

**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555**

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

DOCKET NO. 50-30

AMENDMENT TO FACILITY LICENSE

Amendment No. 14  
License No. TR-3

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment to Facility License No. TR-3, filed by the National Aeronautics and Space Administration (the licensee), dated January 9, 2009, as supplemented by a submittal dated October 6, 2009, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will be maintained in conformity with the amended license, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public;
  - E. This amendment is issued in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
  
2. Facility License No. TR-3 is hereby amended in its entirety to read:
  - A. This license applies to the heterogeneous light-water cooled and moderated test reactor referred to as the Plum Brook Reactor Facility (hereinafter referred to as "the reactor" or "PBRF"). The PBRF includes all associated and site support facilities except for the Mock-Up Reactor (MUR) which is under separate License R-93, Docket No. 50-185. The PBRF is owned by National Aeronautics and Space Administration (NASA), an independent agency of the United States Government and located at the NASA Plum Brook Station near Sandusky, Ohio. The PBRF is described in the application for the full-term license dated January 10, 1964 and amendments thereto.

3. NASA is authorized to decommission the facility in accordance with the Decommissioning Plan for the Plum Brook Reactor Facility approved by the Commission by issuance of license amendment dated March 20, 2002, as revised pursuant to paragraph 3.A.1 below, and to perform Final Status Surveys in accordance with the Final Status Survey Plan for the Plum Brook Reactor Facility submitted by letters dated May 12, 2006 and February 9, 2007 and revised pursuant to paragraph 3.A.1 below.
  - A. This amendment authorizes inclusion of the Decommissioning Plan for the Plum Brook Reactor Facility and the Final Status Survey Plan for the Plum Brook Reactor Facility and their supplements as supplements to the Safety Analysis Report pursuant to 10 CFR 50.82(b)(5).
    1. The licensee may make changes to the above plans and revisions without prior U.S. Nuclear Regulatory Commission approval provided the proposed changes do not:
      - a. Require Commission approval pursuant to 10 CFR 50.59;
      - b. Reduce the coverage requirements for scan measurements;
      - c. Increase the derived concentration guideline level and related minimum detectable concentrations (for both scan and fixed measurement methods);
      - d. Use a statistical test other than the Sign test or the Wilcoxon Rank Sum test for evaluation of the final status survey;
      - e. Result in significant environmental impacts not previously reviewed;
      - f. Increase the radioactivity level, relative to the applicable derived concentration guideline level, at which an investigation occurs;
      - g. Increase the Type I decision error;
      - h. Decrease an area classification (i.e., impacted to unimpacted; Class 1 to Class 2; Class 2 to Class 3; Class 1 to Class 3).
    2. The licensee shall provide the U.S. NRC notification of any changes to the planned decommissioning schedule that will extend the completion date of December 31, 2010.
    3. DELETED
    4. Before backfilling or performing actions that would otherwise render an area inaccessible for survey:

- a. The final status survey or the portion of the final status survey covering the affected area shall be performed.
  - b. The completed final status survey for the affected area and a technical or safety justification demonstrating the need to perform the intended actions shall be submitted to the U.S. NRC.
  - c. Concurrence that the proposed actions may be performed shall be received via telephone, email, or letter from the U.S. NRC.
- B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses the NASA Test Reactor:
- 1. Pursuant to Section 104c of the Act and 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," to possess, but not operate the reactor in accordance with the procedures and limitations described in the application and this license;
  - 2. Pursuant to the Act and 10 CFR Part 30, "Rules and General Applicability to Domestic Licensing of Byproduct Material," and Part 70, "Domestic Licensing of Special Nuclear Material," to possess, but not to separate, such byproduct and special nuclear materials as may have been produced by operation of the facility.
  - 3. DELETED
  - 4. Pursuant to the Act and Title 10, CFR, Chapter 1, Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source, or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components.
- C. This license shall be deemed to contain and is subject to the conditions specified in Part 20, 30, 50, 51, 55, 70, and 73 of 10 CFR Chapter 1, to all applicable provisions of the Act, and to the rules, regulations, and orders of the Commission now or hereafter in effect.
- D. Technical Specifications
- The Technical Specifications contained in Appendix A, as revised through Amendment No. 13, are hereby incorporated in the license. The licensee shall maintain the reactor in accordance with the Technical Specifications.
4. Prior to termination of this license, NASA shall assess the residual activity in Plum Brook between the Plum Brook Station and Sandusky Bay and demonstrate that the area meets the radiological criteria for unrestricted use specified in 10 CFR 20.1402.

5. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Keith I. McConnell, Deputy Director  
Decommissioning and Uranium Recovery  
Licensing Directorate  
Division of Waste Management  
and Environmental Protection  
Office of Federal and State Materials  
and Environmental Management Programs

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