

State of California
AIR RESOURCES BOARD

Second Notice of Public Availability of Modified Text

PUBLIC HEARING TO CONSIDER THE ENHANCED VAPOR RECOVERY
TECHNOLOGY REVIEW AND AMENDMENTS TO THE VAPOR RECOVERY
CERTIFICATION AND TEST PROCEDURES FOR GASOLINE MARKETING
OPERATIONS AT SERVICE STATIONS

Public Hearing Date: December 12, 2002
Public Availability Date: July 17, 2003
Deadline for Public Comment: August 1, 2003

At its December 12, 2002, public hearing, the Air Resources Board (ARB or Board) approved the amendment of sections 94010, 94011, 94163, 94164, and 94165, title 17, California Code of Regulations (CCR), which incorporate by reference the following certification and test procedures for vapor recovery systems. The Board also approved the adoption of new sections 94166 and 94167, title 17, CCR, and the documents incorporated by reference therein.

The amended procedures are:

D-200	Definitions for Vapor Recovery Procedures
CP-201	Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities
TP-201.1	Volumetric Efficiency for Phase I Systems
TP-201.1B	Static Torque of Rotatable Phase I Adaptors
TP-201.1C	Pressure Integrity of Drop Tube/Drain Valve Assembly
Revised Title:	Leak Rate of Drop Tube/Drain Valve Assembly
TP-201.1D	Pressure Integrity of Drop Tube Overfill Prevention Device
Revised Title:	Leak Rate of Drop Tube Overfill Prevention Device and Spill Container Drain Valves
TP-201.2	Efficiency and Emission Factor for Phase II Systems

TP-201.2B	Pressure Integrity of Vapor Recovery Equipment
Revised Title:	Flow and Pressure Measurement of Vapor Recovery Equipment
TP-201.2D	Post Fueling Drips from Nozzle Spouts
Revised Title:	Post Fueling Drips from Nozzles
TP-201.2F	Pressure Related Fugitive Emissions

The procedures to be adopted are:

TP-201.1E	Leak Rate and Cracking Pressure of Pressure-Vacuum Relief Vent Valves
Revised Title:	Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves
TP-201.2G	Bend Radius Determination for Underground Storage Tank Vapor Return Piping
TP-201.2I	Test Procedure for In-Station Diagnostic Systems
TP-201.2J	Pressure Drop Bench Testing of Vapor Recovery Components
TP-201.7	Continuous Pressure Monitoring

At the hearing the staff presented, and the Board approved, modifications to the regulations originally proposed in the Staff Report released on October 25, 2002 in response to continuing review and comments received since the Staff Report was published. The modifications affect the text of certification and test procedures D-200, CP-201, TP-201.1C, TP-201.1D, TP-201.1E, TP-201.2D, and TP-201.2F.

The modified procedures were made available for public comment from May 9, 2003 to May 27, 2003. Based on comments received, additional revisions are proposed for the following certification and test procedures: D-200, CP-201, TP-201.1E, TP-201.2B, TP-201.2D and TP-201.2F.

Modifications to D-200

D-200 provides definitions for terms used in the vapor recovery certification and test procedures. Language is proposed to be added to the definition of “major modification” to

clarify that modifications to dispensers that trigger the unihose requirement are described in section 4.11 of CP-201.

Modifications to CP-201

CP-201 is the certification procedure that contains the Phase I and Phase II standards and specifications and references the test procedures to be used during the certification of vapor recovery systems.

Table 2-1 provides the operative and effective dates for the vapor recovery requirements. Table 2-1 has been modified to reflect the change in effective and operative dates for ISD and Phase II standards and specifications from April 1, 2003 to April 1, 2004. This is necessary to allow sufficient time to certify EVR Phase II systems and will provide for the Phase II standards and specifications to be phased-in more uniformly on April 1, 2004. The effective and operative date for ISD at stations with throughputs greater than 600,000 gallons/yr and less than 1.8 million gallons per year has been changed to April 1, 2005 to allow a phase-in of ISD as originally intended.

Section 3 contains requirements for Phase I systems. The word “relief” has been removed from references to “pressure/vacuum relief valves” in Table 3-1 and section 3.5 to conform to the title change of TP-201.1E. Figures 3A and 3B that depict the dimensional requirements for Phase I adaptors have been corrected by replacing the word “standard” with “specification.”

Section 4.4 describes the ORVR compatibility standard requirements. As originally noticed, section 4.4.1 required that refueling of ORVR vehicles shall not cause the system to exceed the Phase II emission factor and/or efficiency. This is incorrect as exceeding the efficiency standard is acceptable. The language has been further revised to clarify that ORVR fuelings shall not cause the system to fail the Phase II emission factor and/or efficiency standards prescribed in section 4.1. The same modifications are made in Table 4-1, which summarizes the requirements of section 4.

Section 4.11 discusses the unihose dispenser requirement. Language is proposed to be added to section 4.11 to clarify that facility modifications that meet the definition of “major modification” for a Phase II system in D-200 trigger the unihose requirement as the facility is considered a “new installation”.

Section 10.1.11 provides for limited repairs during the certification operational test if the failure was detected by the ISD system and is included in the system maintenance manual. In the first 15-day notice, the word “maintenance” had been substituted for “failure” to better represent allowed equipment repairs. Section 10.1.11 is now proposed for deletion so that no ISD-detected maintenance will be allowed during the certification operational test.

Section 10.2.2 has been revised to remove the word “flow” from “vapor collection flow performance” and additional language has been added to clarify the establishment of a baseline and that the vapor collection performance can be monitored using various means.

Section 10.2.5 adds requirements for Phase I vapor transfer monitoring which were mistakenly proposed for deletion in the original staff proposal. Section 10.2.5 is again proposed for deletion based on comments that corrective action by the facility operator to failures of the Phase I transfer criteria is not generally feasible.

Section 13.4 describes failure mode testing. Revisions are proposed to section 13.4.1 to conform to the changes made in section 4.4 regarding ORVR compatibility requirements.

Section 19.2 allows installation of systems with terminated certifications if systems meeting the operative standards are not commercially available. Modifications have been made to section 19.2 to clarify requirements for systems that may be installed under these circumstances. The latest revisions allow adjustment of effective dates for standards and specifications so that pre-EVR systems installed under circumstances where EVR systems are not commercially available may be used for up to four years after the determination of commercial unavailability.

Modifications to TP-201.1E

Staff discovered that some test equipment in the proposed TP-201.1E, Leak Rate and Cracking Pressure of Pressure/Vacuum Vent Valves, has limitations when used to test pressure/vacuum vent valves (P/V valves) at or above maximum allowable leak rate. Therefore, staff had proposed to withdraw the proposed TP-201.1E and revert to the previously adopted TP-201.2B Appendix. Two manufacturers submitted comments favoring TP-201.1E over the TP-201.2B Appendix. Based on these comments, staff is proposing to retain TP-201.1E with the following changes.

The title of TP-201.1E has been modified to refer to “Pressure/Vacuum Vent Valves” rather than “Pressure/Vacuum Relief Vent Valves.”

Section 2 sets forth the principle and summary of the test procedure. As originally proposed, section 2 discussed measurement of flowrates but did not mention measurement of cracking pressure. Language has been added to clarify that the procedure includes measurement of positive and negative valve cracking pressures. Additional language is proposed to emphasize that P/V valves are to be tested on a test stand, rather than installed on the vent pipe at a gasoline dispensing facility. An exception is made for certification tests conducted by the ARB Executive Officer.

Section 4 relates to sensitivity, range and precision of the test procedure. Revisions are proposed to the specifications of flow meters to conform to the flow meters used in other

vapor recovery procedures.

Section 5 outlines the equipment necessary to conduct the test procedure. As originally proposed, section 5 references specific equipment by manufacturer. The manufacturer references have been removed to clarify that any equipment meeting the required specifications may be used. Language has been added to section 5.6 to require use of a bypass valve on the test stand. The bypass valve allows the tester to set the flow without pressurizing the P/V valve. Revisions to section 5.6 also clarify that P/V valves may be isolated for testing by the ARB Executive Officer at the certification test site.

Section 6 contains the pre-test procedure. Section 6.4 has been revised to include the test assembly used for certification tests and add language to clarify that equipment is leak tight when no bubbles are observed.

Section 7 describes the steps to conduct the test measurements. As originally proposed, section 7.2 referred to a leakrate measurement at 2 inches water column (WC). Section 7.2 has been revised to reference the leak rate at the positive pressure stated in CP-201 section 3, which may differ from 2 inches WC. As originally proposed, section 7.4 referred to a leakrate measurement at – 4 inches WC. Section 7.4 has been modified to reference the leak rate at the negative pressure stated in CP-201 section 3, which may differ from – 4 inches WC. The time required to ensure steady state flow has been changed from thirty to ten seconds for both sections 7.2 and 7.4. Sections 7.3 and 7.5 have been revised to reflect use of the bypass valve in establishing test flowrates for cracking pressure as well as to reference CP-201 section 3 for the positive and negative cracking pressure settings.

Section 10 discusses reporting of test results. Minor changes are proposed to section 10.1 to conform with revisions to Form 1. Figure 1 has been modified to show the addition of the bypass valve to the test stand. Modifications to Form 1 are made to conform to the revisions in the test procedure.

Modifications to TP-201.2B

As noticed on October 25, 2002, staff proposes to delete the TP-201.2B Appendix as it is being replaced by the proposed TP-201.1E as modified.

Modifications to TP-201.2D

As approved by the Board, staff has withdrawn the proposed amendments to TP-201.2D dated October 25, 2002 and has modified TP-201.2D as adopted February 1, 2001.

Section 7 has been revised to clarify each step of the test run. Sections 7.6.1 and 7.6.2 have been modified to clarify the removal of the nozzle from the fillpipe and the counting of the drips.

Modifications to TP-201.2F

TP-201.2F is used to calculate the pressure-related fugitive emissions during certification of Phase II systems. As originally noticed, the flowrate at each observed pressure is calculated using an equation taken from TP-201.3 (TP-201.2F Equation 9.1.1). Based on comments that the TP-201.3 equation can overestimate the flowrate at low pressures (< 1 inch WC), a series of empirically-derived equations are proposed to replace the existing Equation 9.1.1 for calculation of flowrate at observed pressures.

Section 3 discusses possible biases and interferences that may affect test results. Section 3.2 has been modified to allow pressure measurements at points other than the vent pipe. The pressure measurement location must be pre-approved by the Executive Officer.

Section 5 provides equipment specifications. Revisions are proposed to sections 5.1, 5.2 and 5.3 to remove references to specific manufacturers for pressure transducers and data acquisition systems.

Section 6 contains the pre-test procedures. Section 6.7 has been corrected to refer to a “flow meter” instead of a “flow restrictor”.

Section 8.9 has been revised to reflect the revisions to section 9, described below.

Section 9 describes how to calculate the test results. Section 9.1 has been revised to add a table of the maximum allowable leakrates. Section 9.2 has been modified to include a table of the empirical Q vs. P equations for calculation of flow rates relating to each observed pressure interval.

Section 12 provides an example calculation for determination of pressure-related fugitives. The calculations have been modified to be consistent with the changes made to section 9.

Appendix 1 has been modified to reference simulated UST tank apparatus rather than a UST test site for the model station. The simulated UST tank equipment was necessary in order to measure accurate flows at pressures less than 0.50 inches water column.

Editorial Corrections

Throughout the Certification Procedure CP-201 and each of the Test Procedures corrections to wording, grammar and numbering have been made to improve the clarity of the regulations. Cross-references have been added and corrected to improve clarity.

Procedure for Commenting

Board Resolution 02-35 sets forth the Board's action approving changes to title 17, California Code of Regulations, sections 94010, 94011, 94163, 94164, 94165, 94166 and 94167, and approving the amendment of the incorporated certification and test procedures for vapor recovery systems, D-200, CP-201, TP-201.1, TP-201.1B, TP-201.1C, TP-201.1D, TP-201.2, TP-201.2B, TP-201.2D, and TP-201.2F as modified and approving the adoption of TP-201.1E, TP-201.2G, TP-201.2I, TP-201.2J and TP-201.7. The Resolution and the text of the regulations and incorporated certification and test procedures, as modified, are available on the Board's Web site at <http://www.arb.ca.gov/regact/evrtech/evrtech.htm>. Copies of these documents can also be obtained by contacting Mr. George Lew at (916) 327-0900. Test methods and standard operating procedures incorporated into the certification and test procedures are also available from Mr. Lew.

In accordance with section 11346.8 of the Government Code, the Board directed the Executive Officer to adopt sections 94010, 94011, 94163, 94164 and 94165, 94166 and 94167, title 17, California Code of Regulations, and the incorporated certification and test procedures for vapor recovery systems, D-200, CP-201, TP-201.1, TP-201.1B, TP-201.1C, TP-201.1D, TP-201.2, TP-201.2B, TP-201.2D, TP-201.2F, TP-201.1E, TP-201.2G, TP-201.2I, TP-201.2J and TP-201.7, as modified, after making them available to the public for comment for a period of at least 15 days. The Board further provided that the Executive Officer shall consider such written comments as may be submitted during this period, shall make such modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if warranted.

Written comments on the modifications must be submitted by postal mail, electronic mail, or facsimile as follows:

Postal mail must be sent to:

Clerk of the Board
Air Resources Board
P.O. Box 2815
Sacramento, California 95812

Electronic mail is to be sent to: evrtech@listserv.arb.ca.gov

Facsimile submissions are to be transmitted to: (916) 322-3928.

In order to be considered by the Executive Officer, comments must be directed to the ARB in one of the three forms described above and received by the ARB by 5:00 p.m. on the

last day for supplemental comment listed at the beginning of this notice. Only comments relating to the additional modifications to the text of the regulations will be considered by the Executive Officer.

If you have special language needs, please contact the Regulations Coordinator, Alexa Malik, at (916) 322-4011 or by e-mail at amalik@arb.ca.gov. TTY/TDD/Speech-to-Speech users may dial 7-1-1 for the California Relay Service.