Dale Stubblefield

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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L. C. Rouse, Chief
Fuel Fabrication and Reprocessing
Branch
THRU: R. B. Chitwood, Chief
Technical Support Branch

NUCLEAR CRITICALITY SAFETY REVIEW OF UNION CARBIDE CORPORATION APPLICATION DATED FEBRUARY 8, 1973, AND SUPPLEMENT DATED JUNE 13, 1973, SNM-639, DOCKET 70-687

In response to a June 21, 1973, memorandum from F. Stubblefield, the nuclear criticality safety review of the subject application was resumed. As indicated below, some clarification or corrections in the supplement are in order.

Two areas discussed with Union Carbide during a meeting on June 1, 1973, are not reflected in the additional information enclosed with the applicant's letter of June 13, 1973. Specifically these include:

1. It was my understanding that in regard to hot cell monitrons, Mr. McGovern would confirm that they could be used as criticality alarms or specifically request an exemption from 10 CFR 70, Section 70.24 for the hot cells based on the fact that these cells are heavily shielded. The additional information does not include either of these items. This matter should be resolved since the present license does not permit exemption from the requirements of Section 70.24.

2. With respect to evacuation of the building, emphasis during the meeting was placed on immediate evacuation at the detection of a criticality incident. In concession to the viewpoint that it would take excessive time for an individual to determine that more than one monitron was alarming (thus indicating a criticality incident), Mr. McGovern suggested that the upper two monitrons could be interconnected to a horn. This horn would sound if both upper level monitrons alarmed, thus instantaneously warning personnel of a possible incident.

While this horn installation is very desirable, its time saving effect appears to be negated by the second paragraph of the "Hot Laboratory Evacuation Procedure" which states that, "all access doors and windows must be closed when building is evacuated." In the event of criticality, evacuation should be immediate. This instruction should be clarified by the applicant.

Review of the applicant will continue upon resolution of the items mentioned above.

R. W. Szempruch
Technical Support Branch

cc: F. E. Stubblefield