



Linda S. Adams  
Secretary for  
Environmental Protection

# State Water Resources Control Board

## Division of Water Quality

Darrin Polhemus, Deputy Director  
1001 I Street, Sacramento, California 95814 ♦ (916) 341-5775  
Mailing Address: P.O. Box 2231, Sacramento, California 95812  
FAX (916) 341-5808 ♦ Internet Address: <http://www.waterboards.ca.gov>



Arnold Schwarzenegger  
Governor

December 18, 2008

To: Local Implementing Agencies and Interested Parties

### BIODIESEL UPDATE

The purpose of this letter is to provide updated information to the State Water Resources Control Board's (State Water Board) letter ("Clarification of Regulations Applying To Biodiesel-E Stored In Underground Storage Tank [UST] Systems") dated February 28, 2008. This letter is intended primarily as a status report and may be periodically updated as new information becomes available.

#### Definition of Biodiesel

For the purpose of this letter "Biodiesel" is an alternative fuel that is derived from vegetable oils or animal fats and that meets Standard Specification D-6751 by the American Society for Testing and Materials (ASTM) and the United States Environmental Protection Agency (U.S. EPA) as a fuel and as a fuel additive under the Clean Air Act (42 U.S.C. Sec. 7401 et seq.). "Biodiesel blend" is a fuel that contains 1% to 99.9 % biodiesel blended with petroleum diesel fuel.

#### Regulation of USTs

California statutes require that the primary containment of a UST be compatible with the stored substance (such as a fuel and/or fuel additive), and that the secondary containment is constructed to prevent structural weakening because of contact with any released substance. In order to implement these statutes, the State Water Board's regulations require that: a) the design and construction of UST and piping be approved by an independent testing laboratory; b) an owner or operator use system components made of, or lined with, materials that are compatible with the hazardous substances stored in the tank; c) the components approved for the installation of a tank system, on and after July 1, 2004, include a list of compatible products tested and the measured permeation rate of those products; and d) the leak detection equipment be tested and function with the fuel stored.

#### Regulated Substance

California statutes also require that the presence of any quantity of any hazardous substance within the biodiesel is sufficient to designate the entire contents of the UST system a "hazardous substance" as defined in Chapter 6.7 of the California Health and Safety Code. Local implementing agencies and UST owners/operators should be aware that each delivery of biodiesel will be different, depending on variables such as the supplier, biodiesel feedstock, and quality controls employed during the manufacturing (transesterification) process, as well as petroleum introduced during the distribution process. Therefore, local implementing agencies are advised to assume that even 100% biodiesel is a regulated substance unless the particular batch of biodiesel being stored has been analyzed and determined to contain no antioxidants

*California Environmental Protection Agency*

that contain regulated substances, nor any biocides, fungicides, petroleum diesel, methanol, peroxides, or other hazardous substances.

#### Recent Legislative Activity

During the 2008 California legislative session, Senate Bill No. 1574 (SB 1574) (Florez) was introduced that would have allowed biodiesel blends up to B20 to be stored in USTs on an interim basis and under specified conditions. In allowing the storage of biodiesel blends up to B20, SB 1574 would have effectively exempted these blends from provisions of State Water Board regulations that require manufacturers to obtain third-party certification demonstrating that a fuel is compatible for storage in a UST before the fuel can be stored in a UST.

The Governor vetoed SB 1574 and noted in his veto message that "[a]s the Air Resources Board (ARB) moves forward with the adoption and implementation of the Low Carbon Fuel Standard, the issue of the adequacy of underground storage tanks to safely store alternative fuels will continue to arise." The veto message goes on to state that "we need to be prepared to handle this situation in a manner that neither impedes the deployment of alternative fuels, nor sacrifices our other environmental goals, such as improved water quality." As a result, the Governor directed the Secretary of the California Environmental Protection Agency (Cal/EPA) to "coordinate with the State Water Resources Control Board and the ARB to assess this issue and that each entity, as appropriate, establish biodiesel and underground storage tank compatibility standards that can be consistently applied throughout the state."

In response to the Governor's veto message, Cal/EPA and State Water Board staff have met with representatives from the biodiesel industry on several occasions to clarify the issues of concern, discuss the necessary testing that is required by state law and regulation prior to storing biodiesel in USTs, and to develop actions that both the industry and the State Water Board will take to facilitate the completion of the necessary compatibility and leak detection testing so that biodiesel can be routinely stored in USTs in California.

#### Fuel Specifications and Independent Laboratory Approval

Since our correspondence in February 28, 2008, ASTM published ASTM D6751-08 standard fuel specification for biodiesel (B100). This specification prescribes the required properties of biodiesel fuels, and that the biodiesel shall be mono-alkyl esters of long chain fatty acids derived from vegetable oils and animal fats.

Shortly following the ASTM publication D6751-08 fuel specification, fuel specification ASTM D975-08 was updated to include 5% biodiesel or B5. Therefore, for ASTM purposes, B5 can be considered the same as diesel in terms of fuel specifications.

Subsequently, the question has arisen as to whether the UL Standards and UL Certification for petroleum diesel storage in USTs can appropriately be applied to biodiesel blends of up to B5. In California, most manufacturers utilize Underwriters Laboratories (UL) for third party approval of USTs and piping. Cal/EPA Secretary Linda Adams and the State Water Board have requested an expedited determination from UL clarifying whether its diesel certification also now covers B5. Both agencies are hopeful that UL will make a determination very soon. If UL determines that diesel fuels containing up to B5 are equivalent to petroleum diesel for purposes

of UL Standards and UL Certification, then the State Water Board would regard UL's decision as a compatibility determination for the storage of up to B5 in UST's.

Biodiesel Subject to the Petroleum Storage Fee

All biodiesel blends contain petroleum and are therefore subject to the petroleum storage fee and other provisions of the Barry Keene Underground Storage Tank Cleanup Fund Act of 1989 (UST Cleanup Fund). Owners/operators of USTs storing these products are eligible to apply to the UST Cleanup Fund to obtain assistance with the cleanup costs that may result if these USTs leak. Of course, all other applicable UST Cleanup Fund eligibility requirements must be satisfied to receive funding, including compliance with all applicable UST laws.

Present and Future

In the interim, before UL has made its determination regarding B5, local implementing agencies should give consideration to the advancement in design, construction, and monitoring of UST's installed on and after July 1, 2004 and which meet the requirements of Health and Safety Code, Section 25290.1. State Water Board staff believe that the storage of B5 in these newer UST systems poses a low risk of a release to the environment. However, the evolving regulation of biodiesel and other alternative fuels does not diminish or otherwise reduce a UST owner's/operator's responsibility to abate the effects of any release from a UST system.

If UL determines that B5 can be considered petroleum diesel for purposes of compatibility and the functional leak detection testing for use with biodiesel is completed, then B5 can be stored in USTs in California. When a determination is made by UL, the State Water Board will promptly notify local implementing agencies and provide implementation guidance as needed.

If you have any questions or concerns regarding this letter please contact Ms. Laura Fisher-Chaddock at (916) 341-5870 or [lchaddock@waterboards.ca.gov](mailto:lchaddock@waterboards.ca.gov).

Sincerely,

*Original Signed By*

James George Giannopoulos, Chief  
Groundwater Quality Branch