

Is SIR the Leak Detection Method for You?

With the expiration of the ten-year term for using daily inventory control (DIC) as the sole form of monthly leak detection, and operators experiencing problems maintaining minimum volumes for ATG systems, statistical inventory reconciliation (SIR) has gained popularity, and is an easy transition from the DIC method.

SIR meets EPA and state requirements for monthly leak detection. This non-invasive method analyzes the entire fueling system so additional line tightness testing is not required (the annual leak detector testing is still required). Since SIR is not volume dependent for testing, you will not be forced to manage fuel deliveries to maintain minimum levels until you obtain a passing test each month as is required with many ATG systems. In addition, initial capital expenditures to begin SIR is minimal in comparison with other equipment dependent alternatives. SIR uses the same monitoring information as DIC, so it makes for an easy transition into the program.

You need to follow the following guidelines to comply with regulation:

1. You must take daily measurements in 1/8" increments (can be accomplished with stick or tank gauge).
2. You must check for water in the tanks monthly. Most commonly, this is accomplished by smearing water-finding paste on the bottom of the fuel gauge stick. The paste will change colors if there is water present.
3. You must submit requested reconciliation information to the SIR vendor at the end of every month. The SIR vendor must provide you with test results within 14 days of submittal, i.e. pass, fail, or inconclusive.
4. You must report all failures to DNR and perform a precision test (0.1 gph).
5. You must report any two consecutive inconclusives and perform a precision test.
6. You must keep 12 months of reports on file at the site.

SIR can be a very effective and efficient method of monthly leak detection IF done properly. Factors that can cause an inconclusive or failed results are incorrect sticking/gauging, taking measurements at various times during the day, incorrect reading of tank chart or using the wrong chart, errors in calculation, tank deformation or tilt, meter or blender errors, temperature changes, theft of product from tank, shorted on fuel received, water entering the tank, and worse case scenario a LEAK.

For information on current SIR vendors, you may contact PMMIC at 515/987-0061.