

FAQs from the NWGLDE

... All you ever wanted to know about leak detection, but were afraid to ask.

Leak-Detection Equipment and Alternative Fuels (e.g., E85 and Biodiesel Blends)

In this issue's FAQs from the National Work Group on Leak Detection Evaluations (NWGLDE), the Work Group discusses the effects that alternative fuels may have on leak-detection equipment performance and what we can infer from third-party evaluations. (Please Note: the views expressed in this column represent those of the work group and not necessarily those of any implementing agency.)

Q. Is leak-detection equipment compatible with alternative fuels?

A. Third-party evaluations are a useful tool to verify leak-detection equipment performance, but evaluation protocols do not require testing for long-term compatibility with any stored product. Because of this, the NWGLDE makes no representations as to the compatibility of leak-detection equipment with the product stored. (See "Disclaimer" at nwglde.org/disclaimer.) UST owners and regulators may wish to request supplemental test data from the manufacturers to determine long-term material compatibility. Refer to *LUSTLine* #52 (May 2006) for more information on materials compatibility with alternative fuels.

Q. Does the appearance of leak-detection equipment on the NWGLDE list mean that it will perform adequately with alternative fuels?

A. EPA Standard Protocols state that "Any commercial petroleum product of grade 2 or lighter may be used for testing... The choice of product is up to the evaluating organization." The majority of equipment on the NWGLDE list (other than sensors) was evaluated using diesel fuel, which is readily available and easier to work with than gasoline or ethanol-blend fuels. The "Applicability" sections in the NWGLDE listings include several other stored products that were not used in the evaluation but that the third-party evaluator and vendor claimed were acceptable for use with the equipment. The absence of a specific product does not necessarily mean that the equipment cannot perform adequately with that product. As stated in most "Applicability" sections, "Other liquids may be tested after consultation with the manufacturer."

There is leak-detection equipment currently listed by the NWGLDE that will not perform adequately with alternative fuels. Specifically, automatic tank gauges with capacitance probes will not work when used with ethanol fuels. In other cases, physical properties of alternative fuels that differ significantly from conventional gasoline or diesel may lead to degraded performance of certain leak-detection equipment. For example, test methods that rely

on the detection of water at the tank bottom may be less effective in ethanol blends, where water will homogenize with the stored product rather than settle into a separate layer. Some leak-detection equipment, such as simple float-based interstitial liquid sensors, should perform well with any product sufficiently dense to raise the float mechanism. In cases where the performance of a leak-detection method in alternative fuels is in question, it may be appropriate to request that the manufacturer supply supplemental test data to verify performance with the specific product that will be monitored.

NWGLDE listings provide a summary of third-party evaluation results and important information contained in the equipment manufacturer's installation and operating manuals. The NWGLDE list is a tool that can be used to better understand the capabilities and limitations of leak-detection equipment, but it is ultimately up to the regulatory agency to decide whether or not specific leak-detection equipment can be used within their jurisdiction.

About NWGLDE

The NWGLDE is an independent work group comprising 10 members including 9 state and 1 U.S. EPA members. This column provides answers to frequently asked questions (FAQs) the NWGLDE receives from regulators and people in the industry on leak detection. If you have questions for the group, please contact them at questions@nwglde.org.

NWGLDE's mission:

- Review leak-detection system evaluations to determine if each evaluation was performed in accordance with an acceptable leak-detection test method protocol and ensure that the leak-detection system meets U.S. EPA and/or other applicable regulatory performance standards.
- Review only draft and final leak-detection test method protocols submitted to the work group by a peer review committee to ensure they meet equivalency standards stated in the U.S. EPA standard test procedures.
- Make the results of such reviews available to interested parties.