

**From:** [Sara Forster](#)  
**To:** [Inglis, Tonyea](#)  
**Subject:** Additional Information re Stowers Institute for Medical Research Amendment request adding iron-55, NRC License No. 24-32242-01, CN 635314  
**Date:** Thursday, June 08, 2023 10:56:00 AM

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Good morning, Tonyea:

This message is in response to Stowers Institute for Medical Research's (your) request to add an authorization for iron-55 in any unsealed form to the license. The request included a possession limit of 20 millicuries for the added iron-55, which has a half-life exceeding 120 days.

Upon review, we have noted that the license authorizes two additional radionuclides – tritium and carbon-14 – with half-lives exceeding 120 days. The possession limits for those radionuclides are currently 300 and 60 millicuries, respectively.

We have noted that adding an iron-55 authorization with a 20 millicurie possession limit to the license, while leaving the tritium and carbon-14 possession limits unchanged, would trigger NRC's requirement for decommissioning financial assurance as stated in Title 10 of the *Code of Federal Regulations Section 30.35(d)*:

"Table of required amounts of financial assurance for decommissioning by quantity of material... Greater than [1000] but less than or equal to [10,000] times the applicable quantities of appendix B to part 30 in unsealed form. (For a combination of isotopes, if R, as defined in § 30.35(a)(1), divided by [1000] is greater than 1 but R divided by [10,000] is less than or equal to 1.) ... \$225,000"

Using the sums of combined requested possession limits divided by Appendix B values for tritium, carbon-14, and iron-55 values –

$$0.3 \text{ Ci}/1 \text{ Ci} + 0.06 \text{ Ci}/0.1 \text{ Ci} + 0.02 \text{ Ci}/0.1 \text{ Ci} =$$

$$0.3 + 0.6 + 0.2 =$$

1.1, which is greater than 1.

We have noted that – for the requested possession limits – financial assurance would be required in the amount of \$225,000 or a decommissioning cost estimate and funding plan with associated amount.

In accordance with the above, **please indicate any adjustments to your possession limits which would remove the financial assurance requirements OR provide financial assurance in accordance with 10 CFR 30.35.** Please respond via signed and dated letter as a pdf file, attached to an email, within 14 days of this message (on or before June 22, 2023).

Sincerely,

**Sara A. Forster, Health Physicist**  
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