

December 11, 1989

Docket No. 50-139

Dr. Maurice A. Robkin, Director
Nuclear Engineering Laboratories
University of Washington
Seattle, Washington 98195

Dear Dr. Robkin:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING DECOMMISSIONING -
UNIVERSITY OF WASHINGTON

In order for us to complete our review of your decommissioning plan, we need additional information indicated in the enclosure. Please feel free to call me on (301) 492-1102 if you have any questions regarding this request.

Sincerely,

Original signed by:

Theodore S. Michaels, Senior Project Manager
Non-Power Reactor, Decommissioning and
Environmental Project Directorate
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

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Sincerely,

A handwritten signature in cursive script that reads "Theodore S. Michaels".

Theodore S. Michaels, Senior Project Manager
Non-Power Reactor, Decommissioning and
Environmental Project Directorate
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

University of Washington

Docket No. 50-139

cc: Mayor of City of Seattle
Seattle, Washington 98104

REQUEST FOR ADDITIONAL INFORMATION
UNIVERSITY OF WASHINGTON DECOMMISSIONING PLAN
RADIATION PROTECTION BRANCH

- 470.1 The decommissioning organization and responsibilities are outlined in Section 1.5 of the decommissioning plan, however, the specific identity of key personnel and their personal qualifications relevant to the decommissioning and decontamination are not included. Submit the names and personal qualifications for the following positions regarding this decommissioning: Director, Environmental Health and Safety; Radiation Safety Officer; the person who will be in direct control of the facility during the decommissioning and decontamination; the members of the University of Washington Office for Reactor Operations who are designated to review decommissioning plans and tasks; the contractor's Project Manager; and Decommissioning Supervisor. State the standards to be used to determine qualifications of Radiological Control Technicians.
- 470.2 Describe how you plan to meet the intent of Regulatory Guide 2.5, "Quality Assurance Program Requirements for Research Reactors". It is the staff position that licensee should have the capability to assure the accuracy of all measurements as part of his final report to NRC.
- 470.3 State the lower limits of detection to be used in the identification of radionuclides found in swipes, core samples, etc., that will be taken during dismantling.
- 470.4 Table 2.1-1, "Survey Instruments at the UWNR," The radiation protection equipment specified in the table does not include survey meters that can be used to measure dose rates down to 5 μ R/hr. Staff criteria for release for unrestricted use of equipment, release of contaminated structures, surfaces, etc., required for termination of a license are contained in Table I of Reg Guide 1.86. In addition to these criteria, the staff also uses a criterion for radiation exposure rate of 5 μ R/hr above natural background at one meter from the surface being monitored. Indicate how you assure that the survey meter used in radiation surveys to measure exposure rates is energy independent over a wide range of energies. Additionally, the inventory in the table does not include monitoring instrumentation for self examination of extremities, face, clothing, etc. for contamination.
- 470.5 We note that student volunteers have been used for dismantling the core for maintenance. From this, it appears that volunteers will again be used for core dismantlement. Please specify how these volunteers have been and will be trained for this work in accordance with 10 CFR 19.12.
- 470.6 How will the generation and spread of "hot particles" (microscopic or nearly microscopic radioactive particles with high specific activity) be monitored and controlled?

- 470.7 Termination radiation surveys reveal "hot spots" that may require chipping of concrete for removal, what additional radiation protection precautions would be used to preclude spread of contamination and to assure ALARA radiation exposures (airborne radioactivity pathway) to workers?
- 470.8 Describe how you plan to survey for contamination on the pipes, drainlines, and ductwork to assure conformance with Regulatory Guide 1.86 limits.
- 470.9 How will beta dose rates be measured, and how will skin exposures be controlled during the decommissioning and decontamination operations?
- 470.10 How will the dust and radioactive particles be controlled with respect to contamination of workers and equipment in the reactor tank in the presence of air blown to the bottom of the tank, as described in Section 3?
- 470.11 Specify the release criteria (including instruments and minimum sensitivity) for the miscellaneous nonradioactive wastes mentioned in Section 3.
- 470.12 Section 3.1.2 does not provide details of the criteria that will be used to determine whether a submersible shielded container will be used to place the rotary specimen rack in its shipping container or whether the rack will simply be pulled from the pool and placed directly into the shipping container. Furthermore, no information is provided elaborating ALARA considerations for this step of the operations. Provide details of these aspects of the operations.
- 470.13 What criteria will be applied to determine the need for respiratory protection? How will these criteria be implemented? How will respirator users be trained and medically qualified?
- 470.14 Provide a copy of the contractor Radiological Control Procedure and supporting materials used to ensure that all onsite personnel are properly trained and qualified as mentioned in Section 1.7.