

# **FINAL STATEMENT OF REASONS**

## **Title 4. Business Regulations**

### **Division 9. Division of Measurement Standards, Department of Food and Agriculture**

#### **RESUBMITTAL OF REGULATIONS PERTAINING TO NATURAL GAS MOTOR VEHICLE FUELS**

##### **UPDATE OF INITIAL STATEMENT OF REASONS**

On March 6, 2017, a Revised Initial Statement of Reasons and 15-Day Notice was mailed to stakeholders and other interested parties. The public comment period for the Revised ISOR began on March 6, 2017 and ended on March 22, 2017. The ending date was later extended to April 19, 2017.

A Supplement to the Revised Initial Statement of Reasons was posted and mailed to stakeholders on November 2, 2017. The public comment period for the Supplement to the Revised Initial Statement of Reasons began on November 2, 2017 and ended on November 17, 2017.

The Revised Initial Statement of Reasons and the Supplement to the Revised Initial Statement of Reasons are still valid. The Initial Statement of Reasons is also still valid, to the extent not modified by the Revised Initial Statement of Reasons and the Supplement to the Revised Initial Statement of Reasons.

##### **LOCAL MANDATE**

The Department has determined that this rulemaking does not impose a new mandate on local agencies or school districts.

##### **ALTERNATIVES**

The Department has 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 action is proposed or would be as effective and less burdensome to affected private persons than the proposed action, or would be more cost-effective to affected private persons and equally effective in implementing the statutory policy or other provision of law.

##### **INCORPORATION BY REFERENCE**

EN 16726 was available on request from the Department throughout the rulemaking period. This publication would be cumbersome, unduly expensive, or otherwise impractical to publish in the California Code of Regulations.

## **NONSUBSTANTIVE CHANGES MADE TO THE TEXT DURING OAL REVIEW**

Minor, technical nonsubstantive changes were made to the text during OAL review to correct section formatting and punctuation.

## **PUBLIC COMMENTS**

**GROUPED COMMENTS AND RESPONSES.** The Department received similar comments from multiple stakeholders and interested parties throughout all of the public comment periods for this rulemaking. Related comments for five issues are grouped and summarized below, followed by the Department's responses.

### **GROUPED COMMENT #1. CLAIM OF LACK OF NOTIFICATION**

The Department received comments that the Department did not specifically notify some stakeholders and interested parties of the proposed rulemaking, or that the Department did not perform sufficient public outreach as part of its rulemaking. See below for a list of stakeholders and specific comment period:

#### **45-Day Comment Period 6/24/16 – 8/8/16, Extended to 8/11/16**

Ian Hoover, General Manager, 3G CNG Corporation  
Sean Moen, General Manager, Atlas Refuel  
Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs, Clean Energy  
Keith Iaia, President, Revolution CNG, Inc.  
Frances Lemons, Transportation Manager, Lompoc Unified School District

#### **Commenters at the Public Hearing Held on 8/11/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy  
Sean Edgar, Director, CleanFleets.net  
Chuck Helget, Republic Services  
Terry Schubert, Paso Robles Waste and Recycle, Paso Robles County Disposal, and Paso Robles Roll-Off  
Ted A. Williams, American Gas Association

#### **First Additional Public Comment Period 9/13/16 – 10/13/16**

No comments related to this grouped response were received during the first additional public comment period.

#### **Second Additional Public Comment Period 12/1/16 – 12/16/16**

Tony Lindsay, R&D Director, Gas Technology Institute  
Linda Urata, Coordinator, San Joaquin Valley Clean Cities Coalition

Bruce H. Tiffney and Renée Bahl, Co-Chairs, Chancellor's Sustainability Committee, University of California, Santa Barbara  
Melissa Guise, Central Coast Clean Cities Coalition Coordinator.

**Third Additional Public Comment Period 3/6/17 – 3/22/17, extended to 4/19/17**

Sean Edgar, Director, Clean Fleets  
P. Terence Schubert, Attorney representing 3G CNG  
Thomas Lawson, President, California Natural Gas Vehicle Coalition

**Fourth Additional Public Comment Period 4/4/17 – 4/19/17**

No comments related to this grouped response were received during the fourth additional public comment period.

**Fifth Additional Public Comment Period 4/27/17 – 5/12/17**

No comments related to this grouped response were received during the fifth additional public comment period.

**Sixth Additional Public Comment Period 5/2/17 – 5/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**Seventh Additional Public Comment Period 11/2/17 – 11/17/17**

No comments related to this grouped response were received during the seventh public comment period.

**RESPONSE TO GROUPED COMMENT #1:** In initiating and conducting this rulemaking, the Department has complied with all of the requirements of the Administrative Procedure Act (APA) for notification and public participation. There has been opportunity for public comment at each stage of this rulemaking process as required by the APA.

A series of five pre-rulemaking webinars began in September 2015 in accordance with APA Section 11346.45(a). The dates of the webinars were 9/15/15, 10/1/15, 10/7/15, 10/14/15, and 11/18/15. Teleconferences were also conducted on request from various stakeholders on 10/28/15, 11/2/15, and 11/9/15 to receive stakeholder input before formal rulemaking began.

The initial Notice of Proposed Rulemaking was posted on the Department's website on June 24, 2016. Also on June 24, 2016, this notice was sent directly by email or regular mail to over 80 stakeholders and all county weights and measures offices. The Department was not required to notify each potential interested party in advance of the rulemaking. The Department sent the initial notice to stakeholders identified at that time, including trade associations with individual members. These

included the California Natural Gas Producers, the Renewable Natural Gas Coalition, the American Gas Association, and the California Natural Gas Vehicle Coalition. These groups, and others, assisted the Department in identifying other potential stakeholders and interested parties throughout the rulemaking process. Those individuals and businesses were added to the list of contacts to receive future notices of this rulemaking.

This rulemaking has had eight public comment periods for proposed regulatory text: 6/24/16 – 8/8/16 (extended to 8/11/16), 9/13/16 – 10/13/16, 12/1/16 – 12/16/16, 3/6/17 – 3/22/17 (extended to 4/19/17), 4/4/17 – 4/19/17, 4/27/17 – 5/12/17, 5/2/17 – 5/17/17, and 11/2/17 – 11/17/17. There was a 15-day public comment period, 3/6/17 – 3/22/17, for the Revised Initial Statement of Reasons. There were four public comment periods for Additional Documents and Information Relied On: 10/4/16 – 10/18/16, 12/1/16 – 12/16/16, 3/6/17 – 3/22/17, and 4/4/17 – 4/19/17. There was a 15-day public comment period, 11/2/17 – 11/17/17, for modifications to the proposed text and for the Supplement to the Revised Initial Statement of Reasons. A public hearing was held on 8/11/16. The Department has received many written and verbal comments by mail, email and at the public hearing. The Department believes its efforts fully meet the notification and public participation requirements of the APA.

#### **GROUPED COMMENT #2. REQUESTS TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATION**

The Department received comments requesting a delay in the implementation date of the proposed regulation. These comments were received from:

##### **45-Day Comment Period Public Comment Period 6/24/16 – 8/8/16, Extended to 8/11/16**

Ian Hoover, General Manager for 3G CNG  
Sean Moen, General Manger for Refuel

##### **Commenters at the Public Hearing Held on 8/11/16**

May Lee, Principal Engineer for Southern California Gas Company

##### **First Additional Public Comment Period 9/13/16 – 10/13/16**

No comments related to this grouped response were received during the first public comment period.

##### **Second Additional Public Comment period 12/1/16 – 12/16/16**

Tim Carmichael, Agency Relations Manager for Southern California Gas Company

##### **Third Additional Public Comment Period 3/6/17 – 3/22/17, extended to 4/19/17**

No comments related to this grouped response were received during the third public comment period.

##### **Fourth Additional Public Comment Period 4/4/17 – 4/19/17**

No comments related to this grouped response were received during the fourth public comment period.

**Fifth Additional Public Comment Period 4/27/17 – 5/12/17**

No comments related to this grouped response were received during the fifth public comment period.

**Sixth Additional Public Comment Period 5/2/17 – 5/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**Seventh Additional Public Comment Period 11/2/17 – 11/17/17**

No comments related to this grouped response were received during the seventh public comment period.

**RESPONSE TO GROUPED COMMENT #2: REQUEST TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATIONS**

The proposed CCR Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn along with the proposed effective date for these specifications stated on the bottom of page 15 of the Revised ISOR.

The changes to Chapter 1 Article 1 Section 4001 and 4002 will be effective April 1, 2018.

The changes to Chapter 7 Sections 4200, 4201, 4206, and 4207 will be effective April 1, 2018.

**GROUPED COMMENT #3. REQUESTS TO DELAY RULEMAKING**

The Department received comments requesting a delay of this rulemaking to allow time for more discussion with stakeholders and interested parties. These comments were received from:

**45-Day Comment Period Public Comment Period 6/24/16 – 8/8/16, extended to 8/11/16**

Ian Hoover, General Manager, 3G CNG Corporation  
Sean Moen, General Manager, Atlas Refuel  
Thomas Lawson, President, California Natural Gas Vehicle Coalition  
Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs, Clean Energy  
Tim Carmichael, Agency Relations Manager, Southern California Gas Company  
W. A. Zobel, Vice President, Sales, Marketing and Strategy, Trillium CNG.

**Commenters at the Public Hearing Held on 8/11/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs, Clean Energy  
Sean Edgar, Director, CleanFleets.net  
Chuck Helget, Republic Services  
Terry Schubert, Paso Robles Waste and Recycle, Paso Robles County Disposal, and Paso Robles Roll-Off  
Ted A. Williams, American Gas Association.

**First Additional Public Comment Period 9/13/16 – 10/13/16**

Tim Carmichael, Agency Relations Manager, Southern California Gas Company.

**Second Additional Public Comment Period 12/1/16 – 12/16/16**

Tim Carmichael, Agency Relations Manager, Southern California Gas Company  
Tony Lindsay, R&D Director, Gas Technology Institute  
Linda Urata, Coordinator, San Joaquin Valley Clean Cities Coalition  
Bruce H. Tiffney and Renée Bahl, Co-Chairs, Chancellor’s Sustainability Committee, University of California, Santa Barbara  
Melissa Guise, Central Coast Clean Cities Coalition Coordinator.

**Third Additional Public Comment Period 3/6/17 – 3/22/17, extended to 4/19/17**

Kathryn Lynch and Veronica Pardo, Regulatory Affairs, California Refuse Recycling Council.  
Thomas Lawson, President, California Natural Gas Vehicle Coalition

**Fourth Additional Public Comment Period 4/4/17 – 4/19/17**

No comments related to this grouped response were received during the fourth public comment period.

**Fifth Additional Public Comment Period 4/27/17 – 5/12/17**

No comments related to this grouped response were received during the fifth public comment period.

**Sixth Additional Public Comment Period 5/2/17 – 5/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**Seventh Additional Public Comment Period 11/2/17 – 11/17/17**

No comments related to this grouped response were received during the sixth public comment period.  
**RESPONSE TO GROUPED COMMENT #3:** The Department is required to take timely regulatory action to implement provisions of AB 1907 (Ridley-Thomas, Statutes of 2014, Chapter 805). This legislation

amended BPC Division 5 §13404 to specify method of sale requirements for natural gas motor vehicle fuels and certain requirements for dispenser labeling. Multiple commenters stated that the Department should not take regulatory action at this time. However, AB 1907 gives the Department a clear mandate to act under its authority derived from BPC Division 5 Chapter 2 § 12107.

In addition, BPC Division 5 Chapter 14 § 13480(c) requires the Department to adopt regulations for antiknock index and other labeling requirements for CNG and LNG since these are automotive spark-ignition motor vehicle fuels.

Several commenters have requested more time for discussion of natural gas fuel quality specifications. The Department recognizes that there is telling lack of consensus among stakeholders and other regulatory agencies although there have been years of discussion over natural gas fuel quality standards. This lack of consensus was convincingly illustrated by the adoption and subsequent withdrawal of Standard J1616 by SAE International. Accordingly, the proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The statutory mandates for natural gas fuel dispenser labeling in BPC §§ 13404, 13470, 13471, and 13480 are clear and specific. The Department sees no alternative regulations to implement these mandates that would be more effective or less burdensome to directly affected parties.

The regulation of the method of sale, labeling, and advertising of all motor vehicle fuels protects both consumers and retailers. Labeling and advertising of motor vehicle fuels provides a reliable basis for fuel buyers to make value comparisons among competing retailers and fuel types. The Department must ensure a fair, transparent, and competitive marketplace for all fuel retailers. This requires a uniform statewide standard. The proposed regulation supports these objectives and is clearly within the statutory authority of the Department. The Department sees no alternative regulations to implement these mandates that would be more effective or less burdensome to directly affected parties.

The Department believes that further discussion, additional meetings, and workshops as requested by the commenters would significantly delay the rulemaking process without providing any new information or benefit to the public. Therefore, the Department must reject the requests for further delay in the proposed rulemaking.

**GROUPED COMMENT #4. NEED TO CONSULT WITH CALIFORNIA AIR RESOURCES BOARD (CARB) AND/OR THE CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)**

The Department received comments that it should consult and coordinate its rulemaking with the California Air Resources Board (CARB) and/or the California Public Utilities Commission (CPUC). These comments were received from:

**45-Day Comment Period Public Comment Period 6/24/16 – 8/8/16, extended to 8/11/16**

Ian Hoover, General Manager for 3G CNG  
Sean Moen, General Manger for Refuel  
Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy  
Roger Gault, V.P. Regulatory Activity for EMA  
Tim Carmichael, Agency Relations Manager for Southern California Gas Company  
W. A. Zobel, Vice President Sales,

**Commenters at the Public Hearing Held on 8/11/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy  
Sean Edgar, Director for CleanFleets.net  
Chuck Helget for Republic Services  
Terry Schubert for Paso Robles Waste and Recycle, Paso Robles County Disposal, and Paso Robles Roll-Off  
Ted A. Williams for the American Gas Association

**First Additional Public Comment Period 9/13/16 – 10/13/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy

**Second Additional Public Comment Period 12/1/16 – 12/16/16**

No comments related to this grouped response were received during the second public comment period.

**Third Additional Public Comment Period 3/6/17 – 3/22/17, extended to 4/19/17**

No comments related to this grouped response were received during the third public comment period.

**Fourth Additional Public Comment Period 4/4/17 – 4/19/17**

No comments related to this grouped response were received during the fourth public comment period.

**Fifth Additional Public Comment Period 4/27/17 – 5/12/17**

No comments related to this grouped response were received during the fifth public comment period.

**Sixth Additional Public Comment Period 5/2/17 – 5/17/17**

No comments related to this grouped response were received during the sixth public comment period.



### **Seventh Additional Public Comment Period 11/2/17 – 11/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**RESPONSE TO GROUPED COMMENT #4:** The California Business and Professions Code (BPC) Division 5 Chapter 14 gives the Department authority and responsibility for the adoption and enforcement of regulations relating to automotive fuels and lubricants. The Department is not required to adopt any language found in any other state agency's regulations. The Department may not adopt a regulation that is less stringent than any existing state law, but is otherwise authorized to act as it deems necessary and appropriate within the scope of its authority.

The proposed regulatory language to amend the California Code of Regulations (CCR) Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The remaining proposed regulations in CCR Chapters 1 and 7 deal with technical requirements in NIST Handbook 44 for natural gas motor vehicle fuel dispensers and dispenser labeling requirements. The Department's authorities for these regulations are found in BPC Chapter 14. CARB has no authority to implement either NIST Handbook 44 specifications or the dispenser labeling requirements found in BPC Chapter 14.

The Department believes that the California Public Utilities Commission (CPUC) does not have regulatory authority over natural gas motor vehicle fuels sold at retail. This belief is based on the Department's review and interpretation of California Public Utility Code Section 216 (f) which specifically exempts privately owned retail CNG stations from the authority of the PUC:

*PUC § 216 (f) The ownership or operation of a facility that sells compressed natural gas at retail to the public for use only as a motor vehicle fuel, and the selling of compressed natural gas at retail from that facility to the public for use only as a motor vehicle fuel, does not make the corporation or person a public utility within the meaning of this section solely because of that ownership, operation, or sale.*

The CPUC has not commented on the proposed regulations during any public comment period. As noted above, the authority of the CPUC does not extend to motor vehicle fuels.

The Department is the only agency empowered to adopt regulations to implement, interpret, and enforce the statutes in BPC Division 5 Chapter 14. There is no mechanism or authority for the Department to share its rulemaking with any other agency under this authority. While the Department welcomes comments on this rulemaking from all interested parties, including its sister agencies, it must reject any suggestion that it may not act to adopt the proposed regulation under its authority in BPC Division Chapter 14.

**GROUPED COMMENT #5. CLAIM THAT RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY**

The Department received comments that fuel quality should be the responsibility of the public utilities and not retail station owner/operators. These comments were received in from:

**45-Day Comment Period Public Comment Period 6/24/16 – 8/8/16, Extended to 8/11/16**

Ian Hoover, General Manager for 3G CNG  
Sean Moen, General Manger for Refuel  
Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy  
Roger Gault, V.P. Regulatory Activity for EMA  
Tim Carmichael, Agency Relations Manager for Southern California Gas Company  
W. A. Zobel, Vice President Sales

**Commenters at the Public Hearing Held on 8/11/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy  
Sean Edgar, Director for CleanFleets.net  
Chuck Helget for Republic Services  
Terry Schubert for Paso Robles Waste and Recycle, Paso Robles County Disposal, and Paso Robles Roll-Off  
Ted A. Williams for the American Gas Association

**First Additional Public Comment Period 9/13/16 – 10/13/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy

**Second Additional Public Comment Period 12/1/16 – 12/16/16**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy

**Third Additional Public Comment Period 3/6/17 – 3/22/17, extended to 4/19/17**

Todd R. Campbell, Vice President, Public Policy and Regulatory Affairs for Clean Energy

**Fourth Additional Public Comment Period 4/4/17 – 4/19/17**

No comments related to this grouped response were received during the fourth public comment period.

**Fifth Additional Public Comment Period 4/27/17 – 5/12/17**

No comments related to this grouped response were received during the fifth public comment period.

**Sixth Additional Public Comment Period 5/2/17 – 5/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**Seventh Additional Public Comment Period 11/2/17 – 11/17/17**

No comments related to this grouped response were received during the sixth public comment period.

**RESPONSE TO GROUPED COMMENT #5:**

The proposed fuel quality specifications in Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel have been withdrawn. However, the Department expects that a fuel quality standard will be adopted by either ASTM International or SAE International in the near future. BPC § 13440(i) will adopt by reference such a standard without a need for regulatory action by the Department, which may then enforce its provisions. Since this will directly affect many of the stakeholders of this rulemaking, the Department would like to take this opportunity to clarify its authority as well as the responsibilities of fuel retailers and producers by addressing the claims and concerns listed above.

Business and Professions Code (BPC) § 13400(p) defines “motor vehicle fuel” as follows:

*“Motor vehicle fuel” means an engine fuel intended for consumption in, including, but not limited to, an internal combustion engine, fuel cell, or electric motor to produce power to self-propel a vehicle designed for transporting persons or property on a public street or highway.*

Business and Professions Code (BPC) § 13400(g) defines “motor vehicle fuel” as follows:

*“Engine fuel” means any gasoline, diesel, or alternative fuel used for the generation of power in an internal combustion engine or fuel cell in a motor vehicle, or electrical power delivered conductively or inductively to an electric motor in electric or plug-in hybrid vehicles.*

As discussed in the Revised Initial Statement of Reasons posted on March 6, 2017, pipeline natural gas obviously does not meet the definition of a motor vehicle fuel established in the BPC. Pipeline natural gas is not clearly intended for consumption in an internal combustion engine in a motor vehicle. Indeed, pipeline natural gas cannot even be delivered to the fuel storage tank of a natural gas vehicle because it is distributed at a pressure approximately 60-fold lower than that required to refuel a natural gas vehicle.

Pipeline natural gas must be processed to transform it into a motor vehicle fuel that meets the definitions in the BPC. In the case of CNG, this processing, which may include drying and filtering in addition to compression, is most often done at the point of sale by the station operator, who is then necessarily the producer of the CNG fuel sold. If LNG is produced at the point of sale, the LNG station

operator is similarly the natural gas fuel producer. CNG and LNG may be produced at a location separate from the point of sale and delivered as a finished motor vehicle fuel for retail sale using dedicated tank vehicles. The proposed definition of “Producer” in § 4206(a)(6) makes clear the critical distinction between a utility selling pipeline gas and a natural gas motor vehicle fuel producer. Gas rules established by the CPUC clearly place the responsibility for the quality of a natural motor vehicle fuel to the utility customers who buy raw pipeline gas and transform it into CNG or LNG. The applicable provision is found in Gas Rule No. 2 Description of Service in the tariffs of each of California’s natural gas utilities.

From PG&E Cal. P.U.C. Sheet No. 23062-G filed March 21, 2005:

*... Customers using gas supplied by PG&E for processes that are affected by impurities in excess of specified minimum levels are responsible for testing gas supplied and for rendering the gas suitable for their intended uses.*

*Except as provided in this Rule, the utility makes no warranties as to the nature, composition, or properties of the natural gas supplied, and the obligations set forth in this Rule are exclusive and in lieu of all other warranties, guaranties, or liabilities, express or implied, arising by law or otherwise (including without limitation any obligations of the utility with respect to fitness, merchantability, and consequential damages).*

Both tariffs of SDGE and SoCalGas include the same language:

From SDGE Cal. P.U.C. Sheet No. 19179-G filed January 19, 2012 and SoCalGas Cal. P.U.C. Sheet No. 45832-G filed February 26, 2010:

*... Customers using gas supplied by this Utility for processes which are affected by impurities in excess of specified minimum levels are responsible for testing gas supplied and for rendering the gas suitable for their intended uses. Customers using gas supplied by this Utility should also take reasonable steps to prevent Odorant Fade, as defined in Rule No. 1, that may result in Consumer Equipment, as defined in Rule No. 1. This requirement does not apply to Odorant Fade occurring upstream of Consumer Equipment.*

Representative comments received on this issue of retailers include the following:

1. Placing the gas quality standard on the station owner is unprecedented and inefficient.
2. LNG and CNG fuel quality should be ensured by the producer, not a retailer.
3. For CNG, gas quality should be the responsibility of the utility.
4. Requiring a fuel retailer to bear the burden of a utility decision to allow inferior gas into the pipeline system is bad public policy.
5. There is no other example in the commercial transportation market where fuel quality is the responsibility of the retailer. This approach is both unprecedented, and impractical.

6. The retailer has absolutely no control of the gas entering his location, and as such, should not be subject to any regulations related to the quality of the gas received.

The Department appreciates that the assertions above represent sincerely held beliefs of the commenters. However, they are without foundation and contrary to fact.

Comments 2 reflects a misunderstanding of who is the producer of natural gas motor vehicle fuels in California. Utilities sell pipeline natural gas, not motor vehicle fuel. The Department notes that there is a limited exception since both PG&E and SoCalGas own and operate a small number of retail CNG stations. The Department does not have any authority over these few retail fuel outlets since the utilities are under the sole jurisdiction of the CPUC.

As the discussion above makes clear, Comment 3 is contrary to both state law and pipeline gas utility rules approved by the CPUC. The Department cannot take a position on who 'should' be responsible for fuel quality that is inconsistent with state statutes. Similarly, the Department takes no position on the issue raised in Comment 4. Matters of public policy are outside the scope of this rulemaking.

Comments 1 and 5 above suggest that it would be unprecedented to hold owners and operators of CNG and LNG stations responsible for fuel quality. This is simply not true. California retailers of gasoline and diesel fuels are strictly liable for the quality of the fuel they sell to the public. This is true even though these retailers obtain the fuel they sell from distributors and have no control over the quality of the fuel received (see comment 6 above). The Department enforces quality specifications for these fuels by sampling and testing fuel at retail stations. Station owner/operators are liable for any damage to engines or vehicle systems resulting from the sale of substandard fuel.

#### **SUMMARY AND RESPONSES TO WRITTEN COMMENTS RECEIVED DURING THE 45-DAY PUBLIC COMMENT PERIOD (6/24/16 – 8/8/16, EXTENDED TO 8/11/16)**

##### **Commenter 1 - Linda Lee, California Air Resources Board offered the following comment:**

*Title 4, Div 9, Art 10, 4192 (g) definition of Wobbe Index should say square root of relative density.*

##### **Response to Comment 1.1**

The Department thanks the commenter for noting this error. The Department agrees with the comment and has corrected the regulatory text as suggested.

##### **Commenter 2 - Roger Gault offered the following comments on behalf of EMA (Truck and Engine Manufacturers Association)**

##### **Comment 2.1**

*EMA and its members suggest that revisions be made for the purpose of clarifying and/or correcting the proposed regulation. Chapter 1, Article 1, §4001, Exceptions, should be revised to provide agreement with Section 1.3.1.1 and 1.3.1.2 by replacing the definition of gasoline liter equivalent (GLE) with the definition of diesel gallon equivalent (DGE). Similarly, Chapter 6, Article 10, §4192, Butanes, Pentanes, and C6+ hydrocarbons need not be defined as the terms are not used in the Article as proposed.*

##### **Response to Comment 2.1**

The Department thanks EMA for its comments.

This comment refers to the original proposed regulatory text. The definition of gasoline liter equivalent (GLE) was in the 2015 edition of NIST Handbook 44 "Specifications, Tolerances, and other Technical Requirements for Weighing and Measuring Devices". BPC Division 4 Chapter 14 § 12107 requires the Department to adopt by reference. The definition of gasoline liter equivalent (GLE) does not appear in the latest 2017 version. Accordingly, GLE is no longer relevant to this rulemaking. The Department notes that AB 1907 (Ridley-Thomas, Statutes of 2014, Chapter 805) amended BPC § 13404 to establish the gasoline gallon equivalent (GGE) as the sole method of sale for CNG fuel in California.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, the definitions of hydrocarbons in § 4206 are no longer relevant to this rulemaking.

#### **Comment 2.2**

First, EMA strongly supports the minimum Methane Number specified (75) to provide the minimum anti-knock properties required for engine/vehicles in service in California. EMA recognizes that the proposed method to determine Methane Number is not easily accessible and requests that CDFA include in the regulation access to a Methane Number calculator that would allow consistent determination of the Methane Number given gas composition inputs. EMA is working with the ASTM Working Group to make this calculator readily available.

#### **Response to Comment 2.2**

The Department thanks EMA for its support of a methane number specification. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The Department is no longer proposing a minimum Methane Number as part of a fuel quality specification.

The final version of the regulation includes a requirement in Chapter 7 § 4206(c)(1) for labeling natural gas fuel dispensers with the minimum Methane Number of the fuel offered for sale as calculated by fuel producers using the MWM Method as defined in § 4206(a)(4). This is a labeling requirement only so that fuel buyers will be adequately informed about the Methane Number of the fuel offered for sale.

#### **Comment 2.3**

*EMA recommends review of the required inclusion of limits for Ammonia, Carbonyl Sulfide, and Halogen compounds. EMA members are not aware of those "contaminants" raising concerns with natural gas used as a motor fuel. To the extent the presence of those compounds does not meaningfully affect the acceptability of natural gas as a motor fuel, CDFA should avoid the potential increased costs and decreased availability that may result from their regulation.*

#### **Response to Comment 2.3**

The Department thanks EMA for its comment. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

#### **Comment 2.4**

*EMA is concerned that the maximum water content specified (100 ppmv) is insufficient to protect vehicles from increased maintenance requirements associated with removal of condensed water from vehicle fuel storage tanks. Water should not be present in fuel delivered to the vehicle, and limits applied should be stated in terms of dew point of the delivered gas relative to the lowest ambient temperature expected. EMA recommends a dew point of 10°F (6°C) below the lowest temperature expected. If dew point is deemed unacceptable as a measure of water content, the maximum limit value must be lowered from 100 ppmv to 0.5 ppmv for normal service and 0.15 ppmv for cold weather (ambient temperatures below 0 °C) service.*

#### **Response to Comment 2.4**

The Department thanks EMA for its comment. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

#### **Comment 2.5**

*EMA also is concerned that the maximum limit for Hydrogen Sulfide (5 ppmv) is not protective of engines and vehicles. It recommends that the limit be lowered to 3 ppmv maximum.*

#### **Response to Comment 2.5**

The Department thanks EMA for its comment. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

#### **Comment 2.6**

*EMA recommends that the maximum particulate size (10 µm) and maximum particle mass (10 mg/kg) be reduced to 1 µm and 0.07 mg/kg respectively to provide the required protection of engines and vehicles.*

#### **Response to Comment 2.6**

The Department thanks EMA for its comment. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

#### **Comment 2.7**

*EMA recommends additional properties be controlled as follows:*

*i. Hydrogen: maximum of 300 ppmv*

*Engine component (e.g., spark plugs) durability is the concern in addition to the potential for hydrogen embrittlement of fuel system components (including storage tanks).*

ii. *Oxygen: maximum of 1.0% (10,000 ppmv)*

*Oxygen level is important to control flammability and potential for fuel system corrosion.*

iii. *Siloxanes: maximum of 3 ppmv*

*Engine components (e.g., exhaust-related components and sensors) may be sensitive to siloxanes.*

*Traditional natural gas supplies do not contain siloxanes but landfill generated natural gas supplies can contain unacceptable levels.*

iv. *Compressor Oil: maximum of 5 ppmv*

*Compressor oil is a primary source of particulate matter emissions from natural gas engines.*

*Compressor oil may also condense and create problems with fuel system components such as pressure regulators.*

### **Response to Comment 2.7**

The Department thanks EMA for its comment. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

### **Comment 2.8**

*With respect to Chapter 7, §4206, Labeling:*

a. *EMA recommends that the Minimum Methane Number label be revised to replace the proposed "By the MWM METHOD" language with "Per Motor Vehicle Fuels Regulation."*

b. *EMA recommends that the labeling requirement for minimum percent methane, as set forth in §4206(c), be removed. The requirement is likely to create marketplace confusion with the Methane Number, which must be labeled pursuant to §4206(b).*

### **Response to Comment 2.8**

The Department thanks EMA for its comment.

The alternate text suggested by EMA, 'Per Motor Vehicle Fuels Regulation', is non-specific and too vague to be included in the labeling requirement, which is in § 4206(c)(1) in the final version of the regulation. The text '(4 CCR 4206)' has been added to the required label to cite the specific California code section that applies.

The dispenser labeling of percent methane is required by Federal Trade Commission (FTC) Rules 306 and 309. These Rules require posting of the automotive fuel rating as defined. The Department agrees with the FTC that the percent methane in CNG fuel is an appropriate figure of merit and provides valuable information to fuel purchasers for making value comparisons.

To provide this important information about fuel quality to purchasers of CNG fuel, § 4207 requires that CNG and LNG dispensers be labeled with the percent methane fuel rating according to FTC Rules 306 and 309. This requirement in the regulation will provide the Department the ability to enforce these consumer protection rules.



The Department believes that the two labels required in the proposed regulation are sufficiently different to avoid confusion on the part of consumers. The proposed Methane Number label must use characters at least 1/2 inch high as required by BPC § 13480(c). This requirement means that this label will be a block of text roughly 3.5" x 6" or an equivalent size. The FTC percent methane fuel rating label must be 3" wide by 2 1/2" long and prominently includes the % sign. The FTC requires that this label be as near as reasonable practical to the price per unit of the fuel. Retailers may use a different background color for the Methane Number label to further distinguish it from the FTC fuel rating label as long as the required information is clearly legible.

For these reasons, the Department rejects the suggestion from EMA in Comment b. to remove the requirement for labeling dispensers with the minimum percent methane.

### **Commenter 3**

Robin Bremmer and Tim Frazier offered the following comments for Cummins and Cummins-Westport.

#### **Comment 3.1**

*§ 4192 Definitions Used in this Article.*

*Suggest removing the extra "in" found in the second sentence and adding "Annex A" following the reference to the EN16726 standard.*

*e.g., "The MWM Method is presented in the latest version of CEN EN16726 standard "Gas infrastructure - Quality of gas - Group H, Annex A."*

*§ 4193 Specifications for Natural gas Fuel Used in Internal Combustion Engines.*

*(a) Methane Number.*

*Suggest restating the definition of methane number to include Annex A*

*e.g., "Methane Number. The Methane Number (MN) shall be calculated by the method published in the latest version of CEN EN16726 standard "Gas infrastructure - Quality of gas - Group H, Annex A", otherwise known as the "MWM Method."*

*(b) Minimum Methane Number.*

*Suggest removing "MWM" from this sentence as "Methane Number" is sufficient as it is defined in section (a).*

*e.g., "Minimum Methane Number. Beginning January 1, 2017: Natural gas sold as a motor vehicle fuel shall have a minimum Methane Number of 75."*

#### **Response to Comment 3.1**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, these comments are no longer relevant to this rulemaking.

### **Comment 3.2**

*Wobbe Index (Higher Heating Value).*

*Recommend a minimum limit for a Lower Heating Value (LHV) of 37.4 MJ/kg (16100 BTU/lbm) be included. This aligns with CWI's current requirements.*

*While the Wobbe Index (HHV) specified is acceptable, it relates to producers of pipeline gas and not directly to consumers of LNG/CNG for motor vehicle usage. Natural gas engine manufacturer specify gaseous fuel energy content in terms of LHV. Both EN 16273-2 and ASTM D.03.92 WK40094 have specified both LHV and Wobbe requirements. It has also been cited by EMA in their June 2014 Technical Statement.*

### **Response to Comment 3.2**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

### **Comment 3.3**

*[The commenters recommend the following] [l]imits for Contaminants in Natural Gas Motor Vehicle Fuel.*

*(1) The maximum limit for Hydrogen Sulfide (5 ppmv) should be reduced to 3 ppmv in order to properly protect engines and aftertreatment systems. This limit also aligns with current CWI engine limits which operate both in California and globally. It is also supported by EMA's June 2014 "Technical Statement on Commercial Natural Gas in CNG- and LNG-Fueled Mobile Heavy-Duty Engine Applications."*

*(2) The maximum limit for Total Sulfur (including odorant) (15 ppmv) should be reduced to 10 ppmv. Again, this is necessary to protect engines and aftertreatment systems and while higher than current CWI engine limits, allows for the necessary injection of odorant for transmission and usage safety regulations.*

*(3) The limits on Halogens, Carbonyl Sulfide and Ammonia should be reviewed from both need and value viewpoints as these contaminant are not a requirement for CWI and Cummins automotive natural gas engines.*

*In addition, Halogens and Ammonia are not being cited as contaminants of concern by the latest draft version EN 16723-2 "Natural gas and biomethane for use in transport and biomethane for injection in the natural gas network – Part 2: Automotive fuel specifications." They are also not being cited by SAE*

*J1616 “Standard for Compressed Natural Gas Vehicle Fuel” nor EMA’s June 2014 “Technical Statement...”*

*Also suggest clarity on the way the Hydrogen Sulfide and Carbonyl Sulfide contaminants are being cited. Ensure it is clear whether the 5 ppmv limit applies to each contaminant individually, or in total.*

**Response to Comment 3.3**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 3.4**

*The specification for water (100 ppmv) is too high to offer adequate protection for engines and vehicle systems from increased maintenance as in general, water should not be present in the fuel provided to the vehicle/engine. Suggest the requirement be restated in terms of dew point below lowest expected dry-bulb temperature with limits per SAE J1616 and EMA guidance.*

**Response to Comment 3.4**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 3.5**

*[The commenters recommend] a maximum limit for hydrogen be included. Both EN 16273-2 and ASTM D.03.92 WK40094 are specifying maximum hydrogen limits for automotive/motor vehicle gaseous fuels. A limit has also been included in past CARB Certification and Commercial CNG chemical compositions.*

*Suggest 0.03% vol (300 ppmv) to align with current CWI engine limits which operate both in California and globally. Engine component (e.g., spark plugs) durability is the concern and some control on hydrogen levels needs to be in place. Also suggest solicitation of comments by Compressed Natural Gas (CNG) tank suppliers as unrestrained levels of hydrogen may prompt concerns with corrosion to their storage tank materials.*

**Response to Comment 3.5**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 3.6**

*[The commenters recommend] a maximum limit for oxygen be included. EN 16273-2, ASTM D.03.92 WK40094 and CARB requirements are specifying a maximum oxygen limit of 1% vol (10,000 ppmv) for automotive/motor vehicle gaseous fuels.*

*As stated in SAE J1616, limiting the water concentration in the fuel will reduce the potential for corrosion, but oxygen still needs to be controlled to maintain total charge mixtures within the flammability limits of the fuel.*

### **Response to Comment 3.6**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

### **Comment 3.7**

*[The commenters recommend] a maximum limit for siloxanes be included. Both EN 16273 and ASTM D.03.92 WK40094 are specifying/discussing maximum silicon/siloxane limits for automotive/motor vehicle gaseous fuels. Suggest 3 ppmv max to align with current CWI engine limits.*

*Engine component (e.g., exhaust-related components and sensors) will have durability challenges and as more and more renewable sources of fuel enter the CNG fuel supply, controlling siloxanes will be important.*

### **Response to Comment 3.7**

The Department thanks Cummins and Cummins-Westport for their comments. However, the proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

### **Comment 3.8**

*CMI and CWI Comments Regarding Title 4, Division 9, Chapter 7 “Advertising of Gasoline and Other Motor Vehicle Fuels”:*

*§4206, Labeling and Price Sign Advertising Requirements for Compressed Natural Gas and Liquefied Natural Gas.*

*Suggest that “by the MWM Method” language in the first sentence be replaced by a reference to a regulatory statute (e.g., per CCR Title 4, Division 9, Chapter 6). Or, possibly a recognized international standard (e.g., EN16726, Annex A).*

*It is inappropriate to reference an engine manufacturer on any consumer- facing labeling or price sign advertising.*

*Suggest this section discussing “MINIMUM PERCENT METHANE XX” is unnecessary, is not part of the requirements set out in Chapter 6, Article 10, §4193 and will confuse consumers. Most consumers when conferring with engine manufacturer requirements will have energy content (LHV) and methane number (MN) noted as some of the critical aspects of the fuel.*

### **Response to Comment 3.8**

The final regulation includes the wording ‘(13 CCR 4206)’ on the label to specify the relevant regulation section. Based on its pre-rulemaking webinars, teleconferences, and comments received from

stakeholders, the Department believes that the reference to ‘MWM Method’ on the label clearly refers to the MWM algorithm used to calculate the Methane Number and not any commercial product.

The dispenser labeling of percent methane is required by Federal Trade Commission (FTC) Rules 306 and 309. These Rules require posting of the automotive fuel rating as defined. The Department agrees with the FTC that the percent methane in CNG fuel is an appropriate figure of merit and provides valuable information to fuel purchasers for making value comparisons.

To provide this important information about fuel quality to purchasers of CNG fuel, § 4207 requires that CNG and LNG dispensers be labeled with the percent methane fuel rating according to FTC Rules 306 and 309. This requirement in the regulation will provide the Department the ability to enforce these consumer protection rules.

The Department believes that the two labels required in the proposed regulation are sufficiently different to avoid confusion on the part of consumers. The proposed Methane Number label must use characters at least 1/2 inch high as required by BPC § 13480(c). This requirement means that this label will be a block of text roughly 3.5" x 6" or an equivalent size. The FTC percent methane fuel rating label must be 3" wide by 2 1/2" long and prominently includes the % sign. The FTC requires that this label be as near as reasonable practical to the price per unit of the fuel. Retailers may use a different background color for the Methane Number label to further distinguish it from the FTC fuel rating label as long as the required information is clearly legible.

For these reasons, the Department rejects the suggestion from CMI and CWI to remove the requirement for labeling dispensers with the minimum percent methane.

#### **Commenter 4**

Frances Lemons offered the following comment for the Lompoc Unified School District:

##### **Comment 4.1**

*To Whom It May Concern:*

*Lompoc Unified School District (LUSD) runs a successful CNG station. LUSD was not notified via USPS or email of the Notice of Proposed Rulemaking - Natural Gas Regulations. We learned of it inadvertently today from a work colleague. I understand that the deadline for Written Comment Period has already passed; however, since we were not notified by your agency in a timely manner, it is imperative that you accept this public comment notice at the time it is received.*

*It took four (4) years for LUSD to obtain a grant from the Energy Commission and successfully build our CNG station. Part of the requirement of the grant was that the CNG station must be a public one. The station cost the District \$1.4 million dollars to construct and the RTI is projected to be ten years.*

*To shut down stations on the Central Coast of California or have us upgrade our station would be detrimental to our District and the surrounding community.*

*As the Transportation Manager of LUSD, I currently run fifteen (15) CNG school buses. Some of these buses have Cummings engines and there have been no problems or issues. Running the LUSD fleet of school buses on CNG saves the District and tax payers approximately \$100k annually. LUSD has been using CNG since 1992.*

*I am urging the Department of Food and Agriculture to assist us so that we can continue to safely and economically transport the students of our District.*

**Response to Comment 4.1**

The response to grouped comment #1, CLAIM OF LACK OF NOTIFICATION is responsive to this comment.

This comment is a general statement of opposition that does not refer to the proposed regulatory text. Therefore, the Department cannot make a more specific response. However, the Department notes the following:

**Commenter 5**

Derek Carlson offered the following comment for MarBorg Industries:

**Comment 5.1**

*MarBorg Industries is a waste services provider on the Central Coast. We offer solid waste, recycling, liquid waste, and construction site services through Ventura, Santa Barbara and San Luis Obispo counties. We have been in business in this community since the early 1930's and have strived to remain on the leading edge of environmental stewardship practices since our humble beginnings. A large part of our commitment to the environment is to operate vehicles that have minimal impacts to environmental quality. This commitment has led us to convert our fleet of diesel vehicles over to clean running natural gas vehicles; we currently operate over fifty CNG vehicles.*

*Regulations that eliminate or limit our ability to fuel our clean running vehicles would be damaging to our Company and to all of those companies striving to cut emissions through the deployment of clean burning natural gas vehicles.*

**Response to Comment 5.1**

This comment is a general statement of opposition that does not refer to the proposed regulatory text. Neither does the comment explain how the proposed regulation will “eliminate or limit” the ability of MarBorg Industries to fuel its fleet of CNG vehicles. Therefore, the Department cannot make a more specific response.

**Commenter 6**

Ian Hoover offered the following comments for 3G CNG:

**Comment 6.1**

*On page 5 of the Notice of Proposed Rulemaking (referred to as the "Report" or "Notice"), under the heading "Disclosures Regarding the Proposed Action," "Revolution CNG" is incorrectly identified as the*

*owner of this facility. Revolution CNG ("Revolution") does not have any ownership interest in either 3G or the Paso Robles CNG Station. Revolution provides periodic maintenance service to this Facility, and does not own any fueling stations. This shortcoming, and others described below, are repeated in the Initial Statement of Reasons.*

*3G only found out about the Proposed Action on August 9th, less than 48 hours before the hearing set on August 11th. 3G has never received any communications from anyone on behalf of the CDFA; accordingly, there are a number of statements in the Notice of Proposed Rulemaking which are inaccurate, and addressed in more detail below.*

*Simply stated, the adoption of the Rules, as proposed, would probably cause the Paso Robles CNG Facility to cease operations on January 1, 2017. The closure of this Facility for even a short period of time would significantly impact the ability of Paso Robles Waste & Recycle ("PRW&R") to provide solid waste services within the City of Paso Robles ("the City"), with a population of over 30,000, and adjoining County areas which may number as high as 10,000 residents.*

...

*The Report indicates that every CNG Station in San Luis Obispo County would be impacted by the Proposed Rules. If CNG fuel was not readily available within a short distance of Paso Robles, this refuse fleet would become inoperative, and PRW&R would not have sufficient trucks available to service the City.*

*Since its fleet would be inoperable due to lack of fuel, employees of PRW&R would either be laid off or have their hours reduced until an alternative supply of CNG was obtained. In either event, customers of these solid waste companies would face increased costs and decreased operational efficiencies, and the use of diesel trucks in place of CNG trucks would decrease air quality. Lastly, any additional costs incurred by 3G will be passed on to its customers, which will be reflected in additional solid waste disposal costs for Northern San Luis Obispo residents.*

*Since there are a number of school districts, and County, City and State Facilities serviced by these companies, costs will increase to these public entities.*

#### **Response to Comment 6.1**

The Department thanks 3G CNG for its comments.

The Department regrets its error in identifying the owner of the Paso Robles station, which has been removed from the revised ISOR, posted on March 6, 2017.

The issues raised in this letter are addressed in the Responses to grouped comments #1 CLAIM OF LACK OF NOTIFICATION, #2. REQUESTS TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATION, and #3. REQUESTS TO DELAY RULEMAKING.

The Department understands that this comment refers to the fuel quality specifications in the original proposed regulatory text. The proposed regulatory language in Chapter 6 Article 10. Specifications for

Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

The Department does not believe that the dispenser labeling requirements in the final version of the proposed regulations posted on [date] will have an adverse impact on waste collection and recycling services or any public services in San Luis Obispo County.

**Commenter 7**

Todd Campbell offered extensive comments for Clean Energy. The comments refer to the ISOR and do not address specific proposed regulatory text. The comments below are excerpts that represent the points made in Clean Energy’s comment letter.

**Comment 7.1**

*LNG and CNG fuel quality should be ensured by the producer, not a retailer.*

*When considering what entity should be responsible for gas quality, it is important to note that natural gas is delivered in two forms to vehicles: LNG and CNG. LNG is refined by a LNG producer and therefore LNG quality should be the responsibility of the LNG producer. CNG is delivered by the utility, which establishes gas quality specifications that are approved by CPUC. For CNG, gas quality should be the responsibility of the utility. This is a consistent way to address gas quality because it places the responsibility on the entity that has control of the product before it goes to the station.*

*Furthermore, if a utility is willing to accept lower quality natural gas into its system that compromises the MN of their final delivered product, the utility should be responsible for its cleanup. The utility is not just a fuel distributor. The utility buys gas and has the authority to set gas quality standards with approval from the CPUC. Further, it is the utility’s contract with the local producer that currently allows gas into their system that is off specification. Requiring a fuel retailer to bear the burden of a utility decision to allow inferior gas into the pipeline system is bad public policy. Certainly, fuel retailer of gasoline or diesel has no way to refine product received from the local refinery. Such a responsibility would make retailing petroleum products uneconomic.*

**Response to Comment 7.1**

This issue is addressed in the response to grouped comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY.

**Comment 7.2**

*It is for all of the above reasons that we strongly encourage CDFA to work with the California Public Utilities Commission (CPUC) who has authority over the utilities to seek a pathway to meet a minimum MN that is deemed suitable for advanced NGV engines. Further, we encourage CDFA to also consult with other state agencies that are counting on biomethane production and NGV strategies to meet California’s proposed State Implementation Plan, Low Carbon Fuel Standard goals, petroleum reduction goals, sustainable freight initiatives, and short-lived climate pollutant goals, to name a few.*

**Response to Comment 7.2**



This issue is addressed in the response to grouped comments #4. NEED TO CONSULT WITH CPUC AND/OR CARB.

**Comment 7.3**

*Additionally, Clean Energy believes that costs associated with a gas chromatography (GC) test units used to test gas quality at each fueling station are also woefully underestimated at \$25,000 per company. Such tools would need to be distributed to each service technician. Furthermore, GC devices are laboratory tools - not field service equipment - that most certainly would require careful handling and are subject to error if not properly maintained.*

**Response to Comment 7.3**

The Department regrets the confusion evidently arising from the discussion on page 6 of the first ISOR. The equipment referred to is not test equipment prescribed for each station, but equipment a registered service agent (RSA) would need to begin testing CNG fuel dispensers. BPC Division 5 Chapter 5.5 Service Agencies for Weighing and Measuring Devices and CCR Title 4 Division 9 Chapter 4 Registered Service Agencies for Commercial Weighing and Measuring Devices deal with the functions of RSAs.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 8**

Sean Moen offered comments for ReFuel.

**Comment 8.1**

*There is a necessity for the Department to continue to work with the California Public Utilities Commission (CPUC) on a unifying or synchronizing gas standard in order for Natural Gas to continue to be a viable transportation fuel option. Placing the gas quality standard on the station owner is unprecedented and inefficient.*

...

*Questions*

*To what extent as the Department engaged with the CPUC on unifying or synchronizing the gas quality standards across regulatory agencies? What feedback has been received from the CPUC by the Department regarding unifying the standards?*

*Has the Department considered a pausing there regulation implementation while ASTM works through its quality standards?*

*Recommendations*

*Pause the implementation date and allow time for the discussion to yield a satisfactory result for both the Department and the industry stakeholders. Continue the conversations with the CPUC & the state utility companies to unify and synchronize the Department's standards in order to stabilize the long--term quality concerns infrastructure developers and industry stakeholders need to invest in natural gas as a transportation fuel.*

**Response to Comment 8.1**

The Department thanks ReFuel for its comments. The issues raised in its letter are addressed in the responses to grouped comments #2. REQUESTS TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATION, #3. REQUESTS TO DELAY RULEMAKING, #4. NEED TO CONSULT WITH CPUC AND/OR CARB, and #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY.

**Commenter 9**

Keith Iaia offered comments for Revolution CNG.

**Comment 9.1**

*Today, August 9, 2016, Revolution CNG (RCNG), received a copy of the notice of proposed rulemaking – natural gas regulations through the courtesy of a concerned associate within the CNG industry. Even though the associated documents repeatedly (and inaccurately) list RCNG as one of the five affected station owners, we were never notified of this proposed rulemaking and have not been given an opportunity to properly prepare any comprehensive response.*

**Response to Comment 9.1**

The Department thanks Revolution CNG for its comments and regrets its error in identifying the owner of the Paso Robles station. This error was corrected in the revised ISOR posted on March 6, 2017.

The response to grouped comment #1. CLAIM OF LACK OF NOTIFICATION addresses this issue.

**Comment 9.2**

*This rule proposes to solve a problem that largely does not exist. The stations located in Paso Robles, and throughout the Central coast region, fuel CNG vehicles on a daily basis and given our topography these vehicles perform some of the toughest tasks of any California CNG vehicle. Whether it be refuse vehicles, school busses, street sweepers, over-the-road class 8 trucks, or personal vehicles such as my own pick-up truck, we receive ZERO complaints and have had ZERO issues with current gas quality. We completely understand the objective of creating a benchmark for CNG and we support efforts to work in that direction, but an over-bearing rule, sprung onto station owners with no opportunity to participate or even comment.... That is beyond reason.*

**Response to Comment 9.2**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 9.3**

*In addition to the potential disastrous consequences such a rule would have on our existing Central California CNG infrastructure, this rule would bring to a grinding halt all current station development plans for this region. Whether for municipal, school district, or private installations, developing a CNG*

*station is a capital intensive undertaking, and every station RCNG has constructed has relied heavily of federal and state grant fund projects to assist. RCNG currently has several such projects on the horizon, and none of them have room in their tight budgets to add another \$100,000.00 or more for such added equipment. Months, even years, of planning, design work and preparations will go down the drain, cut-off deadlines will be missed, and valuable grant funds will go unclaimed if this rule is implemented. Finally, we believe it would be entirely reasonable to expect that our own business, which has specialized in expansion of much needed CNG infrastructure throughout Central California and which up until now has enjoyed impressive growth, would be seriously jeopardized by the implementation of this rule.*

### **Response**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

This general comment of opposition does not connect the consequences anticipated by Revolution CNG to the proposed regulatory text. Therefore, the Department is not able to make a specific response to the suggestion that the proposed regulation will have an adverse impact on the development of CNG infrastructure in Central California.

### **Commenter 10**

Tim Carmichael offered comments for the Southern California Gas Company (SoCalGas).

#### **Comment 10.1**

*SoCalGas has been and continues to be transparent with Department staff, our customers and engine manufacturers regarding the energy content of the natural gas we provide to compressed natural gas (CNG) fueling stations. It is well-known that there are areas in our service territory in which the pipeline-quality natural gas has more ethane, propane, butane, pentane and/or other hydrocarbons with six or more carbon (C6+) atoms than is found in gas from other areas of the state and most of the nation. These compounds give the natural gas a higher level of energy content. Therefore, it is an excellent source of energy while meeting all CA Public Utilities Commission (CPUC) natural gas specifications, including that for maximum heating value (1150 British Thermal Units [Btu] per standard cubic foot [scf] on a dry basis) and the value for interchangeability, also known as Wobbe Number or Wobbe Index, with a range of 1279 to 1385 Btu/scf. Such gas comes into our pipeline system from local California oil and gas producers, and SoCalGas is required by the CPUC to accept this gas as long as it meets CPUC natural gas specifications, including the heating value and interchangeability criteria mentioned above.*

#### **Response to Comment 10.1**

CPUC pipeline gas specifications are not relevant to this rulemaking, which is concerned only with commercial natural gas motor vehicle fuels as delivered by approved fuel dispensers. Pipeline gas does not meet the statutory definition of motor vehicle fuel in Business and Professions Code (BPC) Title 5 Chapter 14 § 13400 (p):

(p) “Motor vehicle fuel” means an engine fuel intended for consumption in, including, but not limited to, an internal combustion engine, fuel cell, or electric motor to produce power to self-propel a vehicle designed for transporting persons or property on a public street or highway.

As discussed in the revised Initial Statement of Reasons posted on March 6, 2017, pipeline gas is not sold as an engine fuel and cannot be delivered to a motor vehicle through an approved dispenser. The composition of pipeline gas that may be purchased from a utility by producers of natural gas fuels is not within the scope of the proposed regulation.

CPUC Gas Rule No. 2 Description of Service recognizes that pipeline gas may not be fit for all purposes and that utility customers “are responsible for testing gas supplied and for rendering the gas suitable for their intended uses.”

**Comment 10.2**

*Department staff is aware that some of the high energy-content gas will not meet the methane number (MN) specification of 75 proposed in BPC Chapter 6, Article 10 §4193 (b). Despite this knowledge, the Department is proposing a compliance date for meeting the MN specification of January 1, 2017 (less than 5 months from now). This leaves very little time for owners and operators of CNG fueling stations in those areas of SoCalGas service territory that happen to be supplied by pipelines receiving high-energy content natural gas from local production to comply with the proposed CDFA standards. The effects on such owners and operators may include shutting down fueling stations and are further discussed later in our comments.*

**Response to Comment 10.2**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

The response to grouped comment #2 REQUESTS TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATION is also responsive to Comment 10.2.

**Comment 10.3**

*Instead, SoCalGas recommends that CDFA set aside the proposed standard in this regulatory proceeding and allow time for all stakeholders and affected industry to work through the many issues in setting a CNG/LNG motor vehicle fuel standard that includes a methane number that sets a challenge at both the international and the national level, let alone for just one state. If CDFA concludes they must adopt a standard at this time, however, then we submit that the Department must adopt by reference SAE J1616 as mandated by State law. Such action will give the Department and all stakeholders additional time to develop the necessary data, analyses, and costs estimates so as to avoid any shut down of existing natural gas refueling stations within California that will not meet certain specifications in the proposed regulations by the current implementation date of January 2017.*

**Response to Comment 10.3**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, the part of this comment referring to SAE J1616 is no longer relevant to this rulemaking.

This rulemaking is concerned only with the adoption of a regulation for California. National or international considerations are outside the scope of both this rulemaking and the Department's authority under BPC Chapter 14.

The response to the grouped comments #2 REQUESTS TO DELAY IMPLEMENTATION DATE OF PROPOSED REGULATION and #3 REQUESTS TO DELAY RULEMAKING are responsive to Comment 10.3.

**Comment 10.4**

*It is worth noting that ASTM International and European Union are both in the process of developing or reviewing gas quality standards which are expected to include a methane number component to those standards.*

**Response to Comment 10.4**

The Department is aware of both of these efforts. The development of a European Union fuel quality standard is not relevant to this rulemaking, which is concerned only with adopting regulations for California. If ASTM International does succeed in adopting a fuel quality standard for CNG, BPC § 13440(i) will adopt it by reference without a need for regulatory action by the Department, which may then enforce its provisions.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, the final version of the regulatory text does not include a minimum Methane Number specification.

**Comment 10.5**

*Our first comment regards the first paragraph of the document which states, "Currently, there are no quality specifications for CNG and liquid natural gas (LNG) as a motor vehicle fuel to protect retail businesses and consumers from purchasing substandard fuel." SoCalGas notes that the California Air Resources Board (CARB) developed in the early 1990s, "Specifications for Alternative Motor Vehicle Fuels" including CNG, which is codified at 13 CCR §2292.5 Specifications for Compressed Natural Gas. SoCalGas staff participated in the regulatory development process then and has consistently been involved with CARB efforts including a multiyear effort between 2005 and 2010. The efforts of CARB and stakeholders always have focused on engine performance; therefore, we feel it would be appropriate to acknowledge CARB's alternative fuel specifications. Additionally, SoCalGas believes it is inappropriate to use terminology such as the word "substandard" or "poor quality" in regulatory documents such as the Department's ISOR, and we provide additional comments regarding this issue further in this letter.*

**Response to Comment 10.5**

SoCalGas is correct that CARB adopted a fuel quality specification for CNG fuel in 1992 in Title 13 § 2292.5. The CARB specification does not apply to LNG fuel. CARB has issued a blanket exemption throughout the service territory of SoCalGas which allows the sale of CNG fuel that does not meet the

minimum requirements of Title 13 § 2292.5. In its enforcement program, the Department uses the term “substandard fuel” to identify a fuel that does not meet the minimum applicable quality specifications. It is in that sense that this term was used in the ISOR.

#### **Comment 10.6**

*CDFA states that the immediate beneficiaries of the proposed regulation will be owners and drivers of CNG and LNG vehicles, but does not back up this statement with facts. In making this statement, the Department assumes that all CNG fueling stations will easily and immediately meet the proposed standards, but there are some stations that will not meet the specifications by the proposed compliance date of January 1, 2017. For those stations, it appears that the Department has not taken into account the time to design, procure, and construct equipment that may be needed to meet the proposed specifications. Nor is there sufficient economic analysis for costs for such control equipment. Therefore, owners and drivers of CNG and LNG vehicles will suffer a huge disservice if stations that do not meet the specification have to shut down, even if temporarily.*

*CDFA is also clearly assuming that by adopting these CNG standards, NGV owners and operators would appreciate the “better quality” CNG that they will now be receiving. In reality, however, most NGVs on the road today function quite well on CPUC or pipeline-quality natural gas which has a very broad MN range. They do not need CNG with a MN of 75 or higher.*

*Lastly, if NGV operators start experiencing diminished range and gas mileage resulting from CDFA’s imposition of a MN 75 standard for CNG, not only will potential owners be discouraged from purchasing NGVs, current NGV operators—most of whom operate fleets of heavy duty (HD) vehicles—may be forced to return to the diesel and gasoline-powered vehicles they had replaced with NGVs.*

#### **Response to Comment 10.6**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

The Department agrees that most natural gas-powered passenger cars can operate with CNG produced from pipeline gas meeting only CPUC specifications. However, CNG-fueled passenger cars are no longer sold in California. The labeling of natural gas fuel dispensers with the minimum Methane Number of the fuel delivered is required in § 4206(c) so that all fuel purchasers can determine if the fuel meets the manufacturers’ specifications and warranty requirements for their vehicles and make value comparison in the marketplace.

#### **Comment 10.7**

*That said, SoCalGas supports the Department’s vision of how increased use of natural gas as a low-carbon and renewable fuel for CNG and LNG motor vehicles can help our state achieve its air quality goals. Renewable natural gas (RNG) will help meet the goals of California’s climate change law as well as CARB’s Low Carbon Fuel Standard (LCFS) regulation. Specifically, use of RNG sourced from existing organic sources, such as agricultural waste and biomass, is the lowest carbon-intensity standard pathway available in the LCFS, even lower than the current electricity mix or hydrogen.*

**Response to Comment 10.7**

The Department fully supports the LCFS and the expanded use of renewable natural gas, especially as produced from dairy digesters. However, the LCFS is not relevant to this rulemaking. The Department notes that biomethane has a very high percent methane content and a correspondingly high Methane Number. Biomethane can therefore be increasingly important in the future in increasing these parameters in pipeline gas used to produce CNG and LNG fuels.

**Comment 10.8**

*Regarding the discussion on page 4 on the number of existing CNG fueling stations that dispense fuel not meeting the proposed CNG fuel standard, this was based on 2013-2015 data, using the gas composition with lowest (SAE) methane number calculated for each fueling station in our service territory and then calculating the corresponding MWM methane number. Based on this data, there are 24 fueling facilities that potentially will not meet the methane number specification of 75. Based on the Department's stated total of 352 CNG fueling stations in California, this is seven percent rather than "less than two percent" in the ISOR. Eight of these stations could receive natural gas supply with a calculated (MWM method) MN between 65 and 69, and 16 stations could receive natural gas supply with a calculated (MWM method) MN between 70 and 74. Three of the 24 stations are in San Luis Obispo County, eight are in Tulare County, four are in Los Angeles County, three are in Kings County and six are in Santa Barbara County. Of note, 15 of the stations are located in the only two extreme ozone non-attainment areas (the South Coast and San Joaquin Valley air basins) in the country. These 24 stations are located within five of the 12 counties in which SoCalGas provides service, and are supplied by multiple pipelines. They cannot be characterized as contained in just one region of SoCalGas territory. Furthermore, SoCalGas does not understand the origin of, purpose, nor relevancy of CDFA's statement: "...located in one region...with a pipeline carrying gas from old oil wells." We, therefore, request that the CDFA provide backup for the statement "...pipeline carrying gas from old oil wells.*

**Response to Comment 10.8**

A representative of SoCalGas told the Department during pre-rulemaking discussions that there were five stations in one part of its service area that could not meet a minimum Methane Number specification of 75. This statement from SoCalGas was the source of the "less than two percent" of stations reference on page 4 of the original ISOR. The revised estimate from SoCalGas of seven percent of stations across the state is still a small fraction of the total number. The Department regrets any confusion arising from its reliance on the earlier statement from SoCalGas.

The Department regrets its misstatement referring to "old oil wells." The statement should have read "...pipeline carrying gas associated with old oil wells." This reference was removed from the revised ISOR posted March 6, 2017.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The final version of the regulation does not include a minimum Methane Number specification, but does have a labeling requirement so that fuel buyers will be informed about the quality of the fuel offered for sale.

**Comment 10.9**

*With respect to the statement at the very bottom of page 4, “CNG fuel produced from this gas may not meet the proposed specification because the ratio of methane to heavier hydrocarbons is reported to be below the proposed minimum,” SoCalGas was previously unaware that CDFA was proposing to regulate minimum methane content as CARB currently does in the CNG fuel specification. We believe the Department means to reference the proposed minimum methane number that is calculated from the amount of various hydrocarbon constituents of natural gas.*

#### **Response to Comment 10.9**

The Department regrets the awkward phrasing used on the bottom of page 4 of the original ISOR. At the time the first ISOR was written, the proposed regulation included a minimum methane number specification of 75 and did not include any compositional specifications for methane or heavier hydrocarbons. The statement questioned here was meant to convey, as suggested by SoCalGas, that a low relatively concentration of methane to heavier hydrocarbons would result in a low methane number for the CNG fuel.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The final version of the regulation does not include a minimum Methane Number specification, but does have a labeling requirement so that fuel buyers will be informed about the quality of the fuel offered for sale.

#### **Comment 10.10**

*In addition, CDFA’s estimate that the one-time capital investment for conditioning equipment is \$100,000 (or approximately 10% of capital cost of new station) (page 5) is not substantiated. The Department also did not provide an estimate for the cost of retrofitting existing CNG fueling stations. We request that the CDFA provide detail on the necessary permitting, type of equipment, cost for site preparation, installation, and ongoing operations and maintenance costs for both new and retrofit of existing CNG fueling stations.*

#### **Response to Comment 10.10**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The final version of the regulation does not include a minimum Methane Number specification. Accordingly, the costs that may be associated with conditioning equipment to meet a minimum Methane Number specification are no longer relevant to this rulemaking.

#### **Comment 10.11**

*Further, the last sentence of this paragraph uses the term “hot gas.” We request that either a definition be provided for this term or that its use be eliminated. As previously discussed, natural gas that does not meet the 75 methane number is an excellent source of energy and meets the CPUC natural gas specifications including that for heating value and interchangeability.*

#### **Response to Comment 10.11**

As used here, “hot gas” refers to natural gas that contains ethane, propane or heavier hydrocarbons in excess of the limits in CARB’s Title 13 § 2292.5. The Department believes that this term is established



usage in the industry. The phrase “hot gas” was used by various stakeholders, including representatives of SoCalGas, during pre-rulemaking discussions and is found in various documents in the archives of CARB natural gas hearings and workshops held in 2002, 2005, and 2010. Two examples follow.

From a comment letter dated August 2, 2005 addressed to Gary Lee, Manager – Industrial Section, California Air Resources Board from Larry R. Allen, Air Pollution Control Officer, San Luis Obispo County Air Pollution Control District: Stationary source emissions from hot gas could, in reality, be higher than assumed by air district emission inventories, and thus detrimental to our air quality. ... The SLO County Air Pollution Control District supports ARB’s efforts to address the hot gas issue statewide; ...

From a comment letter dated July 29, 2005 addressed to Gary Lee, Manager – Industrial Section, California Air Resources Board from Terry Dressler, Air Pollution Control Officer, Santa Barbara County Air Pollution Control District: It is neither right nor fair that natural gas suppliers be allowed to socialize the impact of hot gas and privatize the profit to be realized from relaxed gas specifications.

#### **Comment 10.12**

*The statement in the third paragraph on page 5 that “sales of natural-gas fueled cars were discontinued in California several years ago,” is inaccurate. For example, American Honda discontinued production of their Civic GX passenger sedan in 2014, but they continued to sell existing inventory. Used or pre-owned NGVs also continued to be sold. While there are no other major manufacturers selling light duty CNG passenger vehicles in California, there are still CNG vehicles being sold in California including CNG vehicles in a variety of weight classes being sold by conversion entities. These companies, known as “up-fitters,” are recognized as original equipment manufacturers (OEMs) and only sell motor vehicle engines in California that meet CARB new engine specifications. SoCalGas’ supplier directory lists 14 such companies, please see (<https://www.socalgas.com/documents/natural-gas-hicles/SupplierDirectory.pdf>).*

#### **Response to Comment 10.12**

The Department acknowledges that Honda continued for some time to sell from its existing inventory of CNG passenger cars after production of this model ended. The sale of used passenger cars does not increase the number of CNG cars on California’s roads.

In recent years, CNG fuel has lost almost all of its price advantage compared to gasoline as reflected in the latest GGE prices. The Department believes this fact has depressed demand for costly “up-fitting” of gasoline-powered cars to run on CNG fuel and will continue to do so for the foreseeable future.

#### **Comment 10.13**

*Lastly, the final paragraph of this section states, “According to recent California Air Resources Board tests and a natural gas engine manufacturer, low and near-zero emission natural gas engines have been developed that require fuel with a minimum methane number (MWM) of 75.” SoCalGas would like the Department to please provide a reference and test results for the stated recent CARB tests that demonstrate the need for a minimum MN of 75.*

**Response to Comment 10.13**

The Cummins Westport product bulletin for the recently introduced ultra-low NOx emission IGL-X engines and other information on its website state that fuel with a minimum methane number of 75 is required for these engines. The CARB tests referred to are the certification testing required for the sale of these engines in California. The Department relies on the statements of Cummins-Westport in its product literature to support the requirement for a minimum methane number 75 fuel.

The minimum methane number specification has been dropped from the proposed fuel quality specifications. A dispenser-labeling requirement of the minimum methane number for the fuel sold has been added. This requirement is necessary for fuel buyers to know that the minimum fuel quality specifications for their vehicles are met so that they can maintain their warranties and avoid costly engine repairs.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The final proposed regulation does not include a minimum Methane Number specification, but does have a labeling requirement so that fuel buyers will be informed about the quality of the fuel offered for sale.

**Comment 10.14**

*Subsection 2 (page 6) of this section pertaining to Registered Service Agencies (RSAs), does not make clear what test equipment RSAs would need if they expand their services to CNG dispensers nor does it provide a clear reason why the equipment would be needed. It is also not clear what new equipment is needed for station owner/operators who currently service their own CNG dispensing equipment, nor is an explanation given as to why the equipment is needed. SoCalGas requests detail on the type of equipment and its need pursuant to this section. Further, we would like to see more detail on the estimated cost of equipment, cost for technician training, and ongoing maintenance and operations costs of each device.*

**Response to Comment 10.14**

The Department notes that its records show that three registered service agents (RSAs) are covered under the registration of SoCalGas.

The functions and responsibilities of registered service agencies are established in BPC Division 5 Chapter 5.5 Service Agencies for Weighing and Measuring Devices. Other statutes relating to RSAs are found in BPC Chapter 5 §§ 12500. Briefly, RSAs certify the accuracy and precision of commercial weighing and measuring devices, including motor vehicle fuel dispensers. This certification is required before a device is placed in commercial service and following certain repairs. The equipment and procedures for CNG dispensers are discussed in National Institute of Standards and Technology Handbook 44, Examination Procedure Outline (EPO) for Compressed Natural Gas (CNG) Retail Motor-Fuel Dispensers. Equipment needed by RSA's certifying CNG dispensers includes storage tank and scale with a suitable range. Costs related to equipment needed by RSAs are outside the scope of this regulation.

**Comment 10.15**

*Aside from initial and ongoing cost, there is no discussion in the ISOR of what exactly is produced by the fuel-gas conditioning equipment. For example, if heavier hydrocarbon gases or liquids are produced, what is the cost for permitting and handling, as well as the storage and potential disposal of these gases and liquids? Would any of these materials be classified as hazardous and need special storage and training for handling these materials? If such materials have to be trucked off site, this increases vehicle trips possibly negating any potential air quality benefit. Some fuel conditioning systems require methanol which would have to be transported and stored onsite. SoCalGas believes all of these issues must be addressed and analyzed further with more detailed cost estimates. SoCalGas respectfully requests that this information and analysis be provided to all stakeholders.*

**Response to Comment 10.15**

These questions do not relate to the text of the proposed regulation. The Department believes that the information requested is outside the scope of this rulemaking. The Department neither has nor seeks authority over the production of natural gas fuels or operations of fueling stations.

**Comment 10.16**

*In the Department's conclusions at the end of this section (bottom of page 6), SoCalGas does not understand what data the Department used to come to the conclusion that the regulation is unlikely to eliminate existing jobs or businesses. Some cost for capital equipment needed to comply is discussed, but the document is silent as to the costs related to permitting, site preparation, shipping, construction, operating and maintenance. Additionally, the Department's estimate of the number of affected existing fueling stations is underestimated by almost fivefold. Further, it is not at all clear to SoCalGas that operators of existing stations will be able to afford \$100,000 plus for initial compliance, considering many of the stations likely do not have significant throughput and small profit margins. In fact, in the CA Regulatory Notice Register No. 26z, there is a statement that characterizes one of the affected CNG stations owners, Revolution CNG, along with SoCalGas and Waste Management as "large companies who the Department believes possess the necessary resources to absorb any additional compliance costs." Revolution CNG is not the actual owner or operator of the subject station, the station is owned and operated by a small family-owned company located on the Central Coast of California. It is hardly fair to compare two Fortune 500 ranked corporations with a small, local family-owned business. This demonstrates that more information and rigorous analysis is needed to verify the actual outcome in terms of retention of retail CNG fueling businesses.*

**Response to Comment 10.16**

The Department regrets the error in identifying the owner of the 3G CNG station in Paso Robles.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn, so the costs referred to in this comment will not occur as a result of the proposed regulation. The Department believes that the costs to comply with the labeling requirements in Chapter 7 will be minimal and arise directly from legislative mandates. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 10.17**

*Amend CCR Chapter 1, Article 1, § 4001. Exceptions.*

*There appears to be a typographical error in S.5.2 of this section (bottom of page 7) in the “conversion factor for natural gas to one GGE.” In every other reference to this factor in the ISOR, the conversion factor is listed as 5.660 or 5.66 not 4.660 or 4.66. We suggest this issue be corrected or clarified.*

**Response to Comment 10.17**

The Department agrees that the 4.66 conversion factor listed in this section in the original ISOR is a typographical error. The correct value of 5.66 is included in the revised ISOR posted on March 6, 2017.

**Comment 10.18**

*Chapter 6. Automotive Products Specifications, Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel.*

*There is no definition listed in §4192 for “grade designation” of the fuel product, which is required to “be on each customer side of all natural gas dispensers” and “on all advertising signs and storage tank labels” by §4206 (a). SoCalGas requests that CDFA clarify this requirement and explain what exactly is meant by grade designation.*

**Response to Comment 10.18**

Subsection 4206 (a) from the original proposed regulation stated, “The name of the product and grade designation, if any, shall be on each customer side of all natural gas dispensers. Name of product and grade designation, if any, shall also appear on all advertising signs and storage tank labels as required in Sections 13404.5 and 13480 of the Business and Professions Code.” There is currently no grade designation for natural gas motor vehicle fuels and this language was deleted in the modified text posted on March 6, 2017.

Since that time, the Department has become aware that ASTM International may adopt a quality standard for natural gas motor vehicle fuels that would include multiple grades of fuel according to the minimum Methane Number. BPC § 13440(i) will adopt by reference such a standard from ASTM without a need for regulatory action by the Department, which may then enforce its provisions. Accordingly, grade designation has been included in § 4206(b) in the final regulation so that a future rulemaking to add a labeling requirement for grade designation will not be required. Until and unless ASTM or SAE adopts a quality standard that includes multiple grades for natural gas motor vehicle fuels, the reference to grade designation in § 4206(b) will have no regulatory effect. The Department will inform stakeholders if a future actions by ASTM or SAE changes the labeling requirements in § 4206.

**Comment 10.19**

*In the second bullet at the bottom of page 11, it appears the citation at the end of the reference for CEC and CARB joint report Reducing California’s Petroleum Dependence, #P600-03-005F, August 2003, needs to be updated as it currently reads “(ask Pam)”.*

**Response to Comment 10.19**

This notation should have been removed from the original ISOR before it was posted. The correction has been made in the revised ISOR posted on March 6, 2017.

**Comment 10.20**

*Regarding the reference listed in the third bullet on page 12, SoCalGas is very familiar with the referenced CARB Technology Assessment Low Emission Natural Gas and Other Alternative Fuel Heavy-Duty Engines and according to CARB’s website it is still in draft form with a date of Sep. 29, 2015, (please see <http://www.arb.ca.gov/msprog/tech/report.htm>). SoCalGas is very concerned that CDFA is relying on this draft document without considering the public comments submitted on the draft document and posted by CARB on their website at <http://www.arb.ca.gov/lispub/comm2/bccommlog.php?listname=techfuel-report-ws>. Please review SoCalGas’ comment letter and attachments, items 23, 24, 25, 26, and 27 as listed on this website.*

**Response to Comment 10.20**

The Department has reviewed all of the comments on CARB’s website on the draft Technical Assessment and has determined that they are not relevant to the proposed regulation. Portions of this document were used as general background information on natural gas vehicles and infrastructure. No part of the draft Technical Assessment was used to develop the proposed regulatory text. As of March 2017, this document was still available on the CARB website only as the draft from September 2015.

**Comment 10.21**

*While the department is aware of five retail fueling stations, as previously mentioned above, SoCalGas believes there are at least 24 fueling stations that may not be able to meet the proposed MN specification. Specifically, there are three in San Luis Obispo County, eight in Tulare County, four in Los Angeles County, three in Kings County and six in Santa Barbara County. These five counties cover a significant portion of southern California; therefore, SoCalGas questions whether a finding can be made that there is no adverse economic impact directly affecting business.*

**Response to Comment 10.21**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 10.22**

*Regarding the options for natural gas stations considered by the Department in this section, there are a number of phrases included in either option 1 or 2 on which SoCalGas seeks clarification. These are delineated below along with other technical issues.*

*1. Install conditioning skids at the spur for each station along the pipeline.*

*2. Blend high concentration methane gas or LNG at the pipeline spur or at the station to increase methane number. (Page 13)*

*3. Convert the affected retail stations to contract fleet sales only. (Page 14)*

### **Response to Comment 10.22**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, the alternatives for conditioning CNG to meet the originally proposed minimum Methane Number specification are no longer relevant to this rulemaking.

### **Comment 10.23**

*Alternatives Considered for Proposed Addition of CCR Title 4, Division 9, Chapter 6, Article 10. Specifications for Natural Gas Used in Internal Combustion Engines.*

*Alternative 2: Adopt natural gas fuel quality specifications that include a permanent minimum methane number of 60*

*SoCalGas does not understand why the Department only considered a minimum methane number of 60. During the regulatory development process, SoCalGas staff and CDFA staff discussed the possibility of setting the standard at a variety of numbers between 60 and 75. We recommend that at a minimum CDFA analyze a methane number 65 which we understand is one of the options being considered by the European Union.*

### **Response to Comment 10.23**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. The final version of the regulation does not include a minimum Methane Number specification. Therefore, this comment is no longer relevant to this rulemaking.

### **Comment 10.24**

*Alternative 3: Adopt natural gas fuel quality specifications that phase in minimum methane number requirements over several years. The Department states that it “considered and rejected phasing in a higher minimum methane number over time. This alternative would disadvantage the great majority of CNG and LNG retailers, who already offer higher quality fuels.” Further, “The methane number of natural gas motor vehicle fuel is determined by the composition of the pipeline gas used. When the available pipeline gas results in fuel of sub-standard quality, its composition must be modified through conditioning, by removal of heavy hydrocarbon gases, addition of methane, or both.”*

*SoCalGas does not see how this alternative “would disadvantage the great majority of CNG and LNG retailers who already offer higher quality fuels.” The stations that already meet the proposed natural-gas motor vehicle fuel standard have a financial advantage over those who will have potentially incur more than \$100,000 in costs to come in compliance with the proposed standard.*

### **Response to Comment 10.24**

Comment 10.25 refers to the minimum methane number specification included in the original version of the proposed regulation. The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The final version of the regulation does not include a minimum Methane Number specification. Therefore, this comment is no longer relevant to this rulemaking.

**Comment 10.25**

*§ 4192 (g), “Wobbe Index means the ratio of the higher heating value of a gaseous fuel at specified reference conditions and its relative density at the same reference conditions.”*

*SoCalGas believes the definition of Wobbe should match what is commonly used in the natural gas industry. The American Gas Association (AGA) defines Wobbe and CPUC defines the reference condition as follows: Wobbe Number is the real higher heating value of a gaseous fuel at 14.73 psia and 60°F divided by the square root of the real relative density at 14.73 psia and 60°F (Page 11, AGA Report No 5 Natural Gas Energy Measurement, 2009). Using this definition would correct that the square root factor being left out of the §4192 (g) definition and makes specific the reference conditions. The CPUC specifies standard pressure and temperature as 14.73 psia and 60°F in General Order 58A - Standards for Gas Service in the State of California, December 16, 19924.*

**Response to Comment 10.25**

The definition of Wobbe index in the final version of the regulation was corrected to include the square root of the relative density as SoCalGas suggested in the modified text posted on March 6, 2017. The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel was subsequently withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 10.26**

*Our second comment is in regard to §4193 (c), which reads as follows:*

*“Wobbe Index (Higher Heating Value). All natural gas sold as a motor vehicle fuel shall have a Wobbe Index range of 46-53 MJ/m3.” First, Wobbe Index of a gas, or Wobbe Number preferably, is not the same as the higher heating value. As in the definition of Wobbe Number above, the real higher heating value is used to calculate the Wobbe Number of a gaseous fuel along with the square root of its real relative density.*

**Response to Comment 10.26**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 10.27**

*Definition of Butanes. § 4192 (c) Butanes means hydrocarbons with molecular formula C4H10 and C4H8.”*

*SoCalGas questions why the Department includes C4H8 in the definition for butanes?*

*Definition of Pentanes. § 4192 (d) Pentanes means hydrocarbons with molecular formula C5H12 and C5H10.*

*Similar to our question on butanes, SoCalGas questions why the Department includes C5H10 in the definition for pentanes?*

**Response to Comment 10.27**

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Commenter 11**

W. A. Zobel offered comments for Trillium CNG.

**Comment 11.1**

*In this proposal, the CDFA incorrectly assigns the responsibility for CNG fuel quality to the retailer. There is no other example in the commercial transportation market where fuel quality is the responsibility of the retailer. This approach is both unprecedented, and impractical.*

*Natural gas, like petroleum fuels, is produced at a centralized location, fed into a distribution system, and ultimately delivered to retailers for sale to the customer. Fuel quality in the petroleum fuels market is the responsibility of the producer, or refiner, not the retailer for reasons of efficiency and enforceability. A direct correlation to the natural gas market would place the responsibility for gas quality on the “gas producer”, or “pipeline owner”. Trillium believes the responsibility for fuel quality rests with the gas producer and/or the gas pipeline for all the same reasons. The retailer has absolutely no control of the gas entering his location, and as such, should not be subject to any regulations related to the quality of the gas received.*

**Response to Comment 11.1**

The response to grouped comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY is responsive to Comment 11.11.

**Comment 11.2**

*We recommend the CDFA not move so quickly, and instead, take on a constructive, comprehensive and transparent process to address issues and concerns thoroughly before setting the standard. Trillium believes it is more important to take the time to get any regulatory action right, rather than meet an arbitrary deadline to set a standard which has wide-ranging impacts on investors, consumers, and the goals of the State of California.*

**Response to Comment 11.2**

The response to grouped comment #3. REQUESTS TO DELAY RULEMAKING addresses this issue.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.



**Commenter 12**

Michael Pimentel sent an email on behalf of the California Transit Association

**Comment 12.1**

*From: Michael Pimentel [mailto:Michael@shawyoderantwih.com]*

*Sent: Tuesday, August 09, 2016 5:12 PM*

*To: Schnepf, Kevin@CDFA <kevin.schnepf@cdfa.ca.gov>*

*Subject: Follow-Up on Natural Gas Regulation*

*Kevin,*

*Thanks for taking my call just now. When you have an opportunity, please provide the AG opinion you referenced regarding the applicability of CDFA rulemaking on public entities.*

*Thanks,*

*Michael Pimentel*

*California Transit Association*

*Legislative and Regulatory Advocate*

*michael@caltransit.org*

*1415 L Street, Suite 1000*

*Sacramento CA 95814*

*T : (916) 446-4656 x1034*

*F : (916) 446-4318*

*caltransit.org*

**Response to Comment 12.1**

From: Schnepf, Kevin@CDFA

Sent: Wednesday, August 10, 2016 8:48 AM

To: 'Michael Pimentel' <Michael@shawyoderantwih.com>

Subject: RE: Follow-Up on Natural Gas Regulation

Good morning Michael,

Thank you for inquiring about the applicability of our proposed natural gas motor vehicle fuel regulation to public entities such as cities, counties, school districts, or other municipal agencies. Attached is a copy of the Attorney General opinion regarding applicability of weights and measures laws to such entities. If there are any special circumstances not expressly covered in the attached document, please seek appropriate legal counsel for guidance.

Since we received your inquiry during the public comment period of our proposed regulation, it will be included in the record of stakeholder input received by the Department as part of the published Final Statement of Reasons for our regulation. This is a requirement of California Rulemaking Law under the Administrative Procedures Act.

Kevin Schnepf, Environmental Program Manager I, DMS

**RESPONSES TO COMMENTS RECEIVED DURING THE FIRST ADDITIONAL PUBLIC COMMENT PERIOD  
9/13/16 – 10/13/16**

**Commenter 1**

Robin Bremmer and Tim Frazier offered the following comments for Cummins and Cummins-Westport.

**Comment 1.1**

*The “modifications of text” proposed by the Department for Chapter 6, Article 10 do not provide an adequate set of natural gas fuel properties for the retail sale of natural gas motor vehicle fuels. Even though §4193 cites the SAE J1616 Standard as providing “the units with minimum and/or maximum values for each specification” listed in the table, SAE J1616 does not actually define all of the units listed in that table. SAE J1616, Section 4, “Technical Requirements” does not provide limits for combustible constituents, e.g., hydrocarbons, carbon monoxide and hydrogen, nor does it define limits for inert constituents, e.g., oxygen, carbon dioxide and nitrogen.*

NOTE: Additional more specific comments on SAE J1616 are included in this comment letter.

**Response to comment 1.1**

The Department thanks Cummins and Cummins-Westport for their comments. However, the comments relating to SAE J1616 are no longer relevant to this rulemaking. SAE J1616 has been withdrawn as a standard. Therefore, the Department is no longer proposing to adopt J1616 by reference.

The proposed regulatory language in Chapter 6 Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn. Accordingly, this comment is no longer relevant to this rulemaking.

**Comment 1.2**

*§4206, Labeling and Price Sign Advertising Requirements for Compressed Natural Gas and Liquefied Natural Gas.*

*(c) Suggest that “BY THE MWM METHOD” language in the first sentence be replaced by a reference to a regulatory statute (e.g., per CCR Title 4, Division 9, Chapter 7). Or, possibly a recognized international standard (e.g., EN16726, Annex A).*

*It is inappropriate to reference an engine manufacturer on any consumer-facing labeling or price sign advertising.*

**Response to comment 1.2**

The Department believes that the phrase ‘MWM Method’ is understood by stakeholders to refer to a specific algorithm used to calculate a gaseous fuel’s methane number. This meaning is illustrated by

the use of the phrase 'MWM Method' in SAE Standard J1616 May 2016 Appendix C. (The withdrawal SAE J1616 as a standard was not connected to the table in Appendix C.) The phrase 'MWM Method' is defined in this way in proposed § 4206(a)(2). The Department believes that the use of this phrase for dispenser labeling in the proposed regulation is appropriate for reasons of clarity and specificity, and is not a commercial reference.

This algorithm was first developed by employees of what was then MWM GmbH for use throughout the natural gas fuel industry. As far as the Department knows, this algorithm was never incorporated by MWM GmbH into any commercial product. Caterpillar Inc. acquired MWM GmbH in 2010 and in 2013, this division was renamed Caterpillar Energy Solutions GmbH.

While Caterpillar continues to maintain the MWM brand, MWM has not been part of the company name of an engine manufacturer for several years. Furthermore, since MWM GmbH was a European company, the Department does not believe that California consumers would be in anyway confused or misled today by the proposed labeling requirement. The proposed minimum Methane Number statement directly conveys clear and specific information about the anti-knock index of the fuel offered for sale as required by BPC § 13480(c). The Department believes that to fuel purchasers and is the best solution.

#### **Commenter 2**

Todd Campbell offered the following comments on behalf of Clean Energy

#### **Comment 2.1**

*CDFA looks to implement the latest version of SAE J1616, effective January 2018. However, we believe CDFA should implement SAE J1616 Version 201605 Section 4.1 thru 4.10 instead of the latest version. Further, we recommend using specific language from Section 4, as most of the other language in the remaining sections is mostly reference materials from other sources. Since it is unknown as to how the latest version of SAE J1616 may evolve over time, we believe it is unwise for stakeholders to support all of it as currently written. Furthermore J1616 contains conflictual requirements, recommendations, guidelines and topical background information which is a cause for concern for any entity subject to this regulation. We therefore believe CDFA should look to implement SAE J1616 Version 201605 Section 4.1 thru 4.10.*

#### **Response to comment 2.1**

The Department thanks Clean Energy for its comments.

The comments relating to SAE J1616 are no longer relevant to this rulemaking. SAE J1616 has been withdrawn as a standard. Therefore, the Department is no longer proposing to adopt J1616 by reference.

#### **Comment 2.2**

*We are also concerned about the potential for regulatory conflicts between CFDA and CARB. The implementation of the proposed regulation poses a potential conflict with the CARB Commercial CNG Chemical Composition. Should a conflict arise in the standard between CARB and CDFA regulations, we*

*strongly suggest that CDFA use a public scoping process to provide for stakeholder engagement and feedback, and for CDFA to consult with ARB.*

### **Response to comment 2.2**

The Department does not believe that there is a possibility of conflict between any regulation it adopts through the current rulemaking process and possible future regulations adopted by another agency. The Administrative Procedure Act (APA) (Government Code Title 2 Chapter 3.5 Section 11340 et seq.) requires that any new regulation be consistent with all existing state laws. The Department's proposed regulation is fully consistent with CARB's specifications for CNG fuel quality in 13 CCR 2292.5.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The APA requires opportunities for public notice and participation in all rulemaking by any state agency. Accordingly, if either the Department or CARB proposes a future rulemaking for natural gas motor vehicle fuels, all stakeholders and interested parties will have an opportunity for comment.

### **Comment 2.3**

*Concerning the design and development of a methane number calculator, we believe this should be done by CDFA and displayed on its web site. Allowing a 3rd-party stakeholder to do this could create significant potential problems. Conversely, a CDFA calculator could be utilized by all stakeholders, and Clean Energy would certainly use and place it on its web site for our customers to use.*

### **Response to comment 2.3**

The Department does not have the expertise or resources to develop its own Methane Number calculator as suggested by Clean Energy. In addition, the Department does not have access to data that would be required to validate its own calculator. The MWM Method calculator is now available on the EUROMOT website through this link: [http://euromot.org/media\\_and\\_events/publications/mn](http://euromot.org/media_and_events/publications/mn). It may be downloaded at no cost by any interested party. EUROMOT is not a third-party stakeholder with a commercial interest, but rather a neutral association of internal combustion engine manufacturers representing their joint interests around the world. EUROMOT members clearly have an interest in supporting expanded use of natural gas fuels and vehicles.

EUROMOT has agreed to maintain this calculator on behalf of the international natural gas industry. The MWM Methane Number calculator has been extensively tested by Caterpillar and other industry stakeholders. Since a DMS calculator would be duplicative of the EUROMOT MWM Method calculator, it would not be a justifiable use of public resources. The Department will maintain a link to the MWM Methane Number calculator in its website. Department staff will provide support to any stakeholder encountering problems with the calculator.

### **Comment 2.4**

*For any mandate to test and sample the natural gas quality, we emphatically urge CDFA to insure this task is conducted exclusively by the utility. Placing such a burden on a business such as ours would*

*result in the problems we expressed in our previous letter and public testimony. Requiring a fuel retailer to bear the burden of a utility decision to allow inferior gas into the pipeline system is bad public policy. Certainly, a gasoline or diesel fuel retailer has no way to refine product that is received from the local refinery on-site. Such a responsibility would make retailing petroleum products both infeasible and uneconomic. To be clear, the utility has the authority to set gas quality standards and deny access to local gas distributors.*

#### **Response to comment 2.4**

This issue is addressed in the response to grouped comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY.

In addition to its response to grouped comment #5, the Department notes that natural gas utilities and the CPUC can only establish specifications for raw pipeline gas not finished CNG fuel. The point of public policy raised in this comment is best addressed to the CPUC and the utilities. The quality (or low quality) of raw pipeline gas as it affects natural gas motor vehicle fuels is outside the authority of the Department and the scope of the proposed regulation.

While it is true that gasoline and diesel retailers cannot refine fuel products they receive from their distributors, they are nonetheless fully liable under state law for ensuring that the fuel they sell meets all safety and quality specifications. They are also responsible for any contamination of fuels caused by their equipment or that occurs while fuel is stored at their locations prior to sale.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Commenter 3**

David A. Cox offered comments for the Coalition for Renewable Natural Gas.

#### **Comment 3.1**

*With these changes, DMS specifies that California natural gas motor vehicle fuel sold for use in internal combustion engines shall meet the requirements of “the latest version” of SAE International J1616 “Standard for Compressed Natural Gas Vehicle Fuel.”*

*Our concern is not necessarily with the technical requirements of SAE J1616, but rather the impact of such a broad reference to it.*

NOTE: Additional comments relating to SAE J1616 were made by the Coalition. No comments on other sections of the proposed regulation were made in this letter.

#### **Response to comment 3.1**

The Department thanks the Coalition for its comments.

Comments relating to SAE J1616 are no longer relevant to this rulemaking. SAE J1616 has been withdrawn as a standard. Therefore, the Department is no longer proposing to adopt J1616 by reference.

**Commenter 4**

Tim Carmichael offered the following comments for the Southern California Gas Company.

**Comment 4.1**

*As we stated in our August 11th comment letter, SoCalGas believes that CDFA was compelled to adopt by reference SAE International's May 2016 Standard for Compressed Natural Gas Vehicle Fuel, J1616 (J1616) as you are now proposing in BPC Chapter 6, Article 10 - Specifications for Natural Gas Used as a Motor Vehicle Fuel section 4193 (Chapter 6 section 4193). SoCalGas has a number of questions and comments regarding J1616 and its implementation, including comments on BPC Chapter 7 - Advertising of Gasoline and Other Motor Vehicle Fuels, section 4206 - Labeling and Price Sign Advertising Requirements for Compressed Natural Gas and Liquefied Natural Gas (Chapter 7 section 4206). Based on our review, SoCalGas urges the Department to postpone the finalization of your regulations until additional meetings and discussions are held with all stakeholders to establish a consensus standard.*

**Response to comment 4.1**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

Comments relating to SAE J1616 are no longer relevant to this rulemaking. SAE J1616 has been withdrawn as a standard. Therefore, the Department is no longer proposing to adopt J1616 by reference.

The response to grouped comment #3. REQUESTS TO DELAY RULEMAKING is also responsive to this comment.

**Comment 4.2**

*In addition, SoCalGas wants to emphasize that it has an approved CA Public Utilities Commission (CPUC) tariff gas-quality specification that suppliers must meet at the receipt points in our system not the redelivery (customer usage) points. We are an integrated system with flows on our system largely dictated by where customers chose to source gas and when they use the gas. Therefore, we and other natural gas local-distribution companies in California should not be treated like traditional fuel (gasoline/diesel) suppliers where they have more control and flexibility to deliver specification gasoline to fueling stations.*

**Response to comment 4.2**

The proposed regulation does not seek to regulate the production or distribution of raw pipeline gas. Nor does it seek to regulate any of the lawful activities of any natural gas producer, distributor, or utility operating under the authority of the CPUC. As discussed in the revised ISOR posted on March 6,

2017, utilities and other distributors of pipeline gas are not motor vehicle fuel suppliers except at fuel stations that they both own and operate.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The Department has clear authority to adopt regulations for the quality, method of sale, labeling, and advertising of natural gas motor vehicle fuels under Business and Professions Code Division 5 Chapter 14 §§ 13440 and 13446. The Legislature recently reaffirmed this authority in 2015 when it approved AB 808 (Ridley-Thomas, Statutes of 2015, Chapter 591). AB 808 repealed a previous version § 13446 and adopted the current language.

The distribution and sale of CNG and LNG motor vehicle fuels at commercial stations is clearly separate and distinct from delivery of pipeline gas to utility customers. Rule 2 of the SoCalGas PUC tariff specifically places the responsibility for meeting natural gas fuel quality specifications on the utility's customers. SoCalGas Cal. P.U.C. Sheet No. 45832-G filed February 26, 2010 states:

*... Customers using gas supplied by this Utility for processes which are affected by impurities in excess of specified minimum levels are responsible for testing gas supplied and for rendering the gas suitable for their intended uses. ...*

*EXCEPT AS PROVIDED IN THIS RULE, THE UTILITY MAKES NO WARRANTIES AS TO THE NATURE, COMPOSITION OR PROPERTIES OF THE NATURAL GAS SUPPLIED AND THE OBLIGATIONS SET FORTH IN THIS RULE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTIES OR LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE (INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF THE UTILITY WITH RESPECT TO FITNESS, MERCHANTABILITY, CONSEQUENTIAL DAMAGES, AND WARNINGS INCLUDING THOSE RELATED TO ODORANT FADE IN CONSUMER EQUIPMENT).*

As Rule 2 makes clear, the composition of raw pipeline gas sold to utility customers is not relevant to the responsibility of fuel retailers to meet quality specifications for the fuels they sell

#### **Comment 4.3**

Additional comments relating to SAE J1616 were included in this comment letter.

#### **Response to comment 4.3**

Because SAE J1616 was withdrawn as a standard, the Department is no longer proposing to adopt it by reference. Comments on SAE J1616 are therefore no longer relevant to this rulemaking.

#### **Comment 4.4**

*The definition of MWM Method in Chapter 7 section 4206 states the calculation methodology (MWM Method) "is available in the latest version of CEN EN16726 standard "Gas infrastructure - Quality of gas – Group H". SoCalGas staff did an internet search using the exact phrase "CEN EN16726 standard "Gas infrastructure - Quality of gas – Group H", and found there are a number of different documents*

*available with the first listed document being a final draft dated July 2015. Since this document is labeled as a final draft, we are not sure if this is the latest version of the standard, so would appreciate clarification from the Department or have the correct methodology provided in the regulation.*

*The MN calculation methodology itself appears in CEN EN16726 standard “Gas infrastructure - Quality of gas – Group H” Annex A, which is 21 pages long. The methodology appears so complicated and complex that we question any reasonable person’s ability to use it. SoCalGas is aware that that many stakeholders in the U.S. are still evaluating and trying to validate this calculation methodology and further understand there is widespread belief that it needs to be simplified and constructed in a spreadsheet-type calculation tool preferably within a publicly- reviewed; fully ANSI- recognized ASTM process. Until such time as this work is completed, SoCalGas believes it is premature to specify its use in Chapter 7 section 4206. As an alternative, we suggest the following:*

- a. Specify the use of the SAE calculation methodology as it appears is the methodology stated for use in J1616. This is especially attractive as the methodology has been used for many years by various agencies, including CARB.*
- b. CDFA will take fuel samples from every natural gas fueling station in California, and complete the analysis and calculation of the MN using the MWM Method and provide the appropriate MN to the fuel provider/station operator so they could post the number as required in Chapter 7 section 4206. SoCalGas believes this is the best solution as CDFA has experienced staff for sampling, transporting and analyzing samples as well as familiarity with the MWM Method. This would assure that the number posted is consistent throughout the state and verified by CDFA itself.*

*Regardless of the methodology used to determine MN, we request further clarification on the requirement to label dispensers with the minimum MN. As we have discussed with the Department staff, there can be variability in the chemistry of our natural gas fuel over the course of a year or even month. As we explained in our previous comment letter (August 11, 2016), we are required by the CPUC to accept natural gas from local California oil and gas producers as long as the gas meets the natural gas specifications adopted by the CPUC. Depending on the chemical makeup of the producer natural gas and whether the producer is producing natural gas and injecting it into our pipeline at that time, customers upstream and downstream (flow is often bidirectional and unpredictable as it is driven by where customers source their gas and their demand) might be supplied with fuel that varies from time to time. Unfortunately, SoCalGas is not able to predict when producers may be delivering or not delivering gas, thus changing the source of customer delivered natural gas.*

#### **Response to Comment 4.4**

BPC § 13480(c) requires the Department to adopt a regulation “to define and enforce the octane number, antiknock index labeling requirements, or other labeling requirements of the product sold” for all spark-ignition motor vehicle fuels, including CNG and LNG. The variability of the composition of the raw pipeline gas purchased to produce natural gas motor vehicle fuels is not relevant to this statutory requirement.



The final modified regulation posted on November 2, 2017 includes an updated reference to the CEN Standard 16726, which is now final. Also included is a link to the EUROMOT MWM calculator, which may be downloaded at no cost. The Department will include this link on its website. EUROMOT has agreed to maintain an MWM calculator on its website. The Department expects that fuel producers and retailers will use this calculator to determine the minimum Methane Number of their natural gas fuels. The proposed regulation does not require any affected person to implement the algorithm for the MWM Method. The Department will monitor the calculator to ensure that remains available and functioning correctly. Department staff will assist any stakeholder encountering problems with the MWM calculator.

It is not the responsibility of the Department to provide analysis of motor vehicle fuels to retailers for purposes of dispenser labeling. The Department must reject the commenter's suggestion that it do so as this would be a misuse of the Department's resources and public funds. The Department will sample and test fuels to ensure the accuracy of the required dispenser labeling as part of its enforcement program.

The Department does not consider the SAE calculation of Methane Number to be adequate. The SAE calculation does not include the inert gases N<sub>2</sub> and CO<sub>2</sub>. The presence of these gases in CNG or LNG fuel has a significant effect on the combustion properties of these fuels and so on their anti-knock properties. Engine manufacturers consider this effect in the design of their engines. In doing so, and to warrant the performance and durability of these engines, they rely on the availability of CNG and LNG fuels meeting appropriate quality specifications. For example, Cummins-Westport has stated a requirement of a minimum methane number of 75 for fuel for its new ultra-low NO<sub>x</sub> emission ISL-X engines. Their Methane Number calculation includes the inert gases. Therefore, the Department rejects the use of the SAE calculation of methane number.

#### **Comment 4.5**

*Labeling Requirement is Premature*

*SoCalGas believes there has not been sufficient discussion and consensus among stakeholders regarding an appropriate MN calculation methodology nor an appropriate level. As such, we believe it is premature to establish a labeling requirement based on Methane Number*

#### **Response to Comment 4.5**

The Methane Number is an important metric for natural gas motor vehicle fuel quality, comparable to the octane number for gasoline. BPC § 13480(c) requires the Department to adopt a regulation "to define and enforce the octane number, antiknock index labeling requirements, or other labeling requirements of the product sold" for all spark-ignition motor vehicle fuels, including CNG and LNG. Therefore, the Department must disagree that a labeling requirement based on Methane Number is premature. On the contrary, it is a legislative mandate since the natural gas fuel industry recognizes that the Methane Number is the appropriate anti-knock index for CNG and LNG. A consensus among stakeholders is not required for the Department to adopt the proposed regulation.

As discussed in the response to Comment 4.4, the Department believes that the MWM algorithm is the preferred method of calculation since it includes the significant effects of inert gases on fuel combustion. In addition, the MWM algorithm has been much more extensively validated than the SAE method.

The inclusion by reference of Annex A of EN 16726 in the proposed regulation does not require any person or business to implement the MWM algorithm. The Department expects that affected parties will use the MWM calculator freely available at the link in § 4206(a)(2). This link will be posted on the Department's website and Department staff will monitor the link and calculator to ensure they continue to function properly. Department staff will assist any stakeholder having difficulty using the calculator.

The final text for Chapter 7 § 4206 requires posting of the minimum Methane Number on natural gas fuel dispensers. The Department is not proposing to set a minimum Methane Number requirement, only that this important measure of fuel quality be disclosed to fuel buyers as required by BPC § 13480(c). Both engine manufacturers and consumers need clear and accurate information about the quality of commercial natural gas fuels. Purchasers of expensive natural gas-fueled vehicles require assurance that the fuel they buy will meet the minimum specifications set by manufacturers to protect their vehicles and maintain their warranties. By requiring that the fuel's minimum Methane Number be posted, the Department ensures that consumers will have this essential information and will be able to make value comparisons when they have a choice of fuel suppliers.

## **RESPONSES TO COMMENTS RECEIVED DURING THE SECOND PUBLIC COMMENT PERIOD – 12/1/16 – 12/16/16**

### **Commenter 1**

Tim Carmichael offered the following comments for the Southern California Gas Company.

#### **Comment 1.1**

*SoCalGas believes that the Department's September 2016 changes to its proposed NG Specifications may have constituted a substantial change that altered the meaning of the NG Specifications originally proposed in June 2016. Thus we question why the Department did not publish another 45- day notice in the California Regulatory Notice Register similar to the original notice of proposed action.*

#### **Response to comment 1.1**

The Department agrees that the modified text posted on September 13, 2016 was a substantial change from the original proposed regulatory text posted on June 24, 2016. However, the Department believes that this change was sufficiently related to the original Notice that a directly affected party could have reasonably anticipated that such a change was possible. In such a case, the Administrative Procedures Act (APA) requires a public comment period of a minimum of 15 days. A new 45 public comment period is not required.

It is clear that SoCalGas anticipated the changes in the proposed regulation well in advance of their posting on September 13, 2016. On July 28, 2016, shortly after the new SAE standard J1616 was

published, Tim Carmichael, Agency Relations Manager for Southern California Gas Company, called Allan Morrison, Supervisor at CDFA/DMS, to verify that the Department was aware of the publication of J1616. In both its written comment letter dated August 11, 2016 and its testimony at the public hearing held on that date, SoCalGas stated its position that the Department was mandated by BPC Section 13446 to adopt by reference SAE J1616. The Department concurred and modified the proposed language accordingly, posting the revised text a month later on September 13, 2016. Recognizing that SAE J1616 was a complex document, the Department used its discretion to extend the required minimum 15-day public comment period to 30 days. However, this was an accommodation to stakeholders, not a requirement of the APA.

### **Comment 1.2**

*As we previously commented, SoCalGas believes that CDFA was compelled to adopt by reference SAE International's (SAE) May 2016 Standard for Compressed Natural Gas Vehicle Fuel, J1616 (J1616). The SAE TC 7 Fuels Committee, however, issued on December 2nd a limited scope ballot requesting a committee vote changing J1616 back to a Recommended Practice from a Standard. We understand that if J1616 is changed back to a Recommended Practice, CDFA would then not be compelled to adopt it by reference. If this occurs, SoCalGas respectfully requests that the Department restart the NG Specifications rulemaking process by issuing a new Notice of Proposed Action and Initial Statement of Reasons. This would restart the 45-day clock, and allow time for additional meetings and discussions with all stakeholders, which is what SoCalGas has urged in order to establish a consensus standard. Such action would also give the Department and all stakeholders additional time to develop and absorb the necessary data, analyses, and costs estimates so as to avoid any shut down of existing compressed natural gas fueling stations within California that that might not meet certain specifications proposed by CDFA.*

### **Response to comment 1.2**

Since the date of this letter, SAE J1616 was formally withdrawn as a national standard by SAE International, effective March 2017. Therefore, as SoCalGas notes, the Department can no longer adopt it by reference as a California regulation. The Department issued a notice of modified text on March 6, 2017 to adopt an interim standard pending publication of a new standard by either ASTM International or SAE International. This was again a significant but substantially related change to the proposed regulation that could reasonably be anticipated by SoCalGas. As stated above, the APA requires only a minimum 15-day public comment period for such sufficiently related changes to proposed regulatory text. For other technical and substantial reasons, the proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

### **Comment 1.3**

*SoCalGas would also like to reemphasize our comments on the ISOR articulated in our August 11, 2016 letter, and our very specific comments on J1616, methane number and its calculation, and labeling requirements in our October 13, 2016 comment letter. Additionally, we believe it will be very beneficial for all stakeholders if the Department addresses fuel sampling procedures, plans for implementation and enforcement, and potential penalties for noncompliance.*

**Response to comment 1.3**

The Department has responded to the issues raised in SoCalGas' previous comment letters received in the first and second public comment periods.

Comments on SAE J1616 are no longer relevant to this rulemaking since this standard was withdrawn by SAE International effective March 2017. It is therefore no longer proposed for adoption by reference by the Department. As noted above, modified regulatory text for an interim fuel quality standard was posted on March 6, 2017.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

Sampling, implementation, and related subjects are outside the scope of this rulemaking. The Department notes that it has a well-established inspection and enforcement program in place. BPC Division 5 Chapter 1. General Provisions and Chapter 2. Administration contain the statutes relevant to the enforcement program.

**Comment 1.4**

*In conclusion, SoCalGas urges the Department to hold additional meetings and discussions with all stakeholders to establish a consensus standard. This would ensure a more transparent and collaborative process as many stakeholders have only recently become aware of the proposed CNG Specifications. We truly believe that by working together with the natural gas transportation and fueling industry to address the issues and concerns raised, CDFA will meet its objective of developing a consensus standard that can be effectively implemented and provide an informed choice for consumers, while benefitting the environment.*

**Response to comment 1.4**

The objective of the Department in this rulemaking is to carry out its statutory responsibility for the oversight and regulation of natural gas motor vehicle fuels under its authority in BPC Chapter 14. The legislature has mandated that if either ASTM International or SAE International has published a consensus standard for a motor vehicle fuel, then that standard must be adopted by reference by the department. Otherwise, the Department has the authority to develop and adopt an interim standard. A consensus among stakeholders is not required by the APA for the Department to take regulatory action.

Input from stakeholders is an essential and valued part of the rulemaking process. The department held a public hearing for this rulemaking on August 11, 2016. No additional public meeting are required by the APA and none is planned. The department appreciates the many detailed written and oral

comments it has received. It has given each due consideration in the proposed modifications to the regularity text. Responses to all comments will be included in the Final Statement of Reasons.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.5**

*SoCalGas reiterates our call for CDFA and CARB to host a technical conference to address a list of key technical issues. One model is used by the U.S. Department of Energy with*

*issuance of an announcement with specific questions to be addressed on the agenda and with written comments to follow.*

**Response to comment 1.5**

The technical conference SoCalGas suggests is outside the scope of this rulemaking. Furthermore, the Department does not have the staff or resources required to organize such an event. CARB regularly holds large public meetings and workshops.

The public comment periods of this rulemaking provide all stakeholders with an opportunity to address all technical issues relevant to the proposed regulation. The Department notes that CARB has held multiple public hearings on natural gas fuels over many years. The Department has relied on material from these hearings in this rulemaking, as reflected in the list of additional documents relied on posted on October 4, 2016.

**Commenter 2**

Roger Gault offered the following comments on behalf of EMA (Truck and Engine Manufacturers Association)

**Comment 2.1**

*EMA and its members believe that a general reference to SAE J1616 does not adequately set forth the specification for natural gas used as a motor vehicle fuel. If CDFA were to rely only on the general reference, it would adopt a standard that clearly is less stringent than the existing California state law as prescribed by CCR Title 13, Division 3, Chapter 5 Article 3, Subarticle 1 §§2292.5. As such, §4193 in the CFDA regulatory proposal must be revised to provide limit values, as well as the source of reference, for the properties listed.*

**Response to comment 2.1**

The Department thanks EMA for its comments. Comments on SAE J1616 are no longer relevant to this rulemaking since SAE International has withdrawn J1616 as a standard. Therefore, the Department

cannot adopt this document as a regulation for California. Modified regulatory text was posted on March 6, 2017 establishing an interim quality standard for natural gas motor vehicle fuels under the authority of BPC § 13446. The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

### **Commenter 3**

Todd Campbell offered the following comments on behalf of Clean Energy.

#### **Comment 3.1**

*In reviewing the latest version of J1616 (May, 2016), we see listed as criteria: maximum Wobbe number, maximum HHV number, maximum water dew temperature, maximum hydrogen sulfide ppm, prohibited use of methanol, maximum propane dew point, minimum odorant level, and a recommendation for maximum particulate and foreign matter size. Clean Energy is in agreement with these requirements (although the station owner will need to manage the maximum water dew temperature), except for the HHV number in areas where there is hot gas that exceeds the 1110 maximum HHV by a small amount. We believe strongly that the station owner should not be responsible for the HHV number, as this value should be managed and controlled by the utility which procures and has control and the responsibility over gas quality. Placing such a responsibility on a station owner would present a potentially insurmountable economic hardship that could certainly lead to closure and thereby strand both public and private fleets which are dependent upon such fueling locations, and result in shutting down a vital local service.*

*We support J1616 as a “Recommended Practice” versus as a “Standard Practice.” This will allow for consideration of small variances to meet the requirements should it be completed before January 1, 2018.*

#### **Response to comment 3.1**

The Department thanks Clean Energy for its comments. Comments relating to SAE J1616 are no longer relevant to this rulemaking. SAE J1616 has been withdrawn as a standard. Therefore, the Department is no longer proposing to adopt J1616 by reference.

#### **Comment 3.2**

*We remain concerned about any potential future mandate that would require a station owner to test and sample the natural gas quality received from the utility. We therefore continue to emphatically urge CDFA to insure this task is conducted exclusively by the utility which is in a better position to meet this obligation and which already has and performs testing throughout their network on a regular basis for billing and other purposes.*

#### **Response to comment 3.2**

The distribution and sale of CNG and LNG motor vehicle fuels at commercial stations is clearly separate and distinct from delivery of pipeline gas to utility customers. Rule 2 of the SoCalGas PUC tariff specifically places the responsibility for meeting natural gas fuel quality specifications on the utility's customers. SoCalGas Cal. P.U.C. Sheet No. 45832-G filed February 26, 2010 states:

... Customers using gas supplied by this Utility for processes which are affected by impurities in excess of specified minimum levels are responsible for testing gas supplied and for rendering the gas suitable for their intended uses. ...

EXCEPT AS PROVIDED IN THIS RULE, THE UTILITY MAKES NO WARRANTIES AS TO THE NATURE, COMPOSITION OR PROPERTIES OF THE NATURAL GAS SUPPLIED AND THE OBLIGATIONS SET FORTH IN THIS RULE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, GUARANTIES OR LIABILITIES, EXPRESS OR IMPLIED, ARISING BY LAW OR OTHERWISE (INCLUDING WITHOUT LIMITATION ANY OBLIGATIONS OF THE UTILITY WITH RESPECT TO FITNESS, MERCHANTABILITY, CONSEQUENTIAL DAMAGES, AND WARNINGS INCLUDING THOSE RELATED TO ODORANT FADE IN CONSUMER EQUIPMENT).

As Rule 2 makes clear, the composition of raw pipeline gas sold to utility customers is not relevant to the responsibility of fuel retailers to meet quality specifications for the fuels they sell. California requires retailers to ensure that their products meet all applicable safety and quality standards.

This issue is discussed further in the response to SoCalGas' Comment 4.2 for the first public comment period (9/13/16 – 10/13/16) and in the response to grouped comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Commenter 4**

Tony Lindsay offered the following comments for the Gas Technology Institute (GTI).

#### **Comment 4.1**

*GTI understands that CDFA is directed by state statute to adopt, by reference, the latest standard established by an ANSI-accredited standards development organization for alternative fuels. Our concern is that the proposed regulatory text references the latest version of SAE International J1616 "Standard for Compressed Natural Gas Vehicle Fuel", however there are efforts underway by the SAE Technical Committee to revert this standard to a "recommended practice", which would then render the current CDFA Proposal unenforceable. In addition, there are a number of issues that are problematic with using a Standard that does not clearly establish measurable limits on many of the compositional components that CDFA is trying to regulate.*

#### **Response to comment 4.1**

The Department thanks GTI for its comments. Comments on SAE J1616 are no longer relevant to this rulemaking since SAE International has withdrawn J1616 as a standard. Therefore, the Department cannot adopt this document as a regulation for California. Modified regulatory text was posted on March 6, 2017 establishing an interim quality standard for natural gas motor vehicle fuels under the authority of BPC § 13446.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The response to grouped comment #3. REQUESTS TO DELAY RULEMAKING is also responsive to this comment.

**Comment 4.2**

*We understand that the initial proposal was released on June 24, 2016; however, we feel insufficient outreach to technical resources like GTI were attempted. We encourage CDFA to take the time needed to work with the natural gas transportation and fueling industry to address the issues and concerns raised.*

*We look forward to working with the Department to assure that the right standard is adopted.*

**Response to comment 4.2**

The responses to grouped comments #1. CLAIM OF LACK OF NOTIFICATION and #3. REQUESTS TO DELAY RULEMAKING are responsive to this comment.

**Commenter 5**

Melissa Guise offered the following comments for the Central Coast Clean Cities Coalition.

**Comment 5.1**

*We understand that the initial proposal was released on June 24, 2016; however, we believe additional public outreach to stakeholders and fleets is needed. We urge CDFA to delay finalizing the Motor Vehicle Fuel Specifications for natural gas until a more robust outreach effort to concerned stakeholders is conducted. We strongly encourage CDFA to take the time needed to work with the transportation and fueling industry to address these issues and concerns.*

**Response to comment 5.1**

The Department thanks the Coalition for its comments. The responses to grouped comments #1. CLAIM OF LACK OF NOTIFICATION and #3. REQUESTS TO DELAY RULEMAKING are responsive to this comment.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 6**

Linda Urata offered the following comments for the San Joaquin Valley Clean Cities Coalition.

**Comment 6.1**

*We understand that the initial proposal was released on June 24, 2016; however, CDFA has not conducted sufficient public outreach to stakeholders like the San Joaquin Valley Clean Cities Coalition*



*and its stakeholders. We urge CDFA to delay finalizing the Motor Vehicle Fuel Specifications for natural gas until a more robust outreach effort to concerned stakeholders is conducted.*

**Response to comment 6.1**

The Department thanks the Coalition for its comments.

The responses to grouped comments #1. CLAIM OF LACK OF NOTIFICATION and #3. REQUESTS TO DELAY RULEMAKING are responsive to this comment.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 6.2**

*We invite you to speak at one of our quarterly meetings, or to address the San Joaquin Valley Natural Gas Partnership at one of our meetings in 2017.*

**Response to comment 6.2**

The Department appreciates the invitation to speak to interested groups. However, such requests should be directed to the CDFA Office of Public Affairs: Phone: (916) 654-0462, OfficeOfPublicAffairs@cdfa.ca.gov.

**Comment 6.3**

*As currently proposed, the Specifications could have unintended consequences resulting in the dismantling of natural gas fueling infrastructure throughout my region, thereby taking clean, alternative fuel vehicles off the road. The introduction of the new Cummins low-NOx engine last September is reinvigorating the market for natural gas vehicles. This change would arrive at a very inopportune moment for CNG fuel users.*

**Response to comment 6.3**

This comment is a general statement of opposition that does not refer to specific proposed regulatory text. The Department recognizes the contribution natural gas fuels make towards the state's goals of improved public and environmental health, as well as reduced petroleum dependence.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 7**

Bruce H. Tiffney and Renee Bahl offered the following comments for the Chancellor's Sustainability Committee of the University of California, Santa Barbara.

**Comment 7.1**

*We understand that the initial proposal was released on June 24, 2016; however, CDFA has not conducted sufficient public outreach to stakeholders like us. We ask CDFA to delay finalizing the Motor Vehicle Fuel Specifications for natural gas until a more robust outreach effort to concerned stakeholders is conducted. We suggest convening additional meetings and workshops, ensuring a transparent and collaborative public process. Pursuing such a Specification in the absence of such public engagement deprives CDFA of valuable stakeholder input and leaves impacted natural gas fueling and transportation customers in the dark.*

#### **Response to comment 7.1**

The responses to grouped comments #1. CLAIM OF LACK OF NOTIFICATION and #3. REQUESTS TO DELAY RULEMAKING are responsive to this comment.

### **RESPONSES TO COMMENTS RECEIVED DURING THE THIRD ADDITIONAL PUBLIC COMMENT PERIOD 3/6/17 – 3/22/17, EXTENDED TO 4/19/17**

#### **Commenter 1**

Tim Carmichael offered the following comments for the Southern California Gas Company in two comment letters dated 3/10/17 (Comments 1.1 and 1.2) and 4/19/17 (Comments 1.3 – 1.14).

#### **Comment 1.1**

*Southern California Gas Company (SoCalGas) respectfully requests the California Department of Food and Agriculture (Department) to schedule and hold a public workshop on the Department's fourth set of proposed specifications for the retail sale of natural gas as a motor vehicle fuel in California. This fourth set of proposed regulations differs significantly from the second set of draft regulations that had been proposed on September 13, 2016, and the third set proposed on December 1, 2016. Accordingly, the Revised Initial Statement of Reasons (Revised ISOR), dated March 6, 2017, is substantially changed from the original published on June 24, 2016. The Department makes statements in the Revised ISOR regarding pipeline natural gas in California and natural gas motor vehicle fuel quality that need clarification, additional explanation and reference. Therefore, it is imperative for the Department to provide a forum for all stakeholders to be informed about the information provided in the Revised ISOR.*

#### **Response to Comment 1.1**

In response to requests from SoCalGas and other stakeholders, a public hearing for this rulemaking was held on August 11, 2016. The Administrative Procedure Act does not require that public workshops be held. Accordingly, the Department declines the request to schedule a workshop. The Department will respond to all specific questions and comments received during this comment period in the FSOR.

This comment letter does not state specific questions or comments on the modifications and revised ISOR posted on March 6, 2017. Therefore, the Department is unable to respond further.

#### **Comment 1.2**

*SoCalGas also believes that the Department's Revised ISOR and the fourth set of proposed specifications both constitute a substantial change altering the meaning<sup>1</sup> of the ISOR and regulations originally proposed on June 24, 2016, as well as the second version and third version of the natural gas specifications proposed on September 13, 2016 and December 1, 2016, respectively. Thus we believe*

*the Department should publish another 45-day notice in the California Regulatory Notice Register similar to the original notice of proposed action.*

### **Response to Comment 1.2**

The changes in the proposed regulation in the notices of September 13, 2016 and December 1, 2016 were significant changes from the previous versions. However, both met the requirement of Government Code § 11346.8 (c) of being sufficiently related to the scope of the regulation stated in the Notice of Proposed Rulemaking posted on June 24, 2016 that a new 45-day public comment period was not required. As an accommodation to stakeholders, the fourth public comment period was extended to April 20, 2017 from the original ending date of March 22, 2017.

### **Comment 1.3**

*Given the interim nature of the NG fuel specifications, as well as the potential confusion caused by the many and varied proposals issued by CDFA in less than a year, SoCalGas suggests that CDFA consider one of two possible alternative paths forward.*

*Option 1: Adopt California Public Utilities Commission's Natural Gas Specifications*

*The California Public Utilities Commission (CPUC) has long ago established NG specifications that make it suitable and safe for transport and use within the state of California. These CPUC specifications are well known and understood by customers who purchase natural gas to condition and compress it into motor vehicle fuel. The CPUC specifications are contained in General Order 58 A – Standards for Gas Service 1 (November 10, 2016 heating value and purity) and CPUC regulated utility tariffs, such as, SoCalGas Rule 302. Rule 30 contains gas delivery specifications for numerous compounds including Higher Heating Value, Moisture Content or Water Content, Hydrogen Sulfide, Mercaptan Sulfur, Total Sulfur, Carbon Dioxide, Oxygen, Total Inerts, Hydrocarbons, Wobbe Number and Hazardous Substances as well as separate specifications for Biomethane Quality. These are similar parameters that are in the NG fuel specifications.*

*The Revised ISOR states that CPUC pipeline gas may not be suitable for use in all natural gas- powered vehicles and cites the Cummins-Westport ISL-G engine as requiring higher methane content than is found in some pipeline gas<sup>3</sup>. Unfortunately, the Revised ISOR provides no research materials, studies, or hard data to substantiate this statement. SoCalGas is currently working cooperatively with Cummins and Cummins Westport to determine what gas specifications are necessary to ensure the optimal performance and durability of their new near-zero emission natural gas engines. SoCalGas would also like to understand why CDFA implies that tailpipe emissions could exceed certified levels with NG fuel that has lower methane content, as this contradicts our understanding.*

### **Response to Comment 1.3**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

For the reasons above, the Department must reject Option 1.

**Comment 1.4**

*Option 2: Adopt California Air Resources Board (CARB) Specifications for Alternative Motor Vehicle Fuels as the Interim Specification and Recognize Exemptions Issued by CARB's Executive Officer CDFA is aware of the CARB Specifications for Compressed Natural Gas Motor Vehicle Fuel (Title 13, Division 3, Article 3, Subarticle 1 §2292.5), and is also aware of the exemption from these CARB specifications for customers served by SoCalGas and SDG&E. These exemptions contain numerous labeling, recordkeeping, and reporting requirements, with which SoCalGas and SDG&E are currently complying.*

*In summary, SoCalGas respectfully requests that CDFA recognize the physical limitations of interstate natural gas supplies and minimize regulatory duplication by adopting either the CPUC or the CARB natural gas specifications and recognize the existing exemptions to CARB's specification.*

*Since the proposed NG fuel specifications are only interim until the Department adopts an ANSI accredited standard by reference, adopting the CARB specifications for Alternative Motor Vehicle Fuels as the interim specification and recognizing the ARB issued exemptions makes sense.*

**Response to Comment 1.4**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

For the reasons above, the Department must reject Option 2.

**Comment 1.5**

*SoCalGas also submits the following comments and concerns with respect to the proposed NG fuel specifications.*

*1. Use Test Methods D1945 or 1946, instead of D7833: ASTM test method D7833- Test Method for Determination of Hydrocarbons and Non-Hydrocarbon Gases in Gaseous Mixtures by Gas Chromatography (GC) requires using GC, Thermal Conductivity Detection (TCD) and Flame Ionization Detection (FID) to analyze C1-C6 or C7+ hydrocarbons, inerts, hydrogen, hydrogen sulfide (H<sub>2</sub>S), and other analytes that are usually not detected in pipeline gas or detected at very low levels (parts per billion [ppb]). We propose that methods D1945 - Test Method for Analysis of Natural Gas by Gas Chromatography and D1946 - Practice for Analysis of Reformed Gas by Gas Chromatography be used instead; as for one the CARB fuel specification requires the use of ASTM D1945.*

**Response to Comment 1.5**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.6**

*SoCalGas also submits the following comments and concerns with respect to the proposed NG fuel specifications.*

*2. Avoid D7833: Method D7833 should not be a referee method for this motor vehicle fuel standard for the following reasons:*

- a. D 7833 was developed to analyze other analytes such as methyl acetylene and 1, 3 Butadiene and detecting analytes at very low levels using FID. This is not necessary for the proposed specifications.*
- b. Using two or three detectors with two carrier gases in one GC may cause interference problems or gas contamination issues.*
- c. Methods D1945 and Practice D1946 are designed to analyze C1-C6+ inerts and they are both easier to perform than Method D7833.*
- d. D7833 should not be used for H<sub>2</sub>S detection as it may not be accurately determined by this procedure due to loss in sample containers or sample lines and possible reactions.*

#### **Response to Comment 1.6**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Comment 1.7**

*3. Why are there two different water specifications? There are two different water specifications in section 4193: maximum 5.0 parts per million by volume (ppmv) in the table and at least 10°F below the 99.0 % winter design temperature (ARB Specification) under the additional requirements section. The 5.0 ppmv is too stringent relative to the degrees below winter design temperature. California's NG motor vehicle fuel stations have gas dryers designed for the CARB specification, not for 5 ppmv.*

#### **Response to Comment 1.7**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Comment 1.8**

*4. Use D5504 instead of D4468: ASTM D4468 should not be the referee method for Total Sulfur. This is an outdated method, SoCalGas and local air districts use ASTM D5504 for Total Sulfur.*

#### **Response to Comment 1.8**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Comment 1.9**

*5. OCS or COS?: It appears there is an error in the term "Sum of H<sub>2</sub>S and OCS as sulfur." We believe it should be COS, or carbonyl sulfide instead of OCS, but this needs to be clarified.*

**Response to Comment 1.9**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.10**

*6. Drop COS Specification: SoCalGas has online analyzers for H<sub>2</sub>S for most of our gas suppliers, but not for COS. We know from spot testing that COS is at trace levels (less than 0.2 ppmv), and we do not believe it is necessary to have a COS specification. The total sulfur limit covers any concerns one may have with sulfides such as COS.*

**Response to Comment 1.10**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.11**

*7. Include D4084: Please note that, ASTM D4084 is typically used for testing H<sub>2</sub>S in NG supplies; therefore, ASTM D4084 should be listed as one of the allowable test methods for H<sub>2</sub>S.*

**Response to Comment 1.11**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.12**

*8. Correct assumptions about CARB's CNG specifications: CARB's compressed natural gas fuel specifications were developed in the early 1990s and surveyed, average gas-composition data from the gas utilities was used for their specifications. Therefore, CARB specifications are not based on the needs for tailpipe emissions or engine performance. At the time the data to correlate NG composition with tailpipe emissions and engine performance were sparse and preliminary in nature. Since then, testing has shown that NG motor vehicle fuel outside the CARB fuel specifications does not affect tailpipe emissions nor creates engine performance issues.*

**Response to Comment 1.12**

The basis for CARB's 1992 regulation is not relevant to this rulemaking. No data or citations to studies or testing has been provided to the Department to support stakeholder assertions about emissions and engine performance. It is clear that such data as may exist has not caused CARB to change its 1992 specifications.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.13**

*9. Drop specifications for trace constituents: Since the alternative motor vehicle fuel and gas industry are still working on a national NG fuel standard, there is no reason to have specifications for trace constituents such as ammonia and particulates until these have been fully reviewed in the ASTM and other forums.*

**Response to Comment 1.13**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 1.14**

*10. Eliminate carbon monoxide and hydrogen limits: SoCalGas does not think there is a need for carbon monoxide nor hydrogen limits. We are not aware of evidence showing that these constituents create issues with engine performance or tailpipe emissions. Additionally, there is discussion of adding renewable hydrogen into pipeline natural gas (such as is being done in Germany), thus this could create a barrier to future renewable fuels and/or other new sources of alternative gaseous motor vehicle fuels.*

**Response to Comment 1.14**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 2**

Roger Gault offered the following comments on behalf of EMA (Truck and Engine Manufacturers Association)

**Comment 2.1**

*EMA and its members believe that the specifications for gas properties proposed in § 4193 of the Third modified proposal are appropriate and acceptable.*

**Response to Comment 2.1**

The Department thanks EMA for its support of the specifications in Chapter 6 §4193. Due to other substantial and technical reasons, the proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 2.2**

*EMA and its members support the proposed requirements in Chapter 7, § 4206, Labeling, regarding the minimum Methane Number as determined by the MWM method. This requirement is extremely important given the Department's intent to provide "developmental engine fuel variances" for non-complying retail stations (Revised Initial Statement of Reasons, page 15). Requiring stations to post the*

*Methane Number for the fuel being dispensed will provide critical information to consumers regarding the acceptability of that fuel for use in their vehicles.*

### **Response to Comment 2.2**

The Department thanks EMA for its support of the labeling requirements in Chapter 7 § 4206. With these requirements and the developmental engine fuel variances, the Department seeks to balance the need to maintain CNG availability in underserved areas with the critical importance to fuel buyers of fuel quality information.

### **Commenter 3**

Todd Campbell offered the following comments on behalf of Clean Energy.

### **Comment 3.1**

*We believe a letter should come from the ARB to the CDFA confirming that the label requirements are sufficient, and that ARB agrees that the minimum fuel composition is identical with both agencies.*

### **Response to Comment 3.1**

The Department thanks Clean Energy for its comments.

This rulemaking is done under the authority given the Department in BPC Division 5 Chapter 14 §§ 12107 and 13446. The labeling requirement of CARB is not relevant to this rulemaking. The Department does not need the concurrence of CARB to adopt the proposed regulation.

The Department cannot rely on CARB's labeling requirement. This requirement is not in regulation, but is contained in Memoranda of Exemption (MOE) CARB has signed with SoCalGas and SDGE. These Memoranda may be withdrawn or changed at any time without notice to or consultation with the Department. General Provision 2 of the Memoranda state:

In the event that both the California Department of Food and Agriculture and ASTM International adopt standards for CNG as a motor vehicle fuel, then ARB may modify the terms of this MOE as needed in collaboration with the Applicant.

The proposed labeling requirements in Chapter 7 § 4206 do not depend on a fuel quality specification. The requirement is only to provide accurate information to purchasers of CNG about the fuel offered for sale.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

For these reasons, the Department rejects the suggestions in Comment 3.1.

### **Comment 3.2**



*Only one label: the required ARB label, below, should be used in lieu of or modified to meet the proposed CDFA requirements. And the requirements for the retailer for the displayed label should ONLY meet these requirements: GGE for CNG is 5.66lbs, DGE for LNG is 6.06 lbs., and the Methane Number (and not the minimum methane percent):*

**Response to Comment 3.2**

The Department has no mechanism to modify the label required by CARB. CARB does not require that the minimum methane number be posted. The Department commends Clean Energy for including this metric, which is critical information for fuel buyers. However, other stations owner/operators are free under the terms of the MOE to omit this information from their label.

The posting of the minimum methane percent is current federal law under Federal Trade Commission (FTC) 16 Code of Federal Regulations Parts 306 and 309. Department staff have observed that some CNG station operators do not currently comply with the FTC rule. The proposed regulation does not impose a new labeling requirement. It does provide a mechanism for enforcement of the Federal labeling requirement throughout California by state and county weights and measures officials.

**Comment 3.3**

*We support the continued display of the Methane Number calculator on the CDFA web site, which will standardize operations for all stakeholders.*

**Response to Comment 3.3**

The Department will provide a link to the MWM methane number calculator on its website for the convenience of station owner/operators. The Department will monitor the link and the calculator to ensure that they continue to operate properly. The Department will provide assistance for any owner/operator encountering problems with the calculator.

**Comment 3.4**

*While we believe this issue has been settled, we remain adamant that any potential future mandate requiring the testing or sampling of natural gas quality should be the sole responsibility of the utility, not a station owner. The utility is in a much better position to meet this obligation, especially since the gas utility is already performing testing throughout its network on a regular basis for billing and other purposes.*

**Response to Comment 3.4**

The Department has addressed this issue in its response to Grouped Comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY and in its response above to Clean Energy's Comment 3.2 in the Third Public Comment Period.

The Department recognizes that compositional data currently maintained by the utilities would be extremely helpful to station owner/operators in meeting the requirements of the proposed regulation. Because the utilities are public entities subject to the jurisdiction of the Public Utilities Commission, the Department has no authority to compel the disclosure of this data. The Department hopes that the

utilities will work with their customers in the interest of CNG users throughout the state. However, Gas Rule 2 of the utilities explicitly makes testing the responsibility of utility customers.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 3.5**

*We therefore strongly encourage the CDFA to assign the responsibility for applying and maintaining the fuel composition variance to the gas utility, as CDFA correctly points out the responsibility for transforming the composition of pipeline natural gas to vehicle grade natural gas for compression and dispensing is solely dependent upon the utility. Therefore, to ensure consistency and reliability we believe the CDFA Variance Permit should also be the responsibility of the respective gas utility. Furthermore, if the composition of the natural gas at the point of sale to the CNG fueling station needs to be polished or blended, it should be the utility's responsibility to do this polishing or blending, not the station owner or operator. The gas composition is controlled by the utility and therefore monitoring, reporting and changing it should be the utility's responsibility, not the station operator.*

**Response to Comment 3.5**

The Department can give a developmental engine fuel variance only to a fuel producer. As discussed in the Revised ISOR, pipeline natural gas is not a motor vehicle fuel as defined in BPC § 13400 (p). Therefore, a utility that provides pipeline natural gas to a CNG station is not a producer of fuel for that station. The producer of the fuel is the entity that filters, dries and compresses the pipeline gas into a finished fuel.

The Department has no authority over the natural gas utilities, which operate under the sole jurisdiction of the California Public Utilities Commission. Therefore, the Department cannot require the utility to polish or blend pipeline gas delivered to its customers. The utilities' Gas Rule 2 makes this responsibility of the utilities' customers. Accordingly, the Department must reject Clean Energy's request to hold the utilities responsible. At the same time, Department hopes that the utilities will offer all possible assistance to their customers as this would be in the best interest of CNG users throughout the state.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The response to Grouped Comment #5. CLAIM RETAIL STATIONS SHOULD NOT BE RESPONSIBLE FOR FUEL QUALITY is also responsive to this issue.

**Commenter 4**

Kathryn Lynch and Veronica Pardo sent two comment letters on behalf of the California Refuse Recycling Council dated March 20, 2017 (Comment 4.1) and April 19, 2017 (Comments 4.2 – 4.5)

**Comment 4.1**

*We are writing in regards to the Fourth Notice for the Proposed Regulation for Natural Gas Motor Vehicle Fuel Specifications. In reviewing the Revised Initial Statement of Reasons, as well as the substantive modifications in Chapters 6 and 7, we note that the fourth set of proposed regulations differ significantly from the second draft proposed on September 13, 2016 and the third draft proposed on December 1, 2016. To that end, we respectfully request that the Department publish another 45-day notice to allow enough time for the industry to review these changes and provide constructive comments.*

**Response to Comment 4.1**

The Department thanks the Council for its comments.

The changes in the proposed regulation in the notices of September 13, 2016 and December 1, 2016 were significant changes from the previous versions. However, both met the requirement of Government Code § 11346.8 (c) of being sufficiently related to the scope of the regulation stated in the Notice of Proposed Rulemaking posted on June 24, 2016 that a new 45-day public comment period was not required. As an accommodation to stakeholders, the fourth public comment period was extended to April 20, 2017 from the original ending date of March 22, 2017.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 4.2**

*As an essential public service, our members ensure the health and safety of their local communities by managing municipal solid waste. Without the ability to haul this material, this would inevitably lead to serious collection and health and safety issues. It is imperative that, at a minimum, the developmental engine fuel variance process guarantee the continuity of these facilities such that no public service agreements are harmed and that basic public health and safety needs are protected.*

*Additionally, while we appreciate the opportunity to apply for a developmental engine fuel variance, there is no guarantee that such a variance will be granted. Moreover, it is unclear whether public consumers will be able to fuel at a station with such a variance. How can we remain confident that stations will be able to maintain service to their customer base?*

**Response to Comment 4.2**

While the Department does have discretion in the terms and conditions for a variance, it may not act in a capricious or arbitrary way. The Department recognizes that in some areas, a single CNG station fills a critical need for waste hauling, school bus fleets, and other regional transportation needs.

The Department must adopt a regulation that will allow it to carry out its responsibilities under Business and Professions Code Division 5 Chapter 14. In doing so, it is to working with all station owner/operators to maintain the services and access their communities and businesses have come to depend on. The proposed regulatory language to amend the California Code of Regulations Title 4,

Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 4.3**

*While we recognize and support the need to label the minimum methane number of LNG and CNG, we do not support the prescriptive fuel quality specification as currently drafted, especially as dozens of facilities will be required to apply for a variance. Moreover, depending on the results of your survey regarding the impact of these regulations, the Department “may consider future amendments to the proposed fuel quality specifications to reduce the impacts that cannot be otherwise mitigated.” While we recognize this is an effort to make the regulations workable, the idea that the regulations could be made to be less stringent in the future is disconcerting as facilities will be investing heavily in meeting the requirements as currently drafted. To that end, we feel strongly that no interim standard for natural gas fuel quality can be finalized until this survey is completed and the true impact of the specification is understood.*

**Response to Comment 4.3**

The Department thanks CRRC for its support of the minimum methane number labeling requirement.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

For the reasons discussed above and in the response to grouped comment REQUEST TO DELAY RULEMAKING, the Department believes it must proceed with this rulemaking to fulfill its statutory obligations under BPC Division 5 Chapter 14.

**Comment 4.4**

*We support the need for labeling standards to incorporate the requirements of AB 1907, but endorse streamlining the requirements such that only one label is required. Any overlap with CARB requirements needs to be combined into one consistent labeling requirement. Furthermore, a clear factsheet regarding the expectations needs to be drafted for dissemination.*

**Response to Comment 4.4**

The CARB labeling requirements are not in regulation, but are included in CARB’s December 2016 Memoranda of Exemption (MOE) with SoCalGas and SDGE in General Provision 8. These MOE may be modified or withdrawn at any time by CARB. The Department has no authority or mechanism to change the CARB labeling requirements.

The Department does not see any overlap or inconsistency between its labeling requirements and those in General Provision 8 of CARB’s MOE. The current CARB labeling requirements deal only with CARB’s CNG fuel specifications. They do not apply to LNG or include minimum methane number or the requirements of AB 1907 and the Federal Trade Commission’s Rules parts 306 and 309. The Department has no authority to include or enforce CARB’s requirements in its regulation.

For enforcement purposes, each specific labeling requirement in the Department's proposed regulation must be in a separate subsection. For these reasons, the Department cannot combine the labeling requirements into just one label.

The Department believes the labeling requirements in Chapter 7 §§ 4201, 4206, and 4207 are clear as written. The language used in these subsections is similar to that used in CCR Title 4 Division 9 Chapter 7 to specify the requirements for labeling dispensers of other motor vehicle fuels. Department staff will be available to assist stakeholders with questions about the requirements.

**Comment 4.5**

*Unfortunately, we remain confused as to who is responsible for meeting the proposed specifications as it pertains to the utility providing the gas or the facility compressing the gas for fuel use. In either case, the estimated costs are significantly higher than referenced in the ISOR and the responsible party needs to be clearly articulated.*

**Response to Comment 4.5**

The fuel retailer is responsible for ensuring that fuel offered for sale meets the quality specifications. This is true whether the fuel is produced at the point of sale or delivered to a fueling station in finished form.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 5**

P. Terence Schubert, attorney for 3G CNG, offered the following comments.

**Comment 5.1**

*I appeared and provided testimony at the August 11th hearing, and briefly met you at that time. I provided contact information to you, and was advised that additional information would be provided to me regarding any subsequent changes being considered with regard to the proposed regulations, yet I have received no information or other communications from you or any other representatives of the Department of Food and Agriculture.*

**Response to Comment 5.1**

The Department regrets that Mr. Schubert may not have received all notices related to this rulemaking. The Department appreciates both his testimony at the public hearing and comments in his letter of April 19, 2017.

The email addresses of Mr. Schubert and his client Dale Gomer, ptschubert@aol.com and dale@prwste.com, both appear on the email lists the Department used for the Notice of Modified Text that was sent on September 13, 2016, and the Notice of Additional Documents that was sent on October 4, 2016. Scans of these email lists are shown on the following pages. While the resolution of the scans is not optimal, both names are clearly on both lists.

These emails did not generate notices of undeliverable mail for Mr. Schubert. The Department's records indicate that the email of October 4, 2016 had to be resent to Mr. Gomer's address.

Based on these email lists, it appears that Mr. Schubert and Mr. Gomer should both have received notices for this rulemaking sent by the Department on and after September 13, 2016.

### **Comment 5.2**

*The Paso Robles CNG Station is one of the 24 stations cited in the Revised Initial Statement as being impacted by these rule proposals. I would respectfully suggest that if a map was included showing the locations of these stations, the true state and region-wide impacts would be made more clear.*

*A portion of page 15 of the Revised Initial Statement reads as follows, "In less densely populated areas, retail stations may be 50 miles or more apart. Private individual and small business customers of an isolated station could suffer serious economic harm if they were to lose access to their one source of CNG fuel. Stations located at the junction of two or more state highways may also provide essential refueling services to vehicles moving through an area."*

*This language describes the Paso Robles CNG Station; however, the "serious economic harm" impact that is acknowledged is never analyzed. In fact, the entire City of Paso Robles would be significantly impacted because the multi-million dollar CNG fueled solid waste hauling fleet would be rendered inoperative, leading to a potential public health crisis, significant air quality impacts (IF diesel trucks could be found to replace the CNG trucks) and increased solid waste rates.*

### **Response to Comment 5.2**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

### **Comment 5.3**

*Instead of conducting an analysis before adopting draconian measures, the Department pledges [its] commitment to "working with individual stations to maintain service to their customer base." These words ring hollow, since the Department previously committed to keeping the representatives of this individual fueling station informed of developments in these regulations. It did not.*

### **Response to Comment 5.3**

As discussed in the response to Comment 5.1 above, the Department believes that notices of modifications to the proposed regulations and additional documents relied on were sent to both ptschubert@aol.com and dale@prwste.com since the notice of September 13, 2016.

### **Commenter 6**

Sean Edgar offered the following comments for Clean Fleets in an email dated March 6, 2017:

#### **Comment 6.1**

*I provided testimony at the August 11, 2016 public hearing on this item.*

*In my follow up by phone with CDFA staff (both your hearing officer Steven and Pamela) I was assured that I would be placed on the listserve for any future efforts.*

*I got wind today that additional changes are now proposed and I would like to identify why your process has failed to keep me informed of changes.*

**Response to Comment 6.1**

Mr. Edgar’s email address was transcribed incorrectly from the sign-in sheet for the hearing because his email address was misread. A copy of the sign-in sheet is reproduced on the following page. The Department regrets the error.

Tammy Sulli responded immediately on behalf of the Department to Mr. Edgar’s email:

Dear Sean: I do have you on the email that I just sent to all stakeholders. I have you as “Sean Edgar, Clean Fuels, Sean@cleanfuels.net” I apologize for this incorrect email address. I have corrected your information for future emails regarding this topic.

**Comment 6.2** in a follow-up email of March 6, 2017

*... the regulatory package that I just located on the CDFA website remains a complete disaster for our members.*

*I can’t imagine how the Department expects companies that have invested tens of millions of dollars in CNG trucks to figure out a new fuel supply in less than four months.*

*That’s why I showed up at the first hearing and am shocked by the process and the content of this package.*

**Response to Comment 6.2**

Comment 6.2 is a statement of general opposition to the proposed regulation and does not refer to any specific regulatory text. The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 7**

Sean Edgar offered the following comments for Clean Fleets in a letter dated April 19, 2017.

**Comment 7.1**

*The regulatory process has not been followed and the regulation should be abandoned or restarted.*

*I provided testimony at the initial August 11, 2016 hearing. I followed up by telephone subsequent to that hearing and was advised that all who provided testimony would be*

*informed of future regulatory proposals. That did not take place until March 2017 (see attached). The failure of CDFA to conduct an open public process is grounds to abandon or restart the regulatory process.*

#### **Response to Comment 7.1**

This comment repeats Comment 6.1 above. As the response to Comment 6.1 states, there was an error in reading an unclear email address. This single error, while sincerely regretted by the Department, does not support a claim that the Department has failed to conduct an open public process. The Department believes that it has complied with all of the requirements of the Administrative Procedure Act throughout this rulemaking.

#### **Comment 7.2**

*The current proposal remains flawed by requiring a minimum methane content that would require expensive upgrades to existing natural gas stations.*

*CDFA has been provided information by Clean Energy and other fuel providers that station upgrades could be well in excess of the \$100,000 contained in the ISOR. Even if the ISOR value is correct, there is no universal pass way of dealing with the contractual and cost issues caused by the proposal. By requiring expensive station upgrades without grant support or reasonable phase-in, CDFA is pitting utilities, fueling station owners and their clean fleet customers against one another. In the final analysis, it might be easier and cheaper for the fleet owner to go back to dirtier diesel, thereby undercutting the state's climate change and diesel risk reduction goals.*

#### **Response to Comment 7.2**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Comment 7.3**

*The Department "may" grant a variance to a CNG fleet that does not have the specification fuel, but due to the discretionary nature of that action we have no confidence that it will be granted. So the only option would be to strand CNG trucks without fueling and risk basic public sanitation and recycling service needs to be unmet.*

#### **Response to Comment 7.3**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

The Department is committed to supporting the growth of natural gas fuels by establishing a framework for a stable and transparent marketplace. The Department believes that the proposed dispenser labeling requirements will provide adequate protection for customers of stations operating under a variance.

#### **Comment 7.4**



*Labeling is not a significant problem*

*On a positive note, pump labeling as proposed does not present problems for our clients that operate CNG fueling stations as it relates to posting the volume dispensed and methane content. Problems will arise if the CDFA tool that is provided to calculate methane content is flawed. A provision that protects station operators from liability if the CDFA tools or instructions are not accurate is needed.*

#### **Response to Comment 7.4**

The methane number calculator referred to will be maintained by Euromot. This calculator and the algorithm on which it is based have been extensively tested and validated by engine manufacturers and other stakeholders. Department staff have tested the calculator using a range of compositional data and found that it operates satisfactorily. The Department notes that it does not have access to one of the very few test engines for the determination of methane number and so relies on the validation conducted by engine manufacturers.

The Department will provide a link to the calculator and support to any station owner or operator that has trouble using the calculator. Department staff will work with stakeholders to resolve any discrepancies that arise in using the calculator.

#### **Commenter 8**

Thomas Lawson offered the following comments for the California Natural Gas Vehicle Coalition.

#### **Comment 8.1**

*We remained concerned about the labeling requirement. There appears to be a duplication of regulations because there is already a label requirement at the Air Resources Board. As businesses put time, energy and resources to comply with a myriad of state regulations, it is important that when new ones are proposed that they solve a problem instead of creating more confusion and duplication.*

*Recommendation: Delete the label requirement in these regulations due to the duplication in other regulations.*

#### **Response to Comment 8.1**

For the reasons detailed below, the Department rejects the recommendation to delete the proposed labeling requirements. The comment does not specify which other regulations it believes are duplicated by the proposed labeling requirements in Chapter 7 §§ 4201, 4206, and 4207. None of these proposed requirements duplicates any label requirement of the CARB known to the Department. The Department is aware that CARB's Memoranda of Exemption (MOE) with the Southern California Gas Company and San Diego Gas & Electric includes a labeling requirement in General Provision 8. This requirement is not in regulation, but in the MOE that may be modified or withdrawn at any time. The MOE deal only with CARB's CNG fuel specifications and are therefore not relevant to the Department's proposed regulation.

Each of the Department's proposed requirements addresses a specific issue within its authority in Business and Professions Code (BPC) Division 5 Chapter 14. The requirements in §§ 4201, 4206 (c), and 4206 (d) implement provisions of AB 1907 (Ridley-Thomas, Statutes of 2014, Chapter 805). This law amended BPC §§ 13404 and 13470 to establish the method of sale for natural gas fuels and require

that fuel dispensers be labeled accordingly. These provisions have been in California law since AB 1907 was chaptered in September 2014 and took effect in 2015. However, during its pre-rulemaking investigations, the Department found that some CNG stations were not complying with this law. The proposed labeling regulation will enable Department to educate station owner/operators about these requirements and to enforce them.

The labeling requirement in § 4207 adopts by reference the Federal Trade Commission (FTC) rules found in 16 CFR Parts 306 and 309. The FTC requires that all motor vehicle fuel dispensers be labelled with the fuel rating of the fuel offered for sale. For natural gas fuels, the FTC defines the fuel rating as the minimum percent methane content. The Department believes that the inclusion of the FTC rules is necessary because during its pre-rulemaking investigations found that some CNG stations were not in compliance. The proposed labeling requirement in § 4207 will give Departmental investigators standing to enforce posting of fuel ratings.

This is important for two reasons. First, the methane content of natural gas fuels is one metric of fuel quality. CARB has recognized its importance as shown by the minimum level set in its specifications in CCR 13 § 2292.5. Posting the minimum methane content on dispensers gives consumers information on fuel quality as intended by the FTC. This information allows fuel buyers to make value comparisons when choosing a fuel supplier. Second, FTC rules and California regulations require that fuel ratings for all other motor vehicle fuels be posted on dispensers. In its oversight and regulation of motor vehicle fuels, the Department must be uniform and consistent. The Department finds no reason to exempt natural gas stations from a requirement imposed on all others.

Similarly, the proposed labeling requirement in Chapter 7 § 4206 for minimum methane number provides fuel buyers with important information. The methane number is a more comprehensive metric of fuel quality than the methane content alone. Thus, knowing the minimum methane number gives consumers additional important information about the fuel they are buying. Manufacturers design their engines based on a chosen minimum methane number. A minimum methane number may be included in the specifications for a natural gas vehicle. For example, the product literature for the new Cummins-Westport ISL-G CNG engine states that it requires a minimum methane number of 75. Labeling dispensers with the minimum methane number allows fuel buyers to be sure their fuel meets the requirements for their vehicles and their warranties.

#### **Comment 8.2**

*The modifications call for a specific gas composition. According to the CPUC, most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. Since the origins of this gas is out of state, there is no way for a retailer or utility to ensure a specified gas composition. Other regulatory agencies have recognized this and provided flexibility in composition. The Air Resources Board proposed an optional MN fuel quality specification that would allow gas compositions that do not meet the current compositional specification requirement to be compliant if the calculated methane number was at 73 or above in the San Joaquin Valley and Central Coast or 80 or above elsewhere (using the SAE MN Method). Thus, a gas specie could be higher than allowed by the current compositional specification if*

*the overall reactive H/C ratio for the entire gas composition was a value of 3.758 or greater. For example, a gas with high ethane content could be compliant if the C3+ content was sufficiently low to compensate for it in the overall reactive H/C ratio.*

*Recommendation: Californians are already receiving and using Natural Gas under a current composition exemption from the Air Resources Board. We recommend that CDFG adopt that exemption, without creating a new composition requirement.*

### **Response to Comment 8.2**

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

### **Comment 8.3**

*It is unclear to us how these modified regulations help promote the natural gas vehicle (NGV) industry. More data is needed on the proposals in order to fully assess the impact on the industry. We are also concerned with some of the comments made in the Statement of Reasons that “hot” or “rich” gas causes higher tailpipe emissions. No background data for those comments were provided and moreover, our industry has found (through testing) that there is no evidence that emissions would suffer in the presence of that quality of gas.*

### **Response to Comment 8.3**

The Department supports the expansion of alternative fuels. However, its regulations must treat all motor vehicle fuels evenly and consistently. The promotion of the natural gas vehicle industry is properly the function of trade groups such as the California Natural Gas Vehicle Coalition and not the Department.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

A lack of consistency in the labeling of fuel dispensers will lead to confusion in the retail fuel marketplace for both fuel buyers and sellers. Many CNG dispensers are unattended, making clear and consistent labeling essential information for consumers. Adoption of the proposed regulation for advertising and labeling of CNG and LNG fuels by the Department will enable enforcement of current codes and provide purchasers of these fuels with the same protections now in place for buyers of gasoline and diesel fuel.

The Department has found sources that link low methane content CNG with increased tailpipe emissions. For example, the Position Paper Impact of Gas Quality on Gas Engine Performance issued in July 2015 from CIMAC (International Council on Combustion Engines) WG 17 Gas Engines <http://www.cimac.com/working-groups/wg17-gas-engines/index.html> states:

On page 3: *Since gas engines are designed for an expected window of specific gas composition it is important that the actual gaseous fuel provided to a given engine lies within this window. The presence of contaminants in a gaseous fuel affects engine wear, oil degradation and emissions while the composition of the combustibles affects the power, efficiency and emissions of the engine.*

On page 4: *Variations in gaseous fuel composition present a number of challenges for engine operation. The change of the composition of hydrocarbons and inert gases like carbon dioxide and nitrogen from biogas admixture influences the ignitability and the combustion behaviour of the gas mixture. When variable quality fuels are provided, the engine controller must adapt operating parameters to prevent poor combustion, misfire or engine knocking. Changing combustion parameters influence the exhaust emissions, the cylinder peak pressure, and the knock margin.*

On page 5: *Engine knock causes a degradation of engine performance, increases emission levels and results in damage to engine hardware that cannot be tolerated. ... If the knock resistance of available natural gas is reduced, existing engines will be forced to operate below their design capabilities in terms of efficiency, power density and emissions. In order to avoid engine failure, a given engine installation is typically designed and adjusted for the least knock resistant fuel on which it will be expected to operate. For this reason even the engine must be adjusted to accommodate the lowest expected Methane Number fuel being provided at a given site will cause a very predictable increase in fuel consumption by reciprocating natural gas engines and an associated rise in greenhouse gas emissions.*

Georgios Karavakakis and coworkers have investigated this issue. In their 2013 paper Karavakakis, Georgios et al, Impact of natural gas fuel composition on regulated emissions, gaseous toxic pollutants, and ultrafine particle number emissions from a refuse hauler, Energy 50, 280-291, 2013, these authors report:

on page 284: *Of the combustion byproducts of regulatory concern, NO<sub>x</sub> emissions tend to be one of the most sensitive to combustion conditions. Emissions of NO<sub>x</sub> are a key concern for heavy-duty engines and can be affected by the methane number and the Wobbe number. Under the present test conditions, fuel composition had a significant influence on NO<sub>x</sub> emissions, as shown in Fig. 4. In general, NO<sub>x</sub> emissions exhibited an increase as methane number decreased and Wobbe number increased during all three phases of the Refuse Truck Cycle. These results are in line with data reported in previous publications showing that NO<sub>x</sub> emissions increased with the mixture energy content. The addition of higher hydrocarbons (ethane and propane) can increase the adiabatic flame temperature, which would result in higher NO<sub>x</sub> emissions, as NO<sub>x</sub> is generated predominantly through the strongly temperature-dependent thermal NO mechanism.*

*CO emissions are shown in Fig. 5. It is evident that CO emissions for the transport and curbside phases of the cycle were generally higher with CNG4, CNG5, and CNG6 gases when compared to other blends.*

*In this study, natural gas mixtures CNG5 and CNG6 were representative of low methane content associated natural gas found in California.*

The Department has received several stakeholder comments asserting that testing and studies have shown that CNG quality has no effect on tailpipe emissions. However, not one has provided data supporting this claim or referenced publically available or peer-reviewed sources. In addition, CARB has yet to make available any of the results from its 2010 - 2015 test program established as part of the exemptions to CCR 13 § 2292.5. Without specific data to the contrary, the Department stands by its concern for increased tailpipe emissions and their impact on air quality, especially in non-attainment areas.

**Comment 8.4**

*In addition, there are still a few unanswered questions that are not addressed in the current proposed regulations:*

*1) Who will report the composition of the fuel?*

**Response to Comment 8.4**

There is no requirement that fuel composition be reported to the Department in the proposed regulation.

**Comment 8.5**

*In addition, there are still a few unanswered questions that are not addressed in the current proposed regulations:*

*2) Who and how will the composition of the fuel be checked?*

**Response to Comment 8.5**

The authority for sampling is in BPC §§ 13592 and 13593.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 8.6**

*In addition, there are still a few unanswered questions that are not addressed in the current proposed regulations:*

*3) What are the penalties for non-compliance?*

**Response to Comment 8.6**

The weights and measures penalty guidelines are found in the California Code of Regulations Title 4 Division 9 Chapter 12 Article 2. This code is too long to be reproduced here. It may be accessed from the Department's website at: <https://www.cdfa.ca.gov/dms/publications.html>.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Comment 8.7**

*4) How does CDFA plan to reconcile with the other agencies (ARB, CEC, SAE, and ASTM) that have or are currently developing regulations on the state and federal levels?*

**Response to Comment 8.7**

BPC Chapter 14 gives the Department the authority and responsibility to develop and enforce regulations interpreting and implementing its statutes. See the response to grouped comment #4. NEED TO CONSULT WITH California Air Resources Board (CARB) and/or the California Public Utilities Commission (CPUC). The Department may not adopt regulations that do not meet the consistency standard in Administrative Procedure Act (APA) § 11349 (d), which states:

“Consistency” means being in harmony with, and not in conflict or contradictory to, existing statutes, court decisions or other provisions of law.

The consistency standard and BPC § 13446 require that any standard for alternative fuel quality adopted by the Department must be at least as stringent as any regulations that have been adopted by CARB. The Department is not aware of any regulations related to motor vehicle fuels that have been adopted by the CEC.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

Department staff are active participants in the natural gas fuels workgroups of both SAE International and ASTM International. If either of these organizations publishes a natural gas fuel quality standard, BPC § 13446 requires the Department to adopt it by reference as long as it is not withdrawn before the Department can complete its rulemaking. The consistency standard of the APA must be met in all rulemakings.

**NO COMMENTS WERE RECEIVED DURING THE PUBLIC COMMENT PERIOD FOR THE REVISED INITIAL STATEMENT OF REASONS 3/6/17 – 3/22/17, EXTENDED TO APRIL 19, 2017**

**NO COMMENTS WERE RECEIVED DURING THE FOURTH ADDITIONAL PUBLIC COMMENT PERIOD 4/4/17 – 4/19/17**

**RESPONSES TO COMMENTS RECEIVED DURING THE FIFTH PUBLIC COMMENT PERIOD 4/27/17 – 5/12/17**

**Commenter 1**

Tim Carmichael offered the following comments for the Southern California Gas Company.

### **Comment 1.1**

... we appreciate the removal of the duplicate water specification, and allowance of other validated test methods...

#### **Response to Comment 1.1**

The Department thanks SoCalGas for its comments and its support of the modifications included in the notice for this comment period.

The remainder of this comment letter is a general statement of opposition that does not address the modifications to the proposed regulation included in the notice for this comment period. The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

#### **Commenter 2**

Todd Campbell sent a comment letter on behalf of Clean Energy.

This comment letter is a general statement of opposition that does not address the modifications to the text of the proposed regulation included in the notice for this comment period.

#### **Response to Clean Energy**

The Department thanks Clean Energy for its comments.

This comment letter is a general statement of opposition that does not address the modifications to the text of the proposed regulation included in the notice for this comment period.

#### **Commenter 3**

Kathryn Lynch and Veronica Pardo sent two comment letters on behalf of the California Refuse Recycling Council dated March 20, 2017 (Comment 4.1) and April 19, 2017 (Comments 4.2 – 4.5)

#### **Comment 3.1**

*[W]e request that the developmental engine fuel variance be self-executing, should specified terms and conditions be met.*

#### **Response to Comment 3.1**

The Department thanks the Council for its comments.

Business and Professions Code § 13405 establishes the requirements for a developmental engine fuel variance. In granting a variance, the Department must consider the specific circumstances of each fuel producer and tailor the terms and conditions of the variance accordingly. Therefore, the Department must reject the suggestion that a developmental engine fuel variance be self-executing.

The remainder of this comment letter is a general statement of opposition that does not address the modifications to the proposed regulation included in the notice for this comment period.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**Commenter 4**

Derek Carlson sent a comment letter on behalf of MarBorg Industries.

**Comment 4.1**

*MarBorg Industries is reiterating its objection to the proposed rulemaking by the CDFA which could ground-our fleet.*

...

*Regulations that eliminate or limit our ability to fuel our clean running vehicles would be damaging to our Company and t[o] all of the Cities and Counties that we serve.*

**Response to Comment 4.1**

This comment letter is a general statement of opposition that does not refer to the modifications of the proposed regulation posted for this comment period.

The proposed regulatory language to amend the California Code of Regulations Title 4, Division 9, Chapter 6 Automotive Products Specifications Article 10. Specifications for Natural Gas Used as a Motor Vehicle Fuel has been withdrawn.

**NO COMMENTS WERE RECEIVED DURING THE SIXTH ADDITIONAL PUBLIC COMMENT PERIOD 5/2/17 – 5/17/17**

**RESPONSES TO COMMENTS RECEIVED DURING THE SEVENTH ADDITIONAL PUBLIC COMMENT PERIOD 11/2/17 – 11/17/17**

**Commenter 1**

Tim Carmichael offered the following comments for the Southern California Gas Company.

**Comment 1.1**

At the top of page 8 of the Revised Supplement to the ISOR regarding §4206(c)(1), the Department proposes that the calculated methane number (MN) be rounded down to a whole number to reflect the standard practice in the natural gas motor vehicle fuels industry. SoCalGas is not familiar with this as a standard practice in the natural gas industry. On the contrary, natural gas engine manufacturers' calculator for MN available on their websites, round to the closest whole number. We, therefore,



submit that the calculated methane number should be rounded to the closest whole number per standard mathematical rules.

**Response to Comment 1.1**

The Department thanks SoCalGas for its comment. The purpose of the calculation of the Methane Number is to establish an appropriate value of the minimum Methane Number of the fuel for the required dispenser label. In its regulation, the Department has specified the EUROMOT calculator, which does report a whole number. Therefore, no rounding is needed and this value will be accepted for the required dispenser label. If a retailer chooses to use an alternate implementation of the MWM algorithm that returns a fractional value, that result must be rounded down to a whole number. This will ensure that such an alternate calculation cannot return a value higher than the EUROMOT calculator.

**Comment 1.2**

In addition, SoCalGas would very much appreciate if the Department would make it very clear to all affected parties the proposed effective date of the proposed regulations.

**Response to Comment 1.2**

The effective date of the regulation will be April 1, 2018. The Department could not determine this date earlier because not all of the requirements for rulemaking had been satisfied.