



January 25, 2023

U.S. Nuclear Regulatory Commission
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Reference: Damage of Portable Nuclear Gauge
NRC Event 56018
Docket No. 03030462
NRC License No. 45-24974-01

Subject: Reply to a Notice of Violation EA-22-087

Attn.: Blake D. Welling

This letter refers to the ECS Chantilly, VA office NRC incident that occurred in Washington, DC on July 22, 2022. The following discusses the circumstances that lead to the violation; root cause of the violation; corrective action and prevention of reoccurrence; and compliance, in sequential order.

Development and Implementation of Corrective Actions:

1. Circumstances that led to the violation:

The incident occurred on July 22nd, 2022, at 1:15 pm. The authorized user who was in control of the nuclear gauge #26, was approximately fifty feet away from the gauge and in the process of obtaining additional paperwork for his assigned task from his vehicle. During this process, gauge #26 was struck and damaged by an excavator.

The authorized user then informed one of the field supervisors from the ECS Chantilly office and was directed to cordon off a 15-foot radius of the area around the damaged gauge immediately.

Omer Duzyol, the ECS Chantilly backup RSO, arrived at the scene at 3:49 pm the same afternoon to conduct a radiation survey and investigate the incident.

Gauge #26's outer shell was found to be broken due to the impact with the excavator, but the sources were found in the shielded position. After conducting several surveys, the readings were found to be less than 0.4 mR/hr at a 1-meter distance.

The NRC Operations Center and Virginia Department of Health (VDH) were informed about the incident following the survey noted above on the same date of the incident (July 22, 2022).

2. The root cause of the violation:

The authorized user is currently serving as a senior engineering technician for the ECS Chantilly office and has been employed with the office since June 3rd, 2013. The user received his initial training June 4th, 2013, and received multiple yearly re-trainings on radiation safety for authorized users. However, for this moment, contrary to license requirements, ECS policy and training, he walked away from the gauge which led to loss of control of gauge #26.

3. Corrective actions and prevention of recurrence:

The authorized user was given an internal written warning with 2 days of suspension without pay, as this was his first incident at ECS. Following his suspension, the user attended a mandatory Radiation Safety class on August 3rd, 2022, to be retrained again. The authorized user was also counseled verbally and shown what constant control and surveillance of the gauge means via demonstration.

The Chantilly office authorized users were immediately informed about the incident, and the subject has been discussed in detail in monthly safety meetings to reiterate and stress the importance of maintaining physical control of nuclear density gauges, especially when the gauge is not otherwise secured using two independent physical locking systems to prevent unauthorized access or removal.

Radiation safety has always been and will continue to be discussed and reinforced in our monthly safety meetings with our authorized users.

Additionally, our field training supervisors and technician team leaders perform field safety audits on a regular basis at our job sites to confirm and reinforce the rules and regulations of safe handling and operations of the gauges by our users. The records of field audits are kept in the users' files and are internally tracked in our weekly reports to verify and maintain that each user is audited regularly.

Furthermore, January of every year is radiation safety retraining month for authorized users and non-users for the entire company. During this month, employees are either informed of radiation safety (for non-users) or are retrained and recertified on radiation safety to comply with both the NRC, and locally for us, VDH requirements.

4. Compliance:

Regarding compliance, the authorized user received full training on Radiation Safety on August 3rd, 2022. Authorized users were informed about the event immediately, and the incident was discussed in detail with at our monthly safety meetings on August 10th, 16th and 18th, 2022. Additionally, field audits were conducted with the authorized user on September 7th, 2022, October 7th, 2022, November 9th, 2022, December 9th, 2022, and January 18th, 2023 to confirm and reinforce surveillance and handling of radioactive material regulations.

Should you have any questions with respect to the information contained in this letter, please do not hesitate to contact us at (703) 471-8400.

Respectfully,

ECS MID-ATLANTIC, LLC



Omer M. Duzyol, COSS
ECS Chantilly Radiation Officer & Safety Manager



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