

Developmental Engine Fuel Variance for Hydrogen

It is recognized by the California Department of Food and Agriculture (CDFA) that the use of hydrogen fuel is still in the developmental stage. Much work still needs to be done to determine the contaminants and their concentration which will lead to premature failure of fuel cells and internal combustion engines. CDFA further recognizes that a standard which is more stringent than needed will lead to increased costs, decreased hydrogen supply, or both in the production of the fuel and ultimately to the consumer. CDFA will continue to evaluate the existing interim hydrogen fuel standards to insure they remain consistent with the latest economical and technical developments. If deemed necessary, CDFA will propose amendments to the current regulations.

If it becomes necessary to validate the use of hydrogen fuel with contaminant levels less stringent than specified by regulation, a developmental engine fuels variance process is available. Section 13405 of the California Business and Professions Code provides a method to allow the sale of non-conforming fuel under controlled conditions. A variance can be issued for a period of two years and renewed for an additional two years. When an ANSI approved consensus organization publishes a hydrogen fuel standard, all related variances immediately end. Once an application is received by CDFA, efforts will be made to provide the quickest response possible.

Most documents in the possession of CDFA are considered public records. However, some applicants may wish to keep the information derived from a study secret until such time as they choose to present the results. Under such circumstances, CDFA will permit the applicant to maintain the required documentation. The applicant, however, must provide access to those documents by CDFA during normal business hours at a location within California. CDFA does reserve the right to obtain and maintain copies of all required documentation as deemed necessary by CDFA.

A guide for making a variance request is attached along with copies of the applicable sections of the Business and Professions Code and the California Code of Regulations.

Mr. A. G. Kawamura
Secretary
California Department of Food and Agriculture
c/o Kristin Macey
6790 Florin Perkins Road, Suite 100
Sacramento, CA 95828

Dear Secretary Kawamura:

With this letter, _____ **(INSERT COMPANY NAME)** is applying for a variance under Chapter 14, Section 13405 of the California Business and Professions Code and pursuant to Title 4, Division 9, Chapter 6, Article 8, Section 4181 of the California Code of Regulations.

Potential Benefits to Californians

Hydrogen is an alternative fuel which may lead to the reduced dependence by Californians upon petroleum imports, provide improved air quality and reduce greenhouse gas emissions. The development of hydrogen fuel is of utmost importance to Californians to insure proper operation of fuel cells and internal combustion engines in motor vehicles at the lowest possible cost.

BRIEFLY, WITHOUT DISCLOSING ANY CONFIDENTIAL OR PROPRIETARY INFORMATION AS DETERMINED BY THE APPLICANT, PLEASE COMPLETE THE FOLLOWING SECTIONS

Objective of the Study

(DESCRIBE THE GENERAL PURPOSE OF THE STUDY AND WHY A VARIANCE IS BEING REQUESTED.)

Method of Fuel Production

(DESCRIBE THE METHOD USED FOR THE PRODUCTION OF THE HYDROGEN FUEL.)

Fleet Makeup

(DESCRIBE THE FLEET OF VEHICLES THAT WILL BE INVOLVED IN THIS STUDY.)

Method of Distribution

(DESCRIBE HOW THE FUEL WILL BE DISTRIBUTED TO THE STUDY FLEET.)

Location of Fueling Stations

(PROVIDE THE ADDRESS OF EACH LOCATION WHERE FUEL WILL BE DISPENSED INTO THE STUDY FLEET.)

Study Design, Duration and Monitoring

(DESCRIBE THE STUDY DESIGN, DURATION, AND GENERALLY WHAT INFORMATION RELATED TO THIS STUDY WILL BE COLLECTED. IN ADDITION TO THE DATA BEING GATHERED TO EXECUTE THE GOALS OF THE STUDY, THE INFORMATION BEING COLLECTED MUST INCLUDE ANY CHANGES MADE TO THE FLEET MAKE-UP AND ANY DAMAGES CAUSED BY THE SALE, DELIVERY, STORAGE AND USAGE OF THE STUDY FUEL.)

Agreement between Participants

(DESCRIBE THE RELATIONSHIP BETWEEN THE PARTIES INVOLVED IN THIS STUDY AND THE AGREEMENTS IN PLACE THAT RELATE TO THE POTENTIAL RISK ASSOCIATED WITH THE USE THIS FUEL.)

Distribution Control

(DESCRIBE HOW ACCESS TO THE FUEL WILL BE CONTROLLED TO ENSURE IT IS NOT USED BY THE GENERAL PUBLIC OUTSIDE OF THE PRESCRIBED FLEET.)

Reporting

Progress in the study will be reported quarterly **(OR ON ANOTHER TIME FRAME PROPOSED BY THE APPLICANT AND AGREED TO BY CDFA)**. The report shall contain information related to any significant changes to the general design of the study, its duration, and fleet makeup and include a summary of any damage caused by the sale, delivery, storage and usage of the study fuel. **(PROVIDE THE MANNER BY WHICH THE INFORMATION WILL BE MADE AVAILABLE TO THE DEPARTMENT. THIS INFORMATION MAY EITHER BE DELIVERED TO CDFA AT 6790 FLORIN PERKINS ROAD, SUITE 100, SACRAMENTO, CA 95828 OR MADE AVAILABLE DURING NORMAL BUSINESS HOURS TO CDFA AT THE APPLICANTS LOCATION WITHIN CALIFORNIA.)**

**California Business and Professions Code
Division 5, Chapter 14, Article 1**

§ 13405. DEVELOPMENTAL ENGINE FUELS

The Department of Food and Agriculture may grant a variance from the specifications of this chapter for developmental engine fuels if all of the following conditions apply:

- (a) Variances may only be granted to provide for the development of information under controlled test conditions to assist in the creation of chemical and performance standards for engine fuels.
- (b) Developmental engine fuel shall only be distributed or sold to fleet-type centrally fueled vehicle and equipment users.
- (c) The applicant shall warn all parties in writing of any potential risk associated with the use of the developmental engine fuel.
- (d) The applicant shall report information when and as the department may prescribe in order for the department to monitor the progress of the developmental engine fuel technology evaluation.

The applicant for a variance shall comply with all other requirements, terms, and conditions that are contained in regulations adopted by the department to further the purposes and administration of this section.

In granting a variance, the department expresses no opinion as to whether an applicant's developmental engine fuel will perform as represented by the applicant. Nor does the department express any opinion to the extent, if at all, that the developmental engine fuel may be safely and effectively used as a substitute for other spark-ignition or compression-ignition engine fuels without incident. Damages caused by the sale, delivery, storage, handling, and usage of the developmental engine fuel shall be addressed in accordance with contractual provisions negotiated and agreed upon by the applicant and the user.

The department may withdraw a variance if the applicant does not adhere to the conditions required to obtain the variance or if the department recognizes a high probability of equipment harm with the continued use of the developmental engine fuel or to protect public safety.

Added Stats 2001 ch 596 § 2.

**California Code of Regulations
Title 4, Division 9, Chapter 6, Article 5**

4144. Specifications – Developmental Fuels.

- (a) Sales of developmental engine fuels authorized by the Department are not subject to restrictions imposed upon the sale of non-conforming fuel products as set forth in Business and Professions Code Sections 13441, 13442 and 13451, but the Department's authorization does not create a variance or waiver from any other applicable California statute or regulation.
- (b) An applicant for authorization to sell developmental engine fuel must submit the following information to the Department:
 - (1) A statement of the potential benefit of the fuel to the people of California; and
 - (2) A description of test conditions associated with the use of the fuel, including control and monitoring practices, and the method of distribution and storage.
- (c) Any authorization provided by the Department is subject to the following terms and conditions:
 - (1) The authorization is limited to a period of two years, with an automatic renewal for an additional two years in the absence of action to revoke the authorization by the Department; and,
 - (2) Damages caused by sale, delivery, storage, handling and usage of the fuel shall be addressed in accordance with contractual provisions negotiated and agreed upon by the authorization holder and the user; and,
 - (3) The authorization holder shall report information to the Department as required to monitor the use of the fuel during the process of developing a generally recognized chemical and performance standard through a recognized consensus organization or standards writing organization, such as the American Society for Testing and Materials ("ASTM") or the Society of Automotive Engineers ("SAE"). The Department shall specify the reporting requirements on a case by case basis at the time the authorization is granted.
- (d) The Department may take action to revoke the authorization at any time. Revocation of the authorization is effective and final upon receipt of written notification by the authorization holder. The Department may take action to revoke the authorization if the Department finds:
 - (1) The authorization holder has violated any of the terms and conditions of the authorization; or,

(2) The authorization holder has abandoned efforts to develop a generally recognized chemical and performance standard for the fuel through a recognized consensus organization or standards writing organization.

(3) There is a high probability of equipment harm with the continued use of the developmental fuel or to protect the public safety.

(e) The authorization shall cease to exist upon publication of a generally recognized chemical and performance standard for the fuel.

NOTE: Authority cited: Sections 12027 and 13405, Business and Professions Code. Reference: Sections 13401, 13440-13443, and 13450-13451, Business and Professions Code.