

Notice of Public Availability of Modified Text and Availability of an Additional Document

Proposed Amendments to the Enhanced Vapor Recovery Regulations for Gasoline Dispensing Facilities

Public Hearing Date: December 10, 2020
Public Availability Date: May 4, 2021
Deadline for Public Comment: May 19, 2021

At its December 10, 2020, public hearing, the California Air Resources Board (CARB or Board) approved for adoption the proposed amendments to sections 94010, 94011, 94016, and 94017, Title 17 California Code of Regulations, which incorporate by reference amendments to Certification Procedures, Definitions, and, Test Procedures for Vapor Recovery Systems at Gasoline Dispensing Facilities (Enhanced Vapor Recovery Regulations). The amendments were intended to refine the Enhanced Vapor Recovery Regulations to improve their practicality and efficiency. These improvements included the following:

- Replacing ineffective in-station diagnostic (ISD) overpressure alarm criteria with improved pressure summary reports and data storage to make stored information more useful in identifying potential issues;
- Allowing use of modern communication ports for ISD system consoles;
- Amending test procedures to accommodate remote fill Phase I system configurations;
- Making nozzle spillage standards more stringent;
- Requiring an archive of vapor recovery equipment samples; and
- Making several administrative changes to improve clarity and enforceability.

The Board directed the Executive Officer to determine if additional conforming modifications to the regulation were appropriate and to make any proposed modified regulatory language available for public comment, with any additional supporting documents and information, for a period of at least 15 days as required by Government Code section 11346.8. The Board further directed the Executive Officer to consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least

15 days and present the regulation to the Board for further consideration if warranted or take final action to adopt the regulation after addressing all appropriate modifications.

The resolution and all other regulatory documents for this rulemaking are available online at the following [CARB website](https://ww2.arb.ca.gov/rulemaking/2020/evr2020): <https://ww2.arb.ca.gov/rulemaking/2020/evr2020>.

The text of the modified regulatory language is shown in Attachments A and B. The originally proposed regulatory language is shown in ~~striketrough~~ to indicate deletions and underline to indicate additions. New deletions and additions to the proposed language that are made public with this notice are shown in ~~double striketrough~~ and double underline format, respectively.

In the Final Statement of Reasons, staff will respond to all comments received on the record during the comment periods. The Administrative Procedure Act requires that staff respond to comments received regarding all noticed changes. Therefore, staff will only address comments received during this 15-day comment period that are responsive to this notice, documents added to the record, or the changes detailed in Attachments A and B.

Summary of Proposed Modifications

The following summary identifies CARB staff's proposed modifications and clarifications to the following test procedure documents, which are incorporated in the regulation by reference in California Code of Regulations, Title 17, §§ 94011 and 94016:

- TP-201.1C – Leak Rate of Drop Tube/Drain Valve Assembly [insert amendment date]
- TP-201.1D – Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves [insert amendment date]

The proposed modifications and clarifications to the above documents are contained in Attachments A and B, respectively. The modifications and clarifications are based on an engineering evaluation performed by CARB staff, which was conducted in response to comments submitted during the 45-day public review period prior to the December 2020 Board hearing. Staff's February 2021 engineering evaluation is added to the revised technical support document, "Pressure-Up Time for Drop Tubes of GDF's Equipped with Remote Fill Configurations, Equation Development and Field Test Verification," described in the next section of this notice. The proposed modifications to TP-201.1C and TP-201.1D are intended to further improve the test procedures to better accommodate remote fill Phase I system configurations.

Although TP-201.1C in Attachment A precedes TP-201.1D in Attachment B, the next two subsections first describe modifications to TP-201.1D because CARB staff's February 2021 engineering evaluation focused on the TP 201.1D amendments.

The following summary does not include all modifications to correct typographical or grammatical errors, changes in numbering or formatting, nor does it include all of the non-substantive revisions made to improve clarity.

A. Substantive Modifications

1. Modifications to TP-201.1D – Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves

A representative of a company that owns a gasoline dispensing facility (GDF) with the remote fill Phase I configuration commented that the allotted time-to-pressurize specified at five minutes in the proposed testing procedures is insufficient for fill pipe lengths less than 50 feet. The TP-201.1D test procedure is applicable to their GDF because it has both an overfill prevention device and a spill container drain valve. CARB staff's engineering evaluation in response to the comment found that the vertical segment, in addition to the horizontal segment, of the fill pipe assembly must be measured to determine the maximum amount of time allowable, per Table 1 in TP-201.1D ("Time to Pressurize GDF Equipped with Remote Fill Configuration by Product Pipe Assembly Length"). Table 1 provides different maximum pressure-up times based upon ranges of fill pipe assembly length; longer pipe assembly lengths are allowed longer maximum pressure-up times. The testing result could be a false indication of system leaks (i.e., test "failure") if a lower maximum pressure-up time is incorrectly selected from Table 1 because the total pipe assembly length is underestimated by not including the vertical segment in the measurement. As a result, the below modifications include changes to several parts of TP-201.1D to specify that both horizontal and vertical pipe segments need to be included in the fill pipe assembly length measurement to ensure the correct maximum pressure-up time is selected from Table 1.

The engineering evaluation also determined that it is necessary to add 25 percent to the field measurement of the horizontal segment to account for the underground pipe slope and bends that are not visible on the surface and that do not take a direct route to the remote fill product riser and to account for the vertical section at the remote fill product riser and access port. The testing result could be a false indication of system leaks (i.e., test "failure") if a lower maximum pressure-up time is incorrectly selected from Table 1 because the total pipe assembly length is underestimated by not accounting for these fill pipe assembly features.

In addition, the engineering evaluation revealed the presence of a restrictor plate and trap door installed below the adaptor within the direct product riser at the GDF. (A restrictor plate and trap door are required components for the configuration installed at the commenter's GDF, but may not be a requirement for all Phase I

systems certified by CARB in the future due to variation in system designs.) The presence of a restrictor plate and trap door prevent the measurement of the vertical length of the drop tube portion of the fill pipe assembly using a typical tape measure, and prevent the installation of an inflatable bladder in the drop tube needed to isolate the remote fill spill container drain valve from the overflow prevention device to test the leak rate of the drain valve. As a result, the below modifications include additional text that notes the use of a "tank gauging stick" may be needed to obtain vertical measurements.

The modifications also include instructions to make it clear that an inflatable bladder is installed below the spill container drain valve at the remote fill access point rather than in the drop tube. This clarification will facilitate the determination of whether drain valves comply with the applicable performance standard. With these modifications, it is not necessary to adjust the allowable pressure-up time to account for the length of the entire product pipe assembly nor reference a pressure-up time table (Table 1) for testing drain valve assemblies at GDFs with remote fill configurations. However, when testing the overflow prevention device, it is still necessary to adjust the allowable pressure-up time to account for the length of the entire product pipe assembly and to reference Table 1.

The following modifications also include new and revised figures, as well as other minor changes to improve accuracy, clarity and consistency.

- a. In section 3.8, the phrase "product line" was changed to "product pipe assembly." The modification provides clarity given the remote fill product line has both horizontal and vertical segments. In addition, the phrase "bias towards compliance" was replaced with "shorten", in reference to the pressure-up times for product pipe assemblies with diameters smaller than four inches, and the reference to the times in Table 1 was removed. This modification improves the accuracy of the text because narrower pipe diameters do not bias testing towards compliance, and instead only allow for the entire pipe assembly to pressure up faster.
- b. In section 3.9, four modifications were made:
 - i. The words "accurate" and "(plus or minus ten feet)" were deleted from the first sentence because TP-201.1D is amended later to better address potential uncertainty in horizontal distance measurements made at the surface at the GDF site. (See modification d below.)
 - ii. Text about the use of as-built drawings was deleted because it is redundant with proposed text in TP-201.1D section 6.6.
 - iii. The remaining text was replaced with more detailed language to inform the tester that both horizontal and vertical segments of the product pipe assembly need to be measured.

- iv. A reference was added to a new Figure 6A, described further in modification I below.
- c. In section 5.10, "Tape Measure" was replaced with "Length Measuring Device", and explanatory text with examples was added. These modifications are necessary to inform testers that a measurement tape, tank gauging stick, and/or other measuring device may be needed for direct field measurements of horizontal and vertical pipe lengths within the remote fill product pipe assembly. Language to clarify the use of a "tank gauging stick" was added for when the vertical segment has a restrictor plate and trap door below the adaptor within the direct product riser. The remaining text about how measurements should be taken was deleted because it is redundant with proposed text in section 6.6.
- d. In section 6.6, language was added to (a) clarify that there are two segments, horizontal and vertical, to the product pipe assembly, and (b) provide additional instruction for their measurement, including a new step to include an additional 25 percent to field measurement of the horizontal segment, as described at the beginning of this section. Equation 6-1 was added to illustrate how to determine the total run length of the remote fill product pipe assembly, including the addition of 25 percent to the field measurement of the horizontal segment, to improve clarity by providing an example equation for the testing contractor.
- e. In section 7.12.2, the text "if equipped" was added after "drain valve" in the sentence, "No further testing shall be conducted until the leak rate of the drain valve, if equipped, can be determined", to clarify for the testing contractor that this procedure step is relevant only if the GDF's fill pipe assembly includes a drain valve.
- f. In sections 7.2.2.1, 7.11.1.2, 8.1.2.1 and 8.10.1.2., "70.79 ml/min" was changed to "71 ml/min" because typical flow meters used by testing contractors are not equipped with sufficient resolution or sensitivity to provide flow measurements in milliliters (ml) with two decimal places. Furthermore, section 10 of the test procedure uses whole numbers when referring to ml/min.
- g. Modifications were made throughout sections 8.2 through 8.7 to instruct the testing contractor to install the inflatable bladder below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations, rather than in the drop tube, and to refer to the same maximum allowable pressure-up time (five minutes) used for GDFs with direct fill configurations. The modified test procedure for testing drain valves at GDFs with remote configurations is now the same as for GDFs with direct fill configurations with just one difference: the location of inflatable bladder installation. The modified text includes a reference to a new figure

- (Figure 6B, described further in modification l) to further describe where to install the inflatable bladder, which improves clarity for testers.
- h. In section 8.8, text was added to clarify that the procedure includes the entire remote fill product pipe assembly, not just the drop tube.
 - i. In section 8.11.2, the text "if equipped" was added after "drain valve" in the sentence, "No further testing shall be conducted until the leak rate of the drain valve, if equipped, can be determined," to clarify for the testing contractor that this procedure step is relevant only if the GDF's fill pipe assembly includes a drain valve.
 - j. In section 8 Table 1, text was added to the table column heading to improve clarity and consistency. The word "Horizontal" was replaced with "Total" and the word "Piping" was replaced with "Product Pipe Assembly" because both horizontal and vertical segments of the remote fill product line need to be included in the length measurement. In addition, the text "Product Pipe Assembly" was added to the title of Table 1 to maintain consistency with prior text within the procedure.
 - k. The text "for Direct Fill Configuration" was added to the Figure 2 title, and the figure was replaced with a diagram that has thicker lines and darker shading, to improve clarity. No changes to diagram labels or features were made.
 - l. A new figure, "Remote Fill Product Pipe Assembly Consisting of Two Segments" was added as Figure 6A. Figure 6A depicts a cross sectional view of a typical remote fill product piping assembly with annotations that describe how to measure the vertical and horizontal segments. In addition, a new figure, "Typical Inflatable Bladder Installation for Remote Fill Configuration" was introduced as Figure 6B. Figure 6B depicts where the inflatable bladder should be placed when testing the leak rate of the drain valve at GDFs with remote fill configurations. Figures 6A and 6B are necessary to clarify pipe length measurements and bladder placement for testers.
 - m. The sixth row of Form 1, the row with "For GDF equipped with Remote Fill Configuration, length of remote fill product run (feet)," was replaced with a more detailed section with check boxes for the tester to indicate if the GDF is equipped with remote fill configuration and form fields to record measurements of horizontal, vertical, and total length of the remote fill product pipe assembly. These modifications are necessary to prompt testers to measure both horizontal and vertical segments of the remote fill product line because both measurements should be included in the total length measurement used to determine the maximum pressure-up time.

2. Modifications to TP-201.1C – Leak Rate of Drop Tube/Drain Valve Assembly

Though CARB staff's February 2021 engineering evaluation focused on TP-201.1D amendments, its findings led CARB staff to re-consider the proposed amendments for TP-201.1C and to identify a simpler approach for quantifying the leak rate of spill container drain valve assemblies at GDFs with remote fill Phase I configurations that do not have overfill prevention devices. Section 8.1 of the TP-201.1C amendments proposed in 2020 instructs the testing contractor to install an inflatable bladder into the drop tube for both GDFs with direct fill configurations and GDFs with remote fill configurations. The below modifications instead instruct the testing contractor to install the inflatable bladder below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations.

With these modifications, it is not necessary to adjust the allowable pressure-up time to account for the length of the product pipe assembly nor to reference a pressure-up time table for testing drain valve assemblies for GDFs with remote fill configurations. In other words, the modified test procedure for GDFs with remote configurations is now nearly the same as for GDFs with direct fill configurations. There is just one difference: the location of inflatable bladder installation. Furthermore, the modifications take into account a finding of the engineering evaluation: if a restrictor plate and trap door are already installed below the product adaptor at the direct fill riser, it is not possible to install an inflatable bladder in the drop tube during testing. The modifications also include new and revised figures to illustrate the placement of the inflatable bladder below the spill container drain valve at the remote fill access point, as well as other minor changes to improve clarity and consistency.

- a. In section 2, a new paragraph was added to instruct the testing contractor to install the inflatable bladder below the spill container drain valve at the remote fill access point for GDFs with remote fill Phase I configurations.
- b. Sections 3.3, 3.4, 5.8, 5.9, and 6.4 are deleted because, as described at the beginning of this section, they refer to measurements and testing equipment that are no longer necessary if the inflatable bladder is installed below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations.
- c. In section 6.2, a new subsection was added to remind the testing contractor that the drain valve assembly at GDFs with remote fill Phase I configurations is located within the remote fill spill container, which is offset some distance from the vertical product riser that houses the drop tube.
- d. At the end of section 7.5.2, the sentence "Proceed to Section 9." was added to improve clarity. This modification does not change the testing requirements.
- e. Modifications were made throughout section 8, including the deletion of the previously proposed Table 1, to instruct the testing contractor to install the

- inflatable bladder below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations, rather than in the drop tube, and to refer to the same maximum allowable pressure-up time (five minutes) used for GDFs with direct fill configurations.
- f. In section 8.5.2, the sentence “No further testing shall be conducted until the leak rate of the drain valve can be determined.” was deleted because it is applicable to TP-201.1D but not to TP-201.1C because TP-201.1C does not apply to GDFs that have an overfill prevention device.
 - g. The text in section 8.6 was re-located to a new subsection 9.1.1 in section 9 to improve clarity and consistency. This modification does not change the testing requirements.
 - h. The text “for Direct Fill Configuration” was added to the Figure 1 title, and the figure was replaced with a diagram that has thicker lines and darker shading, to improve clarity. No changes to diagram labels or features were made.
 - i. Figure 4 was replaced with a new figure that illustrates the location for installation of the inflatable bladder below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations, rather than in the drop tube.
 - j. In Form 1, the field for “For GDF equipped with Remote Fill Configuration, length of remote fill product run (feet)” was deleted because this measurement is no longer necessary if the inflatable bladder is installed below the spill container drain valve at the remote fill access point for GDFs with remote fill configurations.

B. Nonsubstantive Modifications

1. Modifications to TP-201.1D – Leak Rate of Drop Tube Overfill Prevention Devices and Spill Container Drain Valves

- a. In section 5.8.1, edits were made to improve clarity when referring to the product adaptor test cap, and a reference to the new Figure 6A was added to provide additional clarity. These modifications do not change the testing requirements.
- b. The phrase “(DIRECT FILL CONFIGURATION)” was added to the title of section 7 to improve clarity, given the next section (section 8) is specific to remote fill configurations.
- c. In sections 7.2.2.1, 7.11.1.1, and 7.11.1.2, the text referring to “section 7.2.2.2” was changed to “Section 7.3” to improve clarity and consistency. This modification does not change the testing requirements.
- d. In section 7.11.1, the text “(the option that allows testing the entire drop tube assembly)” was added to the end of the sentence, “Testing conducted

- per Section 7.2.2.1", to improve clarity and save reading time for the testing contractor (i.e., so that the testing contractor does not need to refer back to the earlier section to determine the content of section 7.2.2.1). This modification does not change the testing requirements.
- e. In section 7.11.2, the text "(the option that allows testing the drain valve, followed by the entire drop tube assembly)" was added to the end of the sentence, "Testing conducted per Section 7.2.2.2," to improve clarity and save reading time for the testing contractor (i.e., so that the testing contractor does not need to refer back to the earlier section to determine the content of section 7.2.2.2). This modification does not change the testing requirements.
 - f. In section 8, "Configuration" was added to the end of the section title, "Test Procedure (Remote Fill)," to improve clarity because the phrase "remote fill configuration" is used throughout the earlier sections.
 - g. Following section 8.6, section numbers were corrected to address an auto-numbering malfunction that caused the sections to be mislabeled in the 45-day document published for public review prior to the December 2020 Board hearing. Section numbers 8.9, 8.10, 8.11, 8.12, 8.12.1, 8.12.1.1, 8.12.1.2, 8.12.2, 8.12.2.1, 8.12.2.1, 8.13, 8.13.1, and 8.32.2, were changed to 8.7, 8.8, 8.9, 8.10, 8.10.1, 8.10.1.1, 8.10.1.2, 8.10.2, 8.10.2.1, 8.10.2.2, 8.11, 8.11.1, and 8.11.2.
 - h. In section 8.1.2.1, 8.10.1.1, and 8.10.1.2, the text referring to "section 8.1.2.2" was changed to "Section 8.2" to improve clarity and consistency and does not change the testing requirements.
 - i. In section 8.10.1, the text "(the option that allows testing the entire remote fill product pipe assembly)" was added to the end of the sentence, "Testing conducted per Section 8.1.2.1," to improve clarity and save reading time for the testing contractor (i.e., so that the testing contractor does not need to refer back to the earlier section to determine the content of section 8.1.2.1). This modification does not change the testing requirements.
 - j. In section 8.10.2, the text "(the option that allows testing the drain valve followed by the entire drop tube assembly)" was added to the end of the sentence, "Testing conducted per Section 8.1.2.2," to improve clarity and save reading time for the testing contractor (i.e., so that the testing contractor does not need to refer back to the earlier section to determine the content of section 8.1.2.2). This modification does not change the testing requirements.
 - k. In section 10, the prefixes of the equation labels were changed from "9-" to "10-" for consistency with the section number.

- l. In the "Test Results" table on Form 1 in TP-201.1D, the column heading text "(See Section 9.2)" was changed to "(See Section 10.2)" so that the correct section is referenced.

2. Modifications to TP-201.1C – Leak Rate of Drop Tube/Drain Valve Assembly

- a. In section 5.6, the term "Inflatable Bladder" was capitalized for consistency.
- b. The phrase "(DIRECT FILL CONFIGURATION)" was added to the title of section 7 to improve clarity, given the next section (section 8) is specific to remote fill configurations.
- c. In the first sentence of section 7, the acronym "GDF" was replaced with "gasoline dispensing facilities" because the acronym is no longer used elsewhere in this test procedure.
- d. In section 8, "Configuration" was added to the end of the section title, "Test Procedure (Remote Fill)," to improve clarity because the phrase "remote fill configuration" is used throughout the earlier sections.
- e. In section 10.1, the prefix of the equation label was changed from "9-" to "10-" for consistency with the section number.

In addition to the modifications described above, additional modifications correcting grammar, punctuation, and spelling have been made throughout the proposed changes. These changes are nonsubstantive.

Additional Document Added to the Record

In the interest of completeness and in accordance with Government Code section 11347.1, subdivision (a), staff has also added to the rulemaking record the following revised document that was previously included in the record and invites comments on the revisions:

CARB. 2021. Technical Support Document: Pressure-Up Time for Drop Tubes of GDF's Equipped with Remote Fill Configurations, Equation Development and Field Test Verification. Report prepared by staff of the Vapor Recovery and Fuel Transfer Branch, Monitoring and Laboratory Division, California Air Resources Board (CARB). August 1, 2020, revised February 26, 2021.

New deletions and additions to the document are shown in strikethrough and underline form, respectively. This revised document is added to the record for this rulemaking in anticipation of referencing it in the Final Statement of Reasons section for CARB responses to public comments submitted during the 45-day public review period prior to the December 2020 Board hearing.

This document is available on [CARB's Vapor Recovery Program website](https://ww2.arb.ca.gov/resources/documents/information-about-proposed-amendments-enhanced-vapor-recovery-regulations): <https://ww2.arb.ca.gov/resources/documents/information-about-proposed-amendments-enhanced-vapor-recovery-regulations>. Because of current travel, facility,

and staffing restrictions, the California Air Resources Board's offices have limited public access. Please contact Chris Hopkins, Regulations Coordinator, at chris.hopkins@arb.ca.gov or (916) 445-9564 if you need a physical copy of the document. Pursuant to Government Code section 11347.1, upon request to the aforementioned Regulations Coordinator, the document would be available for inspection at the California Air Resources Board, 1001 I Street, Sacramento, California, 95814, between the hours of 9:00 .a.m. to 4:00 p.m., Monday through Friday (excluding holidays).

Agency Contacts

Inquiries concerning the substance of the proposed regulation may be directed to Michelle Wood, Air Pollution Specialist, Vapor Recovery Regulatory Development Section, at (916) 445-3641 or (designated back-up contact) Donielle Jackson, Air Pollution Specialist, Vapor Recovery Regulatory Development Section, at (916) 445-9308.

Public Comments

Written comments will only be accepted on the modifications identified in this Notice. Comments may be submitted by postal mail or by electronic submittal no later than the due date to the following:

Postal mail: Clerks' Office, California Air Resources Board
1001 I Street, Sacramento, California 95814

[Electronic submittal](https://www.arb.ca.gov/lispub/comm/bclist.php): <https://www.arb.ca.gov/lispub/comm/bclist.php>

Please note that under the California Public Records Act (Gov. Code § 6250 et seq.), your written and verbal comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request.

In order to be considered by the Executive Officer, comments must be directed to CARB in one of the two forms described above and received by CARB no later than the deadline date for public comment listed at the beginning of this notice. Only comments relating to the above-described modifications, including modifications to regulatory text and added documents to the rulemaking record, shall be considered by the Executive Officer.

If you need this document in an alternate format or another language, please contact the Clerks' Office at (916) 322-5594 or by facsimile at (916) 322-3928 no later than five (5) business days from the release date of this notice. TTY/TDD/Speech to Speech users may dial 711 for the California Relay Service.

Si necesita este documento en un formato alterno u otro idioma, por favor llame a la oficina del Secretario del Consejo de Recursos Atmosféricos al (916) 322-5594 o envíe un fax al (916) 322-3928 no menos de cinco (5) días laborales a partir de la fecha del lanzamiento de este aviso. Para el Servicio Telefónico de California para Personas con Problemas Auditivos, ó de teléfonos TDD pueden marcar al 711.

California Air Resources Board



Richard W. Corey
Executive Officer

Date: May 4, 2021

Attachments

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs, see [CARB's website](http://www.CARB.ca.gov) (www.ARB.ca.gov).