

SUBJECT: EPA – Underground Storage Tanks

ISSUE: EPA Guidance on Demonstrating UST Equipment Compatibility for Ethanol Blends Greater than E-10 and Biodiesel Blends Greater than B-20

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EXECUTIVE SUMMARY: In preparation for final approval of E-15 blended gasoline in model year 2001 and newer vehicles, the U.S. EPA's Office of Underground Storage Tanks (OUST) recently issued guidance on how owners and operators of UST systems can demonstrate UST equipment compatibility with ethanol blends over E-10 and biodiesel blends over B-20. Under 40 CFR 280.32 of the federal UST regulations, all equipment in the UST system must be compatible with the liquid product stored. According to OUST, the guidance is necessary because national standard setting organizations such as Underwriters Laboratories (UL) will not recertify existing E-10 compatible UST equipment for E-15 use. The guidance provides a list of UST system components that must meet federal compatibility requirements for blends over E-10 along with acceptable methods to demonstrate compatibility. While the guidance is **not legally binding**, it is the only current guidance accepted by the EPA to demonstrate equipment compatibility – a mandatory requirement under federal law. Moreover, the EPA guidance will likely be adopted in whole or in part by state UST program authorities and used as an industry standard by insurance carriers.

EPA ISSUES UST EQUIPMENT COMPATIBILITY GUIDANCE FOR BLENDS OVER E-10 & B-20

The EPA Office of Transportation and Air Quality is expected to complete the regulatory approval process that will allow the introduction and sale of E-15 gasoline for use in all 2001 and newer vehicles by the end of 2011. In preparation for this approval, the EPA's Office of Underground Storage Tanks recently issued a new guidance document that may be useful to marketers who intend to dispense gasoline blends greater than E10 and biodiesel blends greater than B-20 from existing UST system equipment currently certified to a maximum E-10 blend. The guidance identifies UST system equipment that must be recertified as compatible with ethanol blends over E-10 and biodiesel blends over B-20 and discusses the methods by which owners and operators of UST systems may demonstrate such compatibility. The guidance applies **only** to UST system components up to and including dispenser shear valves.

While the EPA guidance **is not legally binding** on state UST program authorities or UST owners or operators UST equipment compatibility is an affirmative requirement under the federal UST regulations. However, PMAA expects that most state UST program authorities will eventually adopt all or part of the guidance as affirmative regulatory requirements. Therefore, the EPA guidance is instructive on how state UST program authorities will deal with the compatibility issue for fuel blends over E-10 and B-20. Insurance carriers may also adopt the guidance as a benchmark standard of care when determining claim eligibility involving the release of blends over E-10 and B-20.

The following is a list of equipment that must be compatible with E-15 and B-20 as well as EPA accepted methods of methods to demonstrating compatibility:

UST System Components That May Be Affected by Biofuel Blends

To be in compliance with 40 CFR 280.32, owners and operators of UST systems storing ethanol-blended fuels greater than 10 percent ethanol or biodiesel-blended fuels greater than 20 percent biodiesel must

use compatible equipment. EPA considers the following parts of the UST system to be critical for demonstrating compatibility:

- Tank or internal tank lining
- Piping
- Line leak detector
- Flexible connectors
- Drop tube
- Spill and overfill prevention equipment
- Submersible turbine pump and components
- Sealants (pipe dope and thread sealant), fittings, gaskets, o-rings, bushings, couplings, boots
- Containment sumps (including submersible turbine sumps and under dispenser containment)
- Release detection floats, sensors, and probes
- Fill and riser caps
- Product shear valve

For newly installed equipment comprised of multiple individual components such as submersible turbine pump assemblies, UST system owners and operators may obtain a certification from the equipment manufacturer documenting compatibility for the entire assembly. If equipment requires maintenance and components of that equipment (for example, sealants and gaskets) are subsequently added or replaced, manufacturer approval of the overall component is not sufficient to demonstrate compatibility.

Acceptable Methods for Meeting the Compatibility Requirement

Acceptable methods for owners and operators of UST systems storing ethanol-blended fuels greater than 10 percent ethanol or biodiesel-blended fuels greater than 20 percent biodiesel to demonstrate compatibility under 40 CFR 280.32 are:

- Use components that are certified or listed by a nationally recognized, independent testing laboratory (for example, Underwriters Laboratories) for use with the fuel stored;
- Use components approved by the manufacturer to be compatible with the fuel stored. Acceptable forms of manufacturer approvals must; be in writing; indicate an affirmative statement of compatibility; specify the range of biofuel blends for which the component is compatible; originate from the equipment manufacturer (not vendors, installers or distributors); or
- Use another method determined by the implementing agency to sufficiently protect human health and the environment. EPA will work with states as they evaluate other acceptable methods.

Currently, the EPA allows owners and operators to use the American Petroleum Institute's (API) Recommended Practice 1626 (2nd Edition 2010) to meet the compatibility requirement for ethanol-blended fuels.

If the UST owner and operator is not able to demonstrate that the UST system is made of materials that are compatible with the ethanol blend or biodiesel blend stored, according to 40 CFR 280.32, the UST owner and operator may not use the system to store those fuels.

State UST program regulations may be more stringent than the Federal UST regulations. In addition to state and Federal UST requirements, UST system owners and operators may be subject to other Federal, state, or local regulatory requirements (for example, U.S. Occupational Safety and Health Administration, National Fire Prevention Association, and International Fire Code). UST system owners and operators should check with their state and local agencies to determine other requirements.

The full text of the EPA Compatibility Guidance is available [here](#).