

From: "McCumbee, William D" <mccumbee@marshall.edu>
To: Thomas Thompson <TKT@nrc.gov>
Date: 3/29/05 7:22PM
Subject: RE: Possession limits for your NRC license 47-05972-02

License No. 47-05972-02
Control No. 136224

Dear Mr. Thompson,

I have a few concerns and questions regarding the proposed possession list that you sent for me to review.

A. Does condition 12 refer to the financial assurance restrictions?

B. Polonium-210

Although we do not currently possess any sealed sources that contain polonium-210, I would like to maintain the option of purchasing polonium-210 sealed sources when the need arises. At Marshall University, polonium-210 sealed sources are used in physical science courses to demonstrate alpha particle shielding and in Modern Physics to study alpha particle Rutherford scattering. The professor who teaches Modern Physics was unable to observe the angles of scattering that were of interest when he used 0.1-microcurie sources. Hence, a 20-nanocurie limit would be too low. My preference for polonium-210 would be to use the limit in Section 33.100, Schedule A as restricted to stay within the limits for our financial assurance. In our financial assurance worksheet, we used a sealed source limit of 1-millicurie for polonium-210.

C. Americium-241

In our current license, possession limits for americium-241 are listed twice: a 100 mCi sealed source limit and a 5-microcurie limit for "any chemical and physical form." The proposed 0.006-mCi limit for "any" is fine; however, we need a greater limit for sealed sources because we already have in our possession a 2-mCi sealed source, a 4.3 microcurie sealed source, and a 0.01-microcurie source. A sealed source limit of 100 mCi, as is in our current license, is probably excessive for our needs. A limit in the range of 5 to 10-mCi would be more realistic.

E/F. Cesium-137

I would like to retain the option of replacing the source in the Amersham Model 773 calibrator with a source of up to 165-mCi. A 100-mCi limit for the source in the ICN Model 375 is fine. How does the possession of these 2 calibrators affect our possession of smaller sealed sources? In our financial assurance worksheet, we used a sealed source limit of 265.5-mCi for cesium-137.

H. Iodine-129

The combined activity of the three iodine-129 sources that we possess approaches the proposed possession limit of 0.0002-mCi. Does this mean that we will need a license amendment to purchase another source or can we purchase other iodine-129 sources as long as we stay within the limits of Schedule A, Section 33.100 as restricted for financial assurance considerations?

I. Cobalt-60

Does the sealed source model limit mean that we must have a license amendment to replace either of these ICN375 sources with currently available IPL brand NRC-registered sources since ICN no longer manufactures the ICN375? The possession limit is fine.

Thank you, in advance, for answering my questions and considering my requests.

Sincerely,

Will McCumbee

-----Original Message-----

From: Thomas Thompson [mailto:TKT@nrc.gov]

Sent: Thursday, March 24, 2005 1:10 PM

To: McCumbee, William D

Subject: Possession limits for your NRC license 47-05972-02

(dkt. 03001142) MC 136224

I have reviewed your January 31, list of requested sealed sources and put together a possession list for your license which looks as though it would cover your needs. Please look at this list and indicate if this covers your request. (see attached file)

Thank you again.

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Subject: RE: Possession limits for your NRC license 47-05972-02
Creation Date: 3/29/05 7:21PM
From: "McCumbee, William D" <mccumbee@marshall.edu>
Created By: mccumbee@marshall.edu

Recipients

nrc.gov
kp1_po.KP_DO
TKT (Thomas Thompson)

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Files	Size	Date & Time
MESSAGE	3482	03/29/05 07:21PM
Mime.822	4602	

Options

Expiration Date: None
Priority: Standard
Reply Requested: No
Return Notification: None

Concealed Subject: No
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