

August 25, 2008

Dr. Wade Richards, Manager of Operations and Engineering  
NIST Center for Neutron Research  
National Institute of Standards and Technology  
U.S. Department of Commerce  
100 Bureau Drive, Mail Stop 8561  
Gaithersburg, MD 20899-8561

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING FINANCIAL  
QUALIFICATIONS AND DECOMMISSIONING FUNDING FOR THE NATIONAL  
INSTITUTE OF STANDARDS AND TECHNOLOGY TEST REACTOR  
APPLICATION FOR LICENSE RENEWAL (TAC NO. MD3410)

Dear Dr. Richards:

We are continuing our review of your application for renewal of Facility Operating License No. TR-5 for the National Institute of Standards and Technology test reactor dated April 9, 2004, as supplemented on October 2, 2006; and May 30, and August 14, 2007. During our review, questions have arisen for which we require additional information and clarification. As we discussed with you during our telephone conversation of August 12, 2008, please provide responses to the enclosed requests for additional information no later than 45 days from the date of this letter. In accordance with 10 CFR 50.30(b), your response must be executed in a signed original under oath or affirmation. Following receipt of your response, we will continue our review of your application.

If you have any questions regarding this review, please contact me at 301-415-2784.

Sincerely,

**/RA/**

William B. Kennedy, Project Engineer  
Research and Test Reactors Branch A  
Division of Policy and Rulemaking  
Office of Nuclear Reactor Regulation

Docket No. 50-184

Enclosure: As stated  
cc w/enclosure: Please see next page

cc:

Environmental Program Manager III  
Radiological Health Program  
Air & Radiation Management Adm.  
Maryland Dept of the Environment  
1800 Washington Blvd  
Suite 750  
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Director, Department of State Planning  
301 West Preston Street  
Baltimore, MD 21201

Director, Air & Radiation Management Adm.  
Maryland Dept of the Environment  
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Baltimore, MD 21230

Director, Department of Natural Resources  
Power Plant Siting Program  
Energy and Coastal Zone Administration  
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Annapolis, MD 21401

Marilyn J. Praisner, President  
Montgomery County Council  
100 Maryland Avenue  
Rockville, MD 20850

Test, Research, and Training  
Reactor Newsletter  
University of Florida  
202 Nuclear Sciences Center  
Gainesville, FL 32611

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REQUEST FOR ADDITIONAL INFORMATION  
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
NATIONAL BUREAU OF STANDARDS REACTOR  
DOCKET NO. 50-184

As required by CFR 50.33(f)(2), "Applicants to renew or extend the term of an operating license for a nonpower reactor shall include the financial information that is required in an application for an initial license." To comply with this requirement, please provide the following updated and supplemental information to the April 9, 2004 National Institute of Standards and Technology (NIST) application (the application) for a renewed license for the National Bureau of Standards Reactor (NBSR).

1. Per 10 CFR 50.33(d), "Contents of applications; general information," certain information is required from the applicant, NIST. The application indicates that NIST is a Federal institution, but does not provide the other information required by the regulation. The NRC staff requests that the applicant state the organizational form of NIST and supply the required information that pertains to NIST. Also, please state whether NIST is owned, controlled, or dominated by an alien, foreign corporation, or foreign government, and if so give details.

2. The staff will analyze NIST's financial statements for the current year, which are required by 10 CFR 50.71(b), to determine if NIST is financially qualified to operate the NBSR. Since NIST's financial statements are not included in the application, please provide a copy of the latest financial statements for the NRC staff's review.

3. As required by 10 CFR 50.33(d)(2), "The applicant shall submit estimates for total annual operating costs for each of the first five years of operation of the facility." Since the information provided in the 2004 submittal is now out of date, please provide the projected operating costs for each of the years fiscal year (FY) 2009 to FY2013 (the first five-year period after the projected license renewal) as well as NIST's source(s) of funding to cover the operating costs for the above fiscal years.

4. The application references a decommissioning cost estimate developed by Duratek, Inc. (2004). The application states that "the total estimated cost in 2003 for complete Decommissioning, Decontamination, and Disassembly costs (excluding NIST direct costs) is \$30.2 million," (which indicates a 25% contingency factor). The application also states that in order "to obtain a complete estimate, the direct costs to NIST must be added," which was estimated to be \$25.9 million dollars (with no contingency factor).

The staff needs the following additional information to complete its review of the NBSR decommissioning costs:

- a. To comply with 10 CFR 50.75(d)(2)(i), update the NBSR decommissioning cost estimate in Table 17.1 by providing a current cost estimate in FY2009 dollars (to meet the NRC's radiological release criteria for decommissioning the facility for unrestricted use) as well as the basis for the cost estimate (if the 2004 Duratek, Inc. estimate is still the basis for the cost estimate, please so state). Also, update the NIST direct costs shown in Table 17.2 to FY2009 dollars.

- b. Provide a summary of total decommissioning costs by labor, waste disposal, other items (such as energy, equipment, and supplies), and a 25% contingency factor for the costs in both Tables 17.1 and 17.2.
- c. Explain the basis for not including a contingency factor into the direct costs identified in Table 17.2.
- d. Clarify whether decommissioning funding assurance will be provided for the total costs of decommissioning (i.e., \$56.1 M 2003 dollars), including both “external” and “NIST direct” costs, or only the “external” costs. If NIST intends to provide decommissioning funding assurance only for the “external” costs, provide a justification for not including NIST direct costs.
- e. To comply with 50.75(d)(2)(iii), the applicant must “provide a description of the means of adjusting the cost estimate and associated funding level periodically over the life of the facility.” Since section 17.1.2 of the application identified a cost adjustment formula prepared by Duratek, Inc., confirm whether that formula will be the means of adjusting NIST’s cost estimate and associated funding level periodically over the life of the facility. Also, provide a detailed numerical example, using the formula, showing how the 2009 cost estimate will be updated periodically.

5. The applicant includes a statement of intent (SOI) as the method to provide decommissioning funding assurance, as provided for by 10 CFR 50.75(e)(1)(iv). The NIST SOI certifies “that congressional appropriations for decommissioning of the NIST Center for Neutron Research (NCNR) reactor will be requested when necessary.” Where the applicant intends to use a statement of intent as the method to provide decommissioning funding assurance, the staff must find that the applicant “...is a Federal, State, or local government licensee...” under 50.75(e)(1)(iv). To make this finding, the applicant must state that it is a Federal Government organization and that the decommissioning funding obligations of the applicant are backed by the Federal Government, and also provide corroborating documentation to the statement. Further, the applicant must provide documentation verifying that the signator of the statement of intent is authorized to execute said document that binds the applicant. This document may be a governing body resolution, management directives, or other form that provides an equivalent level of assurance.

Since the application does not include all of the above information, please submit the following:

- a. An updated SOI, which includes the current (2009 dollars) cost estimate for decommissioning (for which decommissioning funding assurance is being provided; i.e., “external” and “NIST direct” costs) and the signator’s oath or affirmation attesting to the information.
- b. Documentation that corroborates the statement in the application that NIST is a Federal institution and a Federal Government licensee under 10 CFR 50.75 (e)(2)(iv).

- c. A statement as to whether the decommissioning funding obligations for the NIST NBSR are backed by the Federal Government. The application must also present information that corroborates this statement. For example, the documentation may be a copy of or complete citation to a federal statute that expressly provides that the obligations, or at least the decommissioning funding obligations, of the applicant are obligations backed or supported by the full faith and credit of the Federal Government, or an opinion of the applicant's General Counsel with citations to statutes, regulations, and/or case law that the obligations, at least with respect to the decommissioning funding obligations, of the applicant are obligations backed or supported by the full faith and credit of the Federal Government.
- d. Documentation verifying that the signator of the SOI is authorized to execute such a document that binds the applicant financially. For example, provide a copy of an official NIST delegation of authority showing that the signator of the SOI is authorized to bind NIST financially, at least with respect to funding the decommissioning of the NBSR.