

Dykert, Jason

From: Katanic, Janine
Sent: Friday, October 23, 2015 7:17 AM
To: Thompson, James; Vasquez, Michael; Whitten, Jack
Cc: Dykert, Jason
Subject: FW: Kona Hospital Cs137 Sealed Source Leak test.
Attachments: Prelim RAM Sealed Source report 10-2015 F2.pdf

FYI – here's the report. I have included Dykert so this can be set up as an LER. I told Dr. Sweeney that we would be in touch if we needed any additional information. If you want me to pop by there while I am on the Big Island, just let me know, it will not take long to only review this LER.

From: Lawrence Sweeney [mailto:lsweeney@nmnpc.org]
Sent: Thursday, October 22, 2015 11:46 PM
To: Katanic, Janine <Janine.Katanic@nrc.gov>
Cc: Melody Sulliban <MSulliban@hhsc.org>; Timothy Rude <trude@hhsc.org>
Subject: [External_Sender] Kona Hospital Cs137 Sealed Source Leak test.

Dear Dr. Katanic,

I am submitting a report and notification of the results of a detected leak in the Cs137 sealed Dose Calibrator Check Source. This occurred at the Kona Community Hospital, RML# 53-27729-0, this week. All previous tests and residual tests of the department were negative for contamination. The current activity of this source is 0.106 micro Ci. The detected leak sample measured 0.0073 micro curies. The Source has been removed from use.

Please see the attached Report.

If you need any additional information, please contact me.

Thanks you for your attention to this matter.

Sincerely,

Larry Sweeney, Ph.D.

*Larry Sweeney, Ph.D. FAAPM
ABR Radiological Physicist
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**Report of Leaking Sealed Source
Kona Community Hospital RML# 53-27729-01
Department of Imaging, Nuclear Medicine**

10-22-2015

During the routine Leak testing of the departmental sealed sources, the CS-137 Dose Calibrator Sealed Vial was found to be leaking. The preliminary testing is done with a calibrated Ludlum thin window GM Detector for activity reading above twice background (BKG = 0.025 mR/hr) at the window, on the sample. A sample exceeding this value is further analyzed. The results of the analysis and procedure are listed below.

The contamination resulted in a measured activity of 0.0073 μCi (see below). The lead container (PIG) was also tested and found to have a measured activity of 0.003 μCi . Although this is less than the action level of 0.005 μCi , I am also considering this contaminated. No other testing showed any contamination.

The source was contained in plastic and removed from use. This source and the container will be sealed and stored in the disposal safe until shipment to a disposal facility can be arranged.

Submitted by,

Lawrence E. Sweeney, Ph.D., FAAPM
ABR Radiological Physicist
Radiation Safety Officer

Results

SEALED RADIOACTIVE SOURCE LEAK TEST REPORT

Location: Nuclear Medicine
Kona Community Hospital
79-1019 Haukapila Street
Kealahou, HI 96750

Date: 20-Oct-15

RML #53-27729-01

Test Source:		Standard Source:	
Isotope:	Cs-137	Isotope:	Cs-137
Half Life:	10994.0 days	Half Life:	10994 days
Manufacturer:	IPL	Manufacturer:	RadQual
Model Number:	934-92-19	Model Number:	Rod
Serial Number:	934-92-19	Serial Number:	BM0813710092107
Activity:	0.2079 mCi	Activity:	0.1203 uCi
Date:	1-Dec-02	Date:	5-Apr-10
Activity Today:	0.1545 mCi	Activity Today:	0.1059 uCi

Counter Information:	
Manufacturer:	Atom Lab
Type:	100
Window:	Manual 660+100 keV

FWHM = 7.63%
661 keV maps to channel 446
HV = 1005

Count Information:		
Background:	57 counts in	1 minutes 57 CPM
Standard:	32708 counts in	1 minutes 32708 CPM
	NET	32651 CPM
	Efficiency:	3.08E+05 CPM/uCi
Minimum detectable activity:		7.35E-05 uCi
	Percent Efficiency:	13.89%
Test Source:	2321 counts in	1 minutes 2321 CPM
	NET	2264 CPM
	Activity:	0.007342394 uCi

Results:
NOT ACCEPTABLE Detected Activity >.005 uCi, remove source from service.

Physicist:

Larry E. Sweeney, Ph.D.
ABR Certified Radiological Physicist
Radiation Safety Officer

NORTHWEST MEDICAL PHYSICS CENTER

Lead Container:

SEALED RADIOACTIVE SOURCE LEAK TEST REPORT

Location: Nuclear Medicine
Kona Community Hospital
79-1019 Haukapila Street
Kealahou, HI 96750

Date: 20-Oct-15

RML #53-27729-01

Test Source:		Standard Source:	
Isotope:	Cs-137 container	Isotope:	Cs-137
Half Life:	10994.0 days	Half Life:	10994 days
Manufacturer:	IPL	Manufacturer:	RadQual
Model Number:	934-92-19	Model Number:	Rod
Serial Number:	934-92-19	Serial Number:	BM0813710092107
Activity:	0.2079 mCi	Activity:	0.1203 uCi
Date:	1-Dec-02	Date:	5-Apr-10
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Manufacturer:	Atom Lab
Type:	100
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FWHM = 7.63%
661 keV maps to channel 446
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Count Information:		
Background:	57 counts in	1 minutes 57 CPM
Standard:	32708 counts in	1 minutes 32708 CPM
	NET	32651 CPM
	Efficiency:	3.08E+05 CPM/uCi
	Minimum detectable activity:	7.35E-05 uCi
	Percent Efficiency:	13.89%
Test Source:	991 counts in	1 minutes 991 CPM
	NET	934 CPM
	Activity:	0.003029062 uCi

Results:
Acceptable: Activity less than .005 uCi,