PROPOSED AMENDMENTS TO THE
CALIFORNIA CODE OF REGULATIONS
TITLE 23. WATERS
DIVISION 3. STATE WATER RESOURCES CONTROL BOARD
CHAPTER 16. PETROLEUM UNDERGROUND STORAGE TANK REGULATIONS
ARTICLE 3. NEW UNDERGROUND STORAGE TANK DESIGN, CONSTRUCTION AND MONITORING REQUIREMENTS
SECTION 2631.2

# INITIAL STATEMENT OF REASONS

**August 2009**

**STATE OF CALIFORNIA**
**STATE WATER RESOURCES CONTROL BOARD**
**DIVISION OF WATER QUALITY**
Chapter 16. Underground Storage Tank Regulations
Article 3. New Underground Storage Tank Design, Construction and Monitoring Requirements

Technical, Theoretical, and Empirical Study, Report, or Similar Document Relied Upon

The State Water Resources Control Board (State Water Board) relied upon reports and studies prepared by the National Renewable Energy Laboratory, Underwriter's Laboratory, and the National Biodiesel Board.[1] The proposed regulations do not mandate the use of specific technologies or equipment.

Reasonable Alternatives to the Proposed Regulations

No alternatives would be more or equally effective in carrying out the purpose for which the proposed regulations are intended or less burdensome to affected persons. The State Water Board did not consider any alternatives to the proposed regulations.

Reasonable Alternatives to the Proposed Regulations that Would Lessen Any Adverse Impact on Small Business

The regulation provides a variance from existing regulatory requirements and persons are not required to seek this variance. The State Water Board has determined that the proposed regulations will not have an adverse effect small business, and, therefore, the State Water Board has not identified any alternatives that would lessen any adverse impact on small business.

Facts, evidence, documents, testimony, or other evidence to support initial determination that action will not have significant adverse economic impact on business.

This regulation provides a variance from existing regulatory requirements and allows underground storage tank (UST) owners to store certain biodiesel blends if specified criteria are met. During the emergency rulemaking process, the State Water Board received testimony and comments indicating that failing to authorize this variance would have a significant adverse economic impact on business.

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[1] See http://www.nrel.gov/vehiclesandfuels/pdfs/43672.pdf; http://www.ul.com/global/eng/pages/offerings/industries/appliancesandhvac/gasoilsolidfuel/release; http://www.biodiesel.org/resources/fuelfactsheets/default.shtm

The California Biodiesel Alliance stated that the inability to lawfully store biodiesel in California USTs is "creating real harm to California's nascent biodiesel industry, federally regulated fleets and the environment. Urgent action is required to address these harmful impacts to California's general welfare. Without urgent action, a large portion of California's biodiesel industry will fail, with the loss of a significant number of jobs and setting California environmental policy back years." (Letter from California Biodiesel Alliance dated April 30, 2009.)

The California Biodiesel Alliance also stated that there are over ten biodiesel plants in California either currently producing biodiesel or nearing their start-up phase. These plants reported that they had lost a significant amount of business due to their customer's inability to store biodiesel blends in USTs in California. Without adoption of the emergency regulations, many, if not most, of these plants will almost certainly go out of business and over 100 jobs would be lost. (Letter from California Biodiesel Alliance dated May 29, 2009.)

Efforts to Avoid Unnecessary Duplication of or Conflicts with Federal Law or Regulations

The proposed regulations do not unnecessarily duplicate or conflict with federal law. The State Water Board does not propose to adopt regulations inconsistent with those contained in the Code of Federal Regulations.

Public Problem, Administrative Requirement, or Other Condition or Circumstance that the Proposed Regulations are Intended to Address

Biodiesel is a renewable fuel that can be manufactured from new and used vegetable oils, animal fat, and recycled restaurant grease. Biodiesel can be blended and used in many different concentrations, which include B100 (pure biodiesel), B20 (20% biodiesel, 80% petroleum diesel), B5 (5% biodiesel, 95% petroleum diesel).

California statutes require that the primary containment of a UST be compatible with the stored substance (such as a fuel), and that the secondary containment is constructed to prevent structural weakening because of contact with any released substance. Current State Water Board regulations require that a UST be approved by an independent testing organization (e.g., UL), that the UST system be made of or lined with materials that are compatible with the hazardous substances stored in the UST, and that the release detection method or equipment for the UST system be tested by a third party and approved to function with the substance stored. Underwriter's Laboratory (UL) is the independent testing organization that has issued approvals for USTs that are used in California.

The material compatibility testing and approval for biodiesel and biodiesel blends in USTs have not been completed and will likely not be completed for another two to three years. On January 7, 2009, UL determined that biodiesel blends up to B5 fall within the existing certification for petroleum diesel. Thus, biodiesel blends up to B5 can be stored in USTs under existing approvals, but biodiesel blends greater than B5 cannot. Release detection methods or equipment have not been approved for functionality for biodiesel or any biodiesel blend, including B5.

In 2007, Governor Schwarzenegger signed Executive Order S-01-07. This executive order finds that greenhouse gas (GHG) emissions pose a serious threat to the health of California's citizens and the quality of the environment, that California's transportation sector is the leading source of CHG emissions, and that alternative fuels can reduce CHG emissions. The executive order directed, in addition to other things, that a statewide goal be established to reduce the carbon intensity of transportation fuels by at least 10 percent by 2020 and that a Low Carbon Fuel Standard for transportation fuels be established.

Using biodiesel in vehicles provides reductions of GHG emissions. To facilitate the use of biodiesel in California, UST storage issues must be resolved. This regulation authorizes the storage of biodiesel blends up to B20 in USTs in California. Specifically, this regulation provides a temporary variance of testing and approval requirements so that biodiesel blends up to B20 may be stored in USTs until the required testing can be completed and approvals can be obtained.

Purpose and Necessity of the Proposed Regulations

The purpose of this regulation is to authorize the storage of biodiesel blends up to and including B20 in USTs before the otherwise required independent testing organization approvals are received for the particular UST.

California statutes require that the primary containment of a UST is compatible with the stored substance, such as a fuel. (See Health and Saf. Code, §§ 25290.1, subd. (c)(1), 25290.2, subd. (c)(1), 25291, subd. (a)(1).) Federal regulations require that USTs be designed and constructed in a manner to prevent releases due to structure failure, corrosion, or spills and overfills. (40 CFR 280.20.) Federal regulations also require UST owners and operators to use USTs that are made of or lined with materials that are compatible with the substance stored. (40 CFR 280.32.)

California statutes require that UST systems be equipped with leak detection equipment. (See Health and Saf. Code, §§ 25290.1, subd. (d), 25290.2, subd. (d), 25291, subds. (a)(6) and (b), 25292, subd (a).) Federal regulations also impose release detection requirements for USTs. (See 40 CFR, parts 280.40 through 280.45.)

To implement these requirements, existing State Water Board regulations require that:

a) The design and construction of UST and piping must be approved by an independent testing laboratory. (Title 23, California Code of Regulations [23 CCR], § 2631.)

b) An owner or operator must use system components made of, or lined with, materials that are compatible with the hazardous substances stored in the tank. (23 CCR 2631.1.)

c) The components approved for the installation of a tank system, on and after July 1, 2004, must include a list of compatible products tested and the measured permeation rate of those products. (23 CCR 2631.1)

d) The leak detection method or equipment must be tested by an independent third party testing laboratory to verify functionality with the substance stored. (23 CCR 2643.)

The statutes impose general performance standards requiring UST material compatibility and functionality of leak detection method or equipment. Existing State Water Board regulations prescribe how these standards must be demonstrated – testing and appropriate approvals. The proposed emergency regulation allows UST owners to demonstrate compliance with the statutory performance standards by means other than third-party testing and approval. The regulation is necessary to provide this alternative method of demonstrating UST compatibility and release detection functionality. The proposed regulation allows a variance from specific testing and approval requirements that are the obstacle to the lawful storage of biodiesel blends up to B20 in USTs in California. Using an alternate method of demonstrating UST compatibility and leak detection functionality will remove the delay and allow for the immediate, lawful storage of biodiesel blends up to B20.

The State Water Board's decision to limit the variance to blends no greater than B20 is based on documentation by the National Biodiesel Board, National Renewable Energy Laboratory and UL, which indicates that biodiesel blends greater than B20 may damage certain materials used in the construction of USTs. This regulation supports and facilitates the use of biodiesel and also minimizes the risk of UST failures and, therefore, harm to water quality.

**The specific purpose and necessity for each subdivision of the proposed regulation is provided below.**

**Subdivision (a)**

This subdivision provides a general explanation of the scope and purpose of the variance. This subdivision clarifies that the variance is temporary and only applies to biodiesel blends up to B20.

**Subdivisions (b), (c) and (d)**

These subdivisions define biodiesel, biodiesel blends, and B20 as these terms are used throughout the regulation.

**Subdivision (e)**

This subdivision establishes criteria for obtaining a variance from UST material compatibility requirements contained in title 23 of the California Code of Regulations, section 2631, subdivision (b) and section 2631.1, subdivision (b). Underwriter's Laboratory has determined that biodiesel blends up to and including B5 fall within the existing petroleum diesel approval. Thus, no further testing and approval is required for B5, so long as the applicable UST has been approved for the storage of petroleum diesel, so a variance is only necessary for biodiesel blends above B5. To qualify for this variance:

(1) The UST must meet construction requirements contained in Health and Safety Code section 25291, subdivision (a), paragraphs (1) – (6) and subdivisions (b) – (i), inclusive, section 25290.1 or section 25290.2, as applicable. This criterion limits the availability of the variance to USTs that meet certain, threshold construction requirements. Single-walled USTs are not eligible for the variance.

(2) The UST and components must be approved for the storage of petroleum diesel pursuant to title 23 of the California Code of Regulations, section 2631, subdivision (b). Only USTs that have been approved by an independent testing organization, for the storage of petroleum diesel, are eligible for the variance. This condition is necessary because if the UST has not been approved to store petroleum diesel, there is a greater risk that the UST and components may not be compatible with biodiesel blends.

(3) The UST and the owner or operator of the UST must comply with all applicable requirements contained in Chapter 6.7 of the Health and Safety Code and operational requirements that are contained in a permit issued pursuant to Health and Safety Code section 25284. This criterion is intended to ensure that the UST and owner or operator of the UST are in compliance with all applicable requirements designed to prevent a release from a UST system.

(4) The owner must provide to the local agency responsible for issuing UST permits both a Notice of Intent to store a biodiesel blend under this variance and

an "Operating Permit Application – Tank Information" form that contains specified information. The Notice of Intent informs the local agency that the UST owner intends to store a biodiesel blend under this variance. The regulation requires that the Notice be signed by the UST owner. The owner is also required to submit an "Operating Permit Application – Tank Information" form, which exists in Title 27 of the California Code of Regulations, Division 3, Subdivision 1, Chapter 6. The owner must identify the biodiesel blend stored on this form. Along with the form, the owner must provide a written statement that the UST and components are compatible with the biodiesel blend stored or to be stored. This statement must be supported by documentation from the UST manufacturer, a nationally-recognized biodiesel association, or a nationally-recognized research organization with applicable expertise.

Subdivision (f)

This subdivision establishes criteria for obtaining a temporary variance from title 23 of the California Code of Regulations, section 2643, subdivision (f). If all of the criteria set forth in this subdivision are satisfied, the leak detection method or equipment may be used pursuant to this variance even though the leak detection method or equipment has not been approved by an independent testing laboratory to function with the biodiesel blend stored. To date, release detection methods or equipment have not been approved for functionality for biodiesel or any biodiesel blend, including B5. Therefore, a variance under this subdivision is required for leak detection method or equipment where the UST stores any biodiesel blend up to and including B20. To qualify for this variance:

(1) The release detection method or equipment must meet all other requirements of section 2643, except subdivision (f). This condition is necessary because if the leak detection method or equipment has not been otherwise approved for petroleum diesel, there is a greater risk that the leak detection method or components may not properly function.

(2) The UST owner must submit to the local agency that issues UST permits a Notice of Intent, signed by the owner, to use a release detection method or equipment pursuant to the variance established by this section. The owner must also provide a written statement that the release detection method or equipment functions with the biodiesel blend stored. This statement must be supported by documentation from the manufacturer of the release detection method or equipment.

(3) The UST that is associated with the release detection method or equipment must meet the requirements contained in paragraphs (1) to (3) of subdivision (e). This criterion requires that the UST meet certain construction requirements, complies with all otherwise applicable requirements intended to prevent UST failure, and be approved for the storage of petroleum diesel before a release

detection method or equipment can be used before functionality testing is completed.

Subdivision (g)

This subdivision establishes the inoperability of the variance contained in subdivision (e) – UST material compatibility testing and approval by independent testing organization. This subdivision provides that the variance in subdivision (e) shall become inoperative upon the following date, whichever is sooner:

1. Ninety days after the date of any decision by the applicable certification organization that determines that the UST that contain the biodiesel blend stored are included in the existing standard petroleum diesel approval or that determines that the materials or components of the UST for which the variance was obtained are not compatible with the biodiesel blend stored. If the applicable certification organization determines that a particular biodiesel blend falls under the petroleum diesel approval, then a variance under subdivision (e) is no longer necessary. If, on the other hand, the applicable testing organization determines that there are material-compatibility issues with a UST and the biodiesel blend stored, then the variance is no longer appropriate. The UST owner essentially has 90 days to take appropriate steps to remove the product from the UST and the local agency shall inspect the UST before any other substance is stored.

2. Thirty-six months from the effective date of this section. If either scenario in number 1 above does not occur before thirty-six months of the effective date of this section, the variance will expire. This time period was chosen because it is a reasonable time period within which to complete required UST testing and obtain necessary approvals under the existing regulations.

Subdivision (h)

This subdivision establishes the inoperability of the variance contained in subdivision (f) – variance from functionality testing and approval for release detection methods or equipment. This subdivision provides that the variance shall become inoperative thirty-six months from the effective date of section 2631.2.

Subdivision (i)

This subdivision provides that if the variance under subdivision (e) becomes inoperative due to lapse of the thirty-six month period or because the applicable certification organization determines that materials or components of the UST are not compatible with the biodiesel blend stored, the owner shall empty the UST

and the local agency shall inspect the UST before any other substance is stored. This subdivision is not invoked if the appropriate certification organization determines that the biodiesel blend that was stored under the variance falls within the petroleum diesel approval. This subdivision provides an added safeguard in situations where the bioidiesel blend has not been affirmatively approved for the applicable UST.

Subdivision (j)

This subdivision requires the local agencies to report the number of variances they issue pursuant to subdivisions (e) and (f). This subdivision requires a local agency to include this information with a semi-annual report that local agencies are already required to submit under California Code of Regulations, title 23, section 2713 and title 27, section 15290.