

4/3/2019

U.S. Nuclear Regulatory Commission
Region 3
2443 Warrensville Road, Suite 210
Lisle, IL 60532-4352

Control Number: 611639

Dear Mr. Tran,

Per your e-mail request, I am providing the leak test information for item 6.C. (100 microcurie Am-241 sealed source) listed on Amendment 59 of our materials license (34-00507-16). This source was wipe tested on March 22, 2016 as documented on the attached GRC Radiological Survey #16-069. In April, this particular source, as well as several others in storage, was segregated and packaged in a drum for a waste shipment planned later that summer. The certificate of disposal as well as waste manifest documentation for this waste shipment were previously submitted under our March 13, 2019 correspondence.

Please call me if you need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'CTB', followed by a horizontal line extending to the right.

Chris Blasio
NASA GRC Radiation Safety Officer.

Enclosure: GRC Radiological Survey # 16-069

RADIOLOGICAL SURVEY FORM #1

Survey Location: Building 140, Hot Storage Room							Log No.: 16-069	
Purpose Of Survey: <input checked="" type="checkbox"/> Periodic <input type="checkbox"/> Job Coverage <input type="checkbox"/> Other: (describe below)							Time: 0730	
Quarterly leakage test of sealed sources							Date: 3/22/16	

Instrument(s)	Model	S/N	Cal Due	Bkgd	Efficiency (%)	MDA (dpm) ($\alpha/\beta\gamma$)	AL (cpm) ($\alpha/\beta\gamma$)
	S5XLB Unit 1	66510	4/15/2016	$\alpha = 0.07$ cpm $\beta\gamma = 0.73$ cpm	$\alpha = 25.15$ $\beta\gamma = 25.36$	14.16 / 21.79	N/A

ID	Description (e.g. "table top," "operator's seat," "on contact w/ shipping container")	Removable Contam. (dpm/100cm ²)		Direct Frisk (static) (cpm/100cm ²)				Dose Rate (identify units)	Other (identify units)
		α	$\beta\gamma$	α	$\beta\gamma$	α	$\beta\gamma$		
1	Am-241, 100 μ Ci, A-2 Capsule	<MDA	<MDA						
2									
3									
4									
5									
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25									

N/A

COMMENTS: 1-minute MDAs: alpha 14.2 dpm ($6.5 \times 10^{-6} \mu\text{Ci}$), beta 21.8 dpm ($1.0 \times 10^{-5} \mu\text{Ci}$).

Leak test in Sep 2015 showed small amount of detectable alpha activity (33dpm). The Dec 2015 and current leak test results have been below the alpha MDA (~14dpm).

MDA=Minimum Detectable Activity, AL=Action Level for direct frisking associated with unrestricted use limit

Performed by: C. Blasio (print/sign/date) 3/22/2016	Reviewed by: R. Case (print/sign/date) 3/22/16
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Sample Report

Batch ID:	Unknown 1+1 min Alpha then Beta - 201603220734	Count Date:	3/22/2016 7:34:32AM
Group:	A	Count Minutes:	1.00
Device:	S5XLB Unit-1	Count Mode:	Alpha then Beta
Batch Key:	1868	Operating Volts:	1440
Selected Geometry 1/4" Stainless Steel			

Background (cpm)		Efficiency (%)	
Alpha Rate:	0.07 ± 0.08	Alpha:	25.15 ± 0.18
Beta Rate:	0.73 ± 0.30	Beta:	25.36 ± 0.24

Sample ID	Sample Type	Alpha (dpm)	Unc	Alpha MDA (dpm)	Beta (dpm)	Unc	Beta MDA (dpm)	
20160322073432-A10	Unknown	3.71	3.99	14.16	5.00	7.98	21.79	-100 uCi Am-241
				6.5×10^{-6} uCi				1.0×10^{-5} uCi

Qty Leak Test

16-069- Rad Survey #

Reviewed by:

CAB

Tran, Frank

From: Blasio, Christopher J. (GRC-QSH0) <christopher.j.blasio@nasa.gov>
Sent: Wednesday, April 03, 2019 7:32 AM
To: Tran, Frank
Subject: [External_Sender] Re: Request for additional information for NRC License No. 34-00507-16
Attachments: RAI for source disposal, Am241 Leak Test_Apr2019.pdf

Hi Frank,

Here's the response with the leak test information. Let me know if you need anything else.

Thank you for your help with this matter.

R/
Chris B.

Chris Blasio, CHP, CIH
Radiation and Laser Safety Officer
NASA John H. Glenn Research Center
216.433.6520 (office) 216.903.9971 (mobile)

From: "Tran, Frank" <Frank.Tran@nrc.gov>
Date: Tuesday, April 2, 2019 at 10:38 PM
To: "Blasio, Christopher J. (GRC-QSH0)" <christopher.j.blasio@nasa.gov>
Subject: Request for additional information for NRC License No. 34-00507-16

Dear Mr. Blasio:

We have reviewed your letter dated March 13, 2019 requesting a removal of Am-241, Cs-137, and Pm-145 sealed sources listed in Items 6.C., 6.F., and 6.G. in NRC License No. 34-00507-16, Amendment No. 59. In order to delete those sources, we will need the last leak test for sources containing Am-241 if they exceed 10 uCi per source at the time they were disposed of.

Please provide your response with a signed cover letter including the record(s) above, if applicable, by May 2, 2019. (Attn: CN 611639). If you have any question regarding the above, please reply to this email or call me at 630-829-9623.

Thank you,

Frank Tran

Health Physicist/License Reviewer
NRC Region III/Division of Nuclear Materials Safety
Phone: 630-829-9623
Fax: 630-515-1078
Email: Frank.Tran@nrc.gov