



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 4 TO

FACILITY LICENSE NO. R-93

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

DOCKET NO. 50-185

1.0 INTRODUCTION

By letter dated February 27, 1989, as supplemented on June 22, 1989, the National Aeronautics and Space Administration (NASA) requested changes in the Technical Specifications of Facility License No. R-93 for the Plum Brook Mock-Up Reactor (MUR). The requested changes would update portions of the organizational structure of the Lewis Research Center presented in the Technical Specifications.

2.0 EVALUATION

The MUR is located at the Plum Brook Station of NASA's Lewis Research Center. The reactor was shutdown in January 1973 and all special nuclear material has been removed from the site. The reactor is currently licensed under a "possession-only" license which authorizes NASA to possess, but not operate, the reactor. The only radioactive material remaining at the reactor is byproduct material in the form of activated reactor components and contamination that resulted from reactor operation. Research projects at the NASA Plum Brook Station were shutdown during the mid 1970s and the Station was placed under the direction of the Administrative Directorate of the Lewis Research Center. Reactivation of non-nuclear test facilities at the NASA Plum Brook Station has resulted in administrative responsibility for the Station being reassigned to the Aeronautics Directorate. Within the Aeronautics Directorate, the Aeropropulsion Facilities and Experiments Division will be responsible for the reactor through the Plum Brook Station Management Office.

The Aeropropulsion Facilities and Experiments Division will be responsible for meeting Technical Specification 3.1.2 which requires that resources be provided to maintain the MUR in protected safe storage, which is defined by Technical Specification 1.2.1 as "the custodial state of undefined duration characterized by physical and procedural access control and periodic monitoring, maintenance and inspection." NASA shall continue to provide whatever resources are required to maintain the MUR in a condition that poses no hazard to the general public or to the environment as required by Technical Specification 3.1.

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The Radiation Safety Officer (RSO), a member of the Environmental Health and Chemical Analysis Branch, will continue to be responsible for the radiological control and monitoring programs as required by Technical Specification 3.1.4. As a result of the organizational change, the RSO will report to the Director of the Aeronautics Directorate in matters concerning the radiation safety of the facility.

The staff concludes that the requested changes in the technical specifications are organizational changes in management at the Lewis Research Center. The administrative controls of the Technical Specifications will continue to be in place including oversight by the RSO. The facility will continue to be maintained in protected safe storage with no alteration of reactor systems or components. The new management of the NASA Lewis Research Center will continue to meet all requirements of the Technical Specifications. Based on the above discussion the staff concludes that these changes are acceptable.

### 3.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes in the category of recordkeeping, reporting, and administrative procedures and requirements. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

### 4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously evaluated, or create the possibility of a new or different kind of accident from any accident previously evaluated, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed activities, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

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Dated: October 12, 1989