



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

February 11, 1981

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Dockets Nos. 50-30
and 50-185



Mr. Donald E. Benedict, Project Manager
Reactor Decommissioning Projects Office
National Aeronautics and Space Administration
Lewis Research Center
Cleveland, Ohio 44135

Dear Mr. Benedict:

By application dated March 17, 1980 as supplemented by letter dated November 7, 1980 you requested authorization to dismantle the Plum Brook Test Reactor and the Plum Brook Mock-Up Reactor and to decontaminate the NASA Hot Laboratory and Radiochemistry Laboratory all located at the Plum Brook Reactor Facility.

As discussed with you, your proposed radiation limits for release of the Plum Brook Reactor Facility following dismantling and decontaminating must be revised.

Enclosure No. 1 specifies "Radiation Levels for Release of Plum Brook Reactor Facility to Unrestricted Access" that are acceptable to the staff. The Materials Licensing Branch of the NRC Nuclear Materials Safety and Safeguards Office concurs with Enclosure No. 1 with respect to Plum Brook Reactor Facility Byproduct Material License No. 34-06706-3.

Sincerely,

Robert W. Reid, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:

1. Radiation Levels for Release of Plum Brook Reactor Facility
2. Regulatory Guide 1.86

cc w/enc. DS:
see next page

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Mr. Donald E. Benedict

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cc w/enclosures:

Ohio Power Siting Commission
ATTN: Chief, Office of Technical Evaluation
361 East Broad Street
P. O. Box 1735
Columbus, Ohio 43216

Ohio Department of Health
ATTN: Director of Health
450 East Town Street
Columbus, Ohio 43216

Enclosure

RADIATION LEVELS FOR RELEASE OF PLUM BROOK REACTOR
FACILITY TO UNRESTRICTED
ACCESS

Surface Contamination

Surfaces must be decontaminated to levels consistent with Table 1 of Reg. Guide 1.86.

Radioactive Material Other Than Surface Contamination (Co 60, Eu 152, Cs 137, Sr 90)

Co 60, Eu 152 and Cs 137 that may exist in concrete, components, structures, and soil must be removed such that the radiation level from these isotopes is less than $5\mu\text{R/hr}$ above natural background¹⁾ as measured at one meter from surface. Soil samples must be taken in the Emergency Retention Basin at its inlet location to determine the amount of Sr 90 present. Sr 90 in the retention basin soil must be no more than 5p Ci/gm .

General

A statistically sound sampling and monitoring methodology acceptable to the NRC must be used. A site survey plan must be submitted to the NRC prior to conducting final sampling and monitoring.

¹⁾ Radiation from naturally occurring radioisotopes as measured at a comparable uncontaminated structure or exterior soil surface.