FAQs from the NWGLDE

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

What Is the Correct Operating Mode for My ATG—95% or 99%?

In this issue's FAQs from the National Work Group on Leak Detection Evaluations (NWGLDE) we discuss the different operating mode settings that can be used on an automatic tank gauge (ATG). Please Note: the views expressed in this column represent those of the work group and not necessarily those of any implementing agency.

Q. ***I use an ATG that was evaluated by a third party with the equipment in the "99% operating mode." During a compliance inspection, the inspector pointed out that the ATG was in the 95% operating mode, and since there was no evaluation for the 95% operating mode he said that the ATG must be set to the 99% operating mode. I contacted the ATG manufacturer to follow up. They said they had no plans to have an evaluation done for the 95% operating mode. Do I need to have the ATG set to the 99% operating mode?***

A. We will try to explain the 99% and 95% operating mode in the prelude to your question, but whether you need to operate your ATG in the 99% operating mode is a question that must be answered by your regulatory agency. Most UST regulators would recognize 95% as the figure associated with the Probability of Detection (Pd) for leak detection. What that means is that statistically, a method must be capable of identifying a leak of a certain size at least 95 times out of 100. If a method cannot achieve that level of precision, then it does not meet the federal standard for UST leak detection precision. A number of leak detection methods are capable of performing *better* than the minimum federal standard, and are capable of accurately declaring a leak of a certain size 99% of the time, so their P(d) is said to be 99%.

Think of "operating mode" as a measure of sensitivity, like an eye exam. If you go to the optometrist for a vision check and you can correctly read a certain size letter at a specified distance, then the doctor can say you have 20/x vision, with the x being the description of your specific vision compared to an ideal standard. The optometrist's goal is that you have 20/20 vision, and he may need to prescribe corrective lenses to reach that goal if your unaided vision is not at that level. Let's say 20/20 vision is equal to the 95% operating mode, so the expectation is that most people can see 20/20, or be corrected to see 20/20, so you might say most people would be in the 95% operating mode.

If you examine eye charts, many of them have rows of letters below the 20/20 vision line. These lines measure people who may have better than 20/20 vision, and sometimes these individuals may have extremely good vision, like 20/15 or even 20/10 vision. Think of those individuals with 20/10 vision as equal to the 99% operating mode. So if you had an eye exam and it determined that you had 20/10 vision (99% operating mode) it would automatically mean that you could see 20/20 (95% operating mode). With that explanation, does it make sense why it would be pointless for a manufacturer who had been evaluated in the 99% operating mode to go back and have another evaluation in the 95% operating mode?

Regarding your question concerning a regulatory agency request to have an ATG set to the 99% operating mode: that would be up to the regulatory agency. During installation, the ATG set-up menu provides a choice between a 99% or 95% operating mode. The 95% operating mode means an ATG is slightly less sensitive, but still capable of detecting leaks at the minimum 95% P(d) level required. If a regulatory agency determines that an ATG must operate at the same level as it was evaluated by the third party who performed the evaluation, then you should always comply with the guidance given by the regulatory agency. ■

OOPS! In the *LUSTLine* #74 issue, in the first sentence of the first answer to the first question in this column, we stated an incorrect date. The USEPA regulations became effective 12/22/1988, not 12/22/1998. *Gasp!*

About the NWGLDE

The NWGLDE is an independent work group comprising eleven members, including ten state and one USEPA member. 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, 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 USEPA 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.