



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION I  
2100 RENAISSANCE BLVD.  
KING OF PRUSSIA, PA 19406-2713

May 5, 2022

Richard H. Parker, Executive Director, USATA  
U. S. Army Aviation and Missile Command  
U. S. Army TMDE Activity (USATA)  
AMAM-TMD-SR, Building 5417  
Redstone Arsenal, AL 35898-5000

SUBJECT: U. S. ARMY AVIATION AND MISSILE COMMAND, U. S. ARMY TMDE  
ACTIVITY (USATA), REQUEST FOR ADDITIONAL INFORMATION, MAIL  
CONTROL NO. 630630

Dear Mr. Parker:

This is in reference to your application dated March 28, 2022, requesting to amend NRC License No. 01-00126-16. In order to continue our review, we need the following additional information:

1. After reviewing the Sealed Source and Device (SSD) Registration NR-1138-D-106-S, we have two concerns regarding the request to change [correct?] the model number of the device from N40-2DD-A to the N40-2S.
  - a. The SSD registration does not authorize the use of plutonium in this irradiator. According to your application, you plan to replace the plutonium beryllium (PuBe) source with an americium-beryllium (AmBe) source. Although the use of the PuBe source in the irradiator appears to have been accepted in 2012 as use of a sealed source/device without a registration in accordance with 10 CFR 32.210(g)(2), please note that this regulation limits those sources to less than 200 millicuries of any radionuclide except tritium. Confirm that the AmBe source will be in accordance with the requirements of the SSD Registration.
  - b. The SSD registration clearly describes differences in the N40-1 and N40-2D storage shields, although it does not specify which storage shields are in the N40-2S. It describes the sources in the N40-2D device model to be in a different storage configuration than the sources in the N40-2S device model. It also states that the N40-2D has a maximum activity for approved sources which is lower than the maximum activity for the N40-2S. Based on your application, you plan to replace the PuBe source with an AmBe source in the higher quantity for which the N40-2S shielding and configuration is required.

For the device which you currently possess, described as the N40-2D model, please describe the actual shielding in the device and to which device model the shielding pertains; and describe the actual storage configuration which is in the device and to which model it pertains. It does not seem reasonable to simply change the identification plate without confirming that the actual design will meet the requirements of the SSD registration for the intended new source of higher

activity than is authorized for the N40-2D device model, the different shielding of the two models and the different source storage configuration of the two models.

2. If the current identification plate on the device you currently possess, described as the N40-2DD-A model, is incorrect, explain how and when it was determined that the device model requested and approved was not the device model authorized and received. If you are aware of any actions taken by the manufacturer to determine if this occurred with other customers, and any corrective actions taken by the manufacturer, that information should also be provided.

We will continue our review upon receipt of this information. Please reply to my attention with a pdf of a signed letter directly to [Elizabeth.Ullrich@nrc.gov](mailto:Elizabeth.Ullrich@nrc.gov).

In order to continue prompt review of your application, we request that you submit your response to this letter within 30 calendar days from the date of this letter.

An electronic version of the NRC's regulations is available on the NRC Web Site at: [www.nrc.gov](http://www.nrc.gov). Additional information regarding use of radioactive materials may be obtained on the NRC Web Site at: <http://www.nrc.gov/materials/miau/mat-toolkits.html>. This site also provides the link to the toolbox for updated information on the revised regulations for naturally-occurring and accelerator-produced radioactive materials (NARM).

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web Site at: <http://www.nrc.gov/reading-rm/adams.html>. Please be aware that you may request that certain portions of your submittal to NRC be withheld from public disclosure as proprietary information. To do this, you must execute an affidavit as specified in 10 CFR 2.390. You must list all portions that you wish to be held proprietary, along with your reasoning as to why that is appropriate. While it is allowable, please refrain from submitting proprietary information in support of a license unless necessary. Keep in mind that all NRC licenses are considered to be in the public domain, and therefore may be viewed by any member of the public who requests to see them.

If you have any questions regarding this request for additional information, please contact me at (610) 337-5040 (office) or (240) 704-4575 (cell) or by electronic mail to the address above.

Thank you for your cooperation.

Sincerely,

Betsy Ullrich, Senior Health Physicist  
Commercial, Industrial, R&D  
and Academic Branch  
Division of Radiological Safety and Security  
Region I

License No. 01-00126-16  
Docket No. 030-12630  
Mail Control No. 630630

cc: Dr. shen Zhu, Radiation Safety Officer

U. S. ARMY AVIATION AND MISSILE COMMAND, U. S. ARMY TMDE ACTIVITY (USATA),  
REQUEST FOR ADDITIONAL INFORMATION, MAIL CONTROL NO. 630630  
DATED MAY 5, 2022

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**SUNSI Review Complete:** Betsy Ullrich

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