

SAINT LUKES MEMORIAL HOSPITAL INC.

September 12, 2012

Docket No. 03010302
Mail Control Number: 577239

License No. 52-16061-01

Rubin L. Elliott,
Health Physicist
U.S Nuclear Regulatory Commission
Region I, 2100 Renaissance Blvd, Suite 100
King of Prussia, PA 19406-2713

SUBJECT: Additional information Requested.

Dear Miss Elliott:

This letter is in reference to the additional information required by e-mail on September 06, 2012. The Message received and the additional information is listed below.

- A. **You indicated in your last communication that the following radiation monitoring equipment will be used to perform radiation level, detection, measurement and removable contamination surveys for your license: LUDLUM M-14C and an uptake System well counter CAPINTEC Model CAPTUS-600 Spectrometer with a detector well type NaI (TI) 2" x2" crystal. Please clarify if this is not what you intended.**
- Yes, I would like To clarify that the hospital may use any other equipment under license to perform radiation level, detection, measurement and removable contamination survey.
- B. **Please provide leak test certificates for the sources transferred from the Calle Guadalupe Final location to the St. Luke's Memorial Hospital Machuelo location. Please note that per 10 CFR 35.67 if the activity of the sources was 100 microcuries or less for beta or gamma-emitting material or 10 microcuries or less of alpha-emitting material, no leak test is required.**
- Please see the leak test certificates included.

Please contact Mr. Carmelo Pérez at (787) 432-9320 if you need additional information regarding this matter.

Sincerely,



Pedro F. Barez Clavell, M.H.S.A
Executive Administrator
Saint Lukes Memorial Hospital INC.
Phone: (787) 844-2080 Ext: 1656 or 1657
E-mail: pbarez@sanlucaspr.com

Date: 02/14/2007

>>> Sealed Source Leak Test <<<

Date of Test - 02/14/2007 @16:20

*****>> STANDARD SOURCE <<*****

Isotope - Co-57 Serial # - 137S081G93
Type - ROD SOURCE Manufact. - DUPON
Activity - 0.10600 uCi on 08/16/2005 Currnt Act - 0.02617 uCi

*****>> COUNTING INSTRUMENT <<*****

Instrument Name - well600 Model Number - 600279
Manufacturer - CAPINT600 Serial Number - 600279
Last Calibration - 02/14/2007 Instrument ID - "01"

*****>> SEALED SOURCE TESTED <<*****

Isotope - Co-57 Serial # - 61512
Type - VIAL REFERENCE SOURCE Manufact. - NORTHAM
Activity - 11.0100 mCi on 12/01/2004 Currnt Act - 1.4053 mCi onTest Date

*****>> COUNTING DATA <<*****

Gross Std Srce Counts (Gstd) 40320 Standard Source Time..(Tstd) 1.0 Min
Standard Source Bkg... (Bstd) 56 Std Source Bkg Time... (Xstd) 1.0 Min
Net Std Count Rate.... (Rstd) 40264 Cpm
Gross Sample Counts... (Gsam) 58 Sample Count Time....(Tsam) 1.0 Min
Sample Bkg Counts.... (Bsam) 56 Sample Bkg Count Time. (Xsam) 1.0 Min
Sample Bkg Count Rate. (Rbkg) 56 Cpm Net Sample Count Rate. (Rsam) 2 Cpm

*****>> CALCULATION FORMAT <<*****

Net Std Count Rate (Rstd) = Gstd/Tstd - Bstd/Xstd Net Sample Count Rate (Rsam) = Gsam/Tsam - Bsam/Xsam
Instrument Net Std Cpm (Rstd) 40264 Cpm
Efficiency = ----- = ----- = 0.69932 Cpm/Dpm or 69.93 %
Standard Dpm 0.02617 uCi x 2200000 Dpm/uCi

(Note: Z = 1.65, Factor From Standard Normal Distribution z scale for 95% Confidence Interval)

Detection Limit = ----- + 2Z | ----- | 1 + ----- | | = 38 Cpm Net Sample Cpm!!
Tsam | Xsam | Tsam | | = 0.00002447 uCi

Wipe
Sample Net 2 Cpm
Activity = ----- = ----- = Activity <= Detection Limit of 0.000024 uCi
Std Cpm/uCi 1538495 Cpm/uCi

*****>> Comments and Recommendations <<*****

The Removable contamination on this sealed source is within the maximum
limit of 0.005 uCi Removable activity is <= Detection limit !
SAN LUKES EPISCOPAL
THIS TEST PASS

Carmelo Perez
physicist

Sealed Source Leak testing must be performed periodically in accordance
With Applicable Facility License Conditions-Consult Facility License
This source is due for its next Leak test by: Tuesday August 14, 2007

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Date: 02/14/2007
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>>> Sealed Source Leak Test <<<
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Date of Test - 02/14/2007 @16:35

*****>> STANDARD SOURCE <<*****
Isotope - Co-57 Serial # - 137S081G93
Type - ROD SOURCE Manufact. - DUPON
Activity - 0.10600 uCi on 08/16/2005 Currnt Act - 0.02617 uCi

*****>> COUNTING INSTRUMENT <<*****
Instrument Name - well600 Model Number - 600279
Manufacturer - CAPINT600 Serial Number - 600279
Last Calibration - 02/14/2007 Instrument ID - "01"

*****>> SEALED SOURCE TESTED <<*****
Isotope - Co-57 Serial # - 33231
Type - VIAL REFERENCE SOURCE Manufact. - NORTAMERI
Activity - 10.2200 mCi on 03/01/2003 Currnt Act - 253.2550 uCi on Test Date
*****>> COUNTING DATA <<*****

Gross Std Srce Counts (Gstd)	40322	Standard Source Time..(Tstd)	1.0 Min
Standard Source Bkg...(Bstd)	56	Std Source Bkg Time...(Xstd)	1.0 Min
Net Std Count Rate...(Rstd)	40266 Cpm		
Gross Sample Counts...(Gsam)	57	Sample Count Time....(Tsam)	1.0 Min
Sample Bkg Counts.....(Bsam)	56	Sample Bkg Count Time.(Xsam)	1.0 Min
Sample Bkg Count Rate.(Rbkg)	56 Cpm	Net Sample Count Rate.(Rsam)	1 Cpm

*****>> CALCULATION FORMAT <<*****

Net Std Count Rate (Rstd) = Gstd/Tstd - Bstd/Xstd Net Sample Count Rate (Rsam) = Gsam/Tsam - Bsam/Xsam

Instrument Net Std Cpm (Rstd) 40266 Cpm

Efficiency = ----- = 0.69935 Cpm/Dpm or 69.94 %

Standard Dpm 0.02617 uCi x 2200000 Dpm/uCi

(Note: Z = 1.65, Factor From Standard Normal Distribution z scale for 95% Confidence Interval)

	2			1/2	
Detection	Z	Rbkg	Xsam		
Limit	= ---- + 2Z	----	1 + ----	=	38 Cpm Net Sample Cpm!!
	Tsam	Xsam	Tsam	=	0.00002447 uCi

Wipe

Sample Sample Net 1 Cpm

Activity = ----- = Activity <= Detection Limit of 0.000024 uCi *OK*

*****>> Comments and Recommendations <<*****

The Removable contamination on this sealed source is within the maximum limit of 0.005 uCi Removable activity is <= Detection limit !
SAN LUKES EPISCOPAL
THIS TEST PASS

Carmelo Perez
Physicist

Sealed Source Leak testing must be performed periodically in accordance With Applicable Facility License Conditions-Consult Facility License This source is due for its next Leak test by: Tuesday August 14, 2007

Date: 02/14/2007

>>> Sealed Source Leak Test <<<

Date of Test - 02/14/2007 @15:45

*****>> STANDARD SOURCE <<*****

Isotope - Cs-137 Serial # - 139T081992
Type - ROD SOURCE Manufact. - DUPONT
Activity - 7.60000 uCi on 08/19/1992 Currnt Act - 5.44848 uCi

*****>> COUNTING INSTRUMENT <<*****

Instrument Name - well600 Model Number - 600279
Manufacturer - CAPINT600 Serial Number - 600279
Last Calibration - 02/14/2007 Instrument ID - "01"

*****>> SEALED SOURCE TESTED <<*****

Isotope - Cs-137 Serial # - S35600220
Type - VIAL REFERENCE SOURCE Manufact. - DUPON
Activity - 212.0000 uCi on 05/27/1987 Currnt Act - 134.7730 uCi on Test Date

*****>> COUNTING DATA <<*****

Gross Std Srce Counts (Gstd) 9987535 Standard Source Time..(Tstd) 1.0 Min
Standard Source Bkg...(Bstd) 54 Std Source Bkg Time...(Xstd) 1.0 Min
Net Std Count Rate...(Rstd) 9987481 Cpm
Gross Sample Counts...(Gsam) 55 Sample Count Time.....(Tsam) 1.0 Min
Sample Bkg Counts.....(Bsam) 54 Sample Bkg Count Time.(Xsam) 1.0 Min
Sample Bkg Count Rate.(Rbkg) 54 Cpm Net Sample Count Rate.(Rsam) 1 Cpm

*****>> CALCULATION FORMAT <<*****

Net Std Count Rate (Rstd) = Gstd/Tstd - Bstd/Xstd Net Sample Count Rate (Rsam) = Gsam/Tsam - Bsam/Xsam

Instrument Net Std Cpm (Rstd) 9987481 Cpm

Efficiency = ----- = ----- = 0.83322 Cpm/Dpm or 83.32 %

Standard Dpm 5.44848 uCi x 2200000 Dpm/uCi

(Note: Z = 1.65, Factor From Standard Normal Distribution z scale for 95% Confidence Interval)

2 - - - - 1/2
Detection Z | Rbkg | Xsam | |
Limit = ---- + 2Z | ---- | 1 + ---- | | = 37 Cpm Net Sample Cpm!!
Tsam | Xsam | Tsam |_| = 0.00002019 uCi

Wipe

Sample Sample Net 1 Cpm

Activity = ----- = ----- = Activity <= Detection Limit of 0.000020 uCi

Std Cpm/uCi 1833078 Cpm/uCi

*****>> Comments and Recommendations <<*****

The Removable contamination on this sealed source is within the maximum limit of 0.005 uCi Removable activity is <= Detection limit !

SAN LUKES EPISCOPAL

TEST PASS

Handwritten signature: Carmelo Perez, Physicist

Sealed Source Leak testing must be performed periodically in accordance With Applicable Facility License Conditions-Consult Facility License This source is due for its next Leak test by: Tuesday August 14, 2007

Date: 02/14/2007

>>> Sealed Source Leak Test <<<

Date of Test - 02/14/2007 @15:55

*****>> STANDARD SOURCE <<*****

Isotope - Cs-137 Serial # - 139T081992
Type - ROD SOURCE Manufact. - DUPONT
Activity - 7.60000 uCi on 08/19/1992 Currnt Act - 5.44848 uCi

*****>> COUNTING INSTRUMENT <<*****

Instrument Name - well600 Model Number - 600279
Manufacturer - CAPINT600 Serial Number - 600279
Last Calibration - 02/14/2007 Instrument ID - "01"

*****>> SEALED SOURCE TESTED <<*****

Isotope - Cs-137 Serial # - 54196
Type - VIAL REFERENCE SOURCE Manufact. - DUPON
Activity - 209.3000 uCi on 11/01/2004 Currnt Act - 198.5926 uCi onTest Date

*****>> COUNTING DATA <<*****

Gross Std Srce Counts (Gstd) 9987428 Standard Source Time..(Tstd) 1.0 Min
Standard Source Bkg...(Bstd) 56 Std Source Bkg Time...(Xstd) 1.0 Min
Net Std Count Rate...(Rstd) 9987372 Cpm
Gross Sample Counts...(Gsam) 55 Sample Count Time....(Tsam) 1.0 Min
Sample Bkg Counts.....(Bsam) 56 Sample Bkg Count Time.(Xsam) 1.0 Min
Sample Bkg Count Rate.(Rbkg) 56 Cpm Net Sample Count Rate.(Rsam) 0 Cpm

*****>> CALCULATION FORMAT <<*****

Net Std Count Rate (Rstd) = Gstd/Tstd - Bstd/Xstd Net Sample Count Rate (Rsam) = Gsam/Tsam - Bsam/Xsam

Instrument Net Std Cpm (Rstd) 9987372 Cpm

Efficiency = ----- = 0.83321 Cpm/Dpm or 83.32 %

Standard Dpm 5.44848 uCi x 2200000 Dpm/uCi

(Note: Z = 1.65, Factor From Standard Normal Distribution z scale for 95% Confidence Interval)

2 1/2

Detection Limit = ----- + 2Z | ----- | 1 + ----- | | = 38 Cpm Net Sample Cpm!!

Tsam | Xsam | Tsam | | = 0.00002054 uCi

Wipe

Sample Net 0 Cpm

Activity = ----- = ----- = Activity <= Detection Limit of 0.000021 uCi

Std Cpm/uCi 1833058 Cpm/uCi

*****>> Comments and Recommendations <<*****

The Removable contamination on this sealed source is within the maximum limit of 0.005 uCi Removable activity is <= Dectection limit !

SAN LUKES EPISCOPAL
THIS TEST PASS

Carmelo Perez
Physicist

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