

DMC
Sinai-Grace
Hospital

6071 W. Outer Drive
Detroit, MI 48235
www.sinaigrace.org

March 4, 2010

UNITED STATES NUCLEAR REGULATORY COMMISSION
Region III, Materials Licensing Section
2443 Warrenville Road
Suite 210
Lisle, IL 60532-4352

Re: Written Report following loss of I-125 seeds
License number 21-00299-04, Event # 45682

Attention: Regional Administrator
Materials Licensing Branch

A prostate brachytherapy implant was performed on February 5, 2010 at the Sinai Grace Hospital in Cysto Room 2 of the OR department. Ninety (90) Bard BrachySource Iodine-125 Seeds Model 1251 containing 0.336 mCi each were available for implantation. Following the implantation procedure the radioactive seed inventory reflected that eighty-nine (89) seeds had been utilized and one (1) seed remained in the inventory. However, only sixty-eight (68) implanted radioactive seeds could be visualized in the post implantation radiographs. The discrepancy in the inventory was brought to the attention of the physician and the medical physicist and a radiation survey of the room was initiated. Sixteen (16) radioactive seeds were recovered from the floor of Cysto Room 2 immediately following the procedure. Five (5) radioactive seeds were unaccounted for at that time.

Following the unsuccessful search for the five (5) remaining seeds, the NRC Operations Center was notified of the event by Timothy Applegate, Radiation Safety Officer on 2/5/2010 at 21:16 EST. The event number is 45682. Additional radiation surveys were performed that evening and four (4) additional radioactive seeds were located in the adjoining workroom. One (1) seed remained unaccounted for at that time. The NRC Operation Center and the Region III Director were updated at approximately 23:30 EST.

A CT scan was performed following the implant procedure. The radioactive seed count was reevaluated conclusively using VariSeed 8.0 software application on 2/9/2010. A total of sixty-nine (69) implanted seeds were identified on the CT scan. The seed count was verified by the radiation oncologist and medical physicist. As of 2/9/2010 all ninety (90) radioactive seeds were accounted for and zero (0) seeds were missing. NRC Region III was updated on 2/9/2010 that no radioactive seeds were missing.

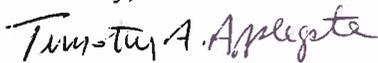
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A thorough investigation was conducted to determine the source of the error resulting in the twenty (20) radioactive seeds falling on to the floor during the prostate implant procedure. Based on our investigation we concluded that the most likely scenario was the accidental inversion of some the QuickLink Relay System transfer tubes as they were passed to the physician implanting the seeds. To prevent future reoccurrence, the radiation oncology staff will be reeducated on the correct handling of the transfer tubes by medical physicist Daniel Tuharsky MS. In-service training of the radiation oncology staff will be completed by March 12, 2010. In addition, the Management Operating Directive for the Seed Implant Process will be revised to limit the handling of the radioactive seeds and the transfer tubes to authorized radiation oncology staff and pre-approved designees. The revisions to the Management Operating Directive for the Seed Implant Process will be completed by March 12, 2010.

If you have any questions or need any other additional information, please contact me at (313) 966-4391 or at TApplega@dmc.org.

Sincerely,



Timothy A. Applegate RT (N)
Radiation Safety Officer
DMC/Sinai-Grace Hospital

cc Conrad Mallett
Stanton Beatty

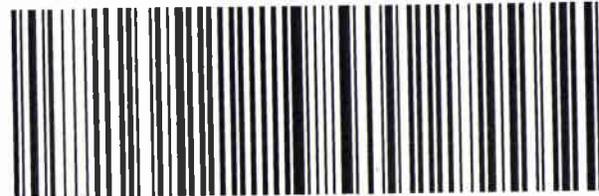
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Company SINAI GRACE HOSPITAL
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City DETROIT State MI ZIP 48235-2624

2 Your Internal Billing Reference 00 4550

3 To Recipient's Name Regional Administrator Phone 630 829-9500
Company US Nuclear Regulatory Commission
Recipient's Address Region III
2243 WARRENVILLE RD
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