

State of California
California Environmental Protection Agency
AIR RESOURCES BOARD

STAFF REPORT:
INITIAL STATEMENT OF REASONS FOR PROPOSED RULE MAKING
PUBLIC HEARING TO CONSIDER THE ADOPTION, AMENDMENT AND REPEAL OF
VAPOR RECOVERY SYSTEM TEST METHODS

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Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

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Prepared by:

Peter H. Kosel

Engineering and Laboratory Branch
Monitoring and Laboratory Division

Reviewed and Approved by:

William V. Loscutoff, Chief, Monitoring and Laboratory Division
George Lew, Chief, Engineering and Laboratory Branch
Cynthia L. Castronovo, Manager, Testing Section

I. Introduction and Recommendations

A. Introduction

The Air Resources Board (ARB or Board) staff proposes to revise four existing certification and test procedures related to emissions from vapor recovery systems at gasoline dispensing facilities. These procedures are used to evaluate and certify the emissions performance of new types of vapor recovery systems, and to measure emissions performance of vapor recovery systems constructed in accordance with certified designs.

Field compliance testing of gasoline dispensing facilities in recent years has raised concerns about the ability of vapor recovery equipment to maintain the emission control effectiveness to which the systems were originally certified. Field testing has also led to suggested improvements in the test procedures themselves. The proposed revisions seek to improve the tools available to the field inspector to ensure in-use systems are operating properly.

Revisions are also proposed to the certification procedures for vapor recovery systems at gasoline dispensing facilities. The proposed changes include expanding the information needed at time of certification application to improve compatibility of system components and an extension of the system warranty requirements.

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 and district non-vehicular emissions standards. The adopted test methods are referenced in sections 94000-94015 and 94101-94162, title 17, California Code of Regulations (CCR).

B. Public Process

The proposed revised test methods are the result of comments and suggestions from vapor recovery equipment manufacturers, purchasers of vapor recovery equipment, contractors and agencies who use the test procedures, and the districts. We conducted public workshops on November 10, 1998 and March 4, 1999 for all of the proposed revised methods. The workshop notices were sent to an extensive list of districts and organizations involved in vapor recovery system testing. In addition, staff have considered written comments received from air pollution control districts, vapor recovery equipment manufacturers and organizations representing gasoline dispensing facility operators and several modifications were made as a result of these comments.

C. Recommendations

We recommend that the Board adopt the following:

- (1) Amendments to the California Code of Regulations to incorporate the revised test methods by reference (as outlined in Appendix 1), and
- (2) Amendments to the vapor recovery system certification and test methods (Appendix 2)

II. Background

A. Legal Requirements

Vapor recovery systems have been used in California to control hydrocarbon emissions for over twenty years. In 1975, the Legislature required the ARB to implement a program to control emissions from gasoline marketing operations "to achieve and maintain applicable air quality standards." The Health and Safety Code statutes pertaining to ARB's role in certifying vapor recovery systems are contained in Appendix 3.

Under the Health and Safety Code, the ARB is directed to certify vapor recovery systems so that all systems meet minimum standards. To comply with state law, the Board adopted certification and test procedures that are referenced in title 17, CCR, section 94000 et seq. In addition, the Board adopted the test procedures to determine compliance with the vapor recovery certification standards as non-vehicular emission standards (title 17, CCR, section 94100 et. seq.).

In addition to the ARB, several other State agencies have defined roles in approving vapor recovery systems, including the State Fire Marshal, the Division of Occupational Safety of the Department of Industrial Relations and the Division of Measurement Standards of the Department of Food and Agriculture. The Fire Marshal must ensure that the system or any component of the system does not create a fire hazard while the Division of Occupational Safety must ensure that the system does not create any other safety hazard. The Division of Measurement Standards checks to ensure dispensed fuel enters the vehicle fuel tank and is not routed back to the underground tank via the vapor return line (gasoline recirculation).

In California, the Districts have the primary authority to regulate stationary sources; however, State law limits the district authority regarding vapor recovery systems. H&SC subsection 41954(g) provides that, except as authorized by other provisions of law, no district may adopt or enforce stricter test procedures or performance standards after July 1, 1995, than those adopted by the Board to determine compliance with performance standards.

B. Air Quality Benefits of Vapor Recovery Systems

The vapor recovery program is one of the Board's major control strategies for reducing ozone formation and benzene emissions. When the program was first adopted, vapor recovery systems were designed to reduce hydrocarbon emissions during the summer months to reduce the formation of ozone. Initially, only gasoline dispensing facilities in ozone non-attainment districts were required to install vapor recovery systems. However, since benzene exposure was significant at gasoline dispensing facilities without a vapor recovery system, the Board required vapor recovery systems on most gasoline dispensing facilities as part of the Air Toxic Control Measure (ATCM) for benzene. With the adoption of the ATCM, vapor recovery systems are now used in all parts of the State to reduce benzene and hydrocarbon emissions.

Gasoline marketing operations are a significant source of hydrocarbon emissions in the California emission inventory. According to the 1995 emission inventory¹, vapor recovery systems at dispensing facilities alone reduce hydrocarbon emissions by an estimated 278 tons/day. This estimate assumes systems certified at 95% efficiency will operate at an average in-use 90% efficiency. However, recent field inspections indicate that many currently installed vapor recovery systems are operating below 90% efficiency. ARB staff is working to address these deficiencies in an enhanced vapor recovery program, which will be presented to the Board in December 1999.

C. Gasoline Marketing Operations

The law authorizes the ARB to adopt procedures to control emissions from gasoline marketing operations. In implementing the law, the marketing operations are divided into five groups: gasoline dispensing facilities, bulk plants, terminals, cargo tanks and novel facilities.

1. Gasoline Dispensing Facilities

In California and throughout the United States, gasoline dispensing facilities are the largest users of vapor recovery systems. In California, there are approximately 11,000 gasoline dispensing facilities using vapor recovery systems. The United States Environmental Protection Agency's (U.S. EPA's) regulations now require that vapor recovery systems be installed in several ozone non-attainment regions across the country. In most of these regions, ARB-certified vapor recovery systems are required.

Because of the number of gasoline dispensing facilities in the State, it would not be cost-effective to certify each system at every gasoline dispensing facility. A prototype of each system is, therefore, tested and certified. The applicant installs a prototype system in an operating service station in the Sacramento area. The system undergoes a series of tests, including an efficiency test which includes fuelings of 100 cars, to determine compliance with performance standards.

2. Bulk Plants

Bulk plants are gasoline distribution facilities which receive fuel and dispense fuel by cargo tank trucks. Bulk plants are used by farmers, small businesses, and independent operators. There are approximately 200 bulk plants in the State. At the request of the districts, the ARB staff tests and certifies bulk plants to determine if the appropriate performance standards are met.

3. Terminals

Terminals, which are larger than bulk plants, receive fuel directly from a refinery or pipeline and dispense fuel to cargo tanks. There are approximately 45 terminals in California. At the request of the districts, the ARB staff tests and certifies terminals to determine if the appropriate performance standards are met.

4. Cargo Tanks

Cargo tanks are the on-road trucks which deliver gasoline to the other facilities. There are approximately 4,400 cargo tanks in California. ARB staff issue certification stickers based on evidence of annual testing for each cargo tank. ARB staff also conduct inspections and field tests to enforce cargo tank requirements.

5. Novel Facilities

Facilities with vapor recovery systems that are not covered under the categories outlined above are considered novel facilities. The certification procedures, including the performance standards and performance specifications, are general in scope and are determined on an individual basis. While less explicit, these certification procedures allow the ARB flexibility in certifying innovative systems as needed. An example of a novel facility is a mobile refueler, which is a cargo tank truck that dispenses gasoline directly to vehicles.

D. Current Certification Program

The ARB certifies vapor recovery systems for all of the facility types described above. This section summarizes the certification process for gasoline dispensing facilities (service stations). A similar process is used for vapor recovery systems for terminals, bulk plants, cargo tanks, and novel facilities. The certification process involves four basic steps: application, engineering evaluation, testing, and certification.

1. Application

The certification process begins with an application from a vapor recovery equipment manufacturer. The application must include a detailed description of the vapor recovery system configuration, engineering parameters for pumps and processing units, warranty, cost, and financial responsibility information, along with evidence that the performance standards are likely to be met.

2. Engineering Evaluation

During the engineering evaluation, ARB staff checks that the application is complete, then determine which performance standards and specifications are applicable to the vapor recovery system. Staff designate appropriate test procedures that must be included in the certification test series to demonstrate that the performance standards are met and performance specifications established.

Minimum performance standards have been established for each of the five facility types. Once the vapor recovery system is determined to meet the performance standards, the ARB can set performance specifications which describe acceptable operation of the system. The more easily measured performance specifications can then be checked by district or ARB staff at subsequent installations of the certified system to check that the vapor recovery system continues to achieve the performance standard.

For example, the required performance standard on a vapor recovery system with an incinerator may consist of a minimum control efficiency of 90%. After the ARB determines that the system meets the 90% efficiency standard, performance specifications can then be derived from the incinerator performance. These specifications might include carbon monoxide limits, requirements for indicating gauges or alarms, or other critical incinerator operating parameters.

3. Testing

The ARB staff, or a contractor under ARB staff supervision, tests the vapor recovery system using the test procedures assigned during the engineering evaluation. Testing will confirm that the performance standards and the performance specifications are met.

4. Certification

If the test results indicate that the performance standards are achieved, the ARB Executive Officer issues an Executive Order which certifies the vapor recovery system.

Each vapor recovery system is certified as a complete system, including the plumbing system, dispenser, hoses, and nozzles. Thus, if an equipment manufacturer desires to use a new nozzle, along with other components of a certified system, the ARB may require another round of certification testing. However, the ARB engineering evaluation of the new component may

reveal that testing is not necessary. If the new component parts are sufficiently similar in design to the certified system components, an Executive Order may be issued with minimal testing requirements. For example, the ARB has several times amended an Executive Order to add to the matrix of approved equipment that may be used to assemble certified vapor recovery systems.

III. Proposed Amendment of Test Methods

A. Need for Adoption of Revised Vapor Recovery Procedures

This proposed action is part of our continuing effort to update and improve the ARB vapor recovery certification and test procedures. Staff is proposing changes to reflect advances in emission measurement technology, to correct inadvertent errors, and to better support effective testing of vapor recovery systems' performance after installation. The proposed changes address comments from districts and industry representatives requesting improvements and corrections as conveyed in various workshops and written communications.

Recent field studies have indicated regular inspection of vapor recovery equipment at service stations is necessary to ensure equipment is working properly. Gasoline dispensers have been found that dispense gasoline as if the vapor recovery system were operating normally but are not properly recovering vapors. In many instances, the vapor recovery equipment defects are only identified through field tests. The proposed revised procedures will assist district staff in collecting and evaluating test data to demonstrate compliance with vapor recovery requirements.

The field studies conducted by agency staff together with information submitted by the districts indicate that improving the durability of the equipment could reduce vapor recovery equipment problems. In 1996, ARB staff relaxed the equipment warranty requirements from 3 years to a minimum of 1 year. Staff proposes to return to the three-year warranty requirement to enhance durability.

In the past year, several districts noted that a high percentage of service stations were failing to pass the liquid removal and dynamic backpressure test requirements which were revised in the 1996 vapor recovery amendments. After researching the problem, ARB staff realized that the 1996 revisions inadvertently applied different dynamic backpressure requirements to systems certified prior to the 1996 amendments. Staff is proposing to revise the procedures so that the systems will be tested to the same dynamic backpressure requirements to which they were certified. The failure to meet the liquid removal requirement was traced to a typographical error in the 1996 vapor recovery revisions. In this case, the 5 ml per gallon fueling limit was mistakenly adopted as a 10 ml per gallon limit. Staff is proposing changes to the procedures to correct this error.

ARB procedures applicable to vapor recovery systems have an impact nationwide. There are no comparable federal test methods and ARB certifications and test procedures are recognized and used in other states.

B. Proposed Revision of Existing Test Methods

We propose to revise the following test methods:

- Method CP-201 Certification Procedure for Vapor Recovery Systems of Dispensing Facilities
- Method TP-201.4 Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities
- Method TP-201.5 Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities
- Method TP-201.6 Determination of Liquid Removal of Phase II Vapor Recovery Systems of Dispensing Facilities

The text of the proposed amended regulations is appended to this Staff Report in Appendix 1. The text of the proposed amended test methods, which the proposed regulations incorporate by reference, is appended to this Staff Report in Appendix 2.

IV. Issues of Controversy

A. Increase Warranty for Vapor Recovery Equipment from One Year to Three Years

Staff is proposing a return to a three year warranty period for vapor recovery equipment. This change was triggered by a request from the CAPCOA Vapor Recovery Committee to evaluate extended warranty requirements. The warranty language in CP-201 prior to the 1996 vapor recovery revisions read as follows:

The manufacturer of the vapor recovery system shall provide a three-year warranty for the system. An exception to the warranty may be for those components of the system which the maintenance manual identifies as having expected useful lives of less than three years; the warranty in these cases may specify the expected life.

In 1996, the warranty language was modified to the current language as follows:

Any manufacturer of vapor recovery system equipment shall provide a warranty of at least one year for the system equipment. The manufacturer of any vapor recovery system equipment shall warrant in writing to the ultimate purchaser and each subsequent purchaser that such vapor recovery system equipment is:

- (1) Designed, built and equipped so as to conform at the time of sale with the applicable regulations; and
- (2) Free from defects in materials and workmanship which cause such vapor recovery system to fail to conform with applicable regulations for at least one year.

The changes in 1996 were prompted by equipment manufacturer arguments that the useful life and the warranty period should not be the same. Also, dispenser manufacturers argued that, although the dispenser manufacturer is usually the responsible party for obtaining certification for the vapor recovery system, they do not manufacture the hanging hardware, such as hoses and nozzles, and thus could not support a three year warranty of the system with these components which normally have a useful life of less than three years.

The proposed revised language is as follows:

Any manufacturer of vapor recovery system equipment shall provide a warranty of at least ~~one year~~ three years for vapor recovery system equipment. An exception to the warranty requirement may be made for those components of the system which are identified in the maintenance manual as having expected useful lives of less than three years; the warranty in these cases may specify the expected life. The manufacturer of any vapor recovery system equipment shall warrant in writing to the ultimate purchaser and each subsequent purchaser within the warranty period that such vapor recovery system equipment is:

- (1) Designed, built and equipped so as to conform at the time of sale with the applicable regulations; and
- (2) Free from defects in materials and workmanship which cause such vapor recovery system to fail to conform with applicable regulations for at least ~~one year~~ the warranty period.

Staff has received comment letters from both vapor recovery equipment manufacturers and those who purchase this equipment regarding the warranty language revisions. The Western States Petroleum Association suggests a minimum one year warranty to begin from the date the equipment is placed in service, but states that the warranty should be no shorter than the interval for performance/compliance testing covering that equipment. WSPA is concerned that identification of useful life will cause districts to require removal of equipment that is still performing adequately.

Equipment manufacturers would like the warranty to remain at one year for hanging hardware, with one manufacturer stating that a two-year period for the dispensers is industry practice. Again, there is criticism of the warranty period for the “useful life”. Also, the dispenser manufacturers object to the idea of warranting system components that they do not manufacture. One manufacturer states that warranty is no guarantee of quality and that the marketplace will evaluate product reliability and purchase accordingly. Another manufacturer states that the failures identified in the recent field studies have involved hanging hardware and thus would not be affected by the three year warranty. One manufacturer commented that effective field enforcement and proper maintenance would provide better system performance than increasing the warranty.

Based on recent service station field inspections with districts, staff agree that vapor recovery equipment does not always perform reliably. Addressing these problems has been difficult there are normally several manufacturers who make components of a vapor recovery system. As the complete vapor recovery system is certified, rather than individual components, staff believe that the certification holder must develop a relationship with the individual

component manufacturers to support a warranty for all of the system components. Staff believes that the three year warranty which existed prior to 1996 is reasonable and will help address the reliability issue. The proposed warranty allows shorter warranty periods for hanging hardware that has an expected life of less than three years.

B. Dynamic Pressure Drop Performance Specification

In 1996, the test procedure for measuring dynamic backpressure was adopted with new flow/pressure criteria. At the time of adoption, it was believed that this new criterion was equivalent to what had already been used to certify systems prior to the 1996 revisions. Recent district compliance tests have indicated that the criterion adopted in 1996 was more stringent and was being applied to systems certified before 1996. Staff has proposed revisions to the test procedure to ensure that the system is tested to the same criteria under which it is certified.

However, these proposed revisions are not enough, according to one dispenser manufacturer. Wayne/Dresser has provided data indicating that existing certified equipment combinations may still fail the dynamic backpressure test. This is because as system components were added to existing certification orders, it was not realized that certain combinations of equipment may restrict flow so that the system cannot pass the dynamic backpressure test at one of the three flow points. Staff is working with industry to develop a “pressure drop budget” and will propose a strategy to address the certified system failures at the Board meeting.

B. Liquid Removal Performance Specification

Recent district enforcement actions have revealed that many service stations are not meeting the 10 ml/gallon liquid removal performance specification. Staff believes the specification should be 5 ml/gallon, and that the 10 ml/gallon is a typographical error. One district is concerned that this is a relaxation of the specification. Staff has located three district rules and the proposed 1994 Federal Implementation Plan that all state 5 ml/gallon as the performance specification unless otherwise indicated in the certification Executive Orders. None of the Executive Orders contains a specification greater than 5 ml/gallon.

C. Test Methodology

There are differences of opinion among technical staff in both the regulatory and regulated communities as to what constitutes the best equipment, etc. in conducting the test. Staff has already made many revisions to the test procedures in response to the comments received and will continue to work with all affected parties as necessary during the comment period.

V. Environmental and Economic Impacts

The proposal is not expected to have any adverse environmental impacts. Rather, the revised test methods will assist air quality decision-makers with improved information regarding performance of vapor recovery systems. The revised test procedures will provide greater uniformity and improved quality assurance practices for vapor recovery testing performed in California.

The economic impacts of this proposal are expected to be minimal for testing contractors and the industrial community. Some small costs will result from updating test equipment. Some increased cost to manufacturers due to change in warranty periods may be passed on to customers but is expected to be offset in turn by benefits to those customers; we note that the warranty change is a revision to requirements which existed before 1996.

VI. Alternatives Considered

We have considered as an alternative the option of not adopting the proposed revised ARB vapor recovery procedures. Not adopting the revised procedures would be detrimental for the following reasons:

- (1) Without revision, the existing vapor recovery certification and test methods listed above may continue to be used without the improvements, clarifications, corrections, and additional quality assurance provisions contained in the proposed revisions.
- (2) Without clarifications to the existing test procedures, districts will continue to issue notices of violation to systems which meet ARB certification requirements.
- (3) The improvements and corrections embodied in the proposed revised methods may be considered departures from currently prescribed procedures and thus prohibited without approval. This could act to the detriment of the quality and comparability of emissions test results in the state.

VII. Summary of Proposed Revisions to Existing Test Methods

All of the proposed revisions are to existing ARB vapor recovery certification and test methods. The proposed revisions constitute a response to reports of problems and shortcomings in existing certification and test methods reported by various parties including air pollution control districts (APCDs), equipment manufacturers, and ARB testing staff. The revisions correct inadvertent errors, clarify wording which has proved subject to misinterpretation, add quality assurance checks, and improve safety in testing.

We consider the proposed revisions to Methods TP-201.4, TP-201.5, and TP-201.6 to be minor since they include no change in fundamental principles or procedures of measurement. The changes to CP-201 are also considered to be minor since they are primarily documenting existing practice and are expected to have negligible economic impact; the warranty change is a reversion to requirements which existed before 1996.

We have briefly summarized below the existing methods for which we are proposing revisions.

Method CP-201	Certification Procedure for Vapor Recovery Systems of Dispensing Facilities
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ARB Method CP-201 was revised and readopted in 1996 under a new designation

number. The method prescribes requirements for certification of the performance of gasoline dispensing facility (service station) vapor recovery systems including procedures for application for certification, performance standards and specifications, test procedure requirements and testing requirements. Method CP-201 is used to pre-qualify system designs through certification after extensive scrutiny and testing so that, with a lesser amount of testing on individual new and modified facilities, equipment conforming to certified designs can reasonably assure appropriate emissions control. CP-201 and the certification program it supports are applicable to thousands of service stations in California, and many other states require or accept system designs certified in California under CP-201. Proposed revisions to the text of the method are as marked in Appendix 2.

Staff proposes to extend the required warranty period on equipment certified in the future to 3 years from 1 year. The CAPCOA Vapor Recovery Committee reported vapor recovery equipment failures in the field and found that some equipment is not durable. In a letter dated September 15, 1998, the CAPCOA Vapor Recovery Committee requested ARB staff to evaluate extended warranty requirements. With the view of enhancing durability, the proposal returns the warranty requirements to those existing before the 1996 revisions. The warranty period before the 1996 revisions specified a three-year warranty except for those components that had an expected useful life of less than three years. During the 1996 rulemaking, industry pointed out that the warranty period is not the same as the useful life. With industry noting that most of the hanging hardware components would not be expected to last 3 years, it was decided to make the warranty 1 year with no mention of useful life. In the proposed rulemaking, an exception to the 3-year warranty requirement may be made for system components that are identified in the maintenance manual as having expected lives of less than three years, with a 1-year minimum warranty.

The application for certification has been revised to require additional system information from the manufacturer, such as the complete list of hanging hardware to be used with the system, rather than just the nozzle. The proposal also clarifies that allowable pressure drop information should be provided through the system as a whole and for each system component. This information has been found to be necessary to assure that any additional equipment components considered for future addition to the certified system will meet system requirements.

A new section proposed to be added to the application would require documentation that the applicant has notified other manufacturers that the applicant is seeking certification of a system that uses the other manufacturers' components. This notification is intended to provide an opportunity for the other component manufacturers to provide input to ARB staff as to the compatibility of their system components with the proposed vapor recovery system. In the past, data regarding issues of possible equipment component compatibilities sometimes came to ARB staff's attention after the system had undergone extensive certification testing and was nearing final certification because the manufacturer was not aware that its component was part of another manufacturer's system.

Lastly, in connection with the dynamic backpressure requirement, the staff is proposing to correct a typographical error from the 1996 rulemaking: a 5 milliliter (ml) per gallon fueling limit was mistakenly adopted as a 10 ml per gallon limit. Staff proposes to correct this limit to 5 ml.

Method TP-201.4 Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities

ARB Method TP-201.4 was adopted in 1996. The method prescribes procedures for determining the resistance of dispensing equipment to the flow of vapor simulated by a nitrogen stream. Method TP-201.4 is used in certification for identifying normal backpressure caused by such flow, and subsequently for verifying that new and existing vapor recovery systems' behavior is similar to the certified system. One change would allow addition of liquid gasoline to underground to be omitted when retesting facilities that have no change in underground piping from the previous test. Another change removes the backpressure limits from the test method and instead references the backpressure limits in certification Executive Orders for system compliance. This eliminates the unintended retroactive effect of certification-performance-specification criteria adopted in 1996 on systems certified earlier than 1996. Although numerous changes are proposed to clarify the test procedure, the principle of the test measurement has not changed. Proposed revisions to the text of the method are as marked in Appendix 2.

Method TP-201.5 Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities

ARB Method TP-201.5 was adopted in 1996. The method prescribes steps for determining the ratio of the volume of air/gasoline vapor recovered to liquid dispensed for assist system nozzles. Procedure TP-201.5 is used in the certification process to characterize the operation of certified systems and later verifies that new and existing systems exhibit similar operation. The uptake of gasoline vapor at the nozzle is essential to vapor recovery system performance. Revisions clarify description of required procedures, provide guidance supporting correction of problems, reduce the number of runs required if the dispensing point clearly passes or fails, and provide for a modified test equipment design to enhance safety. There is no major change in the principle of measurement. Proposed revisions to the text of the method are as marked in Appendix 2.

TP-201.5 was originally scheduled for amendment in 1998; however, this method was withdrawn from the rulemaking due to evidence that application of the revised TP-201.5 to certain vapor recovery systems may give different results than with the adopted TP-201.5. Testing of all systems subject to TP-201.5 testing is underway to determine how many systems might be affected by this change. If necessary, adjustment will be made to the ARB certification-performance specification for the A/L range in the Executive Orders for systems to assure that the new procedure may be used without biasing the test results.

Method TP-201.6 Determination of Liquid Removal of Phase II Vapor Recovery Systems of Dispensing Facilities

ARB Method TP-201.6 was adopted in 1996. The procedure prescribes techniques for quantifying liquid removal from dispenser hoses. TP-201.6 supports liquid removal requirements in CP-201; if not removed, liquid in the vapor passage of dispenser hoses may block vapor and impair emissions control. Several minor revisions are proposed to eliminate provisions for dynamic pressure and gasoline dispensing pressure measurements unrelated to liquid removal

determination and to clarify the intent that liquid removal be determined at flow dispensing rates above 5 gpm. None of the revisions proposed are major. Proposed revisions to the text of the method are as marked in Appendix 2.

VIII. References

1. 1999 California Almanac of Emissions and Air Quality
2. Bay Area Air Quality Management Source Test Procedure ST-39, "Gasoline Dispensing Facilities - Air to Liquid Volumetric Ratio," draft dated July 1998

APPENDIX 1

PROPOSED MODIFICATIONS TO CALIFORNIA CODE OF REGULATIONS

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

Amend Sections 94011, Article 1, Subchapter 8, Chapter 1, Division III, Title 17, California Code of Regulations 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 of Dispensing Facilities" which is herein incorporated by reference. (~~Adopted: on~~ ~~March 30, 1976, as last amended April 12, 1996~~ [insert date of amendment]).

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

TP-201.1 - "Determination of Efficiency of Phase I Vapor Recovery Systems of Dispensing Facilities without Assist Processors" (Adopted: April 12, 1996)

TP-201.1A - "Determination of Efficiency of Phase I Vapor Recovery Systems of Dispensing Facilities with Assist Processors" (Adopted: April 12, 1996, as last amended March 17, 1999) [the March 17, 1999 amendments are pending approval by the Office of Administrative Law]

TP-201.2 - "Determination of Efficiency of Phase II Vapor Recovery Systems of Dispensing Facilities" (Adopted: April 12, 1996)

TP-201.2A - "Determination of Vehicle Matrix for Phase II Vapor Recovery Systems of Dispensing Facilities" (Adopted: April 12, 1996)

TP-201.2B - "Determination of Flow vs. Pressure for Equipment in Phase II Vapor Recovery Systems of Dispensing Facilities" (Adopted: April 12, 1996)

TP-201.2C - "Determination of Spillage of Phase II Vapor Recovery Systems of Dispensing Facilities" (Adopted: April 12, 1996)

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) [the March 17, 1999 amendments are pending approval by the Office of Administrative Law]

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 Tanks (Tie-Tank Test)” (Adopted: March 17, 1999) [the March 17, 1999 adoption is pending approval by the Office of Administrative Law]

TP-201.4 - “Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities” (Adopted: ~~April 12, 1996~~, as lasted amended [insert date of amendment])

TP-201.5 - “Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities” (Adopted: April 12, 1996, as last amended [insert date of amendment])

TP-201.6 - “Determination of Liquid Removal of Phase II Vapor Recovery Systems of Dispensing Facilities” (Adopted: ~~April 12, 1996~~, as lasted amended [insert date of amendment])

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

Amend Sections 94150, 94153, 94154, and 94155, Article 2, Subchapter 8, Chapter 1, Division III, Title 17, California Code of Regulations to read:

Section 94153. Test Method for Determining Dynamic Pressure Performance of Phase II Gasoline Vapor Recovery Systems of Dispensing Facilities

The test method for determining the dynamic pressure performance of Phase II gasoline vapor recovery systems of dispensing facilities is set forth in the Air Resources Board's TP-201.4, "Determination of Dynamic Pressure Performance of Vapor Recovery Systems of Dispensing Facilities" which is incorporated herein by reference. (Adopted: {April 12, 1996}, as last amended [insert date of amendment])

NOTE: Authority cited: Sections 39600, 39601, 39607, and 41954, Health and Safety Code. Reference: Sections 39515, 39516, 39605, 40001, and 41954, Health and Safety Code.

Section 94154. Test Method for Determining (by Volume Meter) of Air to Liquid Volume Ratio of Phase II Gasoline Vapor Recovery Systems of Dispensing Facilities

The test method for determining the air to liquid ratio of Phase II gasoline vapor recovery systems of dispensing facilities is set forth in the Air Resources Board's TP-201.5, "Determination (by Volume Meter) of Air to Liquid Volume Ratio of Vapor Recovery Systems of Dispensing Facilities" which is incorporated herein by reference. (Adopted: {April 12, 1996}, as last amended [insert date of amendment])

NOTE: Authority cited: Sections 39600, 39601, 39607, and 41954, Health and Safety Code. Reference: Sections 39515, 39516, 39605, 40001, and 41954, Health and Safety Code.

Section 94155. Test Method for Determining Liquid Blockage of Phase II Vapor Recovery Systems at Dispensing Facilities

The test method for determining gasoline vapor emissions of vapor recovery systems at bulk plants is set forth in the Air Resources Board's TP-201.6, "Determination of Liquid Blockage of Phase II Vapor Recovery Systems at Dispensing Facilities" which is incorporated herein by reference. (Adopted: {April 12, 1996}, as last amended [insert date of amendment])

NOTE: Authority cited: Sections 39600, 39601, 39607, 41954, Health and Safety Code. Reference: Sections 39515, 39516, 39605, 40001, and 41954, Health and Safety Code.

Appendix 2

Appendix 3

1.