

From: [Layton, Tuanya](#)
To: [VonEhr, Jason](#); [Elliott, Robin](#)
Cc: [Patel, Netra](#); [Lowe, Kim](#); [Artz, Steven, M.D.](#)
Subject: [External_Sender] RE: CAMC NRC Inspection Follow up - Retraction letters for WV State Radiological Health Dept and NRC
Date: Thursday, February 3, 2022 2:34:18 PM
Attachments: [CAMC Memorial Notification Retraction High Exposure 2022 02.pdf](#)
[NRC Retraction Notification of Exposure Report 2022 02.pdf](#)

NRC is being mailed certified today. WV State was emailed to the Director.

Thanks,

Tuanya

Tuanya A. Layton, RBA, CNMT
Imaging Services Quality Manager

304-388-9289 Office

304-388-8922 Fax



**Charleston Area
Medical Center**

MEDICAL IMAGING

3200 MacCorkle Ave. SE
Charleston, WV 25304
(304) 388-5474
Fax: (304) 388-8922

US Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

February 3, 2022

RE: NRC License No. 47-15473-01 - Charleston Area Medical Center

The Charleston Area Medical Center notified the NRC November 8, 2022 of an exposure that exceeded established annual limits. This is notification of retraction of the high exposure.

CAMC received an exposure notice from Landauer, Inc. on 2/3/2021, The Radiation Dosimeter participant #23104 works in the Cath Lab Memorial. The dosimeter report from December 2020 noting annual exposure of 5223 DDE. The physician is also listed as an authorized user on our materials license.

After a recent NRC Inspection in November 2021, our medical physicists did a further investigation into the 2020 monthly exposures. Landauer reported dose reading using standard calculation. The readings were recalculated from the badge worn at the collar level on the lead apron to the assigned deep dose equivalent under the lead apron (ED2 calculation).

The adjusted total deep dose equivalent exposure = 1856.9 mrem. The total exposure is within the 5000 mrem annual limit.

The West Virginia State Radiological Health Department was notified on February 3, 2022 of the retraction and correct adjusted exposure for the participant.

The Radiation Safety Committee and Safety Leadership Council will be updated on the findings and retraction notification at our next scheduled meeting - March 23, 2022.

Please let me know if you need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tuanya A. Layton'.

Tuanya A. Layton, RBA, CNMT
Medical Imaging Services Quality Manager

Attachment: Copy of original notification letter November 8, 2021.

Cc: Dr. Steven Artz, M.D., Radiation Safety Officer & Dr. Kim Lowe, BCNP, Associate RSO



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November 8, 2021

RE: NRC License No. 47-15473-01 - Charleston Area Medical Center

CAMC received an exposure notice from Landauer, Inc. on 2/3/2021, The Radiation Dosimeter participant #23104 works in the Cath Lab Memorial. The dosimeter report from December 2020 noting annual exposure of 5223 DDE. The physician is also listed as an authorized user on our materials license.

The delay in notification to NRC was due to unawareness of reporting for exceeding annual limits for x-ray exposure. This was a topic of discussion during our NRC Safety and Security Inspection completed 11/4/2021.

An investigation was completed. Cath Lab Leadership reviewed the physician's procedure volume (one of the highest in 2020), as well as any fluoroscopy > 10Gy cases. The leadership team meet with the physician on several occasions over 4th quarter 2020 as she was approaching the annual limit. The physician was reinstructed on radiation safety practices to include: proper placement of the dosimeter, personal lead apron shielding, additional lead door shielding that is available during procedures, and proper storage of her lead apron and dosimeter in her personal locker. Additionally, the Physician's supervisor met with the physician to discuss her this exposure and the Cath Lab ordered additional lead shielding devices for use in the procedure labs

The West Virginia State Radiological Health Department was notified March 17, 2021 and received acknowledgement on March 18, 2021. The Radiation Safety Committee and Safety Leadership Council were updated on March 18, 2021.

Please let me know if you need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Steven Artz'.

Steven Artz, M.D.
Radiation Safety Officer

cc: Tuanya Layton, Imaging Quality Manager
cc: Kim Lowe, BCNP, RSO



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Tera Patton, Radiological Health Chief
Office of Environmental Health Services
Radiological Health Program
308 Capitol Street Room 313
Charleston, WV 25301

February 3, 2022

RE: Facility Registration # 201300 Charleston Area Medical Center Memorial Hospital
Retraction of High Exposure Exceeding Annual Established Limits

CAMC notified Radiological Health Program on March 17, 2021 regarding a high exposure annual notification from Landauer, Inc. on 2/3/2021.

Radiation Dosimeter participant #23104 location Cath Lab Memorial. The dosimeter report from December 2020 noting annual exposure of 5223 DDE.

After a recent NRC Inspection in November 2021, our medical physicists did a further investigation into the 2020 monthly exposures. Landauer reported dose reading using standard calculation. The readings were recalculated from the badge worn at the collar level on the lead apron to the assigned deep dose equivalent under the lead apron (ED2 calculation).

The adjusted total deep dose equivalent exposure = 1856.9 mrem. The total exposure is within the 5000 mrem annual limit.

Please let me know if you need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tuanya A. Layton'.

Tuanya A. Layton
Medical Imaging Quality Manager

Attachment: Original notification letter March, 17, 2021.

cc: Dr. Steven Artz, M.D., Radiation Safety Officer & Dr. Kim Lowe, BCNP, RSO



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Tera Patton, Radiological Health Chief
Office of Environmental Health Services
Radiological Health Program
308 Capitol Street Room 313
Charleston, WV 25301

March 17, 2021

RE: Facility Registration # 201300 Charleston Area Medical Center Memorial Hospital

CAMC received a high exposure annual notification from Landauer, Inc. on 2/3/2021. Radiation Dosimeter participant #23104 location Cath Lab Memorial. The dosimeter report from December 2020 noting annual exposure of 5223 DDE.

Upon investigation, Cath Lab Leadership reviewed the physician's procedure volume, as well as any fluoroscopy > 10Gy cases. The leadership team meet with the physician on several occasions over 4th quarter 2020 as she was approaching the annual limit.

The physician was reinstructed on radiation safety practices to include: proper placement of the dosimeter, personal lead apron shielding, lead door shielding that is available during procedures, and proper storage of her lead apron and dosimeter in her personal locker. Additionally, the Cath Lab has ordered another portable lead shield stand use in the procedure labs.

Both Dr. Steven Artz, RSO and Dr. Kim Lowe, RSO were updated on the investigation. The annual exposure notification was also discussed with the physician's supervisor. The supervisor has met with the physician to discuss her exposure levels and radiation safety practices.

The Radiation Safety Committee will be updated at our next quarterly meeting scheduled March 18, 2021. Please let me know if you need any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tuanya A. Layton'.

Tuanya A. Layton
Medical Imaging Quality Manager

cc: Dr. Steven Artz, MD, RSO & Dr. Kim Lowe, BCNP, RSO