



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

~~① Tom Clark~~
② Docket File -
70-687

NOV 20 1981

Docket No. 70-687

MEMORANDUM FOR: L. C. Rouse, Chief
Advanced Fuel and Spent Fuel
Licensing Branch

FROM: R. G. Page, Chief
Uranium Fuel Licensing Branch

SUBJECT: REVIEW OF LICENSE APPLICATION DATED
NOVEMBER 16, 1981, DOCKET NO. 70-687

I. Background

The Union Carbide Corporation (UCC), Medical Products Division, by application dated November 16, 1981, requested authorization to extend their existing exemption from the criticality monitoring requirements, pursuant to 10 CFR 70.24(a)(1), for the hot cells to the new waste storage cells.

II. Discussion

UCC has constructed a new waste storage facility for the storage of radioactive waste in 55-gallon drums containing $<350\text{g } ^{235}\text{U/drum}$. There are 100 waste storage locations in the facility. In a previous study (Memorandum to L. C. Rouse from R. G. Page, dated October 23, 1981, subject, "Review of License Application Dated August 20, 1981, Docket No. 70-687"), it was determined the storage array is safe from a nuclear criticality safety viewpoint.

Since the storage facility is used only for the storage of waste drums ready for shipment, and it is physically impossible to bring the drums in the storage array closer together than the designed spacing (a 28-inch diameter cavity in concrete for each drum spaced on 38-inch centers), criticality is virtually impossible. Moreover, a 4 feet thick concrete shielding is provided on all accessible surfaces of the storage facility. The concrete thickness is adequate to prevent any interaction with SNM that may accidentally be stored above the storage cells. Therefore, the nuclear criticality safety controls provide an adequate margin of safety for the protection of the health and safety of the operating personnel, the public and the environment.

Issuance of the license amendment request is recommended.

W. S. Chow

R. G. Page, Chief
Uranium Fuel Licensing Branch
Division of Fuel Cycle and
Material Safety