

## Naquin, Tyrone

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**From:** Adams, Mary  
**Sent:** Thursday, February 18, 2010 4:21 PM  
**To:** Mengers, Timothy F.  
**Cc:** O'Brien, Thomas; Baker, Merritt; Thompson, Richard  
**Subject:** RE: NIST D&D funding analysis, NRC comments  
**Attachments:** NIST Decomm Cost Est Comments 2-18-10.doc

Hi Tim and Tom,

Here are our comments on the decommissioning cost estimate. I will send them formally later this week or next.

I hope they are timely for you to include responses to them in your revised renewal application.

Please call if you have questions about the comments,

Mary

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Review of National Institute of Standards and Technology Response to RAI on  
Decommissioning Funding Plan Cost Estimate

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NRC reviewed NIST's responses to RAI Numbers D-1a, D-1b, D-1c, and D-2, requesting additional information on labor costs, contingency factor, means for adjusting the cost estimate, and substantiation of the estimated costs associated with decommissioning Building 245. NRC staff have the following questions:

RAI D-1a: The labor costs in the cost estimate are based, according to page 3 of 13 of the introduction to the cost estimate, on a third-party contractor using "nationwide mean salaries" for the appropriate labor categories based on the "latest available data" from the Bureau of Labor Statistics (BLS). The assumptions state that labor costs include salary and fringe, and a rate of 75% was applied for overhead costs. Although neither the assumptions nor Table 3.12, "Worker Unit Cost Schedule," state whether the overhead rate also includes contractor profit, paragraph 7.8 on page 11 of 13 does state that "A 75% multiplier is also added to account for profit to the contractor performing the decommissioning work." Provide support for the labor cost estimates, as follows:

- Provide a citation to the BLS document(s) and data schedules that are the source of the worker cost (wages, salaries, and fringe) data, and specify the date of that data;
- Clarify whether "nationwide mean salaries" for the labor categories are at least equal to third-party salaries for those labor categories in a relatively high-cost area at the site of the facility in Gaithersburg, MD. NRC recommends the use of BLS State, regional, or metropolitan labor cost data instead of national level data.
- If the BLS data are not current, the worker costs should be escalated using the appropriate BLS Employment Cost Index (ECI) so that they provide estimates of compensation (wages, salaries, and fringe) as of 2009. If the labor costs are escalated, the indices used for the data should be identified and the formula given for the calculation of the escalation factor.
- Add a clarification to the assumptions and Table 3.12 that the 75% overhead rate includes contractor profit.

RAI D-1b: The revised cost estimate appears to address RAI D-1b adequately.

RAI D-1c: Section 3.0, "Process," states that "NIST management advised us [Philotec, Ltd.] to use existing routine contamination surveys to determine the likely extent of contamination in laboratory areas." Section 4.1 then explains that

“overall outside dimensions were used for equipment, components, and furnishings” and “a waste fraction was then applied based on the anticipated percentage of equipment expected to be contaminated” in developing estimates of volume of radioactive waste. Although never stated explicitly, the waste fraction is apparently the category “Fraction RW” that appears in subsequent tables. Add information to the “Process” section confirming that the surveys were conducted at the NIST facility, the types and number of “routine contamination surveys” that were used, types of any survey meters used, and how recently the surveys were conducted, and to provide additional detail on how the survey data were used to calculate the waste fractions.

RAI D-2: Detailed estimates are provided for the costs of packaging, shipping, and disposal of radioactive wastes in Table 3.14. Page 4 of 13 states that “waste mass is multiplied by marketplace rates for waste processing and disposal.” However, no source is provided for those “marketplace” rates. The waste processing is assumed to take place at a licensed facility in Oak Ridge, Tennessee. The processing facility should be identified and the cost estimate should either state that its rates are the basis for the estimate or provide information about any other rate basis. Similarly, Table 3.16 provides an estimate for laboratory costs, but does not supply a source for the estimate. Provide additional support for the assumptions about marketplace rates and laboratory costs, similar to the information provided for the costs of transferring sealed sources to the U.S. Department of Energy.

RAI D-2: Appendix C of the cost estimate provides a separate estimate for the costs of decommissioning the accelerator areas of Building 245. This cost estimate is based on limited release followed by long-term monitoring. According to page 10 of 13, complete remediation of the accelerator spaces would involve load-bearing walls and require complete demolition of all of Building 245. Therefore, this portion of the cost estimate is based on the assumption that “the sub basements containing those accelerators will be secured [e.g., locked shut] and long-term monitoring instituted, until activation products decay to levels acceptable for unconditional release.”

A footnote to Table 3.10, “Site Stabilization and Long-Term Surveillance” indicates that the duration of the surveillance period is estimated at 20 years. Provide a discussion of the basis for the 20-year surveillance period, considering the amount of activation components present at the beginning of decommissioning and their half-lives.

The Radiological Scoping Report at pages 9 of 10 to 10 of 10 correctly notes that “restricted release means that conditions are placed on future uses of the site. Common restrictions include legally enforceable institutional controls, such as deed restrictions and describing what the property can and cannot be used for.” However, Appendix C does not provide a cost estimate for any such long-term surveillance activities. Table 3.10, “Site Stabilization and Long-Term

Surveillance (Work Days)” and Table 3.11, “Total Work Days by Labor Category,” both indicate that over the 20-year period, only 19 clerical work days will be devoted to the “security” activity. All other work days by project manager and HP technician staff are devoted to annual sampling and quarterly surveys. Explain whether over the 20-year period the only site restrictions will be limited to locked doors, or whether additional restrictions, potentially including warning signs or legally enforceable institutional controls will be employed. In addition, verify the apparent assumption that clerical level personnel will be adequate to monitor and enforce the access restrictions and develop and implement institutional controls, if institutional controls are employed, and that less than one day per year will be sufficient to monitor and enforce any institutional controls.