UNION OF CONCERNED SCIENTISTS

January 3, 1977

Commissioner Victor Gilinsky
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Commissioner:

We received the enclosed document from an individual who wishes to remain anonymous. We are sending it to you in the hope that the Nuclear Regulatory Commission will take prompt action to protect the health and safety of the public from the known risks discussed in the document.

The document correctly indicates that the consequences of a fuel handling accident inside the reactor containment building are not considered by the NRC in deciding whether a nuclear power plant should receive a license. In addition, the document indicates that Westinghouse believes that a fuel handling accident inside containment could result in radiation doses to the public in excess of 10 CFR Part 100 limits, i.e., in excess of 25 rem to the whole body and 300 rem to the thyroid. In view of these statements, it appears that a fuel handling accident inside containment is an "unreviewed safety question" and a "significant safety hazard."

We recommend that the NRC review the design and procedures of each operating nuclear power plant to determine whether a fuel handling accident inside containment will result in doses that "are well within the guideline values of 10 CFR Part 100," as specified in Section 15.7.4 of the Standard Review Plan. Until such reviews are completed, we believe that the NRC should issue orders to halt all refueling operations in progress and to prohibit all future refueling operations. In addition, we believe that it is appropriate for the NRC to initiate investigations to determine whether Section 206 of the Energy Reorganization Act of 1974 has been violated by individual directors or responsible officers of Westinghouse and other firms which received the enclosed document.

We would appreciate hearing from you promptly regarding the action that NRC will take to resolve this matter. We also would like an explanation of the reasons for NRC not previously requiring analysis of a fuel handling accident inside containment and the steps that will be taken to correct this deficiency in the licensing process.

By copy of this letter, we are also sending the enclosed document to the chairmen of the Advisory Committee on Reactor Safeguards, the Atomic Safety and Licensing Board Panel and the Atomic Safety and Licensing Appeal Panel.

Sincerely,

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As you are aware, a fuel handling accident in the spent fuel storage building is analyzed in plant Safety Analysis Reports. The assumptions utilized for this analysis are outlined in Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility."

The off-site consequences of this accident are compared to 10CFR100 limits of 300 rem to the thyroid and 25 rem whole body dose in the Safety Analysis Reports. In addition, the NRC compares the resultant doses with unofficial limits of 30 rem to the thyroid and 5 rem whole body dose.

However, a fuel handling accident inside the containment is not addressed in the Safety Analysis Reports, other than indirectly in Standard Tech Specs. W is not aware of the NRC bases for not addressing a fuel handling accident inside containment, the bases may include:

1. The assumption that the containment will be isolated during refueling operations;

2. that the containment could be isolated quickly enough to limit off-site consequences; or

3. that filtration capability comparable to that in fuel storage building exhausts exists in the containment purge exhaust.

These bases are similar to the bases used to address the fuel handling accident in the fuel handling building.

Information available to us, including results of scoping analyses using very conservative assumptions based upon Regulatory Guide 1.25, indicates that site boundary doses in excess of exposure guidelines set forth in 10CFR100 could result from a fuel handling accident inside containment if one assumes no credit for containment isolation, iodine filtration, or mixing within containment. In addition to using Regulatory Guide 1.25 assumptions in the scoping analyses, we assumed operation of systems which would result in the most conservative dose. For example, it was assumed that a push-pull type or exhaust only sweep ventilation system is in operation over the refueling canal so that activity releases are routed immediately to the purge exhaust.

Much of the information required to do an evaluation for specific plants is not available to us. We do recommend, however, that you evaluate the consequences of this potential incident to assure that unacceptable doses are not a probable result. Since the NRC regulations do not require the analysis, we do not believe this situation requires reporting to the NRC unless your engineering evaluation shows unacceptable results. In accomplishing the evaluation for your plant, we recommend that you use Regulatory Guide 1.25 assumptions or other conservative justifiable parameters. We also believe that you should not take credit for the function of any system or component that is not qualified for operation during this particular incident. For example, we think you might take credit for equipment not qualified for the post accident containment environment but seismic qualification may very well be required.

Please feel free to contact us if further information or assistance is required.