



The Dow Chemical Company
Midland, Michigan 48674
USA

February 1, 2021

This letter is a follow-up to Event number 55059, reported via phone call from License No. 21-00265-06 to the NRC Operations Center on January 8, 2021. This event is being reported as required by Regulatory Requirement 10 CFR Part 30.50(b)(2) - safety equipment, required by the license or regulation, is disabled or fails to function and no redundant equipment is available and operable.

Facility: Dow Chemical

Location: Midland, MI

Incident: Fixed gauge stuck shutter - stuck in the open/normal operating position

Manufacturer: Vega Americas

Source Holder Model: SH-F2B

Isotope and quantity: Cesium-137, 750 mCi

Source serial number 9006CP

Source holder serial number 46168107

At approximately 1120 EST on 1/8/2021 the site RSO attempted to operate the shutter on source s/n 9006CP located on 5026 vessel (Dow identifier). The shutter operation failed; the shutter was stuck in the open (normal operating) position. The shutter was being operated in an attempt to troubleshoot the Vega America's Fibertrac detector located on 5026 vessel opposite from the fixed gauge. The NRC Operations Center was contacted via phone and the incident was reported on 1/8/2021 at 1415 EST. There were no radiological exposures as a result of the shutter malfunction. The gauge is located at an elevated location and not accessible during normal operations.

A Field Service Engineer from Vega Americas arrived on 1/15/2021 to repair the shutter. He discovered the previously stuck shutter to be operational. The shutter had been stuck on a day when the temperature dropped below freezing, which indicated moisture intrusion into the source holders. After performing leak test and gross contamination check, the Service Engineer removed the shutter mechanism and discovered approximately 1" of water inside. When the temperature dropped below freezing the water froze and prevented the shutter from working. The water was removed, and new shutter mechanism was installed and is operational.

The Service Engineer recommended to add some type of cover over the source holder to prevent moisture from building up on it. An internal work order was submitted to have a roof built over the source holder. In the meantime, a bag was placed over the source per recommendation of the Service Engineer. Following the completion of the roof, Dow will consider this matter resolved. The source is wipe tested and the shutter checked every 6 months, and this schedule will continue.

If you have any questions, please contact me at kelly.wegener@dow.com or (989) 496-1386.

Sincerely,

Kelly Wegener-Gave

Kelly Wegener-Gave

Radiation Safety Officer

The Dow Chemical Company

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