State of California
AIR RESOURCES BOARD

Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response

PUBLIC HEARING TO CONSIDER AMENDMENTS TO TITLE 17, CALIFORNIA CODE OF REGULATIONS, SECTION 94006 - DEFECTS SUBSTANTIALLY IMPAIRING THE EFFECTIVENESS OF VAPOR RECOVERY SYSTEMS USED IN MOTOR FUELING OPERATIONS

Public Hearing Date: November 15, 2001
Agenda Item No.: 01-9-3

I. GENERAL

The Staff Report: Initial Statement of Reasons for Rulemaking ("staff report"), Vapor Recovery Equipment Defects Title 17 Update, released September 28, 2001, is incorporated by reference herein. The purpose of this rulemaking is to implement, interpret, and make specific section 41960.2(c) of the Health and Safety Code, which requires the Air Resources Board (Board or ARB) to "identify and list equipment defects" in vapor recovery systems "that substantially impair the effectiveness of the systems in reducing air contaminants" from motor vehicle fueling operations. Violations involving "substantial" defects require tagging the equipment "out of order" and disallowing its use until replaced, repaired, or adjusted as necessary, and upon reinspection by the Air Pollution Control District (Health and Safety Code Section 41960.2(d)).

The Air Resources Board voted unanimously to approve the amendments to title 17, section 94006, of the California Code of Regulations (CCR) with fifteen-day changes. The changes from the original proposal are:

- Incorporation of a set of criteria which must be considered in determining whether a defect is "substantial".
- Withdrawal of three defects and associated verification procedures. The defects include the roundness specification for nozzle spouts for all systems and, the pressure integrity requirement for the drop tube/drain valve assembly and the static torque constraints for the Phase I adaptors for the VR-101-A Executive Order.
- Insertion of an asterisk("*") for certain defects. The detection of defects identified by an asterisk typically will require that an entire facility (service station) be shut down. A statement explaining the significance of the asterisk was added after each affected Executive Order on the list.
- Replacement of August 21, 2001 date on the heading of each page with date of issuance to be determined.
- Removal of the date and placement of the title on the bottom of each page.
- Correction of the reference for a regulation.
- Alteration of a heading in the All Systems/any E.O. section. The term "general" is replaced with "system" to maintain consistency with other sections.

- Modification to the language of four listed defects in the G-70-168 series and G-70-187 series sections to provide clarity and consistency between the two sections.

The Board also approved incorporation by reference into section 94006(b) of the defects listed in the document titled "Vapor Recovery Equipment Defects List Title 17 Update." Finally, as existing vapor recovery equipment is decertified and new equipment is certified, the Board directed the Executive Officer (E.O.) to update the Vapor Recovery Equipment Defects List as appropriate to maintain its currency and facilitate its use and implementation by district vapor recovery enforcement staff, vapor recovery equipment manufacturers, vapor recovery maintenance personnel, vapor recovery systems and equipment testers, and gasoline facility operators.

Some of the stakeholders were disappointed by the absence of several defects that were removed as part of the fifteen-day changes. Other stakeholders wanted to have additional defects removed from the list. However, each defect listed meets the criteria in the definition of "substantial" as set forth in section 94006(a). Any defect added to the list must also meet this definition. Section 41960.2 of the Health and Safety Code requires the E.O. to review the list at a public workshop at least once every 3 years to determine whether it needs updating. Section 41960.2 also authorizes the E.O. to initiate a public review of the list upon a written request that demonstrates the need for the review. Stakeholders have been informed that the list will be periodically reviewed in accordance with the law. They have also been told that if they know of a defect that should be added or removed, they should provide the ARB with evidence or convincing argument that the defect does or does not meet the definition of "substantial" set forth in the regulation. With suitable support, the list can and will be modified. Notwithstanding conditional objections, everyone involved supported amending the existing list.

The Vapor Recovery Equipment Defects List is incorporated by reference in the regulation. The list's composition and complexity makes it impractical to publish the complete list in the California Code of Regulations.

Whereas section 94006 of title 17 CCR before this amendment was a simple bulleted list, the updated list is a more detailed series of tables. With the exception of the first table, which lists defects applicable to all systems, each table is distinctive for one or more specific vapor recovery systems. The list is 20 pages long, including a title page with the date of adoption and a final page listing the defect identification methods used as verification procedures. The remaining 18 pages contain one or two tables each.

Each table is identified by its system name and has three columns. The columns contain an identification of the equipment which the defect will be associated with for the system in question; a description of the defect; and at least one verification procedure that can be used to confirm the presence of the defective condition.

Copies of the Vapor Recovery Equipment Defects List can be obtained by two means. The list may be downloaded directly from the ARB Internet site at the following URL:

http://www.arb.ca.gov/vapor/title17/title17.htm

or by mail from:

William V. Loscutoff, Chief
Monitoring & Laboratory Division
Air Resources Board
P.O. Box 2815
Sacramento, CA 95812

The Board has determined that this regulatory action will not create any fiscal impacts or mandate to any local governmental agency or school district whether or not reimbursable by the State pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other non-discretionary savings to local agencies. Nor will the proposed regulatory action create costs or savings to any State agency. Programs are currently in place to identify vapor recovery equipment defects in certified systems. The changes in this rulemaking improve enforceability of vapor recovery equipment requirements by clarifying what defects are considered to be "substantial". Resources are also available for completing future reviews and revisions of the list.

The Board's Executive Officer has also determined that pursuant to Government Code section 11346.5(a)(3)(B) the regulations will not affect small business. Therefore, in accord with Government Code section 11346.9(a)(5) no alternatives that would lessen the adverse economic impact on small businesses were considered.

The Board has further determined that no alternative considered by the agency would be more effective in carrying out the purpose for which the regulatory action was proposed or would be as effective and less burdensome to affected private persons than the action taken by the Board.

II. SUMMARY OF COMMENTS AND AGENCY RESPONSE

The following persons submitted written comments during the 45-day comment period:

- Maryann Gonzalez; Associate Director of Regulatory Affairs; British Petroleum
- Sandra Duval; Government Relations Director; California Independent Oil Marketers Association (CIOMA)
- Ed Ward; Manager; JB Dewar Technical Services; and CIOMA Liaison
- Carl Griffin; General Manager; Healy Systems, Inc.
- Donald F. Gilson; Senior Environmental Specialist; Chevron Products Company
- Arthur C. Fink, Jr.; V.P. Engineering; Husky Corporation

The following persons testified at the Board hearing on November 15, 2001:

- Maryann Gonzalez; Associate Director of Regulatory Affairs; British Petroleum
- Sandra Duval; Government Relations Director; CIOMA
- Rosa Salcedo; Vapor Recovery Committee Chair, California Air Pollution Control Officers Association (CAPCOA)
- Donald F. Gilson; Senior Environmental Specialist; Chevron Products Company
- E.W. "Skip" Orr; Western Regional Sales Manager; Husky Corporation

The following persons submitted written comments during the 15-day comment period:

- Sandra Duval; Government Relations Director; CIOMA
- Mike Gallo; Manager, Regulatory Engineering; Dresser Wayne, Dresser Inc.

1. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List the defect described as "phase I vapor poppet inoperative" does not meet the definition of "substantially impairing the effectiveness of the vapor recovery system" because the poppet is covered by a dust cap, which means that the poppet only has to function during a gasoline delivery to prevent the release of vapor from the storage tanks. (Maryann Gonzalez, Sandra Duval, Ed Ward, Donald F. Gilson)

   Agency Response: The "phase I vapor poppet inoperative" defect is on the existing title 17 defects list which indicates that the Board determined an inoperative vapor poppet to substantially impair the vapor recovery system at the time the regulation was originally adopted.

   Dust caps are intended to remain on the vapor poppet during normal operation. A proper functioning vapor poppet ensures that refueling emissions are contained in the storage tanks, regardless if the cap is present. The primary purpose of the dust cap is to protect the vapor poppet from debris/contaminants that could interfere with the operation of the poppet. These caps can not be relied on to prevent the release of emissions through an inoperative vapor poppet, which would reduce the effectiveness of the vapor recovery system.

2. Comment: The term "inoperative" needs to be defined in the regulation. (Maryann Gonzalez)

   Agency Response: "Inoperative" is used here in its normal dictionary definition: not functioning as normal.

3. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List the defect described as "spout does not meet roundness specifications described in 40 CFR, Part 80, Section 80.22 (f)(2)" does not meet the definition of "substantially impairing the effectiveness of the vapor recovery system", particularly in terms of the excess

emissions that would be generated. (Maryann Gonzalez, Sandra Duval, Ed Ward, Donald F. Gilson)

Agency Response: The ARB agrees with the commenters and the defect has been removed from the list.

4. Comment: The regulation does not define "substantial". Substantially impairing and only incidentally impairing the vapor recovery system is a critical distinction and "substantial" should be quantified. (Sandra Duval, Ed Ward, Donald F. Gilson)

   Agency Response: The ARB agrees with the commenters. The following criteria for determining whether a defect is "substantial" have been added to the proposed regulation as part of the 15-day changes. These criteria specify that "... the defect did not exist when the system was certified; the excess emissions associated with the defect have the potential to degrade fueling point or system efficiency by at least five percent; and, a field verification procedure exists to identify the defect."

5. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List, the defect described as "absence or disconnection of any component required to be used in the E.O.(s) that certified the system" is ambiguous and may have no impact on the vapor recovery system emissions. (Sandra Duval)

   Agency Response: This defect is on the existing title 17 defects list. Extensive testing is conducted on vapor recovery systems before an Executive Order is issued to certify each system. A determination that a required component is missing or disconnected indicates the system is not, and cannot function as certified.

6. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List, the defect described as "installation or use of any uncertified component" is ambiguous because an uncertified component may not cause a substantial impact, or may have no impact, on the vapor recovery system emissions. (Sandra Duval)

   Agency Response: The use of an uncertified component is not allowed because, unlike certified components, it has not been shown through extensive precertification testing to be effective. Thus, the presumption is that its use substantially impairs the system's effectiveness.

7. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List the defect described as "dispensing rate greater than ten gallons per minute (10.0 gpm) or less than the greater of five (5.0) gpm or the limit stated in the E.O. measured at maximum fuel dispensing" is not clear because it does not indicate when the dispensing rate changes such that a system is affected to the extent that a substantial reduction in collection efficiency occurs. (Sandra Duval)

   Agency Response: Any dispensing rate, as measured by the verification procedure, outside the specified range qualifies as substantially impairing the vapor collection efficiency. Dispensing rates less than "the greater of five (5.0) gpm or the limit stated in the executive order" leads to a decrease in vapor recovery system effectiveness because it allows liquid to accumulate in the return lines, which prevents the passage of vapor from the vehicle to the storage tank. It also restricts the vacuum pumps from generating the vacuum level necessary to capture refueling emissions. The dispensing

rate upper limit of ten gallons per minute (10.0 gpm) is federally mandated (40CFR, Section 80) and exceedance of this standard reduces vapor recovery system effectiveness because of the increased spillage that occurs during refueling, resulting in excess evaporative emissions.

8. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List, the defect described as "dispensing rate greater than ten gallons per minute (10.0 gpm) or less than the greater of five (5.0) gpm or the limit stated in the E.O. measured at maximum fuel dispensing" is set forth in the "All Systems/any E.O." table, but the minimum flow rate is not applicable to balance systems. (Sandra Duval, Ed Ward)

   Agency Response: The minimum flow rate requirement is applicable to balance systems because low flow rates interfere with the mechanism that maintains the vapor return line clear of liquid. Blockage of the vapor return lines allows excess refueling emissions to be emitted to the atmosphere.

9. Comment: On page 1 of the proposed Vapor Recovery Equipment Defects List, the defect described as "nozzle automatic liquid shutoff mechanisms which malfunction in any manner" does not meet the definition of substantially impairing the effectiveness of the vapor recovery system. The nozzle automatic liquid shutoff mechanism can malfunction for a variety of reasons, including operator error. "Operator error" is not a substantial defect of the nozzle automatic liquid shutoff mechanism. (Sandra Duval, Ed Ward)

   Agency Response: While a nozzle is properly placed in a certified vehicle fill pipe, the automatic liquid shutoff mechanism is designed to terminate fuel dispensing when the vehicle fuel tank reaches its capacity. Regardless of the reason(s) for not functioning correctly, failure of the nozzle automatic liquid shutoff mechanism will increase gasoline vapor emissions during fueling, pre-fueling, and/or post fueling. The path of these emissions may be from spitback, spillage, and/or liquid retention.

10. Comment: On page 18 of the proposed Vapor Recovery Equipment Defects List, the defect described as "system not able to maintain pressure integrity as specified in Executive Order VR—101-A" for the drop tube/drain valve assembly does not meet the definition of substantially impairing the vapor recovery system because this condition will not contribute to excess emissions. (Ed Ward, Donald F. Gilson)

    Agency Response: The ARB agrees with the commenters and the defect has been removed from the list.

11. Comment: On page 18 of the proposed Vapor Recovery Equipment Defects List, the defect described as "adapter does not rotate 360 degrees with less than 108 pound-inch average static torque" for rotatable Phase I adapters does not meet the definition of substantially impairing the vapor recovery system because there are no associated excess emissions. (Ed Ward, Donald F. Gilson)

    Agency Response: The ARB agrees with the commenters and the defect has been removed from the list.

12. Comment: To ensure uniform enforcement and consistency statewide, ARB staff should develop enforcement guidelines to identify defects. (Donald F. Gilson)

    Agency Response: The proposed Vapor Recovery Equipment Defects List is an attempt to establish more uniform enforcement guidelines and consistent State enforcement. This is accomplished by consolidating the existing defects currently set forth in title 17, CCR, section 94006, the Executive Orders certifying each vapor recovery system, and approval letters augmenting the vapor recovery Executive Orders. The ARB will issue advisories and provide training to the regulatory personnel on the basis of the list and how it is to be consulted for inspections and enforcement activities at gasoline dispensing facilities.

13. Comment: On page 14 of the proposed Vapor Recovery Equipment Defects List, the defect described as "any operating pressure range at the nozzle boot/fill-pipe interface less than one-half (0.50) inches water column vacuum or greater than one—fourth (0.25) inches water column pressure" is missing the word minus and a (-) sign from the lower value. (Carl Griffin)

    Agency Response: In an earlier draft of the list, the defect in question mistakenly stated "... interface less than one-half (0.50) inches water column pressure ..."; however the list now appropriately distinguishes between pressure (positive force) and vacuum (negative force). The lower range is now described as "... interface less than one-half (0.50) inches water column vacuum ...", invalidating the application of the word "minus" or a (-) sign.

14. Comment: On page 15 of the proposed Vapor Recovery Equipment Defects List, for the defect described as "any operating pressure range at the nozzle boot/fill-pipe interface less than one-half (0.50) inches water column vacuum or greater than one-fourth (0.25) inch water column pressure", a minus sign is in front of the text but is missing from the numerical portion in parentheses. (Carl Griffin)

    Agency Response: The language has been changed to reflect a distinction between pressure and vacuum (see response to comment 13), obviating the need for the minus sign.

15. Comment: The tests listed under the verification procedure column should be available on the ARB Internet site. (Rosa Salcedo)

    Agency Response: All tests or a link to the most recent version of the test in question are available on the ARB internet site at:

    http://www.arb.ca.gov/vapor/title17/title17.htm

16. Comment: The ARB should create a list of nozzles which have an insertion interlock mechanism that can be verified visually and provide a test method(s) for those nozzles where a visual verification is not possible. (Rosa Salcedo)

    Agency Response: The ARB vapor recovery staff is currently working with manufacturers to develop a list of insertion interlock verification methods for certified nozzles.

17. Comment: ARB staff should create an advisory regarding the proposed Vapor Recovery Equipment Defects List. (Rosa Salcedo)

    Agency Response: The ARB vapor recovery staff intends to draft an advisory to inform district vapor recovery enforcement and operations staff, vapor recovery equipment manufacturers, vapor recovery maintenance personnel, vapor recovery systems and equipment testers, and gasoline facility operators once the Vapor Recovery Equipment Defects List is approved. The advisory will provide the implementation schedule, details of the list, how copies of the list can be obtained, where the defects identified after the adoption of this list can be found, an estimate of when the next workshop will be scheduled to consider updating the list, and information on the training that is to be offered.

18. Comment: The ARB, in conjunction with CAPCOA, should prepare implementation guidelines for the proposed Vapor Recovery Equipment Defects List. (Rosa Salcedo)

    Agency Response: The ARB will consult with CAPCOA on preparing implementation guidelines.

19. Comment: The ARB should provide on-going training to the air pollution control districts for the proposed Vapor Recovery Equipment Defects List. (Rosa Salcedo)

    Agency Response: The ARB has a number of on-going training courses available that are dedicated to or relevant to vapor recovery. The enforcement of requirements that apply to vapor recovery systems, including the title 17 equipment defects list, is discussed. These courses may be modified to provide more in-depth coverage on the proposed list once it is approved.

20. Comment: The amended Vapor Recovery Equipment Defects List should be effective immediately. (Rosa Salcedo)

    Agency Response: California law (*i.e.* the Administrative Procedure Act) dictates the process of amending a regulation. Fixed procedures and the approval of the Office of Administrative Law are required. The amendments cannot become effective until the process is complete, except for emergencies.

21. Comment: The defect described as "spout does not meet roundness specifications described in 40CFR, Part 80, Section80.22 (f)(2)" on page 1 of the proposed Vapor Recovery Equipment Defects List should not be removed without similar language elsewhere in the regulation. (Mike Gallo)

    Agency Response: This condition was removed from the proposed list because there is no evidence that a spout's failure to meet the roundness specifications substantially impairs the effectiveness of the vapor recovery system.

22. Comment: A clarification of the term "system" on page 6 of the Vapor Recovery Equipment Defects List in the defect described as "pressure drop through the system exceeds one-half (0.50) inch water column at sixty standard cubic foot per hour (60 SCFH)" is necessary. For purposes of this test, "system" is understood to be the components that constitute the pathway from dispenser riser to underground storage

tank (UST). Additional provisions for conducting the test are that the P/V valves must be installed and the Phase I vapor poppets must be open. (Mike Gallo)

Agency Response: Yes, for vapor assist type systems, the part of the system this test focuses on is the vapor return plumbing from dispenser riser to UST. The test is performed with P/V valves installed and Phase I vapor poppets open. In the version TP-201.4 (the verification procedure for this defect) as amended April 28, 2000, the following statement is made: "This test procedure is applicable only to balance type vapor recovery systems and is explicitly not applicable to vapor assist type systems." Traditionally, only balance systems were tested with this method and many people are familiar with this version; however, in the most recent version of TP-201.4 approved by the Board this year, the language excluding vapor assist-type systems has been removed and a specific test method for vapor assist-type systems has been added.

23. Comment: On page 6 of the Vapor Recovery Equipment Defects List, the defect described as "defective vapor valve" should be listed in the "equipment" column under "nozzle" rather than "system" because the defect is specific to the nozzle. (Mike Gallo)

    Agency Response: There are nine nozzles certified with the system in question (Dresser/Wayne Vac G-70-153). Each of the nozzles includes a vapor valve. Rather than listing this defect nine separate times, it was placed under "system" to reduce redundancies. If there is a compelling reason to list the defect separately for each nozzle or to add an equipment heading titled "all nozzles", the ARB will be reviewing this regulation, and specifically looking at what changes may be necessary, in 2003.