July 18, 2023

The President
The White House
Washington, D.C. 20500

Re: OSC File No. DI-22-000484

Dear Mr. President:

I am forwarding to you reports transmitted to the Office of Special Counsel (OSC) by the Department of Commerce (Commerce) in response to the Special Counsel’s referral of disclosures of wrongdoing at the National Institute of Standards and Technology (NIST) Fueling Station, Gaithersburg, Maryland. The whistleblower, [redacted], who consented to the release of his name, commented on the reports. I have reviewed the disclosure, agency reports, and whistleblower comments, and, in accordance with 5 U.S.C. § 1213(e), have determined that the reports contain the information required by statute and the findings appear reasonable.\(^1\)

The following is a summary of those findings.

The Allegations

[Redacted] alleged violations of the National Fire Protection Association (NFPA) Code safety requirements related to aboveground diesel, gasoline, and compressed natural gas (CNG) storage tanks and/or fueling pumps/dispensers. [Redacted] reported that NIST improperly installed a bolt-down bollard near the diesel storage tank, other bollards were too close to the tank, and the tank’s foundation did not drain water run-off. [Redacted] also alleged that the bollards installed near the gasoline storage tank’s fuel pump are not set in a required 15-inch concrete footer. Additionally, [Redacted] alleged that the bollards installed near the CNG tank’s piping and dispenser are too close and not set in a 15-inch concrete footer, respectively; the CNG tank canopy is improperly secured to its base with self-tapping screws and wood and metal pillars; and the knife blade-disconnect is not housed correctly. The investigation partially substantiated the allegations.

\(^1\) OSC referred the allegations to Commerce Secretary Gina M. Raimondo for investigation pursuant to 5 U.S.C. § 1213(c) and (d). The Commerce Office of General Counsel investigated the allegations, and the Secretary delegated the authority to review and sign the agency reports to General Counsel Leslie Kiernan.
The Findings

A. The Diesel Storage Tank Bollards Are Appropriately Installed but the Tank’s Foundation Fails to Drain Water Run-off.

Bollards are vertical concrete barriers installed to protect against vehicle damage. The reports confirmed NIST installed a bolt-down bollard anchored with screws rather than a concrete footer near the front of the diesel storage tank, and three bollards in 15-inch concrete footers 2 feet from the tank. The investigation found that NFPA requires guard posts or other approved means to protect tanks from vehicular damage—this includes vehicle impact resistance testing such as those that are Underwriters Laboratory Standard 2085 Certified (UL2085 Certified). NIST documents show the diesel storage tank manufacturer conducted vehicle impact testing and the tank is UL2085 Certified. Thus, the reports concluded that the bollards did not violate NFPA provisions and NIST met NFPA’s safety requirements for tank protection.

As to the tank’s foundation, a site inspection revealed that the tank rests on two saddle supports that in turn rest on and are secured to a concrete pad with bolts and epoxy grout. Investigators saw neither visible cracking of the tank nor lifting of the saddle supports off the ground, but witnesses stated that lifting has previously occurred. Also, investigators did not see water pooling under the tank but found a rusty bolt securing the saddle support to the concrete pad. As a result of the investigation, the agency has initiated a procurement for a project to divert and drain water away from the tank by creating channels on the pad and installing anti-corrosive epoxy protective coating on the steel saddles. Once completed, the agency will conduct annual inspections of the tank to ensure it maintains its structural integrity.

B. The Bollards Installed Near the Gasoline Storage Tank’s Fueling Pump Are Not Required to Be Set in a 15-Inch Diameter Concrete Footing.

Investigators discovered that the gasoline storage tank’s fueling pump is on a rectangular concrete island that is protected by four bollards, one at each corner of the island and set at least four feet from the fueling pump. The reports determined that the NFPA provisions require this dispensing system and components to be mounted on an island or otherwise protected against collision damage. The reports concluded that because the gasoline fuel pump is on an island, NIST complied with the NFPA, which does not require the bollards to be set in a 15-inch concrete footing.

C. The Bollards Installed Near the CNG Storage Tank and Dispensing System and its Canopy Comply with NFPA Safety Requirements but the Knife Blade-Disconnect Installation Did Not.

The reports determined that NFPA 52 Vehicular Natural Gas Fuel Systems Code (NFPA 52) applies to the CNG storage tank and dispensing system and concluded that NFPA 52 contained
no minimum requirements as to where bollards must be in relation to CNG piping. Nor does NFPA 52 contain provisions that require bollards to be in 15-inch concrete footers to protect CNG dispensers. The reports also determined that neither Chapter 4 of NFPA 30A nor NFPA 55 applied to the CNG storage tank and fuel dispensing system, as alleged, because these chapters apply to the storage of liquids as opposed to the piping for or dispensing of liquids.

The reports stated that to the extent NFPA 30A did apply, it only required piping to be located such that it is protected from physical damage and only required that dispensers be mounted on an island or otherwise protected against collision damage by a means acceptable to the authority with jurisdiction. The site inspection revealed that the CNG piping is protected by bollards set 11 to 21 inches away, the CNG dispenser is protected by bollards and elevated from the apron, and multiple concrete barriers are between the system and an adjacent road. Given the above, the reports concluded these protections comply with the relevant parts of NFPA.

The site inspection confirmed that the canopy over the CNG tank is secured to its base with self-tapping screws and wood and metal pillars—specifically wood wrapped in aluminum. The inspection also confirmed that the canopy is grounded into the earth in multiple locations by several grounding wires. The reports determined that NFPA required electrical systems to be grounded, meaning “connected to the earth in a manner that will limit the voltage imposed by lightning, line surges, or unintentional contact with higher voltage lines and will stabilize the voltage to earth during normal operation.” The reports also determined that even though self-tapping screws were not listed as a means of grounding, the canopy was properly grounded by the grounding wires. The reports concluded that given these circumstances using the self-tapping screws did not violate NFPA.

With respect to the wood used to support the canopy, NFPA prohibits using combustible material within 10 feet of any stationary container of natural gas. Combustible material is defined as material that, in the form in which it is used under the anticipated conditions, will ignite and burn, or a material that does not meet the definition of noncombustible or limited-combustible. The reports concluded that the scientific literature that NIST provided established that the wood used to support the canopy over the CNG compressor met the definition of noncombustible. Thus, the agency determined there is no violation.

Lastly, the knife blade-disconnect, which stops the flow of electricity in an emergency, is on a canopy post a few feet from the CNG compressor. The reports determined that the area up to 15 feet from the compressor, which encompasses the knife blade disconnect, is a Division-2 Classified Area. Consequently, the reports concluded that the knife blade-disconnect must be housed in an appropriate enclosure. Accordingly, NIST took corrective action and installed an enclosure that meets NFPA requirements to house the knife blade-disconnect.

---

2 See NFPA 70, Section 250.8(A).
The President
July 18, 2023
Page 4 of 4

*The Whistleblower’s Comments*

[Redacted] criticized the agency investigation, including who the agency assigned to conduct the investigation. [Redacted] also disputed the findings and conclusions regarding the unsubstantiated allegations as well as the agency’s interpretation of the applicable NFPA regulations.

I thank [Redacted] for bringing these serious safety allegations to OSC’s attention. As required by 5 U.S.C. § 1213(e)(3), I have sent copies of this letter, the agency reports, and whistleblower comments to the Chair and Ranking Member of the Senate Committee on Commerce, Science, and Transportation, and the Chair and Ranking Member of the House Committee on Energy and Commerce. I have also filed redacted copies of these documents and the redacted referral letter in our public file, which is available online at www.osc.gov. This matter is now closed.

Respectfully,

Henry J. Kerner
*Special Counsel*

Enclosures