

January 14, 2005

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U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Subject: Plum Brook Reactor Facility, Request for Amendment to Licenses Nos. TR-3,
Docket No. 50-30 and R-93, Docket No, 50-185,

The following request is affirmed under 28 USC Section 1746.

NASA requests that Licenses TR-3 and R-93 be amended as described in the enclosures to this letter. The proposed amendment will clarify the license requirements for confirmation of Final Status Survey results prior to backfilling or covering of excavated areas.

This application has been reviewed pursuant to 10 CFR 50.91(a)(1) and an analysis supporting a determination of no significant hazards is included.

NASA requests that the amendment be made effective upon issuance.

Should you have any questions or need additional information, please contact Mr. Timothy Polich, NASA Plum Brook Station, 6100 Columbus Avenue, Sandusky, OH 44870, at (419) 621- 3314.

The enclosed License Amendment Request is true and correct to the best of my knowledge and belief. I declare under penalty of perjury that the foregoing is true and correct. Executed this 14th day of January 2005.

Vernon W. Wessel
Director, Safety and Mission Assurance

Enclosures (3)

1. Description and Evaluation of the Proposed Changes
2. Proposed Amended License TR-3
3. Proposed Amended License R-93

cc:

QD/F. J. Greco

QD/T. J. Polich

USNRC/P. J. Isaac

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ODH/R. E. Owen

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Enclosure 1
Description and Evaluation of the Proposed Changes

I. LICENSE AMENDMENT REQUEST

NASA requests that section 3.A.4 of Licenses TR-3 and R-93 be amended to clarify the requirements for confirmation of Final Status Survey results prior to backfilling or covering of excavated areas.

II. REASONS FOR THE PROPOSED CHANGE

The current wording of Licenses TR-3 and R-93 requires U. S. NRC confirmation and approval of the completed Final Status Survey covering an area to be backfilled prior to performing any backfill operations.

Generally, confirmatory surveys require coordination with a contractor who performs the U.S. NRC confirmatory measurements. As the decommissioning progresses, situations may arise where the time period involved in scheduling the NRC's contractor may cause an excavation to remain uncovered for an excessive period of time. There are situations where industrial safety or technical issues could make this an undesirable condition.

This proposed amendment would allow the U.S. NRC the opportunity to review the results of the Final Status Survey for an excavated area or an area that planned decommissioning activities could render inaccessible. Based on their review of the Licensee's survey, the NRC Staff would be able to determine that there is reasonable assurance that the Licensee's surveys have adequately demonstrated that the affected area meets the unrestricted release criteria, that there is appropriate safety or technical justification for backfilling the area or rendering it inaccessible, and allow backfilling without the prior performance of confirmatory surveys.

III. DESCRIPTION OF THE PROPOSED CHANGES

Paragraph 3.A.4 of Licenses TR-3 and R-93 is revised to read:

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.*

This proposed change will allow performance of the Final Status Survey for an area that has been excavated and allow backfilling of the area without the performance of confirmatory surveys by the U.S. NRC Contractor. This would be allowed only when the NRC Staff has concurred that there is appropriate safety or technical justification for backfilling and that, based on their review of the completed Final Status Survey for the affected area, there is reasonable assurance that the Licensee's surveys have demonstrated that the affected area satisfies the unrestricted release criteria.

IV NO SIGNIFICANT HAZARDS CONSIDERATION

The proposed amendment to Licenses TR-3 and R-93 are necessary to assure that, in limited situations, areas excavated for the performance of dismantlement and remediation activities do not result in unnecessary industrial safety hazards. The proposed changes do not involve a significant hazard as shown in the following:

- A. The proposed amendment to Licenses TR-3 and R-93 does not involve a significant increase in the probability or consequences of an accident previously analyzed.

The accident scenarios applicable to the decommissioning of the Plum Brook Reactor Facility are described in section 3.3 of the Decommissioning Plan for the Plum Brook Reactor. The Decommissioning Plan describes postulated events that could result in a release of radioactive materials from the site and analyzes the radiation dose consequences of these events and demonstrates that no adverse public health and safety impacts are expected from these events. Performance of Final Status Surveys is a continuation of decommissioning and is an activity that involves measurements and analysis of residual radioactivity in areas in which decommissioning has been already been performed. It is a process used to confirm that radioactivity has been removed to achieve the acceptance criteria specified in 10 CFR 20, Subpart E. These surveys are subjected to NRC review, and in some instances NRC confirmatory surveys. These surveys are performed in areas where other decommissioning activities are already complete and where there is no credible event that could initiate the analyzed accidents. Backfilling an excavated area, or otherwise rendering it inaccessible, will have no impact on other decommissioning activities, or on postulated accidents from other decommissioning activities. Therefore, the proposed amendment will have no affect on the probability or consequences of accidents previously analyzed.

- B. The proposed amendment to Licenses TR-3 and R-93 will not create the possibility of a new or different kind of accident from any accident previously evaluated.

Accidents previously analyzed in the Decommissioning Plan assess different scenarios that could cause the dispersion of radioactive material to the environment. These scenarios arise from dismantlement activities associated with the decommissioning. Excavation of areas to support dismantlement and remediation is an activity that is described in the Decommissioning Plan. Excavated areas will be surveyed in accordance with the Final Status Survey Plan to verify that they have been radiologically remediated to the unrestricted release criteria. These areas may be backfilled without the performance of confirmatory surveys performed by the NRC or their Contractor. However, this will only be permitted after NRC review of the Licensee's survey results and a determination that there is reasonable assurance that no residual radioactivity in excess of the release criteria remains. Therefore, there will be adequate verification by the regulatory agency that there is reasonable assurance that there is no potential for the dispersion of radioactive material to the environment from the backfilled area. The methods and processes used for control of work activities and for control and monitoring of radioactivity will remain the same as those used prior to this amendment. Therefore, no new or different types of accidents are created by this proposed amendment.

- C. The proposed amendment to Licenses TR-3 and R-93 will not involve a significant reduction in a margin of safety.

As discussed previously, the activities that will be performed at the facility are as previously described and evaluated in the accident analyses presented in the Decommissioning Plan. The radiological criteria to be used in applying for termination of the NRC Licenses will remain the same as originally proposed and are consistent with the criteria of 10 CFR 20 Subpart E. The results of Final Status Surveys performed by the Licensee will remain subject to review by the U.S. NRC for adequate implementation of the Final Status Survey Plan. Therefore, the margins of safety applicable to assessing the long term dose to member of the public from exposure to the facility after termination of the license remain unchanged. In addition, since this amendment does not impact any previously reviewed accident analyses as previously discussed, no margins of safety are affected by this proposed amendment.

IV IMPLEMENTATION

NASA requests that the amendment become effective as of the date of issuance.

Enclosure 2

Proposed Amended License

TR-3

Condition 3.A.4 of License TR-3 is amended to read as follows:

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.

Enclosure 3

Proposed Amended License

R-93

Condition 3.A.4 of License R-93 is amended to read as follows:

This section is reworded to read:

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.