

From: [Xu, Shirley](#)
To: [James Blute](#)
Cc: [Herrera, Tomas](#); [Rolland, Joey](#); [Nicky Blute](#); [Jimmy Failla](#); [Hammond, Michelle](#); [Poy, Stephen](#)
Subject: Viken Detection New License Application, Request for Additional Information
Date: Wednesday, August 31, 2022 9:00:43 PM

Mr. Blute,

Thank you for the response dated July 25, 2022. Below are some additional questions regarding your response.

1. In our letter dated July 11, 2022, under question #6, we stated that “provide updated dose rates reflecting the possible maximum activity of 6 mCi.” Please provide information supporting compliance with 10 CFR 32.31 (a)(1), (a)(2), and (b) with maximum activity of 6 mCi.
2. On Page 6, Table 2 “Radiation Profile for Pb200e Shutter Open with a 6 mCi source” indicated that the highest dose rate at 30 cm is 0.06 mrem/hr. On page 12 of your application dated March 16, 2022, it stated that “The highest dose rate at 30 cm is 0.06 mrem per hour.” Please explain why the dose rate at 30 cm for 5 mCi Co-57 is the same as 6 mCi.
3. On Page 6, Table 2 in the response dated July 25, 2022, the dose rate of 6 mCi Co-57 at 5 cm are lower than the dose rate at the same distance (5 cm) with 5 mCi Co-57 listed in the Table 6.2 on page 29 in your application dated March 16, 2022. Please explain why the dose rate are higher with lower Co-57 activity (5 mCi).
4. On page 7, response dated July 25, 2022, it stated “The maximum dose rate at 30 cm was approximately 70 uR/hr (0.07 mR/hr).” As stated in the paragraph, this refer to 3x5 mCi, i.e. 15 mCi total. Based on your calculation, 6 mCi dose rate at 30 cm is: $0.07 \text{ mR/hr} (6 \text{ mCi}/15 \text{ mCi})=0.028 \text{ mR/hr}$.
On Page 17, application dated March 16, 2022 stated that “The highest dose rate from the instrument at 30 cm from the device loaded with a 5 mCi source and the shutter closed was measured at 0.035 mrem/hour? Please explain the reason why 5 mCi dose rate is higher than 6 mCi does rate with the same distance.

We will continue our review upon receipt of this information. If we do not receive a reply from you within 10 calendar days from the date of this email, we will assume that you do not wish to pursue your application.

In accordance with 10 CFR 2.390 of the U.S. Nuclear Regulatory Commission’s (NRC’s) “Agency Rules of Practice and Procedure,” a copy of this letter will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records component of the NRC’s ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html>.

If you have any questions regarding the Sealed Source and Device Registration you can contact Joey Rolland at (301) 415-4059 or by email at Joseph.Rolland@nrc.gov.

For questions related to the exempt distribution license, please contact me at (301) 415-7640 or email at Shirley.xu@nrc.gov.

Best regards,

Shirley Xu

U.S. Nuclear Regulatory Commission

Office of NMSS

Mail Stop: T5B60

Washington, D.C. 20555-0001

Office: 301.415.7640