State of California
AIR RESOURCES BOARD

Hearing Officer's Report

PUBLIC HEARING TO CONSIDER AMENDMENTS TO THE REGULATION LISTING DEFECTS SUBSTANTIALLY IMPAIRING THE EFFECTIVENESS OF VAPOR RECOVERY SYSTEMS USED IN MOTOR VEHICLE FUELING OPERATIONS

I. INTRODUCTION

On August 24, 2004, I, William V. Loscutoff, Chief of the Monitoring and Laboratory Division, conducted a public hearing to consider the adoption of proposed amendments to section 94006, of Title 17, California Code of Regulations (CCR), and the Vapor Recovery Equipment Defects List (VRED List or List) incorporated by reference therein. The hearing was conducted in accordance with a delegation of authority from the Executive Officer (E.O.) of the Air Resources Board (ARB) pursuant to Health and Safety Code (HSC) sections 39515, 39516, and 41960.2. In accordance with the procedures set forth in the Administrative Procedure Act, including the notice of public hearing dated June 29, 2004 and the Initial Statement of Reasons released on July 9, 2004, the staff proposed a number of modifications to the VRED List. These primarily related to clarifying the defects and amending the table for ease of reference, and are described in detail below.

I have reviewed the administrative record in this matter. No testimony was offered at the public hearing, though considerable discussion had occurred at a number of public workshops. Based on the evidence before me, I make the following findings and recommendations.

II. FINDINGS

A. PROPOSED AMENDMENTS

1. Section 94006, Title 17, CCR

Section 41960.2 of the HSC requires the ARB to identify and list defects that substantially impair the effectiveness of systems used for the control of gasoline vapors resulting from motor vehicle fueling operations. Furthermore, the ARB must review the List at a public workshop at least once every three years after January 1, 2001, to determine whether or not an update is necessary. The E.O. of the ARB is authorized to initiate a public review of the VRED List at any time, upon a written request that demonstrates the need for the review.

Title 17 CCR, section 94006, which sets forth the criteria for determining that defect "substantially impairs" the effectiveness of the vapor recovery system and incorporates the VRED List by reference, includes language to show that the VRED List was originally adopted on September 23, 2002; an "as last amended" date has been added to identify the most recent changes to the List.

2. The VRED List

The specific proposals to update the VRED List can be placed into three categories: specific changes to describe individual defects listed in a single VRED List table; modifications which affect a defect listed several times in multiple tables, and changes which affect all defects listed. All of the proposed changes are underlined for additions and strikethrough for deletions, as set forth in the proposed VRED List. Each type of VRED List change is described by category in the following sections.

a. Changes Which Affect All Defects Listed

Alphanumeric Identification Scheme for All Defects

A stakeholder made a request to add a “numbering” scheme so that each defect would have a unique identification. After discussing this plan at workshops with the VRED update participants, ARB staff proposed an alphanumeric identification scheme. The identifier for each defective condition would be comprised of three parts: i) the Executive Order number where the specific vapor control system was certified, ii) a sequential letter for the equipment with which the defect is associated, and iii) a sequential number for the description of the specific defect itself. As can be seen in the “GVR All Systems/any E.O.” table on page one of the proposed VRED List, the defect number (part iii above) is sequential for the particular equipment (part ii above) with which it is associated. For each category in the equipment column, the defect number sequence begins again with one (“(1)”). The same is true for the equipment letter. At the start of a new table that applies to a specific vapor control system that has been certified by the ARB in the proposed VRED List, the first identifying letter associated with the first equipment listed will be “a”, the second “b”, and so on. The Executive Order number (part i above) represents the characters which proceed the literal description/title of the specific certified system. GVR (for “general vapor recovery”) has been added to the “All Systems/any E.O.” table on page one of the proposed VRED List because it applies to all vapor control systems, regardless of type.

Examples of the scheme are: the identification for the defect described as “installation or use of any uncertified component” listed in the “All Systems/any E.O.” table on page one of the proposed VRED List is “GVR(a)(3)”; the next listed defect which begins “dispensing rate greater than …” would be “GVR(a)(4)”; and the last defect on the “G-70-7 series Hasstech VCP-2 and VCP-2A” table on page two of the proposed VRED List is “G-70-7(d)(1)”.

The multi-system table on page 3 of the VRED List is the only table somewhat different from the examples above. The identification scheme for defects listed in this VRED List table has the same three part alphanumeric identification, but the correct Executive Order number will be the one for the specific system in question. For example, the identification for the "any hose with a visible opening" defect will always begin with "G-70-" and end with "(b)(2)." On the Atlantic Richfield system it will be "G-70-25(b)(2)", on the Texaco system it will be "G-70-38(b)(2)", and so on.

Notes explaining the identification scheme are included as part of the proposed VRED List on pages one and three. The table is easier to use graphically than it is to describe in words.

b. Changes to Defects Listed In Multiple VRED Tables

Vapor Valves

There is a "defective vapor valve" defect listed in 18 of the 22 tables which comprise the adopted VRED List. However, the list does not distinguish between the two types of vapor valves: i) remote and ii) non-remote. Vapor valves not contained in the nozzle are considered remote.

The necessity to make this distinction occurs because the verification procedure, used to determine if a remote vapor valve is defective (GDF-03), is being removed from the VRED List and there is no alternative procedure. GDF-03 is also being removed from the "Defect Identification Methods Used In the Verification Procedure Column" list on page 20 of the VRED List.

One of two verification procedures (GDF-01 or GDF-02) is used to determine if any non-remote vapor valve is defective. For systems which have both remote and non-remote valves the verification procedure will remain "GDF-01/GDF-02."

However, these verification procedures will only be applicable to specific non-remote vapor valves.

There is a system “G-70-7 series Hasstech VCP-2 and VCP-2A” (the table on page two of the proposed VRED List) which has remote vapor valves only. For this system the “defective vapor valve” defect will be removed. This is the only system for which the defect is being removed entirely.

Pressure Drop Unit of Measurement

In 20 of the 22 tables which comprise the adopted VRED List there is a “pressure drop through the system exceeds one-half (0.50) inch water column at sixty standard cubic foot per hour (60 SCFH)” defect listed. ARB staff is proposing to remove the term “standard” and change the singular “foot” to the plural “feet”, thus changing the units of measurement to “cubic feet per hour.” The initials “SCFH” will likewise have the “S” removed changing “SCFH” to “CFH.”

Defects Followed by an Asterisk (*)

Many of the defects are followed by an asterisk (the character *). It is used in the VRED List to mark the footnote which follows the VRED List table. The footnote states that the identification of a defect with an asterisk may result in the removal of all gasoline fueling points at a GDF from service. When created, the asterisk was intended to call special attention to those defects which are likely to remove all fueling points of a GDF from service. Since the adoption of the VRED List, it has come to the attention of ARB staff that there are other defects which are just as likely as defects with an asterisk to remove all gasoline fueling points at a GDF from service. An asterisk has been added to those defects in the proposed VRED List. No asterisk is being removed from any defect.

Decimal Fractions Expressed As Percentages

Throughout the VRED List there are measurements written and followed by a decimal fraction in parentheses. Two examples with unit are “one and one-half (1.5) inches” and “three-eighths (0.38) inch.” Those defects in units of measurement like gallons per minute, inches, and water column inches remain unchanged; however, defects expressed as fractions of a whole will be modified. Examples are “one-fourth (0.25) of the circumference” and “one-eighth (0.13) of the diameter.” At a stakeholder’s request, staff is proposing these unit-less fractions be expressed as percentages rather than decimal fractions. The examples given would be changed to “one-fourth (25%) of the circumference” and “one-eighth (13%) of the diameter.”

c. Changes to Individual Defects

The remaining changes are specific modifications to individual defects listed in a single VRED List table or reconciliation of two tables for a single system.

Systems Certified for Underground and Aboveground Tanks

There are two sets of two VRED List tables, which are for different applications of a single system. G-70-164 and G-70-175, the first such set of VRED List tables, are the Hasstech VCP-3A system certified for underground and aboveground tanks respectively. Other than the defects discussed in previous paragraphs, the proposed VRED List has additions to these two tables to make them as close to one another as allowable by the Executive Orders certifying the systems. Similarly, the G-70-186 series and the G-70-187 series are a Healy Model 400 ORVR system certified for underground and aboveground tanks respectively. The changes for these two tables in the proposed VRED List are also to make

them as close to one another as allowable by the Executive Orders certifying the systems.

Improper Installation of Any Component

In the “GVR All Systems/any E.O.” table on page one of the VRED List the defect “absence or disconnection of any component required to be used in the E.O.(s) that certified the system” is being changed to “absence, improper installation, or disconnection of any component required to be used in the E.O.(s) that certified the system.” The term “improper installation” is being added to address the situation where the correct component is in place but it is installed backward or incorrectly. The verification procedure for this defect is direct observation. If a situation exists where a verification means other than direct observation is necessary, this defect may not be applied.

Verification Procedure for Dispensing Rate

In the “GVR All Systems/any E.O.” table on page one of the VRED List, changes to the verification procedure for the defect “dispensing rate greater than ten (10.0) gallons per minute (gpm) or less than the greater of five (5.0) gpm or the limit stated in the E.O. measured at maximum fuel dispensing” are being proposed. The verification procedure is “direct measurement for 60 seconds minimum” as adopted. A stakeholder raised the point that this requires dispensing large quantities of gasoline to determine flow-rates. After examining ARB test methods, which calculate flow-rate (among other things), most of the time flow-rates are calculated over about a one-half minute period. This realization initiated the proposed change in the verification procedure language: “when determined as part of any ARB approved test method or direct measurement for 30 seconds minimum.” This means that anyone conducting a approved test which determines dispensing rate will not have to run a separate

test for the dispensing rate; but if they do, the minimum time will be reduced from 60 to 30 seconds.

Insertion Interlock Verification Procedure Addition

An additional method is included for the “insertion interlock mechanism which will allow dispensing when the bellow is uncompressed” defect verification procedure in the multi-system table on page three of the VRED List is being proposed. GDF-09: Phase II Balance System Nozzle Insertion Interlock Operation Determination is the method. At the time the current VRED List was adopted, GDF-09 was not available. The addition of GDF-09 will allow testing of insertion interlock mechanisms where direct observation is not possible.

One and One-Half Inch or Greater Slit/Vapor Splash Guard

In the “G-70-150 series Marconi (Gilbarco) Vapor Vac” table on page five of the VRED List there is a defect written, “a one and one-half (1.5) inch slit in vapor splash guard” for the Husky V34 6250 nozzle equipment component. The defect should be “a one and one-half (1.5) inch or greater slit in vapor splash guard.” The term “or greater” has been added to the proposed VRED List to correct the interpretation of this defect. In this same VRED List table and equipment component, the next defect “any hole greater than three-eighths (0.38) inch in vapor splash” is missing the term guard at the end. The proposed VRED List corrects this by rewriting the defect “any hole greater than three-eighths (0.38) inch in vapor splash guard.”

Defective Vapor Valve on the WayneVac Systems

The “G-70-159 series Saber nozzle for Gilbarco (Marconi) Vapor Vac and WayneVac” table on page eight of the VRED List has a “defective vapor valve”

defect. The Gilbarco systems have a vapor valve with a remote check valve. In previous paragraphs it was explained that no verification procedure exists for nozzles with vapor valves and remote check valves. This issue has been addressed by changing the defect to “defective vapor valve on the WayneVac systems” in the proposed VRED List.

Vapor Guard Defect Clarification

The “any nozzle with a vapor guard damaged such that a slit from the outer edge of the open end flange to the spout anchor clamp” defect listed in the table “G-70-165 series Healy Model 600” on page ten of the VRED List is missing two terms. The defect should read “any nozzle with a vapor guard missing, damaged such that a slit from the outer edge of the open end flange to the spout anchor clamp, or which has equivalent cumulative damage.” The terms “missing” and “or which has equivalent cumulative damage” have been added to the proposed VRED List to achieve consistency with the Executive Order.

AGT/AST

Underground storage tanks have traditionally been referred to using the initials “UST” while aboveground tanks used “AGT”. With recent modifications to aboveground storage tank regulations, the initials “AST” have replaced “AGT”. The title of the VRED List table “G-70-187 series Healy Model 400 ORVR AGT” on page 16 of the VRED List is being changed to “G-70-187 series Healy Model 400 ORVR AGT (AST).” The initials “AGT” are being kept in the title because this is the title of the G-70-187 Executive Order; however, the initials “AST” are added in parentheses to emphasize this is an aboveground storage tank defect VRED List table.

B. PUBLIC COMMENTS

No oral or written comments were submitted during the 45-day comment period, at the public hearing, or on the modifications or additional supporting information during the 15-day comment period. The ARB conducted two public workshops to review the VRED List and to determine the necessity for an update.

A Workshop was held November 5, 2003 to determine whether or not the VRED List adopted September 23, 2002 needed to be updated and, if necessary, to list any defects not currently specified. An update was determined to be necessary and modifications to the VRED List were proposed. Attendance included local regulatory agencies, California Air Pollution Control Officers Association (CAPCOA) representatives, equipment manufacturers, petroleum suppliers, and ARB staff.

After introductions, a brief Power Point presentation covered the following topics: equipment defect history, ARB defect authority, ARB ‘s requirements, defect determination criteria, source of list changes, requests for additional changes, and future action. A handout of a draft proposal of changes to the VRED List was then discussed with reasons for each change explained and questions answered by ARB staff.

A second Workshop was held March 10, 2004. Six additional changes to the proposed VRED List were made. Individuals representing industry and the public attended the meeting. A handout of the draft proposal containing the six changes to the VRED List was discussed with reasons for each change explained and questions answered by ARB staff. ARB staff posted the entire VRED List on the web to allow all stakeholders additional time for review. The proposed changes included an identification scheme for each defect, removal of a verification procedure, and modification of another verification procedure as well as minor clarifications to language.

C. ECONOMIC AND ENVIRONMENTAL IMPACTS

The proposed amendments will not create costs or savings to any state agency or in federal funding to the state, costs or mandate to any local agency or school district. The proposed amendments should have minimal or no impacts on the creation or elimination of jobs within the state of California, minimal or no impacts on the creation of new businesses and the elimination of existing businesses within the state of California, and minimal or no impacts on the expansion of businesses currently doing business within the state of California.

The proposed amendments will not result in any significant adverse environmental impacts. No one participating in this rulemaking action raised either economic or environmental impacts as a concern.

II. HEARING OFFICER'S CONCLUSIONS AND RECOMMENDATION

After consideration of the record herein, I find that the adoption of the proposed amendments to section 94006 of Title 17, CCR and the VRED List incorporated by reference therein to be necessary and appropriate to serve the purposes set forth in HSC section 41960.2. I have concluded that:

1. Section 94006 should be amended to:
   (a) include language to indicate that the VRED List was originally adopted on September 23, 2002;
   (b) add an "as last amended" date to identify the most recent changes;

2. The VRED List should be amended to:

(a) include the proposed alphanumeric identification scheme for all defects;

(b) change the manner in which “defective vapor valve” defects are listed;

(c) change the units for pressure drop measurements

(d) add footnotes to call special attention to those defects which are likely to result in the removal of all fueling points of a GDF from service;

(e) modify defects with values expressed as fractions of a whole to be expressed as percentages;

(f) correlate the listings of defects for the same system when certified in separate E.O.s for both underground and aboveground tanks;

(g) add “improper installation” to the defect GVR(a)(2) for absence or disconnection of any component required to be used in the E.O.(s) that certified the system;

(h) modify the dispensing rate verification procedure;

(i) include the GDF-09 verification procedure to allow testing of insertion interlock mechanisms where direct observation is not possible;

(j) add additional language to clarify the meaning of the defects in G-70-150(e)(1) and (2);

(k) identify “WayneVac systems” for the vapor valve defect identified as G-70-159(a)(4);

(l) include the terms “missing vapor” guard and “equivalent cumulative damage” in accordance with Executive Order G-70-165 in the defect identified as G-70-165(a)(1); and

(m) add the initials “AST” to identify “aboveground storage tanks” in parentheses following “AGT,” which was previously used to denote “aboveground tanks.”

Based on the above findings and conclusions, I recommend that the Executive Officer adopt Executive Order G-04-058 to amend section 94006 of Title 17, CCR and the VRED List incorporated by reference therein.

_____
William V. Loscutoff, Chief
Monitoring and Laboratory Division
Hearing Officer

Adopted _____
Catherine Witherspoon
Executive Officer

Date: _____