for Stationary Gas Tanks**

41950. (a) Except as provided in subdivisions (b) and (e), no person shall install or maintain any stationary gasoline tank with a capacity of 250 gallons or more which is not equipped for loading through a permanent submerged fill pipe, unless such tank is a pressure tank as described in Section 41951, or is equipped with a vapor recovery system as described in Section 41952 or with a floating roof as described in Section 41953, or unless such tank is equipped with other apparatus of equal efficiency which has been approved by the air pollution control officer in whose district the tank is located.

(b) Subdivision (a) shall not apply to any stationary tanks installed prior to December 31, 1970.

(c) For the purpose of this section, "gasoline" means any petroleum distillate having a Reid vapor pressure of four pounds or greater.

(d) For the purpose of this section, "submerged fill pipe" means any fill pipe which has its discharge opening entirely submerged when the liquid level is six inches above the bottom of the tank. "Submerged fill pipe," when applied to a tank which is loaded from the side, means any fill pipe which has its discharge opening entirely submerged when the liquid level is 18 inches above the bottom of the tank.

(e) Subdivision (a) shall not apply to any stationary tank which is used primarily for the fueling of implements of husbandry.

(Added by Stats. 1975, Ch. 957.)

### **H&S 41951 Definition of Pressure Tank**

41951. A "pressure tank" is a tank which maintains working pressure sufficient at all times to prevent hydrocarbon vapor or gas loss to the atmosphere.

(Added by Stats. 1975, Ch. 957.)

### **H&S 41952 Definition of Vapor Recovery System**

41952. A "vapor recovery system" consists of a vapor gathering system capable of collecting the hydrocarbon vapors and gases discharged and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent their emission into the atmosphere, with all tank gauging and sampling devices gastight except when gauging or sampling is taking place.

(Added by Stats. 1975, Ch. 957.)

### **H&S 41953 Definition of Floating Roof**

41953. A "floating roof" consists of a pontoon-type or double-deck-type roof, resting on the surface of the liquid contents and equipped with a closure seal, or seals, to close the space between the roof edge and tank wall. The control equipment required by this section shall not be used if the gasoline or petroleum distillate has a vapor pressure of 11.0 pounds per square inch absolute or greater under actual storage conditions. All tank gauging and sampling devices shall be gastight except when gauging or sampling is taking place.

(Added by Stats. 1975, Ch. 957.)

### **H&S 41954 ARB Shall Certify Vapor Recovery Systems**

41954. (a) The state board shall adopt procedures for determining the compliance of any system designed for the control of gasoline vapor emissions during gasoline marketing operations, including storage and transfer operations, with performance standards that are reasonable and necessary to achieve or maintain any applicable ambient air quality standard.

(b) The state board shall, after a public hearing, adopt additional performance standards that are reasonable and necessary to ensure that systems for the control of gasoline vapors resulting from motor vehicle fueling operations do not cause excessive gasoline liquid spillage and excessive evaporative emissions from liquid retained in the dispensing

nozzle or vapor return hose between refueling events, when used in a proper manner. To the maximum extent practicable, the additional performance standards shall allow flexibility in the design of gasoline vapor recovery systems and their components.

(c) (1) The state board shall certify, in cooperation with the districts, only those gasoline vapor control systems that it determines will meet the following requirements, if properly installed and maintained:

(A) The systems will meet the requirements of subdivision (a).

(B) With respect to any system designed to control gasoline vapors during vehicle refueling, that system, based on an engineering evaluation of that system's component qualities, design, and test performance, can be expected, with a high degree of certainty, to comply with that system's certification conditions over the warranty period specified by the board.

(C) With respect to any system designed to control gasoline vapors during vehicle refueling, that system shall be compatible with vehicles equipped with onboard refueling vapor recovery (ORVR) systems.

(2) The state board shall enumerate the specifications used for issuing the certification. After a system has been certified, if circumstances beyond the control of the state board cause the system to no longer meet the required specifications or standards, the state board shall revoke or modify the certification.

(d) The state board shall test, or contract for testing, gasoline vapor control systems for the purpose of determining whether those systems may be certified.

(e) The state board shall charge a reasonable fee for certification, not to exceed its actual costs therefor. Payment of the fee shall be a condition of certification.

(f) No person shall offer for sale, sell, or install any new or rebuilt gasoline vapor control system, or any component of the system, unless the system or component has been certified by the state board and is clearly identified by a permanent identification of the certified manufacturer or rebuilder.

(g) (1) Except as authorized by other provisions of law and except

as provided in this subdivision, no district may adopt, after July 1, 1995, stricter procedures or performance standards than those adopted by the state board pursuant to subdivision (a), and no district may enforce any of those stricter procedures or performance standards.

(2) Any stricter procedures or performance standards shall not require the retrofitting, removal, or replacement of any existing system, which is installed and operating in compliance with applicable requirements, within four years from the effective date of those procedures or performance standards, except that existing requirements for retrofitting, removal, or replacement of nozzles with nozzles containing vapor-check valves may be enforced commencing July 1, 1998.

(3) Any stricter procedures or performance standards shall not be implemented until at least two systems meeting the stricter performance standards have been certified by the state board.

(4) If the certification of a gasoline vapor control system, or a component thereof, is revoked or modified, no district shall require a currently installed system, or component thereof, to be removed for a period of four years from the date of revocation or modification.

(h) No district shall require the use of test procedures for testing the performance of a gasoline vapor control system unless those test procedures have been adopted by the state board or have been determined by the state board to be equivalent to those adopted by the state board, except that test procedures used by a district prior to January 1, 1996, may continue to be used until January 1, 1998, without state board approval.

(i) With respect to those vapor control systems subject to certification by the state board, there shall be no criminal or civil proceedings commenced or maintained for failure to comply with any statute, rule, or regulation requiring a specified vapor recovery efficiency if the vapor control equipment which has been installed to comply with applicable vapor recovery requirements meets both of the following requirements:

(1) Has been certified by the state board at an efficiency or emission factor required by applicable statutes, rules, or regulations.

(2) Is installed, operated, and maintained in accordance with the requirements set forth in the document certification and the instructions of the equipment manufacturer.

(Amended by Stats. 2000, Ch. 729, Sec. 14.)

References at the time of publication (see page iii):

Regulations:

17, CCR, Sections 94006, 94010, 94011, 94012, 94013, 94014, 94015, 94148, 94149, 94150, 94151, 94152, 94153, 94154, 94155, 94156, 94157, 94158, 94159, 94160, 94163

### **H&S 41955 Certification Required by Other Agencies**

41955. Prior to state board certification of a gasoline vapor control system pursuant to Section 41954, the manufacturer of the system shall submit the system to, or, if appropriate, the components of the system as requested by, the Division of Measurement Standards of the Department of Food and Agriculture and the State Fire Marshal for their certification.

(Added by Stats. 1976, Ch. 1030.)

### **H&S 41956 Other Agencies to Adopt Rules for Certification**

41956. (a) As soon as possible after the effective date of this section, the State Fire Marshal and the Division of Measurement Standards, after consulting with the state board, shall adopt rules and regulations for the certification of gasoline vapor control systems and components thereof.

(b) The State Fire Marshal shall be the only agency responsible for determining whether any component or system creates a fire hazard. The division shall be the only agency responsible for the measurement accuracy aspects, including gasoline recirculation of any component or system.

(c) Within 120 days after the effective date of this subdivision, the Division of Measurement Standards, shall, after public hearing, adopt rules and regulations containing additional performance standards and standardized certification and compliance test procedures which are reasonable and necessary to prevent gasoline recirculation in systems for the control of gasoline vapors resulting from motor vehicle fueling operations.

(Amended by Stats. 1981, Ch. 902.)

## **H&S 41956.1 Revision of Standards for Vapor Recovery Systems**

41956.1. (a) Whenever the state board, the Division of Measurement Standards of the Department of Food and Agriculture, or the State Fire Marshal revises performance or certification standards or revokes a certification, any systems or any system components certified under procedures in effect prior to the adoption of revised standards or the revocation of the certification and installed prior to the effective date of the revised standards or revocation may continue to be used in gasoline marketing operations for a period of four years after the effective date of the revised standards or the revocation of the certification. However, all necessary repair or replacement parts or components shall be certified.

(b) Notwithstanding subdivision (a), whenever the State Fire Marshal determines that a system or a system component creates a hazard to public health and welfare, the State Fire Marshal may prevent use of the particular system or component.

(c) Notwithstanding subdivision (a), the Division of Measurement Standards may prohibit the use of any system or any system component if it determines on the basis of test procedures adopted pursuant to subdivision (c) of Section 41956, that use of the system or component will result in gasoline recirculation.

(Amended by Stats. 1996, Ch. 426, Sec. 2.)

References at the time of publication (see page iii):

Regulations: 17, CCR, Section 94011

## **H&S 41957 Division of Industrial Safety Responsibilities**

41957. The Division of Occupational Safety and Health of the Department of Industrial Relations is the only agency responsible for determining whether any gasoline vapor control system, or component thereof, creates a safety hazard other than a fire hazard.

If the division determines that a system, or component thereof, creates a safety hazard other than a fire hazard, that system or component may not be used until the division has certified that the system or component, as the case may be, does not create that hazard.



The division, in consultation with the state board, shall adopt the necessary rules and regulations for the certification if the certification is required.

(Amended by Stats. 1981, Ch. 714.)

### **H&S 41958 Rules Shall Allow for Flexibility in Design**

41958. To the maximum extent practicable, the rules and regulations adopted pursuant to Sections 41956 and 41957 shall allow flexibility in the design of gasoline vapor control systems and their components. The rules and regulations shall set forth the performance standards as to safety and measurement accuracy and the minimum procedures to be followed in testing the system or component for compliance with the performance standards.

The State Fire Marshal, the Division of Occupational Safety and Health, and the Division of Measurement Standards shall certify any system or component which complies with their adopted rules and regulations. Any one of the state agencies may certify a system or component on the basis of results of tests performed by any entity retained by the manufacturer of the system or component or by the state agency. The requirements for the certification of a system or component shall not require that it be tested, approved, or listed by any private entity, except that certification testing regarding recirculation of gasoline shall include testing by an independent testing laboratory.

(Amended by Stats. 1982, Ch. 466, Sec. 72.)

### **H&S 41959 Certification Testing**

41959. Certification testing of gasoline vapor control systems and their components by the state board, the State Fire Marshal, the Division of Measurement Standards, and the Division of Occupational Safety and Health may be conducted simultaneously.

(Amended by Stats. 1981, Ch. 714.)

References at the time of publication (see page iii):

Regulations: 17, CCR, Sections 94010, 94011, 94012, 94013

### **H&S 41960 Certification by State Agencies Sufficient**

41960. (a) Certification of a gasoline vapor recovery system for safety and measurement accuracy by the State Fire Marshal and the Division of Measurement Standards and, if necessary, by the Division of Occupational Safety and Health shall permit its installation wherever required in the state, if the system is also certified by the state board.

(b) Except as otherwise provided in subdivision (g) of Section 41954, no local or regional authority shall prohibit the installation of a certified system without obtaining concurrence from the state agency responsible for the aspects of the system which the local or regional authority disapproves.

(Amended by Stats. 1996, Ch. 426, Sec. 3.)

References at the time of publication (see page iii):

Regulations: 17, CCR, Sections 94011, 94012, 94013

### **H&S 41960.1 Operation in Accordance with Standards**

41960.1. (a) All vapor control systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall be operated in accordance with the applicable standards established by the State Fire Marshal or the Division of Measurement Standards pursuant to Sections 41956 to 41958, inclusive.

(b) When a sealer or any authorized employee of the Division of Measurement Standards determines, on the basis of applicable test procedures of the division, adopted after public hearing, that an individual system or component for the control of gasoline vapors resulting from motor vehicle fueling operations does not meet the applicable standards established by the Division of Measurement Standards, he or she shall take the appropriate action specified in Section 12506 of the Business and Professions Code.

(c) When a deputy State Fire Marshal or any authorized employee of a fire district or local or regional firefighting agency determines that a component of a system for the control of gasoline vapors resulting from motor vehicle fueling operations does not meet the applicable standards established by the State Fire Marshal, he or she shall mark the component "out of order." No person shall use or permit the use of the component until the component has been repaired, replaced, or adjusted, as necessary, and either the component has been

inspected by a representative of the agency employing the person originally marking the component, or the person using or permitting use of the component has been expressly authorized by the agency to use the component pending reinspection.

(Added by Stats. 1981, Ch. 902.)

### **H&S 41960.2 Maintenance of Installed Systems**

41960.2. (a) All installed systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall be maintained in good working order in accordance with the manufacturer's specifications of the system certified pursuant to Section 41954.

(b) Whenever a gasoline vapor recovery control system is repaired or rebuilt by someone other than the original manufacturer or its authorized representative, the person shall permanently affix a plate to the vapor recovery control system that identifies the repairer or rebuilder and specifies that only certified equipment was used. In addition, a rebuilder of a vapor control system shall remove any identification of the original manufacturer if the removal does not affect the continued safety or performance of the vapor control system.

(c) (1) The executive officer of the state board shall identify and list equipment defects in systems for the control of gasoline vapors resulting from motor vehicle fueling operations that substantially impair the effectiveness of the systems in reducing air contaminants. The defects shall be identified and listed for each certified system and shall be specified in the applicable certification documents for each system.

(2) On or before January 1, 2001, and at least once every three years thereafter, the list required to be prepared pursuant to paragraph (1) shall be reviewed by the executive officer at a public workshop to determine whether the list requires an update to reflect changes in equipment technology or performance.

(3) Notwithstanding the timeframes for the executive officer's review of the list, as specified in paragraph (2), the executive officer may initiate a public review of the list upon a written request that demonstrates, to the satisfaction of the executive officer, the need for such a review. If the executive officer determines that an update is required, the update shall be completed no later than 12 months after the date of the determination.

(d) When a district determines that a component contains a defect specified pursuant to subdivision (c), the district shall mark the component "Out of Order." No person shall use or permit the use of the component until the component has been repaired, replaced, or adjusted, as necessary, and the district has reinspected the component or has authorized use of the component pending reinspection.

(e) Where a district determines that a component is not in good working order but does not contain a defect specified pursuant to subdivision (c), the district shall provide the operator with a notice specifying the basis on which the component is not in good working order. If, within seven days, the operator provides the district with adequate evidence that the component is in good working order, the operator shall not be subject to liability under this division.

(Amended by Stats. 1999, Ch. 501, Sec. 1.)

References at the time of publication (see page iii):

Regulations: 17, CCR, Sections 94006, 94010, 94011

### **H&S 41960.3 Telephone Number for Reporting Problems**

41960.3. (a) Each district which requires the installation of systems for the control of gasoline vapors resulting from motor vehicle fueling operations shall establish a toll free telephone number for use by the public in reporting problems experienced with the systems. Districts within an air basin or adjacent air basin may enter into a cooperative program to implement this requirement. All complaints received by a district shall be recorded on a standardized form which shall be established by the state board, in consultation with districts, the State Fire Marshal, and the Division of Measurement Standards in the Department of Food and Agriculture. The operating instructions required by Section 41960.4 shall be posted at all service stations at which systems for the control of gasoline vapors resulting from motor vehicle fueling operations are installed and shall include a prominent display of the toll free telephone number for complaints in the district in which the station is located.

(b) Upon receipt of each complaint, the district shall diligently either investigate the complaint or refer the complaint for investigation by the state or local agency which properly has jurisdiction over the primary subject of the complaint. When the

investigation has been completed, the investigating agency shall take such remedial action as is appropriate and shall advise the complainant of the findings and disposition of the investigation. A copy of the complaint and response to the complaint shall be forwarded to the state board.

(Amended by Stats. 1986, Ch. 194, Sec. 1.)

#### **H&S 41960.4 Operating Instructions**

41960.4. The operator of each service station utilizing a system for the control of gasoline vapors resulting from motor vehicle fueling operations shall conspicuously post operating instructions for the system in the gasoline dispensing area. The instructions shall clearly describe how to fuel vehicles correctly with vapor recovery nozzles utilized at the station and shall include a warning that repeated attempts to continue dispensing, after the system having indicated that the vehicle fuel tank is full, may result in spillage or recirculation of gasoline.

(Added by Stats. 1981, Ch. 902.)

#### **H&S 41960.5 Nozzle Size Requirements**

41960.5. (a) No retailer, as defined in Section 20999 of the Business and Professions Code, shall allow the operation of any gasoline pump from which leaded gasoline is dispensed, or which is labeled as providing leaded gasoline, unless the pump is equipped with a nozzle spout meeting the required specifications for leaded gasoline nozzle spouts set forth in Title 40, Code of Federal Regulations, Section 80.22(f)(1).

(b) For the purpose of this section, "leaded gasoline" means gasoline which is produced with the use of any lead additive or which contains more than 0.05 gram of lead per gallon or more than 0.005 gram of phosphorus per gallon.

(Added by Stats. 1987, Ch. 592, Sec. 2.)

#### **H&S 41960.6 Fuel Pump Nozzles**

41960.6. (a) No retailer, as defined in subdivision (g) of Section 20999 of the Business and Professions Code, shall, on or after July 1, 1992, allow the operation of a pump, including any pump owned or operated by the state, or any county, city and county, or city,

equipped with a nozzle from which gasoline or diesel fuel is dispensed, unless the nozzle is equipped with an operating hold open latch. Any hold open latch determined to be inoperative by the local fire marshal or district official shall be repaired or replaced by the retailer, within 48 hours after notification to the retailer of that determination, to avoid any applicable penalty or fine.

(b) For purposes of this section, a "hold open latch" means any device which is an integral part of the nozzle and is manufactured specifically for the purpose of dispensing fuel without requiring the consumer's physical contact with the nozzle.

(c) Subdivision (a) does not apply to nozzles at facilities which are primarily in operation to refuel marine vessels or aircraft.

(d) Nothing in this section shall affect the current authority of any local fire marshal to establish and maintain fire safety provisions for his or her jurisdiction.

(Added by Stats. 1991, Ch. 468, Sec. 2.)

### **H&S 41961 Fees for Certification**

41961. The State Fire Marshal, the Division of Measurement Standards, and the Division of Occupational Safety and Health may charge a reasonable fee for certification of a gasoline vapor control system or a component thereof, not to exceed their respective estimated costs therefor. Payment of the fee may be made a condition of certification. All money collected by the State Fire Marshal pursuant to this section shall be deposited in the State Fire Marshal Licensing and Certification Fund established pursuant to Section 13137, and shall be available to the State Fire Marshal upon appropriation by the Legislature to carry out the purposes of this article.

(Amended by Stats. 1992, Ch. 306, Sec. 5. Effective January 1, 1993. Operative July 1, 1993, by Sec. 6 of Ch. 306.)

### **H&S 41962 Vapor Recovery Systems on Cargo Tank Vehicles**

41962. (a) Notwithstanding Section 34002 of the Vehicle Code, the state board shall adopt test procedures to determine the compliance of vapor recovery systems of cargo tanks on tank vehicles used to transport gasoline with vapor emission standards which are reasonable

and necessary to achieve or maintain any applicable ambient air quality standard. The performance standards and test procedures adopted by the state board shall be consistent with the regulations adopted by the Commissioner of the California Highway Patrol and the State Fire Marshal pursuant to Division 14.7 (commencing with Section 34001) of the Vehicle Code.

(b) The state board may test, or contract for testing, the vapor recovery system of any cargo tank of any tank vehicle used to transport gasoline. The state board shall certify the cargo tank vapor recovery system upon its determination that the system, if properly installed and maintained, will meet the requirements of subdivision (a). The state board shall enumerate the specifications used for issuing such certification. After a cargo tank vapor recovery system has been certified, if circumstances beyond control of the state board cause the system to no longer meet the required specifications, the certification may be revoked or modified.

(c) Upon verification of certification pursuant to subdivision (b), which shall be done annually, the state board shall send a verified copy of the certification to the registered owner of the tank vehicle, which copy shall be retained in the tank vehicle as evidence of certification of its vapor recovery system. For each system certified, the state board shall issue a nontransferable and nonremovable decal to be placed on the cargo tank where the decal can be readily seen.

(d) With respect to any tank vehicle operated within a district, the state board, upon request of the district, shall send to the district, free of charge, a certified copy of the certification and test results of any cargo tank vapor recovery system on the tank vehicle.

(e) The state board may contract with the Department of the California Highway Patrol to carry out the responsibilities imposed by subdivisions (b), (c), and (d).

(f) The state board shall charge a reasonable fee for certification, not to exceed its estimated costs therefor. Payment of the fee shall be a condition of certification. The fees may be collected by the Department of the California Highway Patrol and deposited in the Motor Vehicle Account in the State Transportation Fund. The Department of the California Highway Patrol shall transfer to the Air Pollution Control Fund the amount of those fees necessary to reimburse the state board for the costs of administering the

certification program.

(g) No person shall operate, or allow the operation of, a tank vehicle transporting gasoline and required to have a vapor recovery system, unless the system thereon has been certified by the state board and is installed and maintained in compliance with the state board's requirements for certification. Tank vehicles used exclusively to service gasoline storage tanks which are not required to have gasoline vapor controls are exempt from the certification requirement.

(h) Performance standards of any district for cargo tank vapor recovery systems on tank vehicles used to transport gasoline shall be identical with those adopted by the state board therefor and no district shall adopt test procedures for, or require certification of, cargo tank vapor recovery systems. No district may impose any fees on, or require any permit of, tank vehicles with vapor recovery systems. However, nothing in this section shall be construed to prohibit a district from inspecting and testing cargo tank vapor recovery systems on tank vehicles for the purposes of enforcing this section or any rule and regulation adopted thereunder that are applicable to such systems and to the loading and unloading of cargo tanks on tank vehicles.

(i) The Legislature hereby declares that the purposes of this section regarding cargo tank vapor recovery systems on tank vehicles are (1) to remove from the districts the authority to certify, except as specified in subdivision (b), such systems and to charge fees therefor, and (2) to grant such authority to the state board, which shall have the primary responsibility to assure that such systems are operated in compliance with its standards and procedures adopted pursuant to subdivision (a).

(Amended by Stats. 1982, Ch. 1255, Sec. 2. Operative July 1, 1983, or earlier, by Sec. 27.5 of Ch. 1255.)

References at the time of publication (see page iii):

Regulations: 17, CCR, Sections 94014, 94015