

Francis Palermo, M.D.
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May 30, 2012

Lester Tripp, License Reviewer
Licensing Assistance Section
Nuclear Materials Safety Branch
Division of Radiation Safety and Safeguards
U.S. Nuclear Regulatory Commission, Region I
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406-2713

RE: Response Letter - Pending Renewal Application
Francis Palermo, M.D.

Dear Mr. Tripp:

Pursuant to our conversation on May 30, 2012, the following responses are provided in support of our pending renewal application. Each response will numerically correspond to the questions addressed in your email. Please refer to the following paragraphs for details.

1. In regards to the areas surrounding the nuclear cardiology department, the imaging center resides of the top floor of the building. Only the roof resides above the imaging center. Offices are located on the second floor. The outside wall is located on the west and south sides of the imaging room, hot lab and stress lab. To the north and east side sits the waiting room, office/reception area, and stairwell to the parking garage, second and first floors. Along the sides of the hallway leading to the elevator resides professional office suites.

2. Pages two and three of the renewal application, have been amended as follows:

The paragraphs listed at the bottom of Page Two have been moved to the top of Page 3 and integrated into Item 9.3. The relocated statements are provided below:

“Equipment used to measure dosages will be calibrated in accordance with nationally recognized standards or the manufacturer’s instructions”.

We confirm that patient doses will be measured in a dose calibrator prior to administration.

Corrected pages of the renewal application are provided on the next two pages.

Item 7.2

RADIATION SAFETY OFFICER

Francis Palermo, M.D.

The physician referenced above is currently listed as the radiation safety officer on our current license (License Number: 07-28780-01. Please refer to this radioactive material license for RSO confirmation.

Item 8.1

TRAINING PROGRAM:

We will establish and implement the model training program outlined in Nuclear Regulatory Guide 1556, Volume #9, Revision 2, **Appendix J entitled; “Model Training Program”**.

Item 9.1

FACILITIES AND EQUIPMENT DIAGRAM

Refer to Attachment 9.1

Item 9.2

INSTRUMENT CALIBRATIONS:

We will establish and implement the model procedure outlined in Nuclear Regulatory Guide 1556, Volume #9, Revision 2, **Appendix K entitled; “Radiation Monitoring Instrument Specifications and Model Survey Instrument Calibration Program”**.

Records of survey meter calibrations will be maintained and recommendations for repair will be followed. A survey meter will not be used beyond the anniversary of its last successful calibration. If needed, a loaner survey meter will be made available at the time of annual calibration.

Survey meter calibrations will be performed by MPM Products or an equivalent service vendor. MPM Products operates under, Texas Radioactive Material License Number: LOO967.

“Radiation monitoring instruments will be calibrated by a person qualified to perform survey meter calibrations”.

“We reserve the right to upgrade our survey instruments as necessary as long as they are adequate to measure the type and level of radiation for which they are used”.

Item 9.3

DOSE CALIBRATOR CALIBRATION

“Equipment used to measure dosages will be calibrated in accordance with nationally recognized standards or the manufacturer’s instructions.”

We confirm that patient doses will be measured in a dose calibrator prior to administration.

A. The dose calibrator will be calibrated as follows:

1. Sealed sources will be used to establish accuracy. They will consist of two of the following:

Nuclide	Suggested Activity	Activity
Co-57	0.5 - 6.0 mCi	50 uCi or more
Ba-133	.05 - 0.5 mCi	50 uCi or more
Cs-137	.05 - 0.3 mCi	50 uCi or more

2. The accuracy of the assay of these standards will be at least $\pm 5\%$ and traceable to National Institute of Standards and Technology.

3. The calibration procedure will be as follows:

- a. The dose calibrator will be checked for accuracy at installation, repair and annually thereafter. Each sealed source will be assayed three times and the average compared to the activity displayed by the dose calibrator. The displayed activity must agree with the stated assay, within $\pm 10\%$ of the limits of the standard's calibration accuracy. If the unit displays readings with an error greater than $\pm 10\%$, the dose calibrator will be repaired or replaced.
- b. The dose calibrator will be checked for constancy each day of use. This will be accomplished using a Cs-137 standard. The sealed source will be placed in the chamber and the unit set to measure that nuclide. The activity displayed with background and decay considered, must fall within $\pm 10\%$ of the predicted activity based on the value obtained at the time of the last accuracy test.

The daily constancy check will be extended to include verification of displayed activities using the same standard but with the dose calibrator set to measure each of the different nuclides to be assayed on that day. With background and decay considered, variation in displayed activities must fall within $\pm 10\%$ of the activity shown at the time of the most recent accuracy check. If variations greater than $\pm 10\%$ are noted, the dose calibrator will be repaired or replaced.

If, you require additional information, please contact me for assistance. We thank you in advance for assistance with this pending licensing action.

Sincerely,

Michael W. Lairmore, M.S.