



# DEPAUW UNIVERSITY

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July 18, 2016

To: US Nuclear Regulatory Commission, Region III  
ATTN: Frank Tran, Health Physicist/License Reviewer  
Division of Nuclear Materials Safety  
2443 Warrenville Road, Suite 210  
Lisle, IL 60532-4352  
(ph) (630)-829-9623  
(fax) (630)-515-1078

Dear Mr. Tran,

This letter is in response to our conversation regarding NRC License number 13-26020-01 for DePauw University about DePauw's responsibilities towards the decommissioning financial assurance (DFA) requirements outlined in 10 CFR 30.35(c)(1). Per our conversation, and after careful inspection of our current inventory (taking into account past purchases), I would like to amend our license to reflect reasonable quantities. With that, it just recently came to my attention that when we renewed our license in 2010, some of the items I asked to be included in our inventory were deleted. Therefore, I'd like to totally fix our license amounts as follows:

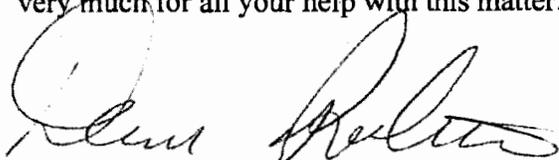
a. Radioisotope	b. Chemical and/or physical form	c. Maximum amount that licensee may possess at any one time under this license
A. Hydrogen-3	A. bound/non-volatile	A. 10 mCi (reduced from 200mCi)
B. Carbon-14	B. Any	B. 10 mCi (reduced from 50 mCi)
C. Phosphorus-32	C. Any	C. 25 mCi (reduced from 75 mCi)
D. Sulfur-35	D. Any	D. 25 mCi (reduced from 75 mCi)
E. Calcium-45	E. Any	E. This can be removed (reduced from 2mCi). We have never had this in our possession as far as I can tell.
F. Iodine-125	F. Any	F. This can be removed (reduced from 75mCi). We have never had this in our possession as far as I can tell
G. Iodine-131	G. Any	G. This can be removed (reduced from 75mCi). We have never had this in our

		possession as far as I can tell
H. Polonium-209	H. Any	H. 1 $\mu$ Ci (no change)
I. Cadmium-109	I. Dissolved in solution (non-volatile)	G. Not to exceed a total of 2 $\mu$ Ci – (reduced from 5 $\mu$ Ci) – our present amount is 0 due to decay, but we have purchased it in the past 15 years
J. Cobalt-57	J. Dissolved in solution (non-volatile)	J. Not to exceed a total of 1 $\mu$ Ci (no change)
K. Cerium-139	K. Dissolved in solution (non-volatile)	K. Not to exceed a total of 1 $\mu$ Ci (no change)
L. Mercury-203	L. Dissolved in solution (non-volatile)	L. Not to exceed a total of 1 $\mu$ Ci (no change)
M. Tin-113	M. Dissolved in solution (non-volatile)	M. Not to exceed a total of 1 $\mu$ Ci – Note – this form was removed from our license upon renewal – our present amount on hand is 0 due to decay – but it should be on the license
N. Strontium-85	N. Dissolved in solution (non-volatile)	N. Not to exceed a total of 1 $\mu$ Ci - Note – this form was removed from our license upon renewal – our present amount on hand is 0 due to decay – but it should be on the license
O. Cesium-137	O. Dissolved in solution (non-volatile)	O. Not to exceed a total of 1 $\mu$ Ci- Note – this form was removed from our license upon renewal – our present amount on hand of this form is 0 due to decay – but it should be on the license
P. Cobalt-60	P. Dissolved in solution (non-volatile)	P. Not to exceed a total of 1 $\mu$ Ci - Note – this form was removed from our license upon renewal – our present amount on hand is .5 $\mu$ Ci due to decay – we need this put back
Q. Yttrium-88	Q. Dissolved in solution (non-volatile)	Q. Not to exceed a total of 2 $\mu$ Ci- Note – this form was removed from our license upon renewal – our present amount on hand of this form is 0 due to decay – but it should be on the license
R. Lead-210	R. Dissolved in solution (non-volatile)	R. Not to exceed a total of 2 $\mu$ Ci – Note – this form was removed from our license. We have both liquid and a sealed source. We need this added back
S. Americium-241	S. Dissolved in solution (non-volatile)	S. 0 $\mu$ Ci – this form is not presently on our license – and we do not have any (nor have

		we ever had this form) – so we do not need to add this back.
T. Cadmium-109	T. Sealed Source (AEA Technology-Isotrak Model #QCRB4136)	T. Not to exceed a total of 2 $\mu$ Ci (no change)
U. Cobalt-57	U. Sealed Source (AEA Technology-Isotrak Model #QCRB4136)	U. Not to exceed a total of 2 $\mu$ Ci (no change)
V. Lead-210	V. Sealed Source (AEA Technology-Isotrak Model #QCRB4136)	V. Not to exceed a total of 2 $\mu$ Ci (no change)
W. Americium-241	W. Sealed Source (AEA Technology-Isotrak Model #QCRB4136)	W. Not to exceed a total of 1 $\mu$ Ci (no change)
X. Cesium-137	X. Sealed Source – P/N 598860	X. Not to exceed a total of 30 $\mu$ Ci. This is a sealed source located within our scintillation counter. While I recognize that it does not need to be present, I would like to add this as an assurance for when I am no longer RSO.
Y. Nickel-63	Y. Foil sources in detector cells approved for licensing purposes by the NRC or an Agreement State in accordance with 10 CFR 32.210	Y. We can remove this one from our possession. This was an ECD that was returned to the company in 2014, and thus is no longer in our possession.

As you can see, I have a lot of changes documented here. Please do not hesitate to call me if you have any questions at all about these issues. Several items were removed on our 2010 renewal, for reasons unbeknownst to me. Also, I just realized that a scintillation counter purchased in 2003 has a general license requirement on it, and thus I would like it added to our license and inventory to ensure that future RSO's recognize it exists (and deal with it appropriately). I've added that as item X. I believe some things were removed due to duplications, but please note that they are in different forms, and I outlined that as such.

Hopefully these changes in limits will fix any potential issues we may currently have with DFA requirements. Again, if you need further information, please do not hesitate to contact me either via phone (765-658-4606) or email ([droberts@depauw.edu](mailto:droberts@depauw.edu)). Thank you very much for all your help with this matter.



David Roberts, Ph.D., R.S.O.  
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## Tran, Frank

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**From:** David Roberts <droboters@depauw.edu>  
**Sent:** Tuesday, July 19, 2016 10:05 AM  
**To:** Tran, Frank  
**Subject:** [External\_Sender] Re: NRC License No. 13-26020-01  
**Attachments:** financialassurancerequirements\_july2016.pdf; ATT00001.txt

Hello,

Here is my document outline our response. As mentioned on the phone, I would like to simply reduce our limits to go below the threshold for the DFA requirements. Also, I would like to update our license limits to reflect our current inventory and to better reflect what we have purchased since I have been RSO (16 years). Some things were antiquated, and so I am removing them.

Please don't hesitate to contact me if you have any questions on what I have included here. I am amending quite a bit.

Thank you for all of your help on this. I appreciate it.

Dave Roberts