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SCHOOL OF ENGINEERING AND APPLIED SCIENCE
LOS ANGELES, CALIFORNIA 90024
January 30, 1976

Karl R. Goller
Assistant Director of Operating Reactors
Division of Reactor Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



Dear Mr. Goller:

Due to the sensitive nature of the contents of this letter, we request that this document be withheld from public disclosure pursuant to section 2.790 of 10 CFR Part 2.

We have at this facility a full core loading of new fuel, fuel plate scrap, and uranyl nitrate solution, all at an enrichment of 93%. We also have on hand two 32 gram Pu-239-Be neutron sources. This gives us a non-exempt SNM inventory of less than 5 kg.

We request that we be allowed to retain this inventory for the following reasons:

- a. To be able to perform low power experiments along with computer code work, whereby irradiated fuel is temporarily replaced by non irradiated fuel. This would greatly reduce experimental error and personnel exposure.
- b. To have on hand new fuel to replace damaged fuel elements.
- c. To have inherent flexibility because we are a university facility. Projects and experiments come up often with very little lead time. If we do not possess the proper material, it is more than likely that we may have extreme difficulty acquiring it and a finite possibility of not obtaining it.

We therefore request permission to have on hand our existing SNM inventory. We have provided adequate protection according to NRC and have followed the advice of Doug Schuster of Region V to the letter. We are also within the limits set forth by 10 CFR.

Sincerely yours,

Charles E. Ashbaugh III
Charles E. Ashbaugh III
Reactor Supervisor

CEA:vl

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January 29, 1976

- R. Purple, Chief, Operating Reactors Branch #1, DOR
- D. Ziemann, Chief, Operating Reactors Branch #2, DOR
- G. Lear, Chief, Operating Reactors Branch #3, DOR
- R. Reid, Chief, Operating Reactors Branch #4, DOR

WITHHOLDING OF SPECIAL NUCLEAR MATERIAL (SNM) INVENTORY INFORMATION FOR NON-POWER REACTOR FACILITIES

Although license authorization limits for SNM at non-power reactors are not considered sensitive and may be mentioned freely in any correspondence, the specific types, enrichments and amounts of SNM actually held on-hand by non-power reactor licensees should be "withheld from public disclosure". The amount of uranium - 235 (contained in uranium enriched to 20 percent or more in the uranium - 235 isotope), uranium - 235, or plutonium held by the licensee as unirradiated fuel is particularly sensitive information.

Therefore, in your preparation of safety evaluations or other documents for license amendments to reduce the authorization limit of SNM for non-power reactor licensees, no reference should be made to the actual quantity of SNM that a particular facility has on hand. The current and projected authorization limits in the license may be disclosed.

Karl R. Goller

Karl R. Goller, Assistant Director
 for Operating Reactors
 Division of Operating Reactors

NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

IE Circular No. 76 - 03
DATE: September 13, 1976

RADIATION EXPOSURES IN REACTOR CAVITIES

DESCRIPTION OF CIRCUMSTANCES:

On March 18, 1976, an employee at the Zion station received a "whole body" radiation dose of 8 rems or more upon entering the cavity beneath the reactor vessel during a refueling outage. On April 5, 1976, a similar reactor cavity entry at Indian Point resulted in a 10-rem whole body dose to a licensee employee. A similar entry on October 5, 1972 caused a 5-rem dose to a Point Beach employee.

These three overexposures appear to have been caused by failure to appropriately control entry into high radiation areas, failure to conduct adequate surveys and failure to compensate for exposure rate variations that can occur in various areas in power reactors, e.g., the cavity beneath the reactor vessel. With the incore thimbles and detectors inserted into the core, radiation levels in the cavity appear to be low. With the thimbles or detectors withdrawn into the cavity, however, exposure rates of hundreds or possibly thousands of roentgens per hour can exist. Overexposures can occur in seconds.

All three overexposure events involved entry into potentially high radiation areas without surveys and/or special controls over equipment which could cause transients in the exposure rate.

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ACTION TO BE TAKEN BY LICENSEES:

While the three exposures above occurred at pressurized water reactors, similar situations could develop at other types of reactors, e.g., pneumatic irradiation equipment areas (research reactors) and traveling incore probe equipment areas (boiling water reactors). Accordingly, holders of power, test and research reactor operating licenses are to complete the following:

1. Perform a thorough review of plant areas and operations to identify high radiation areas, both continuous and transient, as defined in 10 CFR 20.202(b).
2. Verify that entryways into high radiation areas are conspicuously posted and locked or otherwise controlled in such a manner as to explicitly identify the nature of the hazard, appropriately control entry, and require adequate pre-entry surveys,
3. Ensure that radiation protection procedures and radiation protection training and retraining programs specifically address the matter of control of and access to such areas and initiate appropriate retraining of all plant personnel,
4. Ensure that the procedures governing personnel entry into all actual or potential high radiation areas permit such entry only after appropriate management review and approval so that conditions within the area are known and not subject to change while the area is occupied,
5. Periodically audit whatever controls result from item 1-4, above, to ensure their continued effectiveness, and
6. Confirm by written reply within 60 days that the actions for items 1-4 above, have been or are being taken. A record, detailing findings, actions taken, and actions to be taken, should be retained for review by NRC during the next radiological safety inspection.

This request for information was approved by GAO under a blanket clearance number B-180225 (R0072); this clearance expires July 31, 1977.