

QuikTrip Fuel System, Leak Prevention and Emergency Response

Introduction: QuikTrip has a state-of-the-art UST system that includes several redundant leak prevention systems and procedures. We also have in place a sophisticated network which notifies us real time should a leak occur within our piping system. We also track our fuel inventory daily to determine if we are possibly losing fuel from our system. The following discussion looks at our methods for preventing leaks, how we know if a leak occurs, and what we do in the event of a leak. The discussion includes regulatory compliance, our fuel system design, fuel system monitoring, and our emergency response procedures.

(1) Regulatory Compliance: Regulatory compliance provides the bare essentials for operating a fuel system in a manner that both prevents and identifies leaks. In our opinion, simply meeting the requirements for federal and state compliance is inadequate. Following this section will be measures above and beyond compliance minimums. Typical compliance methods utilized by QuikTrip are presented below:

(A) Warren Rogers (WR): We utilize a third party certified consultant to monitor all of our fuel systems for leaks in “real time”. This method of leak detection takes care of the required compliance for the vast majority of our stores.

(B) Line Leak Detection: All of our stores have a Veeder Root TLS-450 Leak Detection System that is capable of detecting a leak as small as 0.1 gallon per hour.

(C) Interstitial Monitoring: The fuel systems at all of our stores are installed with sensors capable of detecting a leak in any portion of our system.

(2) UST System Design: QuikTrip utilizes a unique UST system design that has been developed and refined over the past fifteen years to maximize leak prevention and detection. The current design has resulted from lessons learned from previous designs, input from our in house engineers and scientists, and input from third party experts. Some of the components of our fuel system follow:

(A) Doublewall Fiberglass Pipe (3” over 2”)

(B) Single Fiberglass Stick Design: This design is unique in that it has the ability to eliminate joints in our Fiberglass piping system that occur between sumps. This is accomplished by utilizing pipe lengths that extend from sump to sump.

(C) Transition Sumps: This unique design allows us to make the piping run from the tanks to the dispensers without exposed joints.

(D) Fiberglass Sumps with Sensors:

(E) Doublewall Fiberglass Tanks with Sensors:

(F) Variable Speed FE Petro Sumps: These allow us to operate our gas system at the lowest possible pressure thus minimizing leaks. The alternative is to utilize fixed speed pumps which operate at maximum pressure at all times when fuel is being dispensed.

(3) Fuel System Monitoring: QuikTrip monitors all of its stores using technology developed both externally and internally by systems experts. The monitoring includes real time remote system monitoring, daily inventory management, periodic site inspections, and annual third party operability tests.

(A) Veeder Root TLS-450: This unit monitors the gas system for pressure drops which indicates a leak in the system. Sump and interstitial sensors are also connected to the TLS 450. All of these units are programmed automatically to shut down the gas system if a leak is indicated. These units are monitored remotely by a 24/7 help desk (see below).

(B) In-House Remote System Monitoring: QuikTrip has developed a computer program that monitors all TLS-450's and sends a message to a 24/7 help desk, the Environmental department, and QuikTrip's maintenance department in the event of an alarm. The help desk enters a call in our Call Management System and a trained employee is dispatched to the site to investigate the alarm.

(C) Daily Inventory Variance Monitoring: QuikTrip has developed a program to monitor daily inventory records for each tank in the company. If certain criteria are triggered (1 day, 3 day, 7 day) and email alarm is sent to the help desk, Environmental department, and the maintenance department. The help desk investigates the reason for the variance and if they cannot reconcile the variance the Environmental department investigates the issue, including dispatching a consultant to the site to ensure that a leak has not occurred.

(D) Monthly and Semi-Annual Site Checks: A QuikTrip Environmental Technician or environmental consultant performs a thorough site check of the gas system every month and every six months. Any system issues are identified and repaired. All site checks are reviewed by the Environmental Compliance Engineer.

(E) Annual Leak Detection System Testing: QuikTrip has a third party contractor inspect and test every leak detector in the company annually.

(4) Emergency Response: QuikTrip maintains a 24/7 emergency response system. Store operations and store personnel are trained in the identification of and the response to leaks. They notify the 24/7 help desk as well as take appropriate measures

onsite to prevent the spread/migration of the spill. The help desk notifies the Environmental Project Manager and/or the environmental consultant to respond to the site. The environmental consultant will handle the spill or call in the emergency response contractor to perform the clean-up.