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Mr. James M. Taylor
Executive Director for Operations
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Taylor:

SUBJECT: INDIVIDUAL PLANT EXAMINATION AND ACCIDENT MANAGEMENT PROGRAMS

During the 386th meeting of the Advisory Committee on Reactor Safeguards, June 4-5, 1992, we discussed the status of the Individual Plant Examination (IPE) and Accident Management Programs. This matter was also discussed with the staff and NUMARC during a joint meeting of our Subcommittees on Individual Plant Examinations and Severe Accidents held on April 21, 1992. We also had the benefit of the documents referenced.

The IPE program is achieving the objectives that we had hoped it would. The Accident Management Program was perceived to be at a reasonable, albeit an early, stage of development. However, the staff and NUMARC appear to be developing, cooperatively, a program that will extend beyond and be compatible with existing emergency operating procedures.

During the course of our discussions, several comments and suggestions were made which the staff may want to consider as these programs develop further. These are listed below. We do not request any formal response to this letter.

1. Some of the data used in NUREG-1150 (e.g., failure probabilities of motor-operated valves for certain postulated accidents) are now recognized to have been inappropriate. It appears that the results of NUREG-1150 are being used, at least to some extent, in evaluating the results reported in the IPEs and that some of the IPEs may be using the same inappropriate data used in NUREG-1150. It might be useful to reevaluate some of the originally reported NUREG-1150 results in light of new, more appropriate, data.

2. It also might be worthwhile to conduct sensitivity studies to determine the effects of using faulty data on IPE results.

3. Some of the IPEs will describe plants that have implemented the Station Blackout Rule (10 CFR 50.63) and some will describe plants that have not. It would be instructive if the results of the IPEs could produce an estimate of the risk reduction achieved by implementing the rule. Even if the conclusion is that it is not possible to do this, that fact would be significant.

4. The NRC staff has made and is continuing to make detailed inspections of nuclear power plant maintenance programs. It

would be useful to determine if there is any observable correlation between a good maintenance program and a low value of core damage frequency (CDF) as indicated by the IPEs. Dr. Murley's February 6, 1992 letter to the New York Power Authority regarding the FitzPatrick IPE seems to indicate that he feels there should be a detectable correlation between calculated CDF and "operability problems and procedural deficiencies."

5. It would be desirable to document and preserve the plant-specific PRAs that result from the IPE process. It was not clear whether the data base that is being compiled by Brookhaven National Laboratory will accomplish this. If it does not, other methods of doing so should be explored.

6. We suggest that, in addition to those things that have been identified by licensees, consideration be given to identifying, as vulnerabilities, any risk-significant sequence which has a large uncertainty in its upper bound.

7. Rather than treat shutdown risk on a generic basis, as appears to be the proposed approach, it should be treated on an individual plant basis, because it is likely to be very plant-specific. A mini-IPE might be appropriate.

8. It appears, on the basis of our discussion, that the staff has not yet arrived at an agreed-upon definition of an accident (in the context of accident management). Absent such a definition, there may be unproductive duplication between "accident management" and "emergency operating procedures." We recommend that an effort be made to arrive at a definition which will be acceptable to both the staff and to NUMARC.

Sincerely,

David A. Ward
Chairman

References:

1. U.S. Nuclear Regulatory Commission, NUREG-1150, "Severe Accident Risks: An Assessment for Five U.S. Nuclear Power Plants," December 1990
2. Letter dated February 6, 1992, from T. E. Murley, Office of Nuclear Reactor Regulation, NRC, to J. C. Brons, New York Power Authority, Subject: Request for a review of the FitzPatrick IPE with respect to the NRC's Diagnostic Evaluation Team Report