CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE
Fuel Specifications and Labeling of Natural Gas
CCR Title 4, New Sections 4192.1 and 4192.2; and Sections 4206 and 4207
April 8, 2025

FINAL STATEMENT OF REASONS

UPDATED INFORMATIVE DIGEST

Pre-existing California laws and regulations directly relating to the proposed regulation have not changed during this rulemaking activity. In October 2024, the Department closed this rulemaking file and submitted it to the Office of Administrative Law (OAL) for review. During review, the Department, under advisement of OAL, determined that this rulemaking file conflicted with BPC Sections 13440 and 13446. The Department determined that *ASTM International Standard Specification D8080* (*ASTM D8080*) for compressed natural gas is less stringent than the existing compressed natural gas specification adopted in CCR Title 13, Section 2292.5. Therefore, the Department voluntarily withdrew this file from OAL in November 2024. To resolve the conflict, the Department proposed the following modifications to the text on February 14, 2025:

- Define an additional natural gas motor vehicle fuel variety "Compressed Natural Gas – Hydrogen Blend," pursuant to BPC Section 13400 (b)(12).
- Require Compressed Natural Gas to meet CCR Title 13, Section 2292.5 unless repealed or modified to be equally or less stringent than *ASTM D8080*. If this occurs, Compressed Natural Gas would be required to meet *ASTM D8080*.
- Require Liquified Natural Gas to meet *ASTM D8080*.
- Require Compressed Natural Gas – Hydrogen Blend to meet *ASTM International Standard Specification D8487* (*ASTM D8487*).
- Incorporate Compressed Natural Gas – Hydrogen Blend in CCR Section 4206 natural gas labeling requirements.

The proposed modifications do not impact any other topics discussed in the 45-day Notice of Proposed Rulemaking Action.

Modifications to the proposed text, changes to the Initial Statement of Reasons (ISOR), and any additional documents relied upon added after the publication of the Notice of Proposed Action are summarized below. As authorized by Government Code Sections 11346.9 (d) and 11347.1, the Department incorporates those changes in the rulemaking file.

SUMMARY OF CHANGES TO PROPOSED REGULATION

The Department received written comments from three commenters regarding the proposed regulation during the 45-day public comment period. After considering all comments and voluntarily withdrawing the rulemaking file from OAL final review, the Department made modifications to this proposed rulemaking file.

45-Day Public Review and Comment Period:

The 45-day public notice and comment period for this proposed regulation began on April 26, 2024, and closed at 5:00 p.m. PDT on June 11, 2024.

The Department did not schedule a public hearing and one was not requested by the public.

15-Day Notice of Modifications to the Proposed Text:

A 15-day notice and public comment period for the proposed regulation began on February 14, 2025, and closed at 5:00 p.m. PST on March 3, 2025.

The Department did not schedule a public hearing and one was not requested by the public.

ADDENDUM TO THE ISOR – PURPOSE AND NECESSITY OF THE PROPOSED REGULATION

Chapter 6. Automotive Products Specifications

Article 10. Specifications — Natural Gas

During the 15-day comment period, the Department proposed the following modifications to Article 10. The Department added additional statutory citations to the regulatory notes (Credits), where necessary, to include BPC Sections 13400 (b)(12) and 13446. This is necessary to include the secretary's authority to define new alternative fuel types and establish corresponding fuel specifications published by ASTM International (or another standards development organization accredited by the American National Standards Institute).

Section 4192.1. Definitions.

The Department proposes to add subdivision (b) to this section of the regulation to define Compressed Natural Gas – Hydrogen Blend as an alternative motor vehicle fuel pursuant to Business and Professions Code Division 5, Section 13400 (b)(12). It is necessary to provide this additional natural gas fuel definition to distinguish it from the definition found in subdivision (a)(1). Furthermore, the proposed definition describes which natural gas fuel variety that the proposed *ASTM D8487* fuel specification in Section 4192.2 (c) applies to. The Department

proposes to establish a minimum hydrogen concentration exceeding 0.3 volume percent so that if in the future CCR Title 13, Section 2292.5 is superseded by *ASTM D8080*, then this fuel type would not conflict with the upper hydrogen limit of 0.3 volume percent established in *ASTM D8080*.

Section 4192.2. Specifications — Natural Gas.

Based on OAL's review in October 2024, it was determined that CCR Title 13, Section 2292.5 is more stringent than *ASTM D8080* and *ASTM D8487*. Pursuant to BPC Sections 13440 and 13446, the Department shall adopt fuel specifications provided they are not "less stringent than required by any California state law." It was determined that if any one limit in a specification was less restrictive compared to another specification already in California law, then the entire specification under consideration should be considered less stringent. Therefore, in subdivision (a) of this section, the Department proposes to establish the fuel specification for compressed natural gas to be the same as CCR Title 13, Section 2292.5. If CCR Title 13, Section 2292.5 is repealed or modified to be less or equally stringent than the latest specification set forth in *ASTM D8080*, the Department proposes in subdivision (a)(1) of this section that *ASTM D8080* shall be the fuel specification for compressed natural gas. It is necessary for the Department to adopt this regulation to fulfill the mandate of BPC Sections 13440 and 13446 to adopt the latest fuel specifications established by ASTM International. It is also necessary to adopt this regulation so that *ASTM D8080* would become immediately effective if CCR Title 13, Section 2292.5 were to be repealed or modified to be equally or less stringent. Subdivisions (b) and (c) of this section are modifications of the original proposed language to include a newly defined fuel variety and establish the applicable fuel specifications. This is necessary because these natural gas fuel varieties are distinct, as defined in the proposed Section 4192.1, and thus require distinct fuel specifications to be adopted.

Section 4206. Labeling Requirements for Natural Gas.

The Department proposes non-substantive formatting edits to this section and includes reassignment of subdivisions from the originally proposed text. This is necessary to facilitate regulatory citation. The Department also proposes modifications to the dispenser labeling requirements to account for the fuel varieties as defined in proposed Section 4192.1. This is necessary so customers can make an informed decision before a fuel purchase based on the natural gas fuel dispenser labels and the fuel requirements of their vehicle.

The Department proposes to cross reference size and height requirements in BPC Section 13480 for product name and fuel grade labeling requirements in subdivisions (a)(2) and (a)(3), of this section. This is necessary to harmonize this regulation with statute and inform dispenser owners and enforcement personnel of the existing label size and height requirements.

The Department proposes to modify subdivision (a)(3) of this section to require specific fuel grade labeling corresponding to the natural gas fuel varieties as defined in proposed Section 4192.1. This is necessary because *ASTM D8080* and *ASTM D8487* specifications have distinct fuel grades. All fuel grades contain the minimum calculated methane number (MN_C). Additionally, fuel grades found in *ASTM D8487* also include the hydrogen blend upper limit of 10 volume percent (H10). Fuel grade labels that correspond to fuel variety and their applicable fuel specification will help customers make informed decisions based on the fuel requirements of their vehicle. This is especially important, because Compressed Natural Gas – Hydrogen Blend is a newly proposed natural gas fuel variety and therefore may or may not be reverse compatible with existing natural gas vehicles. During the 45-day comment period, commenter 1 also recommended that the minimum calculated methane number and the maximum hydrogen volume percent be labeled. Additionally, during the 45-day comment period, commenter 3 stated that table 1 of *ASTM D8487* would be modified to include the term "fuel grade" to clarify that the requirements in the table determine each fuel grade designation. After considering these comments, the Department agreed to make the proposed modifications to the fuel grade label.

MANDATE ON LOCAL AGENCIES OR SCHOOL DISTRICTS

The Department determined that this proposed regulation does not impose a new mandate on local agencies or school districts. As explained in the ISOR, the Department does not have authority to regulate natural gas fuel dispensers owned and operated by these entities as they are not considered "persons" pursuant to Attorney General (AG) Opinion No. SO 77-13 and BPC Section 12501.1. This is further supported by Division of Measurement Standards (DMS) Notice D – 20 – 06. This proposed regulation does not include additional requirements, change the normal business operations of, nor incur additional non-reimbursable costs to local agencies or school districts.

ALTERNATIVES CONSIDERED

The Department determined that no reasonable alternative it considered or that has otherwise been identified and brought to its attention would be more effective in carrying out the purpose for which the regulation is proposed, would be as effective and less burdensome to affected private persons than the adopted regulation, or would be more cost effective to affected private persons and equally effective in implementing the statutory policy or other provision of law. All suggestions and alternatives offered by public comment and the reasons the Department choose to accept or reject each comment are summarized below.

INCORPORATION BY REFERENCE

No other documents were incorporated after the 45-day comment period. The Department has the entire rulemaking file available for review at the address provided in the Notice of Proposed Action.

SUMMARY AND RESPONSE TO COMMENTS

The Department included a copy of each written comment received during the rulemaking process and included them in this rulemaking file. The Department sequentially numbered each written comment for ease of referencing and addressing responses to them.

During the 45-day public review and comment period, the Department received comments from three stakeholders:

- Ted Williams of Natural Gas Direct, LLC on June 11, 2024, comments 1, 2 and 3;
- Darrell Johnson of SoCalGas on June 11, 2024, comments 4 and 5; and
- Allan Morrison of AMT Consulting on June 11, 2024, comments 6 and 7.

During the 15-day public comment period, the Department received one comment from one stakeholder:

- Ryan Kenny of Clean Energy Fuels on March 3, 2025, comment 8.

The following are summarizations of these comments and the Department's response to each comment:

Summary of written comment 1:

The commenter offers general support for the adoption and incorporation by reference of *ASTM D8080* and *ASTM D8487* specifications in CCR Title 4 with suggested changes to the proposed text. The commenter's suggestions are explained in the summaries of written comments 2 and 3 below.

Response to comment 1:

The Department thanks the commenter for the general support to incorporate by reference *ASTM D8080* and *ASTM D8487* specifications in CCR Title 4. The Department makes no changes to the proposed text.

Summary of written comment 2:

The commenter expresses concerns regarding natural gas fuel compatibility with current vehicle systems and suggests additional requirements in the specifications of the proposed text (CCR Section 4192.2). The commenter offers three text modifications. First, the commenter suggests that the title of Section 4192.2 "Specifications – Natural Gas" be changed to "Specifications – Compressed Natural Gas." Second, the commenter suggests a requirement that dispensed Compressed Natural Gas (CNG) specified in accordance with *ASTM D8080* shall also have a calculated methane number (MN_C) grade upper limit specified.

Third, the commenter suggests a requirement that dispensed CNG that contains hydrogen by admixture shall not exceed ten percent by volume as specified in *ASTM D8487*.

Response to comment 2:
The Department thanks the commenter for their suggested modifications to CCR Section 4192.2, however disagrees with all three suggestions. First, Section 4192.2 covers specifications for both CNG and Liquified Natural Gas (LNG). Modifying the section title to include the word "compressed" could be construed to limit the specification requirement to just CNG and this would not reflect the Department's intent. Second, *ASTM D8080* does not specify an upper MN_C limit. It is the Department's position that if an upper MN_C limit has industry merit, it should be vetted by ASTM International and reflected in future publications of *ASTM D8080*. Third, the latest version of *ASTM D8487* specifies an upper hydrogen limit of ten percent by volume and therefore already meets the commenter's suggestion. Furthermore, commenters 2 and 3 (see comments 5 and 7) mention a potential future need to increase the hydrogen blending limit above ten percent by volume. It is unnecessary for the Department to restrict the hydrogen blend limit when various natural gas stakeholders are currently expressing a desire to increase it. Therefore, the Department declines to make changes to the proposed text.

Summary of written comment 3:
The commenter expresses concerns regarding natural gas fuel compatibility with current vehicle systems and suggests two additional dispenser labeling requirements in CCR Section 4206 (c). The commenter offers two text modifications. First, the commenter suggests that the MN_C grade designation should include the minimum MN_C applicable to the fuel dispensed, whether provided by the natural gas utility or by other natural gas sources serving the dispenser. Second, the commenter suggests that the maximum hydrogen content by volume delivered by the dispenser be included as part of the fuel grade label.

Response to comment 3:
The Department thanks the commenter for their suggested modifications to CCR Section 4206 (c). The Department disagrees with the first suggestion, but agrees with the second suggestion. First, *ASTM D8080* and *ASTM D8487* specify fuel grades that reflect two minimum MN_C limits (MN_C 65 and 75). Through citation of *ASTM D8080* and *ASTM D8487* in subdivision (c), the Department's proposed language already incorporates and requires dispenser labeling of the minimum MN_C of the dispensed fuel in accordance with either of the specifications. Additionally, the source(s) of natural gas dispensed as motor vehicle fuel is beyond the scope of the fuel grade labeling requirement so long as the dispensed fuel meets the minimum MN_C indicated on the fuel grade label. Furthermore, commenter 3 (see comment 7) explains that future proposed editorial changes to the scopes of both *ASTM D8080* and *ASTM D8487* would include fuel grade descriptions. These descriptions would clarify that the MN_C fuel grade

reflects a minimum MN_C of the dispensed fuel. After voluntarily withdrawing the rulemaking file from final OAL review and considering the commenter's second suggestion, the Department determined that including "H10" in the fuel grade label has merit to the regulated stakeholders and consumers.

Summary of written comment 4:
The commenter offers general support to adopt and incorporate by reference *ASTM D8080* for CNG. However, the commenter expresses general concern regarding the existing California Air Resources Board (CARB) CNG fuel specification (CCR Title 13, Section 2292.5) that will compete with the proposed regulation unless the Department and CARB harmonize their specifications. On the other hand, the commenter acknowledges that CARB's specification has not been updated in 33 years, despite advancements in natural gas engine technology, rendering it outdated and no longer necessary to ensure efficient CNG engine performance.

Response to comment 4:
The Department appreciates the commenter offering support to adopt and incorporate by reference *ASTM D8080* for CNG. The Department acknowledges CARB's existing CNG fuel specification in the ISOR. CARB's regulation was adopted in 1993 and has not been updated since then. *ASTM D8080* and *ASTM D8487* meet the modern needs of fuel suppliers, engine manufacturers and consumers, and will be updated as needed by the appropriate subcommittee at ASTM International to reflect future needs of the industry. CARB is aware of ASTM International's two natural gas fuel specifications because it is part of the ASTM subcommittee that drafted and published them. As mentioned in the ISOR and reported by CARB on its natural gas webpage, CARB may consider future rulemaking action to harmonize its outdated fuel specification with the new specifications of *ASTM D8080* and *ASTM D8487*. It is important to note that CARB has not adopted a fuel specification for LNG or CNG blended with hydrogen – two other natural gas fuel varieties becoming more prevalent in the industry today. In addition to CNG, ASTM International's two fuel specifications are inclusive to LNG and CNG blended with hydrogen.

CARB's authority to adopt its CNG fuel specification in CCR Title 13, Section 2292.5 is provided for by the California Legislature in Health and Safety Code (HSC) Division 26, Section 43013 (a). However, in the context of this rulemaking action, this statue limits the scope of CARB's authority to enforce the provisions of HSC Division 26 and CCR Title 13. CARB does not have authority to enforce the provisions of BPC Division 5 or CCR Title 4, Division 9.

The Department identifies all applicable statutes and regulations that authorize and mandate both CARB and the Department to adopt natural gas motor vehicle fuel specifications meant to carry out separate and distinct purposes of the Health and Safety Code and the Business and

Professions Code, respectively. For these reasons, the Department declines to make any further changes to the proposed text.

Summary of written comment 5:
The commenter offers a concern that the maximum blend limit of ten percent hydrogen gas by volume specified in *ASTM D8487* may not meet future California decarbonization needs. The commenter mentions that there are concurrently five hydrogen blending demonstration projects in progress to develop a hydrogen gas injection standard for California. Furthermore, the commenter expresses concern about the 5 parts per million by volume (ppm(v)) total sulfur limit because their business Rule 30 for transportation of natural gas allows 12.6 ppm(v) total sulfur. The commenter acknowledges that these limits can be addressed and modified in the specification by the ASTM International subcommittee and thus be automatically adopted and incorporated by reference into CCR Title 4 without the Department needing to modify this regulation in the future.

Response to comment 5:
The Department appreciates the commenter's concern regarding the maximum hydrogen blend limit specified in *ASTM D8487*. However, the Department maintains that *ASTM D8487* should still be adopted and incorporated by reference in addition to *ASTM D8080*. By not adopting *ASTM D8487*, the maximum hydrogen blend would be limited to only the scope of *ASTM D8080* and specified as a maximum of 0.3 percent by volume. This would be counterproductive to the entire industry, especially those who choose to blend hydrogen with CNG. As the commenter notes, changes to hydrogen blend limits would be adopted in future publications of *ASTM D8487* by the appropriate subcommittee of ASTM International. Commenter 3 (see comment 7) mentions that future work to increase the hydrogen blend limit in *ASTM D8487* is being considered to address the needs of fuel suppliers, engine manufacturers, and consumers.

Regarding the five demonstration projects, the Department does not have regulatory purview over natural gas quality in distribution (transportation) pipeline systems. The Department's regulatory authority is limited to enforcing motor vehicle fuel quality specifications and dispenser labeling of natural gas at retail fueling stations in California. Regardless of the natural gas fuel quality in distribution pipelines, it is the responsibility of the station owner to ensure that dispensed natural gas sold as motor vehicle fuel meets either CCR Title 13, Section 2292.5, *ASTM D8080* (when appropriate), or *ASTM D8487* specifications. As for the commenter's concern for the sulfur limit, it is the Department's position that if increasing the sulfur limit in Compressed Natural Gas – Hydrogen Blend fuel has industry merit, it should be vetted by a subcommittee of ASTM International and reflected in future publications of *ASTM D8487*. Therefore, the Department declines to make further changes to the proposed text.

Summary of written comment 6:
The commenter offers general support to the proposed modifications of CCR Title 4, adopting new Sections 4192.1 and 4192.2, and amending or repealing Sections 4206 and 4207, respectively.

Response to comment 6:
The Department appreciates the commenter's general support of this rulemaking action and makes no changes to the proposed text.

Summary of written comment 7:
The commenter offers updates regarding work items opened by ASTM International Subcommittee D03.02. These work items were opened due to some confusion as to what "fuel grade" meant within the specifications and to address some needed editorial changes in both *ASTM D8080* and *ASTM D8487*. For *ASTM D8080*, proposed changes include adding renewable natural gas (RNG) to both the scope and keyword sections, adding fuel grade descriptions to the scope, and correcting "ppmv" to "ppm(v)." For *ASTM D8487*, proposed changes include adding fuel grade descriptions to the scope, correcting "ppmv" to "ppm(v)," adding "fuel grade" to the heading of table 1, and correcting the title of section 3.2 from "abbreviations" to "acronyms." Furthermore, the commenter mentions that future work to increase the hydrogen blend limit is being considered to address the future needs of fuel suppliers, engine manufacturers, and consumers alike.

Response to comment 7:
The Department appreciates the commenter's updates of D03.02 subcommittee and finds them informative in addressing the concerns expressed by commenters 1 and 2. The Department makes no further changes to the proposed text.

Summary of written comment 8:
The commenter offers a concern that the natural gas methane content sold at retail refueling stations may not meet the 88 percent minimum methane requirement found in CCR Title 13, Section 2292.5 for compressed natural gas. Retail station operators do not control natural gas motor vehicle fuel composition but instead buy natural gas from utilities based on MMBTUs and not methane percentage. The commenter suggests that minimum fuel content requirements be based on OEM recommendations and provides an example.

Response to comment 8:
The Department appreciates the commenter's concern regarding the potential conflict between current retail compressed natural gas fuel composition and the fuel specification found in CCR Title 13, Section 2292.5. This specification has existed in its current form and has been enforceable since 1993. However, the Department does not have statutory authority to adopt,

modify, repeal or enforce CCR Title 13 regulations. The California Air Resources Board has statutory authority over CCR Title 13. BPC Sections 13440 and 13446 authorizes the Department to establish specifications set forth by ASTM International or SAE International for natural gas motor vehicle fuel, but stipulates that no adopted specification shall be less stringent than required by any California state law. This statutory stipulation includes regulations found in CCR Title 13 which are more stringent than *ASTM D8080* and *ASTM D8487*.

The Department concurs with the commenter that fuel specifications should be based, in part, on OEM recommendations among other stakeholder recommendations. Many OEMs and other affected stakeholders are participants of the appropriate subcommittees of standards writing consensus organizations such as ASTM International. The Department recommends any affected stakeholder submit comments to ASTM International to consider modifications to their fuel specifications. The Department proposes in this rulemaking that *ASTM D8080* immediately become the superseding fuel specification for CNG if CCR Title 13, Section 2292.5 is ever repealed or modified to be less or equally stringent than *ASTM D8080*.

Additionally, during the 45-day comment period, commenter 2 stated that as of March 3, 2024, they began joint utility research of compressed natural gas with hydrogen blends between 0.1 and 20 percent to recommend a future state hydrogen injection standard into the state's natural gas distribution and transmission system. Depending on the results of this study, commenter 4's concern in this comment (comment 8) about pipeline gas composition may be resolved by future policy decisions made by California's utilities. Commenter 4 may also address their concern with the California Air Resources Board, as they have statutory authority over CCR Title 13 regulations. The Department makes no further changes to the proposed text.