RESPONSE TO INVESTIGATION DI-22-000484

This investigation has used the same people who have caused the issues due to misinterpretation of basic fuel system codes, leaving the fuel station in noncompliance just as it was.

NIST/ OSC have not kept their safety at work commitment as they should.

Below findings apparently without reading the codes sited in the report.

If you read the UL 2085 rating “UL 2085 Section 34.1.e is stating that if local building codes require guard posts or barriers in addition to a UL 2085 tank, they need to be installed. Electric, and fuel piping need protected “the interpretation in this report is incorrect.

3. Diesel Tank Allegations
The Whistleblower alleges that NIST has failed to properly install appropriate bollards in front of the diesel tank at the NIST Fueling Station. Specifically, the Whistleblower claims that NIST has inappropriately installed a “bolt down” bollard (a bollard secured with screws) in front of the diesel tank instead of a bollard that is installed in a 15-inch diameter concrete footer. The Whistleblower further alleges that NIST has installed bollards too close to the South side of diesel tank. The investigation revealed that NIST had installed one “bolt down” bollard on the West side of the diesel tank and 3 in-concrete bollards on the South side of the diesel tank that were located within two feet of the tank. The investigation also revealed that the diesel tank is double walled and is “UL 2085 (Underwriters Laboratory Standard 2085) certified.”

NFPA 30A, Chapter 4, Section 4.3.7.2 states: “Guard posts or other approved means shall be provided to protect tanks that are subject to vehicular damage.” That section then establishes minimum requirements for the installation of guard posts. Annex A of NFPA 30A explains that “other approved means” includes “vehicle impact resistance testing such as that prescribed in UL 2085.”

Documentation provided by NIST indicates that the diesel tank is UL 2085 certified and that the manufacturer of the tank conducted vehicle impact testing. Thus, the installed diesel tank meets the requirements set for in NFPA 30A, Chapter 4, Section 4.3.7.2 for the protection of the diesel tank.

The Whistleblower also asserts that the foundation for the diesel tank “violates NFPA installation requirements because it is uneven — the saddle base plate has come off the surface of the concrete housing pad and it fails to drain water run-off properly.” Referral letter at 1. NFPA 30, Chapter 22, Section 22.5.2.1 states only that “[t]anks shall rest on the ground or on foundations made of concrete, masonry, piling or steel.”

The site inspection revealed that the diesel tank rests upon two saddle supports. Those saddle supports rest upon a concrete pad and are adhered to the concrete using bolts and epoxy grout (which was installed after one side of the tank began lifting off the ground). At this time, there is no visible cracking of the tank. Additionally, while witnesses previously reported that one of the supports was lifting off the ground, witnesses reported that that was not currently the case and no lifting was observed during the site inspection. Witnesses also advised that water sometimes pools on the concrete pad after rain due to how the concrete settled following construction. While no water was observed on the concrete pad during the site inspection, it had not rained on the date of the inspection. Further, there appears to be rust on at least one of the bolts adhering one of the saddle supports to the concrete.
Multiple witnesses reported that NIST engineers were studying the issue to determine whether to take steps to address the pooling.

We still fail SPCC001 yearly inspection.

"the AHJ has the ability to alter the code, "Such alternate arrangements shall provide protection at least equivalent to that required by this code." (Chapter 1.5.1)"

If bollards are used, they should be built to the following specifications [NFPA 30A 4.3.7.2]:

So while the UL 2085 tank does not necessarily require bollards, the other system components such as the piping, electrical conduits, and dispensers would have to be protected by bollards.

The NIST AHJ, is not meeting minimum code requirements nor are they fuel station experts.

I suggest a fuel station expert! And read the UL 2085 book!

IFC 2015

SYSTEM. An assembly of equipment consisting of a tank, container or containers, appurtenances, pumps, compressors and connecting piping.

CONTAINER. A vessel of 60 gallons (227 L) or less in capacity used for transporting or storing hazardous materials. Pipes, piping systems, engines and engine fuel tanks are not considered to be containers.

TANK. A vessel containing more than 60 gallons (227 L).

5704.2.9.7.4 Vehicle Impact Protection

Where protected above-ground tanks, piping, electrical conduit or dispensers are subject to vehicular impact, they shall be protected therefrom, either by having the impact protection incorporated into the system design in compliance with the impact test protocol of UL 2085, or by meeting the provisions of Section 312, or where necessary, a combination of both. Where guard posts or other approved barriers are provided, they shall be independent of each above-ground tank.

312.1 General

Vehicle impact protection required by this code shall be provided by posts that comply with Section 312.2 or by other approved physical barriers that comply with Section 312.3.

312.2 Posts

Guard posts shall comply with all of the following requirements:
1. Constructed of **steel** not less than 4 inches (102 mm) in diameter and concrete filled.

2. Spaced not more than 4 feet (1219 mm) between posts on center.

3. Set not less than 3 feet (914 mm) deep in a concrete footing of not less than a 15-inch (381 mm) diameter.

4. Set with the top of the posts not less than 3 feet (914 mm) above ground.

5. Located not less than 3 feet (914 mm) from the protected object.

*misinterpretation of codes is dangerous for a fuel station!*

Thank you,