



July 27, 2010

United States Nuclear Regulatory Commission  
Region I  
475 Allendale Road  
King of Prussia, PA 19406

**RE: License No. 06-09522-01**

Dear Ms. Nguyen:

The purpose of this letter is to clarify the procedure that was used to evaluate a patient receiving quantities greater than 33 mCi of I-131 as an outpatient prior to our revision outlined in our correspondence dated July 1, 2010. I will provide the rationale that was used for patient selection for outpatient treatment and subsequent release of the patient.

- A Nuclear Medicine technologist conducted a telephone interview and discussed our standard instructions with the patient.
- In cases where the patient expressed concern in their ability to follow the instructions properly a medical physicist would conduct a second interview with the patient.
- If the patient was unable to follow the instructions the case was performed as an inpatient.
- If the patient was capable of following the instructions properly the case was scheduled as an outpatient procedure.
- The sample calculations in Regulatory Guide 8.39 and NUREG-1556, Vol.9, Rev.2 were used as a guide to determine the release criteria for the patient.
- The Nuclear Medicine staff was aware that for patients receiving  $\leq 55$  mCi of I-131 for hyperthyroidism or  $\leq 175$  mCi of I-131 for treatment of thyroid carcinoma; that the calculation would result in an exposure of less than 500 mrem to a member of the general public. This fact is based on the sample calculation in the NUREG-1156, Vol.9, Rev.2 which assumes an occupancy factor of 0.25. The Regulatory Guide recommends several specific radiation safety practices for a period of 1 or 2 days when using an occupancy factor of 0.25. Greenwich Hospitals' written instructions employs the same radiation safety practices but extend the period to 3 to 5 days, thus Greenwich Hospital's patient instructions are more conservative than the NRC recommendations. The calculation for the exposure to any member of the public was in some cases performed after patient release, with the understanding that the patient was able to follow the instructions for the occupancy factor of 0.25. Therefore, the result of the exposure to any member of the general public *would always be below 500 mrem.*

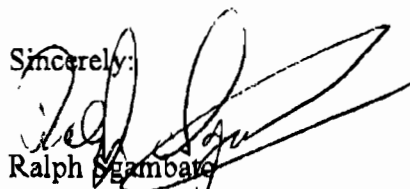
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**NMSS/RGN MATERIALS-004**

- For cases involving greater than 55 mCi for hyperthyroidism or greater than 175 mCi of I-131 for thyroid carcinoma a medical physicist would evaluate the case and determine the appropriate occupancy factor and if the written instructions needed revision.

If you have any additional questions regarding this correspondence, please contact me at 203-863-3036 or [ralph.sgambato@greenwichhospital.org](mailto:ralph.sgambato@greenwichhospital.org).

Sincerely:



Ralph Sgambato  
Program Director Radiology