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**Subject:** Request for additional information  
**Date:** Thursday, June 17, 2021 7:19:00 AM

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License No.: 06-13022-02

Docket No: 030-01295

Control No: 624907

Licensee Name: UConn Health

This refers to your request to update your Decommissioning Funding Plan (DFP) dated March 4, 2021. In order to continue our review of your request, the following additional information is needed:

Based on the possession limits of your license and 10 CFR Part 30.35, you are required to submit a DFP. NUREG 1757 Vol. 3 Rev. 1 Consolidated Decommissioning Guidance Financial Assurance, Recordkeeping, and Timeliness provides licensees guidance on what to submit regarding DFPs. Based on the Checklist 1 Master Checklist for Decommissioning Financial Assurance (Page A-4) you need to provide the DFP (checklist 3) and Statement of Intent (checklist 11-A). Based on these checklists, please provide the following:

Section A.3.3 "Submitting the Required Documentation," of NUREG 1757 Vol. 3 Rev 1 provides information to licensees regarding the documents to submit for a DFP. As stated in the NUREG, the DFP must include a site-specific cost estimate, a means to adjust the estimate based on inflation, a Certificate of Financial Assurance, and an originally signed duplicate of the Financial Assurance instrument.

1. Please provide an updated Certificate of Financial Assurance if anything on the current one dated December 1, 2017, has changed or if the revisions to the DFP made as a result of this request dictate a higher amount. (If the only change is to the amount, please wait to submit until we have agreed on the final DFP amount)
2. Please provide the following information relative to the Statement of Intent (SI) dated December 1, 2017:
  - a. The document references the following locations: 263 Farmington Ave, 11 Shuttle Road, and 400 Farmington Ave; however, your DFP only addresses the Farmington Ave addresses. The SI needs to include the addresses of all locations where licensed materials requiring Financial Assurance (FA) are used/stored. As a broad scope licensee, that means all addresses listed on the license should be included, unless there is a tie-down commitment or some other license condition that limits certain locations only to material for which FA is not required. Please indicate why all addresses are not covered by the DFP.
  - b. Confirm that the authority established in the document referenced: "Description of Authority of Government Entity to Make Statement of Intent License Number; 06-13022-02," is still valid, or provide an updated reference.
  - c. If the revisions needed as a result of this request dictate a higher amount of FA, please generate a new SI for the new amount. (If the only change is to the amount, please wait to submit until we have agreed on the final DFP amount.)

3. With regard to the DFP, the license authorizes four locations: 230, 263, and 400 Farmington Avenue and 11 Shuttle Road and your DFP only addresses two locations. See item 2a above.
- a. Please confirm that if only short-lived isotopes and sealed sources are used at 230 Farmington Avenue, that you will continue to restrict use in this way and maintain leak test records of sealed sources to confirm that none have leaked.
  - b. Please indicate why 11 Shuttle Road is not included in the DFP.
  - c. While comparing the 2017 DFP to the 2021 DFP there a number of significant reductions in cost for items such as disposal costs to decontaminate areas known to be contaminated or identified during characterization, disposal of collected radioactive materials, disposal of contaminated equipment; however, the only change appears to be the reduction in active labs from seven to none.
    - i. If you performed the decommissioning of those seven labs, provide the results of the final status surveys that demonstrate that these labs no longer are required to be considered in the DFP. Confirm that, if these laboratories are approved for use with licensed materials in the future, they will be included again in the cost estimate for the next update of the DFP.
    - ii. The cost estimate that was submitted does not have the level of detail as identified below, therefore it is difficult to determine if the current plan adequately addresses the current needs. While the tables provided in the Appendix are not required to be used, the detail laid out in these tables appears to be missing in your plan.
      1. Appendix A Section A.3.1.1 discusses the information to be submitted to adequately evaluate the facilities involved in eventual decommissioning. For example, although your plan references 234 labs that will be evaluated, your plan does not include the dimensions of the labs, or the number of fume hoods, glove boxes, lab benches, sewer lines and ductwork associated with these labs. Because you are a broad scope license, you may make some assumptions regarding the typical dimensions of most labs and account for any labs that are significantly different. Please review the NUREG again and update your plan to provide the stated detail.
      2. Appendix A Section A.3.1.2 discusses the information to be submitted for Estimated Decommissioning costs. Again, the information that you have provided does not provide the detail needed to adequately evaluate the decommissioning costs. For example, although section IV of your plan covers performing scoping surveys and determining impacted areas and classifications, clearing impacted labs in preparation for characterization surveys, performing final status surveys, etc., it does not include the Table in A.3.6 planning and preparation information such as: all the personnel involved in completing the tasks and the associated overhead costs. Please review the NUREG again and update your plan to provide the stated detail.
  - c. As a general comment, you have referenced using RESRAD-BUILD DCGLs in several sections of the plan. Note that the use of site-specific DCGLs, (DCGLs other than the NRC screening values or those generated using the DandD code) requires prior approval by the NRC, by submitting an amendment request for the site-specific values. Such an amendment should include the input parameters and the basis for selecting those parameters; a sensitivity analysis of the input parameters; and output data from the code you are using to develop the site-specific DCGLs.
  - d. It is not clear what the is the scope of the plan. Based on what was presented it appears that there is no active use, there are 2 PIs authorized to use RAM, 4 known labs that contain long lived residual contamination, 6 labs that are presently authorized for RAM use, and 234 labs that would be subject to characterization surveys. Further,

the plan estimates that 11 labs may be discovered as having some contamination less than 2200 dpm/cm<sup>2</sup> and none greater than that based on your experience in decommissioning the Veterans Administration Building.

- i. Does the 234 number include all laboratories that could possibly have been involved with radioactive material use or storage? If not, what is the criteria used for selecting these laboratories?
  - ii. What is the total number of laboratories that exist at UConn or the total number of laboratories in the departments that have any history of radioactive material use?
  - iii. Indicate why the Veteran's Administration Building is a reasonable comparator for determining percentages of impacted laboratories.
  - iv. Does the estimate of the number of impacted laboratories include consideration of associated drain lines, hoods and ventilation ducts, or other building infrastructure.
- f. In Section II, "Decommissioning Objectives, Activities, and Tasks," and Section IV, "Perform Final Status Surveys (FSS) in Deconned Areas," it states that FSSs will be conducted in areas that required decontamination. Does this mean that FSSs will not be conducted in other laboratories? This would only be possible if the characterization surveys are designed correctly to meet FSS requirements. Please indicate if your intention is to design your characterization surveys to meet the FSS criteria or revise the estimate to include FSSs of all areas.
- g. In Section V, a table is included using the D and D Building Occupancy Scenario. Using these values rather than the approved screening values for P33, Fe59, Co57, As76 and Sr90 will involve NRC regional approval. Additionally, there is no need to include I125, Tc99m, and Hg203 as their half-life is less than 120 days.
- h. With regard to your Co-60 irradiators, an increase correlated to the CPI back to 2001 is not a good estimate of actual disposal costs. Either obtain an updated quote from your vendor or revise your estimate to more accurate data. A search on the disposal costs of Co-60 sources revealed a 2008 National Academy of Sciences report that quotes the cost of disposal alone for 300 Ci of Co-60 as \$130,000.
- i. Appendix A Section A.3.1 states that the site-specific estimate **must be based** on an independent third party performing the work. You have stated, "Our plan is to have the necessary staff from the Office of Radiation Safety with all required radiation detection equipment remain onsite until all surveys, decontamination and waste disposal are accomplished." Please clarify if you have included the labor costs for all activities associated with the plan at the third-party rates. In addition, please update your plan to include the May 2020 salary rate of \$40.29 from the Department of Labor's Bureau of Labor Statistics for Nuclear Technicians. The HPS society conducted a salary survey for 2020 for Medical RSOs. Please use the updated figures from that survey of \$145,636/year for Medical RSOs.
- j. It is noted that the release of the Red Cross Blood Center and Uncas on Thames Hospital in 1998, did not include a submission of any FSSs. It was stated that Uncas on Thames licensed material use was limited to isotopes with half-life less than 120 days or sealed sources, which were leak tested every six months and never revealed any contamination. The Red Cross Blood Center, however, did include use of C-14. It was stated that the final decommissioning survey was conducted on June 14, 1991, but that survey was not submitted to the NRC for review. This survey may need to be reviewed at the time of license termination.

Your reply must be an originally signed and dated letter. The letter may be scanned and submitted as a pdf document attached to an email (preferred method during the pandemic); or it may be

transmitted by facsimile to (610) 337-5269; or it may be sent by regular mail. Please reply within 30 calendar days from the date of this e-mail, in order for us to continue our prompt review of your submission.

Regards,

*Robin L. Elliott*

(Pronouns: she/her/hers)

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