

Electronic Liquid Measurement

SUE:

Company owned fuel-dispensing stations are automating and centralizing their fuel inventory records. This means that a company retail service station operator would no longer complete and maintain an on-site fuel inventory dip book.

The Alberta Fire Code (AFC) establishes criteria for storage tank owners to perform tests, measurements and reconciliation calculations to determine if any portion of their storage tank system is leaking.

The AFC also requires that records be kept and made available to the authority having jurisdiction (AHJ) for a period of at least 2-years. The AHJ will continue to have the ability to ask for weekly or daily dip records by contacting the company directly and having records delivered electronically in 72 hours or less.

BACKGROUND:

An automatic tank gauge system (ATG) is an electronic measurement device installed in fuel storage tanks. ATG's measure fuel level input and throughput and perform reconciliation automatically and hourly. ATG systems can also measure water levels at the bottom of tanks for determining ingress leaks.

Companies are able to centrally collect data from the ATG's and accurately monitor the liquid levels as if the retail operator was performing the tasks manually. Companies using ATG systems must be aware of the limitations of their systems and not all ATG's are certified as a precision leak detection system.

This bulletin is intended to address only those ATG systems that are considered a replacement for manual dip testing, inventory control reconciliation and record keeping.

CODE REQUIREMENT: ¹

1.4. Leak Detection Monitoring of Storage Tanks and Piping Systems

1.4.1. Inventory Reconciliation

Where inventory reconciliation is required by this Section, the liquid level in any *storage tank* shall be measured at intervals not greater than 7 days in conformance with Sentences (2) to (4), except that at *fuel-dispensing stations* the measurements shall be taken each day the station is in operation.

¹All references are to the Alberta Fire Code, Division B, unless otherwise stated



Archived

Alberta
Municipal Affairs
and Housing

Issue of this STANDATA is authorized by
the Chief Fire Administrator

[Original Signed]
Raymond Ligenza



SAFETY CODES COUNCIL

The level of water at the bottom of an underground *storage tank* shall be measured at intervals not greater than 7 days, except that at *fuel-dispensing stations* the measurements shall be taken each day the station is in operation.

A comparison of the measurements described in Sentences (1) and (2) with meter readings and a computation of any gain or loss of liquid shall be done each time a required measurement is taken.

A record of the measurements for each *storage tank* and of the computations described in Sentence (3) shall be retained, in conformance with Article 2.2.1.2. of Division C.

When required by the *authority having jurisdiction* the record referred to in Sentence (4) shall be the subject of an audit performed in a manner acceptable to the *authority having jurisdiction*.

2.1.2. Records (AFC, Division C)

Where this Code requires that plans be provided, or that tests, inspections, maintenance or operational procedures be performed, records shall be made and the original or a copy shall be retained at the premises for examination by the *authority having jurisdiction*.

The initial verification or test reports for each system shall be retained throughout the life of the systems.

Records of tests, inspections, maintenance or operational procedures undertaken after the initial tests referred to in Sentence (2) shall be retained so that at least the current and the immediately preceding records are available.

Notwithstanding the conditions stated in Sentence (3), no record shall be destroyed within 30 years of being prepared.

TENT:

Companies that use a centralized ATG system as an automatic fuel inventory dip book with reconciliation and water level measurement capabilities, meet the intent of Subsection 4.4.4. for liquid level measurements and Article 2.2.1.2. (Division C) regarding maintenance of records.

Fuel-dispensing stations utilizing the ATG system are required to provide the AHJ contact information for obtaining liquid level records when requested.

This item has been replaced by a more recent resource or the content may be otherwise out of date.
It is provided for informational and research purposes.



Archived