

State of California
AIR RESOURCES BOARD

**Notice of Public Availability of Modified Text
and Availability of Additional Documents and Information**

**PROPOSED AMENDMENTS TO ENHANCED VAPOR RECOVERY REGULATIONS
TO STANDARDIZE GAS STATION NOZZLE SPOUT DIMENSIONS TO HELP
ADDRESS STORAGE TANK OVERPRESSURE**

Public Hearing Date: October 25, 2018
Public Availability Date: April 8, 2019
Deadline for Public Comment: April 23, 2019

At its October 25, 2018, public hearing, the California Air Resources Board (CARB or Board) approved for adoption the proposed sections 94010, 94011, 94016, and 94017 of Title 17 California Code of Regulations, which incorporate by reference amendments to Certification Procedures and Definitions for Vapor Recovery Systems at Gasoline Dispensing Facilities (GDF) that will standardize GDF nozzle spout and bellows dimensions.

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:

<http://www.arb.ca.gov/regact/2018/gdfnozzles2018/gdfnozzles2018.htm>

The text of the modified regulatory language is shown in Attachments A through D. 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.

Attachment E to this Notice shows minor corrections and updates to the Staff Report: Initial Statement of Reasons for this rulemaking action. New deletions and additions to the report are shown in ~~striketrough~~ and underline form, 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 through E.

Summary of Proposed Modifications

The following summary identifies CARB staff's proposed modifications to the following documents, which are incorporated in the regulation by reference in California Code of Regulations, title 17, §§ 94010, 94011, 94016, and 94017, respectively:

- CP-201 – Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities [insert amendment date]
- CP-206 – Certification Procedure for Vapor Recovery Systems at Gasoline Dispensing Facilities Using Aboveground Storage Tanks [insert amendment date]
- CP-207 – Certification Procedure for Enhanced Conventional (ECO) Nozzles and Low Permeation Conventional Hoses for Use at Gasoline Dispensing Facilities [insert amendment date]
- D-200 – Definitions for Vapor Recovery Procedures [insert amendment date]

The proposed modifications to the above documents, including an updated Table of Contents for each, are contained in Attachments A, B, C, and D respectively. The corrections and updates to the “Staff Report: Initial Statement of Reasons for the Public Hearing to Consider Proposed Amendments to Enhanced Vapor Recovery Regulations to Standardize Gas Station Nozzle Spout Dimensions to Help Address Storage Tank Overpressure” are contained in Attachment E.

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.

1. CP-201 Table 4-2 footnote (c), CP-206 Table 5-2 footnote (c), and CP-207 Table 3-2 footnote (c), in the amendments approved by the Board at the October 2018 hearing all cited the following draft document in anticipation of its approval by the Society of Automotive Engineers:

Society of Automotive Engineers (SAE). Recommended Practice SAE J1140: Filler Pipes and Openings of Motor Vehicle Fuel Tanks. [Update to be issued.]

The Society of Automotive Engineers Fuel Systems J285/J1140 Task Force (SAE Task Force), which is comprised of nozzle, vehicle, and fill pipe

manufacturers and CARB staff, recently completed updates to SAE J1140. However, the updates for J1140 have not yet completed the full SAE approval process. Consequently, CARB staff proposes deleting the citation in footnote (c) for SAE J1140 and instead incorporating the relevant J1140 material into CARB's certification procedures in new sections and figures, which will now be referenced by footnote (c):

- CP-201: Section 4.7.4 and Figures 4C through 4G
- CP-206: Section 5.7.4 and Figures 5C through 5G
- CP-207: Section 3.5.3 and Figures 3C through 3G

Footnote (c) refers to the nozzle spout dimension "Bend Angle of Nozzle Spout" (S_α , 19.5° to 26.0°) specified in the certification procedure tables in the amendments approved by the Board. The footnote approved by the Board provides an alternative to the bend angle range that allows additional design flexibility for nozzle manufacturers. The alternative provides vehicle fill pipe access zone templates and an assessment method for nozzle manufacturers to assess their nozzle spout, body, and handle insertion clearance when the nozzles have spout angles outside the 19.5° to 26.0° range. This nozzle insertion clearance is necessary for GDF customers to be able to use a nozzle to fill their tanks.¹ Both the SAE J1140 updates and CARB staff's proposed amendment modifications include these templates and assessment method.

2. The following minor modifications and clarifications were made to nozzle spout and bellows dimensions, figure annotations, and definitions in response to comments submitted during the 45-day public review period prior to the October 2018 Board hearing and other SAE Task Force deliberations.

These modifications are in CP-201 Table 4-2, CP-206 Table 5-2, and CP-207 Table 3-2:

- a. Changed minimum "Spout Outside Diameter" (D_1) from 20.12 mm (0.792 in) to 20.5 mm (0.807 in). Per written comments from the automotive industry, if a new gasoline nozzle has a diameter as small as 20.12 mm, as it becomes worn with use it may become small enough for someone to unintentionally insert the nozzle into a urea-based selective catalytic reduction (urea-SCR) system² on vehicles with diesel engines.

¹ The SAE Task Force determined that having a nozzle spout angle within the range of 19.5° to 26.0° ensures that the nozzle spout assembly, body, and handle can be inserted into the vehicle fill pipe access zone. The SAE Task Force also determined that it is possible for some nozzles, including some nozzles currently certified by CARB for sale in California, to have nozzle spout bend angles outside this range and still be inserted into the vehicle fill pipe access zone. Therefore, to allow flexibility for current and future nozzle designs, the SAE Task Force developed vehicle fill pipe access zone templates and an assessment method for use by nozzle manufacturers.

² Urea-SCR systems remove nitrogen oxide, a major air pollutant that contributes to smog, from diesel exhaust. Urea-SCR systems are required for most new diesel trucks, buses, cars, and sport utility

Urea/SCR systems are required to have devices that prevent nozzles larger than 20.0 mm from being inserted, such that gasoline nozzles cannot be accidentally inserted. All gasoline nozzles currently certified by CARB for use in California have spout diameters that are 20.5 mm or larger when new.

- b. Changed the dimensions for “Length of Anchor without Chamfer” (A_2) from a range of 0.5 to 12.5 mm (0.020 to 0.500 in) to a maximum of 12.5 mm (0.500 in). Per nozzle manufacturers, recent voluntary improvements to spout anchor design incorporate a full-length chamfer to help obtain a more secure latch with the mating surface of the vehicle fill pipe (called the locking lip). For this improved design, a section of anchor length without chamfer is not desirable and could potentially compromise nozzle latch performance.
- c. Added a decimal place zero to the minimum range value for the “Aspirator Port Diameter” (P) to provide a consistent number of significant figures between the minimum and maximum values of the range.
- d. Changed the table footnote for “Anchor Latch Height” (A_H) from “*Measurement of anchor latch height (A_H) taken from spout to virtual sharp*” to “*Measurement of anchor latch height (A_H) taken from anchor largest diameter to spout diameter.*” This modification improves clarity given the diameter of the anchor is offset from (not centered on) the spout of some nozzles.

These modifications are in CP-201 Figure 4A, CP-206 Figure 5A, and CP-207 Figure 3A:

- e. Changed the illustration of the “Clearance from Fuel Dispensing End to Spout Connection to Nozzle Body” (L_4) so that the dimension line is drawn to the inner edge of the nut that attaches the nozzle spout to the nozzle handle, instead of the outer edge of the nut. This modification improves clarity and consistency of spout length measurements. This modification is shown in blue in the attachments.
- f. Deleted the “Virtual Sharp” text and line from the figures because the SAE Task Force determined this phrase and line were not needed to define the measurement of A_H given other clarifying edits that had already been made.

vehicles manufactured in the United States after January 1, 2010. Diesel engines require the periodic addition of diesel exhaust fluid (DEF, a urea solution) to urea-SCR systems, usually from a bottle though some truck stops provide bulk DEF dispensers near diesel fuel pumps.

These modifications are in CP-201 Table 4-2 and Figure 4B, and in CP-206 Table 5-2 and Figure 5B:

- g. Changed the dimension name “Nozzle Bellows Face Flatness” (B₃) to “Nozzle Bellows Face Profile”, and the definition from “2.5 mm (0.098 in) total indicator reading (TIR) max over seal surface” to “2.5 mm (0.098 in) profile tolerance on seal surface”, to improve clarity and consistency with how nozzle manufacturers typically refer to this dimension.
- h. Changed the illustration of the “Nozzle Bellows Contact Angle” (B₄) to show the angle drawn perpendicular to the spout to agree with dimension descriptions in the tables.
- i. In Figures 4B and 5B, added the word “spherical” to the phrase “Conical Nozzle Bellows Cross Section”. This is a minor clarification resulting from the SAE Task Force deliberations.
- j. In Figures 4B and 5B, added the word “planar” to the phrase “Donut Nozzle Bellows Cross Section”. This is a minor clarification resulting from the SAE Task Force deliberations.

These modifications are in CP-206 Table 5-2:

- k. Changed the dimension symbol from “A_F” to “A_H” to ensure consistency with proposed language contained in CP-201 and CP-207. This symbol should refer to “Anchor Latch Height” rather than “Anchor Latch Zone Flatness”.
- l. Changed the dimensional description “Anchor Latch Zone Flatness” to “Anchor Latch Height” to ensure consistency with proposed language in CP-201 and CP-207. The term “anchor latch zone flatness” was used in earlier draft versions of the documents but later refined to “anchor latch height” per SAE Task Force deliberations.

This modification is in CP-207 Figure 3B:

- m. Changed the orientation of the line that defines the “Nozzle Bellows Face Outer Diameter” (B₁) for the ECO nozzle from straight up/down to parallel to the nozzle bellows face. The SAE Task Force determined a parallel line orientation is the appropriate way to measure B₁ for ECO nozzles and is consistent with the B₁ measurement drawn for vapor recovery nozzles included in CP-201 Figure 4B and CP-206 Figure 5B.

These modifications are in CP-207 Table 3-2:

- n. Deleted the last row in the table referring to Symbol H, Calibration Hole and footnote "F". Because ECO nozzles are used exclusively with ORVR equipped vehicles and do not collect displaced vapors from the vehicle fuel tank, there is no concern with premature shutoff that may occur with Phase II EVR nozzles. ECO nozzles do not form a leak tight seal with the vehicle fill pipe nor are they subject to V/L ratio adjustment.
- o. Changed the dimensional description "Nozzle Bellows Face Outer Diameter" (B₁) to "Insertion Interlock Face Outer Diameter". Unlike Phase II EVR nozzles, ECO nozzles are not equipped with a nozzle bellows (nozzle boot) as defined in D-200 Definitions for Vapor Recovery Procedures. In order to meet CARB spillage requirements, ECO nozzles are equipped with an insertion interlock. This change is consistent with the language used in Figure 3B.

This modification is in D-200 sections 2 and 3:

- p. The term and acronym for "total indication reading (TIR)" were deleted, and the term for "profile tolerance" was added, for consistency with the changes made to the "Nozzle Bellows Face Flatness" term and definition described in part 4(g) above.
3. The Table of Contents (TOC) for CP-201, CP-206, and CP-207 were updated to reflect the proposed additions and deletions to text, tables, and figures, as well as formatting changes elsewhere in the document to improve page breaks for existing tables and figures. The TOCs are included in Attachments A, B, and C in their entirety. The proposed 15-day modifications to the TOCs are shown in double underline to indicate additions and ~~double strikethrough~~ to indicate deletions. The originally proposed modifications to the TOCs are shown in underline to indicate additions and ~~strikethrough~~ to indicate deletions. These modifications were included in the originally proposed amendments during the 45-day public review period prior to the October 2018 Board hearing but were not shown in underline/strikethrough format.
4. The following minor corrections, updates and clarifications were made to the cost analysis in the Initial Statement of Reasons (ISOR). None of these modifications change the ISOR conclusion that the costs are considered negligible. All of the modifications rely on information and documents already in the rulemaking record. The following bullets describe the rationale for the modifications and identify their locations with page and paragraph numbers within the original ISOR. Attachment E to this Notice provides the text of the new deletions and additions to the ISOR in ~~strikethrough~~ and underline format, respectively.

Rationale for ISOR modifications:

- a. Minor corrections: In the Economic Impact Statement in the original ISOR, CARB staff identified that about 5,305 of the about 10,202 GDFs in California could be impacted by negligible increases in nozzle costs if nozzle manufacturers pass on new certification costs because about 5,305 GDFs may have existing nozzles that do not comply with the proposed amendments. However, all GDFs could be impacted if nozzle manufacturers pass on new certification costs, not only those GDFs with nozzles that do not meet all the dimensions specified in the proposed amendments. As stated in the ISOR, if nozzle manufacturers were able to pass on all costs (\$20,520) along with an estimated 20 percent markup, this would result in \$24,624 ($\$20,520 \times 1.2$) in costs to California businesses over the 11-year lifetime of the regulation. If all GDFs are impacted by passed-on costs, this could result in approximately \$2 in additional cost per GDF ($\$24,624 \div 10,202$ impacted GDFs = \$2.41 per GDF on average) over the 11-year lifetime, compared to the \$5 in additional cost per impacted GDF estimated in the original ISOR ($\$24,624 \div 5,305$ GDFs). CARB staff presented the corrected value during the October 25, 2018 Board Hearing. This correction does not change the ISOR conclusion that this cost is considered negligible.
- b. Update: In the original ISOR, CARB staff identified the same estimated cost for a “small business” and a “typical business” in the Economic Impacts Assessment chapter because small businesses own the majority of GDFs in California. Since then, CARB staff updated the definition of a “typical business” to mean a non-small business, per common Department of Finance practice, and estimated average annual costs specific to different business size categories. If nozzle manufacturers were to pass on new certification costs to GDFs through nozzle price increases, CARB staff estimates average costs of about \$0.21 per year per business for the most common type of impacted California small business, single-GDF operators, and about \$1.26 per year for small businesses that own two to twelve GDFs. CARB staff estimates an average cost of about \$8.40 per year for the most common type of non-small business (independent businesses that own 10’s to 100’s of GDFs), and about \$4.20 and \$29.40 per year on average for other non-small business types (major oil companies and hypermarkets such as Costco and Sam’s Club). These updates do not change the ISOR conclusion that these business costs are considered negligible.
- c. Clarification: Explanatory text was added to two sections (Sections VIII.D and VIII.G.1) to clarify CARB staff assumptions about potential increases to certification costs for out-of-state nozzle manufacturers and how the certification cost increase estimate was used to estimate potential costs for businesses that own California GDFs. The same explanatory text was

already provided in other sections (e.g., Section VIII.G.2) of the original ISOR.

Modifications in ISOR:

Executive Summary:

- a. Page 2, paragraph 3: The third sentence was edited to reflect the correct number of GDFs (10,202) and the correct cost per GDF (\$2.41 over 11 years, on average).

Chapter VIII. Economics Impacts Assessment:

- b. Page 36, paragraph 4 (first paragraph in Section C.1): The first sentence was edited to reflect the correct number of GDFs (10,202).
- c. Page 37, subsection *Gasoline Dispensing Facilities* (in Section C.1): A new paragraph was added at the end of this subsection to summarize how the proposed amendments might result in negligible cost increases for GDFs throughout California (10,202 GDFs), including those that already have nozzles that comply with the proposed dimensions, if nozzle manufacturers pass on new certification costs.
- d. Page 38, paragraph 3 (in Section C.2): The text “with assist systems” was deleted to clarify that the business descriptions apply to all business-owned GDFs throughout California.
- e. Page 40, paragraph 2 (in Section D): A new sentence was added to the end of the paragraph to clarify CARB staff assumptions about potential increases to certification costs for out-of-state nozzle manufacturers.
- f. Page 41, paragraph 1 (in Section D): The last sentence was edited to reflect the correct number of GDFs (10,202) and the correct cost per GDF (\$2.41 over 11 years, on average). New text was added at the end of the paragraph to introduce and summarize estimated annual costs for different size categories of businesses that own GDFs.
- g. Page 42, Table 4 Cost Estimates: New text, “A. Nozzle Manufacturers.”, was added to the beginning of the table’s subtitle, and the table was expanded to include a new section, “B. Businesses that Own California GDFs”, that provides calculations and assumptions for estimating potential increases in nozzle price and associated costs to small and typical (non-small) businesses that might occur if nozzle manufacturers pass on increased CARB certification costs.
- h. Page 45, paragraph 1 in Section G.1: New text was added to this paragraph to clarify CARB staff assumptions about potential increases to

certification costs for out-of-state nozzle manufacturers and how the certification cost increase estimate was used to estimate potential costs for businesses that own California GDFs. The last sentence was edited to reflect the correct number of GDFs (10,202) and the correct cost per GDF (\$2.41 over 11 years, on average). A new sentence was added to the end of the paragraph to provide the estimated annual costs for the two small business categories.

- i. Page 45, paragraph 3 (in Section G.2): The first sentence was edited to define “typical businesses” as mid-sized and large businesses.
 - j. Page 46, paragraph 2 (in Section G.2): The last sentence was edited to reflect the correct number of GDFs (10,202) and the correct cost per GDF (\$2.41 over 11 years, on average). A new sentence was added to the end of the paragraph to provide the estimated annual costs for the three typical (non-small) business categories.
 - k. Page 46, paragraph 5 (in Section G.3): The last sentence was edited to reflect the correct cost per GDF (\$2.41 over 11 years, on average).
 - l. Page 47, paragraph 3 (in Section G.2): The bullet text was edited to reflect the correct cost per GDF (\$2.41 over 11 years, on average).
5. 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 Documents

The following 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 October 2018 Board hearing:

CARB. 2011. California Air Resources Board’s Response to U.S. Environmental Protection Agency’s Proposed Rule, *Air Quality: Widespread Use for Onboard Refueling Vapor Recovery and Stage II Waiver* (EPA-HQ-OAR-2010-1076-0001). Letter from James N. Goldstene, Executive Officer, California Air Resources Board (CARB), September 8, 2011.

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) Lou Dinkler, Manager, Vapor Recovery Regulatory Development Section, at (916) 324-9487.

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 5:00 p.m. on the due date to the following:

Postal mail: Clerk of the Board, California Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://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 by 5:00 p.m. on the deadline date for public comment listed at the beginning of this notice. Only comments relating to the above-described modifications to the text of the regulations shall be considered by the Executive Officer.

If you need this document in an alternate format or another language, please contact the Clerk of the Board 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 alternativo 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: *April 8, 2019*

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 at www.CARB.ca.gov.