



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

February 28, 1986

Docket No. 50-187

Dr. Jack Benveniste, Chairman
Corporate Radiation Committee
Northrop Research & Technology Center
Northrop Corporation
One Research Park
Palos Verdes, California 90274

Dear Dr. Benveniste:

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION ON NORTHROP CORPORATION'S
REACTOR FACILITY DECOMMISSIONING PROGRAM

Northrop Corporation's (NC) final report on the facility decommissioning program has been reviewed by the Headquarters staff and a site survey of the decontaminated facility has been conducted by the Region V staff. Our review and the site survey have identified the need for additional information, as discussed below.

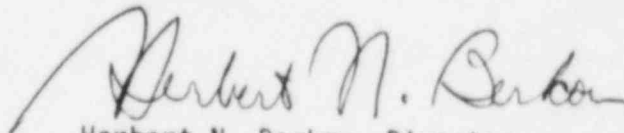
- (1) Radiation measurements were obtained by NC using a sodium iodide crystal which is calibrated for a certain source type and strength. The methods and standards used for calibration of this survey instrument were not specified in the final report. Please provide a detailed description of your calibration procedure and justify use of a scintillation detector, which is an energy dependent instrument, to measure dose rate with reasonable accuracy (e.g. $\pm 20\%$) over the wide range of energies expected in your surveys.
- (2) Your report indicates that your survey of the Exposure Room was hampered by the small dimensions of the room, which resulted in your providing 4 pi readings versus measurements which would directly demonstrate satisfaction of the requirements of $5 \mu\text{R/hr}$, at one meter from any planar surface. Your calculations indicated that the readings were close to background. However, because of the geometry problem, you dismantled the room and placed the resulting biological shield concrete rubble in a pile. Your survey of this pile also indicated readings close to background. However, during its final survey of your facility, the Region V staff found that the configuration of the concrete rubble pile precluded their obtaining the required final survey measurements with the available instrumentation.

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Accordingly, we request that NC: (a) provide all the readings that were taken of the Exposure Room walls prior to dismantling, with and without shielding, (b) discuss the method used to determine "background" radiation and provide the respective data, (c) show from your measurement techniques and data that the contribution of dose rate from the surrounding walls could be subtracted from the relevant planar wall to provide the "close-to-background" dose rate from the planar wall, (d) physically redistribute the concrete rubble pile into a homogeneous configuration with as uniform and even a surface as possible and not more than about 1 foot deep. Measure the radioactive contamination levels at the surface and the radiation levels at one meter from the surface at a suitable number of locations.

Following receipt of the above information, we will complete our safety evaluation of your facility decommissioning. Should you have any questions, please contact Harold Bernard at (301) 492-8529.

Sincerely,



Herbert N. Berkow, Director
Standardization and Special
Projects Directorate
Division of PWR Licensing-B, NRR

cc: See next page

Northrop Corporation

Docket No. 50-187

cc: Director
Energy Facilities Siting Division
Energy Resources Conservation &
Development Commission
1516 - 9th Street
Sacramento, California 95814

California Department of Health
ATTN: Chief, Environmental
Radiation Control Unit
Radiologic Health Section
714 P Street, Room 498
Sacramento, California 95814

Attorney General
555 Capitol Mall
Sacramento, California 95814

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Original signed by
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Standardization and Special
Projects Directorate
Division of PWR Licensing-B, NRR

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