## Franciscan ST. ANTHONY HEALTH

June 16, 2011

FRANCISCAN ALLIANCE CORPORATE OFFICE Mishawaka Mr. James Mullauer Nuclear Regulatory Commission (james.mullauer@nrc.gov)

FRANCISCAN ST. ANTHONY HEALTH Crown Point

FRANCISCAN ST. ANTHONY HEALTH Michigan City

FRANCISCAN
ST. ELIZABETH HEALTH
Crawfordsville

FRANCISCAN ST. ELIZABETH HEALTH Lafayette Central

FRANCISCAN ST. ELIZABETH HEALTH Lafayette East

FRANCISCAN ST. JAMES HEALTH Chicago Heights

FRANCISCAN ST. JAMES HEALTH Olympia Fields

FRANCISCAN ST. MARGARET HEALTH

FRANCISCAN
ST. MARGARET HEALTH
Hammond

FRANCISCAN
ST. FRANCIS HEALTH
Beech Grove

FRANCISCAN ST. FRANCIS HEALTH Indianapolis

FRANCISCAN ST. FRANCIS HEALTH Mooresville

FRANCISCAN
PHYSICIANS HOSPITAL, LLC
Munster

Franciscan Alliance.org

Re: Request to grant exemption to use existing Cs137 sources (manufacturer Radiation

Therapy Resources)

Rf: NRC Material License No.: 13-19533-01

Control No.: 575080

Dear Mr. Mullauer:

As per our phone conversation yesterday, we are providing the following additional information:

## 1. Description of the exemption needed and the reason

We are requesting you grant us the permission to use our existing Cs137 sources (manufacturer Radiation Therapy Resources) for brachy therapy procedures. We need to provide these procedures for our patients with early state of gynecological cancer or to give boost dose post external beam therapy without radiating the dose to extra normal tissue. Brachy therapy with Cs137 sources using appropriate applicators such as the Fletcher suit, wang applicator vaginal cylinders of different sizes will achieve this goal and it will be effective therapy for such patients.

## 2. Description of Compensating Safety Measures

We received 14 Cs137 sealed sources from Radiation Therapy Resources on September 18, 1986. These sources are stored in a lead safe in a specially designed "sources storage room". Sources are color coded with serial numbers engraved on each source. Safe drawers are also marked distinctively for the sources strengths stored in each of the drawers. Lead bricks and L blocks are used to protect the personnel and minimize the radiation exposure in the surrounding area.

Only Physicist, Dosimetrist and Radiation Oncologist have access to the sources. Keys to the source storage room are strictly controlled. The only

other key is with the security of our hospital for emergency situations. Room doors are posted with appropriate Radiation Caution Sign.

We have been doing the quarterly inventory of the sources and radiation surveys outside the safe and all the adjacent areas and keep records. In addition, we perform source leakage tests for source integrity every six months. We found no problems of leakage of any sources.

In addition, we have verified these sources for its activities using a well chamber (model HDR1000Plus) calibrated by Accredited Dosimetry Calibration Lab twice. Once in January 2005 and June 2011 to compare with manufacturer provided values adjusted for decay. The difference we found was no more than about 3 percent.

We have been using the sources for brachy therapy for about the past 25 years and never had any misadministration or medical events. All the required precautions are followed. Radiation surveys are done after sources insertion and removal. Sources are immediately brought to source storage room and transferred to the safe and accounted for.

## 3. Discussion of Reasonable Alternatives

Alternatively, we considered HDR, but cost is prohibitively too high for the volume of procedures we are doing. The cost of HDR is \$250,000 to \$300,000 plus yearly cost of four source exchanges, maintenance and warranty is approximately an additional \$50,000.

The second alternative was to buy new cs137 sources from a current vendor. The cost of new sources would be \$100,000 or more, which would not be offset by our volume of procedures (total procedures from January 2006 to December 2010 was 33), the hospital may decide to get HDR in a few years after we move to a new cancer center within the hospital. In that case, new cs137 sources may not be that useful.

Therefore, we hope and request that the exemption be granted for the benefit of our patients.

If there are any questions, please contact Ram A. Basavatia. His telephone number is 219.757-6285.

Regards,

Karin Kolisz

VP, Clinical Services