

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
Before the Atomic Safety and Licensing Board



In the Matter of	:	Docket No. 50-272
PUBLIC SERVICE ELECTRIC	:	Proposed Issuance of Amendment
& GAS CO.	:	to Facility Operating License
(Salem Nuclear Generating	:	No. DPR-70
Station, Unit #1)	:	

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INTERVENORS, COLEMAN, RESPONSE  
TO NRC STAFF OBJECTION  
TO BOARD QUESTION NO. THREE

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346 134

PRELIMINARY STATEMENT

By Order dated April 18, 1979, the Atomic Safety and Licensing Board, charged with the responsibility for adjudicating the admitted contentions pertaining to Public Service Electric and Gas Company's application to rerack its spent fuel pool at the Salem One Nuclear Generating Station, indicated the following:

"The Board wishes to add the following questions for discussion at the hearing:

3. If an accident such as the one at Three Mile Island occurred at Salem, to what extent would the accident affect the spent fuel pool? If an explosion or 'meltdown' occurred at Salem, to what extent would that affect the spent fuel pool? To what extent would it have mattered how much spent fuel was present at the pool at Salem?" \*

In objecting to not only its participation in this hearing discussion of the effects a Class Nine accident on the Salem SFP, the NRC staff has sought to foreclose any party from examining this issue or even the Board itself from inquiring about this particular subject. The authority relied upon by the NRC staff in interposing this objection focuses on the purported extreme unlikelihood of such a catastrophic event, which in the past has been used to justify their exclusion from the final Safety Evaluation Reports prepared for NRC licensing reviews. The rationale for this exclusion would appear to be that for reasons of administrative convenience and efficiency it was not worthwhile to devote months and months of time by scarce technical resources to evaluating consequences of events which were deemed realistically incapable of occurring.

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\* It should be noted that in its objection dated June 1, 1979, the NRC staff incorrectly asserts that "the Board propounded three questions to be answered by the staff and the licensee." (Staff objection, pl; Background).

POOR ORIGINAL

346 135

-4-

For two basic reasons, however, this rationale is not applicable to the Board's Order of April 18, 1979. Initially, it is important to note that the Board has not directed the NRC staff to redo its final SER done on either the Salem One plant or the final SER prepared on the proposed reracking of the Salem One spent fuel pool. Rather, the Order is very limited in scope, requesting only that a discussion be held at the hearing concerning two specific potential impacts of a Class Nine accident. It contains no directive to either the Staff or the Licensee to spend months of time by experts examining all the many ramifications of a full-blown Class Nine accident at a nuclear power plant. Thus, since the Board's Order compels no undue level of resource commitment by the staff or PSEG Co., reasons of administrative expediency are not implicated in this request.\*

Secondly, since the Board's Order is directed to a legitimate safety concern which is germane to the admitted contentions in this proceeding, the panel members, pursuant to the authority vested in them by 10 CFR § 2.721 and 2.718, may examine hearing witnesses pertaining to the potential impacts Class Nine type accidents at their own discretion. The entry of an order affording the parties advance notice of the Board's intention to do so can not be construed in any fashion to limit the express authority of an Atomic Safety and Licensing Board to manage the conduct of a hearing as it progresses, including the right to examine witnesses at the panel members sole discretion. A good example of this type of ASLB panel member witness examination occurred during the May 1979 hearings in this matter when Dr. Lamb questioned Mr. Liden on the possible safety considerations involved in

**POOR ORIGINAL**

\* It can even be stated convincingly that the Order, on its face, allows the staff and Licensee to offer no affirmative evidence on the Class Nine impacts issue while allowing the burden to be carried by intervenor's witnesses and limiting their "discussion" of this topic to reacting to whatever is proffered by these other parties, as deemed appropriate in light of the evidence submitted. Of course, this approach involves no use of agency resources to evaluate the Class Nine impacts in advance of the hearings and removes entirely the administrative convenience rationale for the staff objection to the ASLB informing itself about an issue of potentially paramount importance to the public safety.

maintained a full core discharge capability at the Salem One Reactor. (May 4 1979 transcript at ps. 866-869). Despite Mr. Liden's acknowledgment that full core discharge capability is not a safety factor in any way regulated by the NRC, Dr. Lamb continued to explore in detail the possible safety and environmental impacts associated with its absence, without significantly, any objection thereto by either the staff or the licensee. For either the staff or licensee to now object to the Board's examination of witnesses on a subject which they possibly do not deem as favorable to their position is simply not consistent with their earlier receptivity to prior board initiated questioning in this proceeding. Fundamental fairness dictates that either the staff and licensee consent to striking Liden's testimony regarding full core discharge or inclusion of Class Nine accident testimony.

They should not, however, be entitled to obtain the benefits of the former while seeking to exclude the perceived disadvantages of the latter testimony.

ARGUMENT

THE BOARD SHOULD EXAMINE THE CONSEQUENCES OF A CLASS NINE ACCIDENT BECAUSE THE FAILURE TO CONSIDER ALL POTENTIAL RISKS TO THE HEALTH AND SAFETY OF THE PUBLIC IN LIGHT OF THE TMI-2 EXPERIENCE WOULD CONSTITUTE ABDICATION OF THE NRC'S STATUTORY RESPONSIBILITIES

Repeatedly since March 28, 1979, the highest federal officials charged with the responsibility for regulation of nuclear power generation in the United States have assured the public that they would not ignore the lessons to be learned from the near catastrophe at Three Mile Island Nuclear Generation Station No. Two.\* All aspects of the nuclear plant safety would be examined, we have been told, to prevent a recurrence of the situation where NRC Chairman Joseph Hendrie was reduced to exclaiming in apparent desperation:

"We are operating almost totally in the blind, his information is ambiguous, mine is non-existent and -- I don't know, its like a couple of blind men staggering around making decision." (Nucleonics Week, 4.26.79, p.3; transcript of Commission meeting March 30, 1979 regarding then ongoing TMI-2 crisis).

Chairman Hendrie's remarks were closely echoed by Harold Denton, Director, Nuclear Reaction Regulation and Roger Mattson, Director, Systems Safety Division, NRC, in reporting to the Commission their understanding of the then unfolding TMI accident:

"We saw failure modes, the likes of which have never been analyzed." (Mattson, Nucleonics Week, 4.26.79, p.10; transcript March 30, 1979, Commission meeting).

\* \* \*

We kind of had the feeling this morning . . . that the licensee doesn't recognize the problem that we're facing with regard to the bubble and damage and what might happen if we were to lose vacuum and so forth." (Denton, Nucleonics Week, 4.26.79, p.8; transcript March 30, 1979, Commission Meeting).

\* See, e.g., New York Times, April 10, 1979, p. 1, report of NRC Chairman Hendrie's testimony before U.S. Senate.

Apparently, however, these reassurances may have been somewhat overstated and it continues to be business as usual for the U.S. regulation of the nuclear industry, despite the unprecedented events at the Metropolitan Edison, TMI-2 nuclear generating facility which narrowly avoided (it seems by mere good fortune) the ultimate nuclear accident. In its brief in support of its objection to Board consideration of a class nine accident at the Salem One facility, the Staff asserts that such an event is deemed "highly unlikely," citing an eight year old document as authority for this now somewhat dubious proposition -- 36 F.R. 22851 (December 1, 1971).

A more current expression of the Commission's thinking on the probability of such a catastrophic event at a reactor can be found in its Three Mile Island deliberations this past March:

Mattson: "They are working on some alternatives. One, we thought of, and one that B&W kind of likes, but it doesn't have a lot of promise. B&W says start up all the reactor coolant pumps, burn them out, blow the seals and hope they cause a loss of coolant accident that way, which would depressurize the system rapidly. Then we get into a mode for which all these systems were designed and we could cope with." (emphasis added).

\* \* \*

Commissioner  
Gilinsky:

"let me ask you again suppose we go into this maneuver, or one of them, and it turns bad, what sort of time scales are involved there?"

Mattson: Hours.

Gilinsky: Hours before what?

Mattson: Before you had core melt down.

(Nucleonics Week, 4.30.79, pp. 2-4, transcript  
March 30, 1979, Commission Meeting).

**POOR ORIGINAL**

346 139

In light of the Three Mile Island accident, simple prudence dictates that all potential consequences of the storage of massive amounts of radioactive materials 80 feet from an active reactor be carefully and fully examined, unless compelling reasons exist demonstrating that this not be done. Surely, the proposition that a Class Nine accident is "highly unlikely" no longer can be deemed persuasive. The one hypothetical study which the NRC used to reach this conclusion, WASH-1400, has now been officially rescinded by the Commission and the actual experience with nuclear power plants in the United States (Fermi, Detroit; Browns Ferry, Alabama; and Three Mile Island, Harrisburg) lends little support for the glib assertion that a core melt down just cannot and will not happen.

Nonetheless, even assuming that the chances of a Class Nine accident are still determined to be small and such an occurrence is deemed unlikely, such a conclusion does not justify the responsible regulatory officials taking a categorical position that they refuse to examine this eventuality despite its catastrophic consequences. The reasoned and conservative analytical approach to the safe use of nuclear energy required close scrutiny of the class nine consequences, particularly when licensing decisions involve authorization to place the equivalent of five nuclear cores 80 feet from an active reactor. No additional insights into reactor safety can be gleaned by ignoring the consequences of a Class Nine accident and if this "highly unlikely" eventually does in fact occur, the NRC will again find itself confronted with "failure modes, the likes of which have never been analyzed." (Mattson, supra, at p. 4 ). Of course, this need not be the case. Adoption of a conservative approach to the analysis of the Salem One reracking proposal can produce a planning document that would be available in the event it was ever required over the next forty years of reactor operations at Lower Alloways Creek which could prevent the responsible regulatory officials from

despairing of their non-existent data base. (Hendrie, supra, at p.4 ). Having shown no countervailing considerations warranting exclusion of this evidence, the staff's position is wholly lacking in a rational basis necessary to sustain it.

Moreover, it is readily apparent that the NRC's policy on consideration of Class Nine accidents is far more flexible than the staff's brief contends. At no time did the Commission, the NRC staff or anyone else determine that a core melt down at a floating nuclear power plant was "reasonably likely to occur" and therefore warranting scrutiny of the consequences flowing therefrom.\* Rather, the Commission has adopted a policy which does not require consideration of Class Nine accidents, absent a showing of special circumstances. This flexible standard permits the NRC staff and licensing boards sufficient discretionary authority to exercise their judgment as to when such analysis would be appropriate and prudent. It should also be noted at this juncture that since the annex to former Appendix D to 10 C.F.R., Part 50 (1970), published at 36 Fed. Reg. 22851-52 (December 1, 1971) has not been adopted as a regulation by the Commission, it does not have force and effect of "law."

In any event, the Commission's most recent articulation of its policy on this matter, as reflected by Chairman Hendries' summation at its January 31, 1979 meeting on the Offshore/appeal, <sup>Power Systems</sup> indicates the extremely broad discretion which has been delegated on the Class Nine question: "the thrust of the

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\* In fact, the NRC staff in the pending Offshore Power Systems proceeding "does not dispute that the probabilities of experiencing a Class Nine accident at a nuclear power plant ashore or afloat are the same." 8 NRC at 211; Slip Opinion at 32 (emphasis in original).

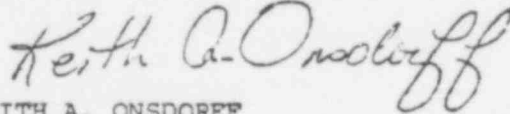
Commission's decision, then, is that indeed these considerations the staff has raised in this case are appropriately considered." (Tr. at 51). Most assuredly, then, Atomic Safety and Licensing Board has been delegated no less authority than the NRC staff to raise Class Nine considerations where such an examination is appropriate. This is clearly the situation here. The Atomic Energy Report -- Theoretical Possibilities and Consequences of Major Accidents in Large Nuclear Power Plants, (Wash. - 740, March 1957), calculated that the release of .15 million curies of strontium 90 could result in the contamination of 150,000 square miles of land mass. A loss of coolant water accident at the Salem One spent fuel pool could conceivably cause the release of forty-five million curies of strontium 90, or three-hundred times the WASH-740 predicted release of lethal radiation.

In light of the near catastrophe at the Three Mile Island Nuclear Generating Station, this Board's expressed desire to examine the consequences of a Class Nine accident at the Salem plant on this huge stockpile of radioactive materials is entirely justified, reasonable and prudent. No further special circumstances need be shown than the close proximity of the spent fuel pool (within 80 feet) to the reactor core to warrant review of the consequences of a core melt down on the spent fuel pool.

CONCLUSION

For all the foregoing reasons, it is respectfully requested that the Board deny the NRC staff's objection to consideration of the consequences of a Class Nine accident on the reracked Salem One spent fuel pool.

Respectfully submitted,

A handwritten signature in cursive script, reading "Keith A. Onsdorff". The signature is written in dark ink and is positioned above the typed name.

KEITH A. ONSDORFF  
Assistant Deputy Public Advocate

DATED: JUNE 14, 1979

346 143