SAFETY EVALUATION BY THE OFFICE OF FEDERAL AND STATE MATERIALS AND

ENVIRONMENTAL MANAGEMENT PROGRAMS

SUPPORTING AMENDMENT NO. 13 TO FACILITY LICENSE NO. TR-3

AND AMENDMENT NO. 9 TO FACILITY LICENSE NO. R-93

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

PLUM BROOK REACTOR FACILITY

DOCKET NOS. 50-30 AND 50-185

## 1.0 INTRODUCTION

By letter dated May 18, 2005, as supplemented by letters dated July 11, 2005, May 12, 2006, January 10, 2007, and February 9, 2007, the National Aeronautics and Space Administration (NASA), the licensee, requested amendments to Facility Licenses (TR-3 and R-93). The amendments to the licenses include revisions to the Technical Specifications (TS), and incorporates a Final Status Survey Plan (Revision 1). The same Technical Specifications set applies equally to both licenses.

A "Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing" was published in the *Federal Register* (72 FR 46521) on August 20, 2007. The U.S. Nuclear Regulatory Commission (NRC) has received no public comment on this finding.

The NASA Plum Brook Reactor Facility (PBRF), which operated from 1961 to 1973, is located within a fenced area in the northern portion of NASA's Plum Brook Station. The Plum Brook Station is located about 6-km (4-mi) south of Sandusky, Ohio, about midway between Cleveland and Toledo, south of Lake Erie, and just north of the Ohio Turnpike. The Plum Brook Station is surrounded by farmlands and low density housing. The PBRF currently has two 10 CFR Part 50 facility licenses: License No. TR-3 for a 60-megawatt materials test reactor, and License No. R-93 for a 100-kilowatt swimming pool, Mock-Up Reactor (MUR). Besides the test and research reactors, the PBRF includes a seven-cell hot laboratory complex, reactor operations and laboratory support facilities, and areas of environmental contamination. These facilities and areas require radiological decontamination.

Upon approval of the Decommissioning Plan, these two licenses were amended on March 20, 2002, to allow decommissioning of the facility. The facility is to be decommissioned with the end objective being removal and disposal of remaining radioactive materials, release of the 11-ha (27-acre) facility for unrestricted use, and termination of the NRC licenses. The radiological criteria for license termination to allow unrestricted use are set forth in 10 CFR Part 20, Subpart E, "Radiological Criteria for License Termination."

## 2.0 BACKGROUND

The current Technical Specifications contain some requirements that are not typically included in Research Reactor Technical Specifications since they are regulatory requirements that are normally satisfied through compliance with the regulations invoked by the License. Further, some of the current specifications would be deleted in this revision since the decommissioning process has significantly reduced the source term remaining at the facility. In addition, the format of the existing Technical Specifications is inconsistent with the formatting recommendations of ANSI/ANS-15.1, 1990, "The Development of Technical Specifications for Research Reactors". For example, section 1.2.2 of ANSI/ANS-15.1 indicates that in the recommended format, the “Applicability” and “Objective” discussions provide important information but only the “Specification” section is governing. The wording and format of the current Technical Specifications contains “Applicability” and “Objective” statements that appear to be governing statements. This lends itself to difficulty in understanding and applying the intent of some of the Technical Specifications and the need for the decommissioning staff to seek interpretations of their meanings and applicability. The revised Technical Specifications are written in a format that is consistent with that presented in ANSI/ANS-15.1, and intended to more clearly state the requirements that must be implemented and conditions under which the requirement must be met.

The requirements after the approval of the decommissioning plans for non-power reactor licensees are in 10 CFR 50.82(b)(6). This regulation states that the Commission will terminate the license if it determines that decommissioning was performed in accordance with the approved decommissioning plan, and the terminal radiation survey and associated documentation show that the facility and site are suitable for release in accordance with the criteria for decommissioning in 10 CFR Part 20, Subpart E.

## 3.0 EVALUATION

### 3.1 Section 1 of the Technical Specifications titled “Introduction” is revised as follows:

The current section titled “Introduction” and the “Scope” and “Application” subparagraphs that follow are replaced with an introductory statement numbered section 1.0. The introductory statement in this revision states that the Technical Specifications apply to all activities conducted under the provisions of the Licenses. It clarifies that the reactors are both shutdown and defueled and that there is no fuel remaining at the facility. The discussion relating to the history of the facility and the former “possess but do not operate” status has been removed since this discussion is not germane to the decommissioning process that is currently in progress as authorized by the reactor licenses.

The staff concludes that the format changes and additional information to clarify the current status of the facility are administrative in nature and are acceptable.

### 3.2 Section 2 of the Technical Specifications titled “Definitions” is revised as follows:

Section 2.0, “Definitions” is renumbered as section 1.1 in conformance with the ANSI/ANS-15.1 format, and the definitions that follow are numbered as subparagraphs with the format 1.1.x.

3.2.1 The definition of “containment” is revised from “a closure on the overall facility or a volume within the facility” to “a closure on a volume within the facility”. The revised definition reflects the fact that there is no closure on the overall facility. Further, the applicable specifications that apply this definition generally refer to localized containments over a specific area or volume of the facility.

3.2.2 The definition of “decommissioning” is deleted since this term is clearly defined in 10 CFR 50.2 and that definition is consistent with the definition that has been deleted.

3.2.3 The definition of “non-operable” was replaced with standard definitions of “operable” and “operating” to be consistent with industry standards.

3.2.4 The definition of “protected safe storage” was deleted since this term is not used in any of the Technical Specifications and is not relevant to the facility.

3.2.5 The definitions related to “radioactive material” and “contaminated material” were deleted as existing regulatory definitions and industry standards provide adequate definitions.

3.2.6 The definitions of “should”, “shall”, and “may” are deleted as the standard dictionary definitions for these terms are adequate and enforceable in the context of these Technical Specifications.

3.2.7 The definition of “unrestricted area” is deleted as this term is defined adequately in 10 CFR 20.1003.

3.2.8 The definition of the term “kept dry” has been deleted since this term is no longer used in the specifications. The revised Technical Specifications have replaced the term “kept dry” in the “Response to Alarms” section with quantitative criteria.

The staff concludes that the changes to format and definitions are acceptable since these changes are administrative in nature. The revisions to the definitions section either clarify terminology and/or delete terminology (e.g. decommissioning, unrestricted area) that is already defined in the regulations or standard reference sources. The definition of terms that are clearly defined in applicable regulatory documents are not required and adds unnecessarily to the Technical Specifications.

3.3 A new section 2.0 titled “Safety Limits and Limiting Safety System Settings” is added to the Technical Specifications as follows:

The standard format for research reactor Technical Specifications recommended by ANSI/ANS-15.1 includes a section 2 that discusses “Safety Limits and Limiting Safety System Settings”. Since the Plum Brook Reactor Facility is in a decommissioning status and has no new or irradiated fuel remaining on site, these limits are no longer applicable. A section 2.0 is inserted in the revised Technical Specifications that includes an explanation that there are no Safety Limits or Limiting Safety System Settings applicable to the facility.

The staff concludes that this revision is administrative in nature and acceptable. This change incorporates a new section to the Technical Specifications consistent with the format in the

ANSI/ANS-15.1 guidance document. The new section states that there are no Safety Limits or Limiting Safety System Settings applicable for this facility, since: (1) the facility is being decommissioned and the reactors cannot be operated; and (2) there is no new or irradiated fuel on site, and no remaining activities that could lead to a breach of the fission product barrier or an inadvertent or uncontrolled criticality.

3.4 Sections 3.1 and 4.1 relating to “Access Control” are revised as follows:

The “Applicability” and “Objective” sections are revised to conform to the ANSI/ANS-15.1 format and governing type statements have been moved to the specification section, as applicable.

The current Technical Specification requirement for issuance of security badges has been deleted. Access authorization will be governed by site procedures that assure that unauthorized access is prevented consistent with the objective and bases section of section 3.1. In addition, the current specification requiring controlling access to radiologically controlled areas in accordance with 10 CFR Part 20 requirements has been deleted from section 3.1 and replaced with requirements in section 3.4. Section 3.4 requires a radiological protection program that meets the requirements of 10 CFR 20.1101, which will also assure the implementation of regulatory requirements applicable to control of access to radiologically controlled areas.

The requirement in section 3.1 to provide radiological monitoring prior to ingress and egress from the facility has been revised to require radiological monitoring prior to egress. This is consistent with the stated objective to prevent uncontrolled release of radiological hazards from the facility.

The current Technical Specifications contain no surveillance section related to Access Controls. The revision includes a section 4.1 surveillance section that requires a verification that the perimeter fence gates are locked at the end of the work day and a verification that the keys issued during the work day for access through the gates have been accounted for. In addition, the requirement to periodically audit the control of keys has been deleted since the existing wording is non-specific in that “periodically” is a term subject to individual judgment and is inappropriate in the context of this specification. Since control of keys is a Technical Specification, the "Audit Requirements” of section 6.9 of the revised Technical Specifications will assure an annual audit of these requirements.

The staff has concluded that the changes to the Access Control are acceptable. The proposed revision to sections 3.1 and 4.1 of the Technical Specifications will provide an adequate level of assurance that effective controls are implemented to control access to the facility in such a manner that inadvertent exposures to radiological hazards from unauthorized access is prevented and that authorized personnel, vehicle, and material egress are adequately monitored to prevent inadvertent or unmonitored movement of radiological hazards out of the facility. The revision adds requirements for surveillance and annual audits which should ensure access controls remain effective.

3.5 Sections 3.2 and 4.2 related to “Alarm Response” are revised as follows:

The specifications related to the Containment Vessel Door Open alarm have been removed from this section and incorporated into the specifications related to “Containment”.

The specifications related to sump level alarms have been revised to provide quantitative criteria on when sump level alarms are required rather than the subjective criteria of “kept dry”. The requirements imposed by the revised Technical Specification provide controls that assure that loose surface contamination does not become entrained with water resulting from ground water intrusion into building sumps if the pumps fail to function automatically. The quantitative limit is based on a calculation that demonstrates that the quantity of radioactivity that could be flushed into a sump if it overflowed and the pump then restarted would not result in a liquid effluent concentration greater than the limit specified in section 3.4(2).

The requirement for the sump alarms to annunciate at the Plum Brook Station Communications Center has been revised to require that the alarms annunciate at a remote manned location which is typically the Plum Brook Station Communications Center. This change affords the flexibility to provide a different manned location for the alarm function in the event future staffing changes at the Plum Brook Station result in a reduced manning level at the existing communications center. In this event, the alarm functions can be routed to other manned locations such as the Glenn Research Center Communications Center or a privately contracted security service.

The staff concludes that the revisions to “Alarm Response” in sections 3.2 and 4.2 are acceptable, and would result in no adverse impact to public health and safety. In this revision, the Containment Vessel Door Open alarm specifications are incorporated in specifications related to “Containment” (section 3.3), and specification related to sump level alarms are revised to provide quantitative criteria on when sump level alarms are required rather than the subjective criteria of “kept dry”. In addition, this revision requires that sump alarms annunciate at any alternate location manned by trained staff that will provide the equivalent level of notification to PBRF Management.

3.6 Sections 3.3 and 3.4 relating to “Containment” and “Ventilation Systems” and the associated Section 4 “Surveillance Requirements” are revised as follows:

The current Technical Specifications contain requirements relating to containment and ventilation systems in sections 3.3 and 3.4, respectively. Since the objectives of these specifications are to provide controls on the release of airborne radioactivity to the environment and they are directly related to one another, they have been combined into one section (section 3.3 Containment). This section addresses the controls placed on activities that have the potential to produce airborne radioactivity by imposing limitations on the containment and ventilation systems that will be used to control the airborne activity.

The applicability section has been revised to reflect the fact that airborne activity must be controlled during all decommissioning activities rather than only during the time period that a “major portion of the source term is present”. This revision assures that the control of airborne activity will continue even after the major source term is removed. In addition, the objective has been revised to more clearly reflect the fact that this section is intended to protect the workers, the environment, and the public from exposure to airborne radioactivity.

The proposed specifications incorporate the existing requirements that activities with the potential to produce airborne radioactivity in excess of one Derived Air Concentration (DAC) be controlled through the use of containment with a High Efficiency Particulate Air-filtered (HEPA) ventilation system. In addition, the proposed specifications have been revised to clarify that the

requirements to maintain the Containment Vessel in a condition that would control airborne activity when the Containment Vessel is serving the role of a containment device to mitigate activity in excess of one DAC.

The surveillance requirements in the proposed section 4.3 provide for verifications that the containment devices are capable of performing their intended function of control of airborne radioactive material prior to the system being placed in service and daily while in operation.

The activities that could produce excessive airborne radioactivity during the decommissioning project include various cutting and disassembly work on systems and components, and aggressive decontamination activities and demolition of concrete structures. These activities are routinely evaluated during the planning phase for their potential to create airborne radioactivity. In addition, radiological controls practices implemented through the radiation protection program provides for regular monitoring for radiological hazards as the work is in progress.

The staff concludes that the current requirements relating to containment and ventilation are directly related, and it is reasonable to combine them into one section. Further, the specifications incorporate the existing requirements that activities with the potential to produce airborne radioactivity in excess of one DAC be controlled through use of containment with a HEPA filtered ventilation system. These requirements provide assurance that the health and safety of the workers is protected. It also provides assurance that the nearest receptor in the offsite public would not be exposed to airborne radioactivity in excess of restrictions imposed by 10 CFR Part 20. Therefore, the staff has determined that these revisions are acceptable.

3.7 Sections 3.5 and 3.6 relating to “Radiation and Effluent Monitoring” and the associated Section 4 “Surveillance Requirements” are revised as follows:

The current Technical Specifications include controls on the systems and processes and the monitoring programs used to ensure that radiological protection programs and effluent controls and limitations are consistent with the restrictions of 10 CFR Part 20. These requirements have been combined into a single section numbered section 3.4 in the revised format.

NRC regulations in 10 CFR Part 20 impose requirements to implement a written radiological protection program and provide criteria that those programs must meet. The revised Technical Specifications invoke the requirements of 10 CFR Part 20 and impose a requirement to implement the program through written plans and procedures. The regulatory requirements provide criteria against which the program can be assessed and both qualitative and quantitative criteria can be evaluated. Accordingly, the revised specifications remove requirements that were subjective and open to interpretation, and instead provide for a program that can be assessed. It eliminates subjective statements such as “devices shall be used, as necessary, within PBRF and appropriately located support activities in progress”, and replaces them with specific requirements to locate air particulate samplers at the fence boundaries. The proposed revision requires a documented program for monitoring of radiological hazards, protection of the workers, and controlling exposure to the public to below the levels specified in 10 CFR Part 20. In addition, the revision imposes a specific written plan that defines sample locations and protocols for environmental media sampling.

The existing specifications related to the Reactor Tank Nitrogen Purge Monitoring have been deleted since the Reactor Tank has been removed and the purge system is no longer in operation, thus eliminating this potential release point.

The specifications relating to the required number and sensitivity requirements for radiation monitoring equipment have been deleted. The imposition of a 10 CFR Part 20 compliant radiation protection plan carries with it an implied requirement to have the necessary functional and calibrated instrumentation to implement the plan.

The existing specifications contain requirements in the surveillance section relating to Lower Limits of Detection for sample analysis. This has been deleted since the Environmental Media Sampling and Analysis Plan, which is invoked by the revised Technical Specification, contains the sampling protocols and required sensitivities to assure that the 10 CFR Part 20 effluent requirements are satisfied.

The staff concludes that the changes relating to radiation and effluent monitoring and associated surveillance requirements are acceptable. The proposed revision to section 3.4 Technical Specification requirements and the associated section 4.4 surveillance requirements will provide assurance that a program is implemented that assures the worker exposure to radiological hazards is maintained “As Low as is Reasonably Achievable” (ALARA) and in compliance with 10 CFR Part 20 limits. In addition, they assure that effluents from the facility are adequately monitored to protect the public and environment from radiological hazards.

3.8 Sections 5.0 relating to “Site Features” has been revised as follows:

This section has been revised to conform to the format suggested in ANSI/ANS-15.1 and to more accurately reflect the current site conditions that have evolved as the decommissioning program has progressed.

The staff concludes that the changes related to site features are administrative in nature and acceptable.

3.9 Sections 6.0 relating to “Administrative Controls” has been revised as follows:

The last sentence currently in section 6.3 reads, “The PgM [NASA Decommissioning Program Manager] will serve as the primary point of contact between GRC [Glenn Research Center] and the USACE [U.S. Army Corp of Engineering] Project Manager.” This section has been revised by deleting this sentence since USACE no longer has an active role in the Decommissioning Project.

The last sentence currently in section 6.5 reads, “The Senior Project Engineer will have direct authority over all activities that take place at the PBRF and will be the primary interface with the USACE Resident Engineer.” This sentence is revised to read “The Senior Project Engineer will have direct authority over all activities that take place at the PBRF and will be the primary interface with on-site Contractors supporting the Decommissioning project.” This sentence is revised since the USACE no longer has an active role in the decommissioning project.

The last sentence of the first paragraph in section 6.7 currently reads, “The authority to fulfill this responsibility and perform these functions will be granted by Chairman of the Glenn

Executive Safety Board." This sentence is revised to read, "The authority to fulfill this responsibility and perform these functions will be granted by Chairman of the NASA Safety, Health, and Environmental Board." This sentence is revised to reflect a change in title of the Executive Safety Board. The functions of the board as they apply to the PBRF are unchanged.

The requirement in section 6.7(7) for the Decommissioning Safety Committee (DSC) to perform an annual review has been relocated to section 6.9.2 to incorporate it into the annual review performed at the direction of the NASA Safety, Health, and Environmental Board. A statement is added to section 6.7(6) indicating that the DSC reviews are not necessarily "in line" reviews for prior approval.

Sections 6.7(6) and 6.8(3) have been revised by removal of the term "unreviewed safety question" and replacing it with wording consistent with the requirements of 10 CFR 50.59.

The second sentence currently in section 6.9.2 reads, "Personnel performing these reviews shall be appropriately qualified and experienced, and shall be members of, or appointed by the Executive Safety Board." This sentence is revised to read, "Personnel performing these reviews shall be appropriately qualified and experienced, and shall be members of, or appointed by the NASA Safety, Health, and Environmental Board." This sentence is revised to reflect a change in title of the Executive Safety Board. The functions of the board as they apply to the PBRF are unchanged.

Section 6.10 is revised by removal of the requirement to have Level 3 approval of temporary procedure changes. Since this paragraph applies only to temporary changes that do not affect the intent of a procedure, such changes are controlled through site established administrative procedures.

The staff concludes that the revisions related to Administrative Controls reflect minor organization changes, and therefore are acceptable.

3.10 Figure 1 "Organization Chart" of the proposed Technical Specifications is revised as follows:

The proposed change to the organization chart reflects the change in the name of the Executive Safety Board to the "NASA Safety, Health, and Environmental Board" and depicts the direct reporting relationship of the Health Physics and Radiation Protection staff to the NASA Project Radiation Safety Officer.

The staff concludes that the proposed revision to the organization chart, which depicts a direct reporting relationship of the Health Physics and Radiation Protection Staff to the NASA Project Radiation Safety Officer, would appear to enhance organizational communication; and therefore is acceptable.

3.11 Paragraph 2.A of License TR-3 is revised by changing the last sentence to read:

"The PBRF is described in the application for the full-term license dated January 10, 1964 and amendments thereto." The revision eliminates the list of past amendment submittals consistent with License R-93 for the Mock-Up Reactor.

The staff concludes that this change is administrative and streamlines the license by eliminating a list of past amendment submittals; and therefore is acceptable.

3.12 Paragraph 3 of Licenses TR-3 and R-93 is revised to read:

"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."

The current wording of Licenses TR-3 and R-93 requires the submittal of the completed Final Status Survey Plan for review prior to performing the Final Status Survey. The NRC approved Decommissioning Plan which includes a Proposed Final Status Survey Plan to ensure that the decommissioned facility meets the unrestricted release criteria. This revision will reflect the fact that the Final Status Survey Plan has been submitted for review by the U.S. NRC to facilitate commencement of the Final Status Survey. In addition, the word changes recognize that the Decommissioning Plan and Final Status Survey Plan may both be revised without prior NRC approval provided conditions in paragraph 3.A.1 are satisfied, and that activities are performed in accordance with these plans as revised.

The staff has completed its review of Revision 1 to the Final Status Survey Plan and has determined that the plan is acceptable. The staff reviewed the classification of areas, radiological contaminants, derived concentration guideline levels, survey units, survey design, radiological instrumentation, radiological survey methods, investigation levels and elevated areas test, data collection and processing, data assessment and compliance, reporting format, and final status survey quality assurance and quality control. The information provided by NASA was consistent with the Multi-Agency Radiation Survey and Site Investigation Manual, NUREG -1575, the Consolidated NMSS Decommissioning Guidance, NUREG 1757, and the NMSS Decommissioning Standard Review Plan, NUREG 1727.

3.13 Paragraph 3.A of Licenses TR-3 and R-93 is revised to read:

"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 Final Safety Analysis Report pursuant to 10 CFR 50.82(b)(5)."

The current licenses authorize inclusion of the Decommissioning Plan as a supplement to the Final Safety Analysis Report. This change would add the Final Status Survey Plan as a supplement to the Final Safety Analysis Report.

The staff concludes that this change is consistent with regulatory requirements; and is therefore acceptable.

3.14 Paragraph 3.A.1 of Licenses TR-3 and R-93 is revised to read:

"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:"

This proposed revision changes the word 'plan' to 'plans', and would allow the licensee to make changes to the Final Status Survey Plan without prior U.S. NRC approval subject to the same criteria as currently applied to changes to the Decommissioning Plan.

The staff concludes that this revision is acceptable since any change to the Decommissioning Plan and Final Status Survey Plan would be subject to the same criteria incorporated in the Decommissioning Plan previously approved by NRC.

3.15 Paragraph 3.A.1.c of Licenses TR-3 and R-93 is revised to read:

"Increase the derived concentration guideline level and related minimum detectable concentrations (for both scan and fixed measurement methods);"

This proposed change revises the word 'fuel' to 'fixed' to correct a typographical error that appears in both License TR-3 and R-93.

The staff concludes that the correction of the topographical error is acceptable.

3.16 Paragraph 3.A.2 of Licenses TR-3 and R-93 is revised to read:

"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."

On July 11, 2005, the licensee notified NRC of a change in the planned decommissioning schedule that will extend the decommissioning completion date from December 31, 2007 to December 31, 2010. In this letter, NASA noted the completion of significant decommissioning activities since NRC's approval of the Decommissioning Plan in 2002. These activities include the shipment of 8,000,000 pounds of Low Level Radioactive Waste (with a curie content of over 10,000 curies) offsite to licensed disposal sites. NASA believes this accounts for 97 percent of the decommissioning source term at the PBRF. NASA also states that significant work remains for the decontamination of structures, soil remediation, and the Final Status Survey. This extension of the decommissioning schedule will allow the necessary time for the completion of this work.

The staff concludes that this change is consistent with the requirements of Licenses TR-3 and R-93, and is therefore acceptable.

3.17 Paragraph 3.A.3 of Licenses TR-3 and R-93 is revised to read:

"DELETED'

The Final Status Survey Plan required to be submitted by paragraph 3.A.3 of the current licenses has been included as part of this amendment request. In addition, characterization data necessary to support U.S. NRC approval of the Plan has been included as part of this

submittal. Additional characterization data will be submitted as necessary to support future revisions to the Final Status Survey Plan as needed in accordance with proposed License Conditions 3.A.1. Therefore, the terms of this License condition are no longer needed.

The staff concludes that the characterization data necessary to support the Final Status Survey Plan has been submitted as part of this amendment request; therefore this revision is acceptable.

3.18 Paragraph 3.D of Licenses TR-3 and R-93 is revised as follows:

The revision numbers associated with issuance of the proposed License Amendments will be inserted in place of "Amendment 12" and "Amendment 8" respectively.

The staff concludes that the insertion of the new License Amendment numbers is acceptable.

## 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Ohio State official was notified of the proposed issuance of the amendment. The State had no comments.

## 5.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in (1) recordkeeping, reporting, or administrative procedures or requirements; or (2) requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant changes in the types, of any effluents that may be released offsite, and there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such findings (72 FR 46521). Accordingly, the amendments meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

## 6.0 CONCLUSION

The staff has concluded, based on considerations above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by the proposed activities; (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

## 7.0 REFERENCES


- Notice of Solicitation of Comments Pursuant to 10 CFR 20.1405 and 10 CFR 50.82(b)(5) Concerning Proposed Action to Decommission NASA Plum Brook Reactor Facility was published in the Federal Register in March 2000 (65 FR 12040).

- NASA; Plum Brook Reactor Facility Mock-Up Reactor Environmental Assessment and Finding of No Significant Impact was published in the Federal Register on March 28, 2000 (65 FR 1640)
- Issuance of License Amendment was published in the Federal Register on April 2, 2002 (67 FR 15633).
- NASA letter dated May 18, 2005, requesting amendment (ADAMS ML051430356).
- NASA letter dated July 11, 2005, on Notice of Change of Decommissioning Schedule (ADAMS ML051940437).
- NASA letter dated May 12, 2006, requesting amendment (ADAMS ML061390292).
- NASA letter dated January 10, 2007, requesting amendment (ADAMS ML070170174).
- NASA letter dated February 9, 2007, requesting amendment (ADAMS ML070450166).

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