6/18/79

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

LICENSEE'S RESPONSE TO NRC STAFF OBJECTION TO BOARD QUESTION AND MOTION FOR EXTENSION OF TIME TO FILE RESPONSE TO BOARD QUESTION RELATING TO CLASS 9 ACCIDENTS

INTRODUCTION

On June 1, 1979, the Nuclear Regulatory Commission ("NRC" or "Commission") Staff objected to the consideration of that portion of Question No. 3 propounded by the Atomic Safety and Licensing Board on April 18, 1979 relating to the effect of a hypothesized "explosion" and "meltdown" at the Salem Generating Station Unit 1 reactor on the spent fuel pool. For the reasons discussed below, Applicants, Public Service Electric & Gas Company, support and join in the Staff's motion that the above stated portion of Question 3 not be considered.

On June 12, 1979, the Staff moved for an extension of time until 30 days after final disposition of the Staff objection noted above within which to file testimony on that issue if its objection were denied. As discussed in Section

III, infra, the Licensee supports the Staff motion and moves for a similar extension of time to file any of its testimony related to this issue.

ARGUMENT

I. Design Basis Events With A Low Probability Need Not Be Considered In Evaluating Safety Or Environmental Risks

It is beyond question that consideration of an "explosion" and "meltdown" of the Salem Unit 1 core is an accident more severe than the design basis accidents which the NRC reviewed and on which it based its approval for construction and operation of Salem Unit 1. Such an "explosion" and "meltdown" could only be associated with a so-called "Class 9" accident. As explained in the "NRC Staff Objection to Board Question," it is contrary to Commission regulation, policy, and established practice to include consideration of accidents more severe than the design basis accidents in any safety or environmental analysis. In general, it has been uniformly recognized that postulated Class 9 accidents are not credible events, and that any related risks are therefore inconsequential and need not be considered.

In publishing the proposed Annex to 10 C.F.R. Part 50, Appendix D, the Commission negated consideration of Class 9 accidents. The proposed Annex to 10 C.F.R. Part 50, Appendix D states as follows:

> The occurrences in Class 9 involve sequences of postulated successive failures more severe than those pos-

> tulated for the design basis for protective systems and engineered safety features. Their consequences could be severe. However, the probability of their occurrence is so small that their environmental risk is extremely low. Defense in depth (multiple physical barriers), quality assurance for design, manufacture, and operation, continued surveillance and testing, and conservative design are all applied to provide and maintain the required degree of assurance that potential accidents in this class are, and will remain, sufficiently remote in probability that the environmental risk is extremely low. For these reasons, it is not necessary to discuss such events in applicant's Environmental Reports. [Emphasis added.] 1/

1/ This proposed Annex was published in 36 Fed. Reg. 22851 (1971) for comment and provides "interim guidance until such time as the Commission takes further action . . . ." Effective August 18, 1974, the procedures implementing NEPA previously set forth in Appendix D were transferred to Part 51. In the Statement of Considerations published in the July 18, 1974 issue of the Federal Register (39 Fed. Reg. 26279), the Commission expressly stated:

> Part 51 does not affect the status of the proposed Annex to Appendix D to Part 50 regarding the discussion of accidents in environmental reports published by the Commission for comment on December 1, 1971. The proposed Annex is still under consideration by the Commission.

Accordingly, the proposed Annex continues to be the operative statement of Commission policy regarding Class 9 accidents. The continuing vitality of the proposed Annex was acknowledged by the Appeal Board in Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194, 209-10 (1978). Also, although the proposed Annex refers to applicants' environmental reports, the Annex states at footnote 2 that its "current assumptions and other provisions" are applicable elsewhere.

The Commission simply has not required consideration of safety or environmental issues postulated on remotely improbable events. The NRC's Standard Review Plan, NUREG-75/087, Section 2.2.3 (Evaluation of Potential Accidents), which explains how the Staff reviews an applicant's evaluation of potential accidents (i.e., design basis events), states as follows:

> The identification of design basis events resulting from the presence of hazardous materials or activities in the vicinity of the plant is acceptable if the design basis events include each postulated type of accident for which the expected rate of occurrence of potential exposures in excess of the 10 CFR Part 100 guidelines is estimated to exceed the NRC staff objective of approximately 10^{-7} per year. Because of the difficulty of assigning accurate numerical values to the expected rate of unprecedented potential hazards generally considered in this review plan, judgment must be used as to the acceptability of the overall risk presented.
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> The probability of occurrence of the initiating events leading to potential consequences in excess of 10 CFR Part 100 exposure guidelines should be estimated using assumptions that are as representative of the specific site as is practicable. In addition, because of the low probabilities of the events under consideration, data are often not available to permit accurate calculation of probabilities. Accordingly, the expected rate of occurrence of potential exposures in excess of the 10 CFR Part 100 guidelines of approximately 10^{-6} per year is acceptable if, when combined with reasonable qualitative arguments, the realistic probability can be shown to be lower.

In other words, design basis events do not include a postulated type of accident if the realistic estimate of its probability

of occurrence is less than a set level. Like the proposed Annex to Appendix D, NUREG-75/087 merely recognizes that, as a matter of scientific and engineering practical necessity, there must be some identifiable line of demarcation beyond which the likelihood of a radiological occurrence is so remote that it can be safely dismissed from further consideration.

The exclusion of occurrences which are only remotely probable from safety and environmental analysis has long been sanctioned by the Commission and its boards. In Consolidated Edison Company of New York (Indian Point Unit No. 2), CLI-72-29, 5 AEC 20, 21 (1972), the Commission itself held that, absent demonstrated "special circumstances," there was no need to inquire into measures for the integrity of the pressure vessels for light water reactors beyond compliance with the Commission's regulations.

More recently, the Commission reviewed and confirmed its position under the proposed Annex that Class 9 accidents need not be considered in licensing proceedings under Part 50. On April 19, 1978, the Commission denied a Petition for Rulemaking filed by the Connecticut Citizens Action Group with respect to locating nuclear reactors below ground and sealing them in heavy vacuum containments.[2/] Prior to discussing underground siting, the Commission stated:

2/ See 43 Fed. Reg. 16556-58 (April 19, 1978).

> 1. The current NRC design requirement is that reactor containments be designed to withstand up to, and including, Class 8 Design Basis Accidents. Class 9 accidents, such as core melt, are not required because their probability of occurrence is so small that their environmental risk is extremely low. 3/

Further, the Commission cited with approval the Staff's reliance on the proposed Annex to Appendix D, which had been incorporated as Appendix I to Regulatory Guide 4.2 (Preparation of Environmental Reports for Nuclear Power Stations). The Commission observed as follows:

> Second, additional protection against, or reduction of, the risk from Class 9 (core melt) accidents is another objective of proposing underground siting. Regulatory Guide 4.2, [footnote omitted] in addition to defining a spectrum of Class 1 through 8 accidents, describes Class 9 accidents and their probability of occurring as:
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> > * * * sequences of postulated successive failures more severe than those postulated for establishing the design basis for protective systems and engineered safety features. Their consequences could be severe. However, the probability of their occurrence is so small that their environmental risk is extremely low. Defense in depth (multiple physical barriers), quality assurance for design, manufacture, and operation, continued surveillance and testing, and conservative design are all applied to

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3/ Id. at 16557 (emphasis added).

> provide and maintain the required high degree of assurance that potential accidents in this class are, and will remain, sufficiently remote in probability that the environmental risk is extremely low. For these reasons, it is not necessary to discuss such events in applicants' Environmental Reports. 4/

A number of Licensing and Appeal Board decisions have likewise followed the rule by which remotely probable accidents need not be considered absent some special showing of an initiating mechanism. Thus, in Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-74-22, 7 AEC 659 (1974), the Licensing Board held as follows:

> The Intervenor was desirous of presenting testimony on the effects of accidents more severe than the design basis accidents treated in the ER and FES, i.e., testimony on Class 9 accidents. The Board did not permit this since a consideration of such accidents in licensing proceedings is not normally allowed. (Proposed new Annex to App. D, 10 CFR Part 50, 36 F.R. 22851, December 1, 1971.) 5/

The decision to exclude Class 9 matters was affirmed by the Appeal Board in Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397 (1976), where the Appeal Board stated:

4/ Id. at 16557 (emphasis added). By the language, the Commission contemporaneously reaffirmed the proposed Annex to Appendix D.

5/ 7 AEC at 686 (emphasis added).

> Intervenor additionally asserts that the Licensing Board erred in omitting from the environmental balance the consequences of a "breach of containment," a "Class 9" accident. The Board below ruled that the chances of this happening were so remote as to be incredible; it therefore declined to consider it absent a showing - not made - that special circumstances rendering such an occurrence more likely at Catawba than in power reactors generally. 7 AEC at 686. Intervenor argues to us that the Board was obliged to weigh this type of accident, "incredible" or not.
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> Intervenor put forward this same argument in a prior Commission proceeding involving another nuclear facility. It was rejected there on the ground that NEPA does not require consideration of environmental effects not shown to have some reasonable likelihood of occurring, a rejection which the court of appeals upheld on the ground stated. Carolina Environmental Study Group v. United States, supra, 510 F.2d at 798-800 (D.C. Cir. 1975), affirming Duke Power Co. (McGuire Nuclear Station, Units 1 & 2), ALAB-128, 6 AEC 399 (1973). For the reasons explained in those decisions, the Licensing Board justifiably refused to consider the "Class 9 accident" contention in this proceeding. 6/

In Long Island Lighting Co. (Jamesport Nuclear Power Station, Units 1 and 2), LBP-77-21, 5 NRC 684 (1977), an intervenor had proposed to recall and cross-examine Staff witnesses on a comment by the Department of the Interior that the "most serious (Class 9) postulated accident has not been evaluated" by the Staff in its Draft Environmental

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6/ 4 NRC at 415-16 (footnotes omitted)(emphasis added).

Statement. The Department of Interior commented that certain site specific "circumstances suggest that risks may be above average" at the Jamesport site and, accordingly, recommended "that any site posing special problems or risks in the event of a core melt-through accident should be evaluated individually."[7/] The Licensing Board denied the intervenor's motion to reopen this testimony:

> We find that the Staff has complied with NEPA as implemented by 10 CFR Part 51. First, the Staff did acknowledge and directly address Interior's comments. In Section 11.9.1 of the FES, responding to Interior's comments, the Staff noted that its position on Class 9 accidents was stated in Section 7.1. In that latter section, while recognizing that the consequences of postulated Class 9 accidents could be severe, the Staff concluded that, because the probability of their occurrence was judged so small, their environmental risk was extremely low, and, thus, it was unnecessary to evaluate them. We note that Staff's position here is entirely consistent with 10 CFR Part 100, Reactor Site Criteria. Footnote 1 of 10 CFR Part 100.11 specifically requires that sites must be evaluated on the basis of a fission product release not in excess of those from any accident considered credible. We do not consider postulated Class 9 accidents to be credible ones. Second, we note that the Department of Interior does not challenge the Staff's conclusion of small probability or the basis for that finding. Instead, apparently like the appellant in Carolina Environmental Study Group v. U.S., 510 F.2d 796 (1975), the Department of Interior, focusing on the degree of possible damage resulting from the oc-

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7/ 5 NRC at 690-91.

> currence of a Class 9 accident, urges that the risk is very real, and thus tends to equate damage with risk. The Court of Appeals in the Carolina Environmental Study Group case, supra, could not and we cannot agree with such an equation. 8/

The Jamesport and Catawba holdings, excluding hypothecated Class 9 accidents from consideration, follow the "rule of reason" applied by the Commission's Boards in licensing proceedings. This "rule of reason" was expressly credited by the Appeal Board in Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831 (1973). The Appeal Board there rejected an intervenor's Class 9 argument on the following grounds:

> In the oral argument before this Board, the intervenor presented its Class-9-accident argument somewhat differently. It began by re-asserting the argument advanced in its brief that such accidents may not be incredible. It went on, however, to assert that
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> > . . . while various kinds of accidents such as a meltdown or a pressure vessel rupture are incredible within the terms that the Commission uses, they are not impossible, and the same can be said as to multiple mode consecutive failures. [Emphasis in original.]
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> Its conclusion was that, under NEPA, the consequences of accidents not shown to be impossible should be considered in the Final Environmental Statement (FES) and by the Licensing Board.
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> As put to us, this assertion brings into question the comprehensiveness of the environmental review mandated by NEPA -

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8/ Id.

i.e., whether it must include all theoretically possible environmental effects arising out of an action, or whether it may be limited to effects which are shown to have some likelihood of occurring. NEPA itself supplies little guidance in this respect, providing only that the environmental effects of a proposed agency action must be discussed "to the fullest extent possible" through the medium of a "detailed statement." But there has been clear judicial sanction of a "rule of reason" in the application of NEPA. See N.R.D.C. v. Morton, 458 F.2d 827 (D.C. Cir. 1972). The reasonableness standard was specifically invoked in EDF v. Corps of Engineers, 348 F. Supp. 916 (N.D. Miss. 1972), where the court required a statement assessing the impact of a facility to contain a discussion only of

> the significant aspects of the probable environmental impact of the proposed agency action. [Emphasis in original.]

The court found no necessity for the agency to consider what that court described as "mere possibilities unlikely to occur as a result of the proposed activity."

That description fits the Class 9 accident. In the absence of a showing that, with respect to the reactor in question, there is a reasonable possibility of the occurrence of a particular type of accident generically regarded as being in Class 9, NEPA does not require a discussion of that type of accident. It does not require an impact statement or a licensing board to exhaust all theoretical possibilities, whether or not they have been identified by a party.

LHSG here has failed to make the requisite showing, despite its being afforded the opportunity to do so. Its assertions regarding Class 9 accidents are accordingly without merit. 9/

9/ 6 AEC at 835-36 (footnotes omitted)(emphasis added).

The earlier precedents have been cited by the Appeal Board more recently in a continuing line of authority for the proposition that postulated accidents of only very remote probability need not be considered. For example, in Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 2), ALAB-486, 8 NRC 9 (1978), the Appeal Board followed precisely this line of reasoning in accepting the conclusion of the Staff and applicant that the crash of an airplane heavier than 200,000 pounds travelling at 200 knots was calculated "to have such a low probability that it does not present a hazard to the public, and therefore the plant need not be designed to withstand its effects."[10/] The Appeal Board observed that "if the probability of a plane crash . . . can be shown to be less than 1×10^{-7} (i.e., less than one chance in 10 million) per year, such events are deemed by the Staff to be of sufficiently low likelihood that their effects may be ignored, even though the consequences of such a crash may exceed those specified in 10 C.F.R. Part 100. Standard Review Plan (NUREG-75/087), §3.5.1.6."[11/]

In so ruling, the Appeal Board took further note of the Commission's traditional reliance upon probabilities in

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10/ 8 NRC at 25.

11/ Id. at 26 (emphasis supplied).

analyzing design requirements, as in the Indian Point and Shoreham proceedings:

> [T]he intervenors do not disagree that the determination whether a plant need be designed to withstand the crash of a heavy aircraft may properly turn on the probability of occurrence of such a crash. That they do not is understandable, for the concept of analyzing aircraft hazards in terms of probabilities has had longstanding acceptance within the Commission. See, e.g., Long Island Lighting Company (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 845-46 (1973). Cf. Consolidated Edison Company of New York (Indian Point Unit No. 2), CLI-72-29, 5 AEC 20 (1972)(acceptance of probability approach to ascertain the need for additional safety measures with regard to pressure vessels). Nor do they contest the applicants' and staff's conclusion that a facility need not be designed to withstand a crash the probability of which is less than approximately 10^{-7}. In these circumstances, and absent any indication that the criterion should be different, we accept that probability value for the purposes of this case. See Public Service Electric and Gas Company (Hope Creek Generating Station, Units 1 and 2), ALAB-429, 6 NRC 229, 234 (1977). 12/

No one can doubt that the crash of a 100 ton airplane into the containment of a nuclear plant could pose safety and environmental questions. However, the Appeal Board in Three Mile Island correctly determined, as urged by the Staff, that the NRC's regulations and empirical tests justified excluding such postulated events as too improbable and therefore incredible for purposes of licensing analysis.

12/ Id. at 28 (footnote omitted).

Such a conclusion necessarily accepts the premise that the event postulated to be incredible would entail severe consequences, including exposure exceeding the guidelines in 10 C.F.R. Part 100. Yet, the Commission has consistently rejected such events as design basis accidents on the sole ground of their improbability, as shown by the preceding authorities.

Again, in Public Service Electric and Gas Co. (Hope Creek Generating Station, Units 1 and 2), ALAB-429, 6 NRC 229 (1977), the Appeal Board evidenced its reliance upon the probability values as a proper safety guideline. The Appeal Board plainly indicated that the consequences of a liquefied natural gas accident could be disregarded in safety analysis on the sole basis of improbability. The Appeal Board stated:

> Although the point was nowhere explored on the record, it seems possible that the deflagration of a methane cloud at the plant site could lead to consequences which exceed those normally considered in a reactor safety analysis and hence should be included in the design of the plant unless it can be established that such an event has an exceedingly low probability of occurrence. The Licensing Board accepted, and so do we, the guideline probability values set forth in NUREG-75/087 (10^{-7} for a realistic calculation and 10^{-6} for a conservative calculation) which would permit an applicant not to design a plant to withstand a particular accident due to its low probability. 13/

13/ 6 NRC at 234 (footnotes omitted).

The remainder of the decision, reviewing Staff's and applicant's probability analysis, confirms the Appeal Board's reliance on a strict probability approach.

As the Staff notes in its Objection to Board Question, the Appeal Board has recently addressed the Class 9 issue in the OPS proceeding,[14/] once more reaffirming the principle that "[t]hough the results of a Class 9 accident might be extremely severe, the likelihood of one occurring is deemed highly improbable; so unlikely, in fact, that a nuclear power plant need not be designed with protective systems or safety features to guard against it."[15/] Further, the Appeal Board explicitly stated that the proposed Annex "continues to be the Commission's 'interim guidance' on the treatment to be accorded Class 9 accidents in environmental impact statements."[16/] The Appeal Board noted, after setting forth the Staff's consistent position that Class 9 events are too remote to require consideration, "[n]ot only we but the courts of appeals have upheld the correctness of that position in the face of vigorous challenges."[17/]

14/ Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194 (1978), appeal pending. It should be noted that during its public deliberations, the NRC has given no indications that it proposed to change the rule as to non-considerations of Class 9 accidents for land-based plants.

15/ 8 NRC at 209. The Appeal Board cited the Commission's Denial of Rulemaking Petition of Connecticut Citizen Action Group, supra, approving the proposed Annex to Appendix D, 10 C.F.R. Part 50 as viable, to support this proposition.

16/ Id. at 210.

17/ Id. (footnotes omitted).

In holding that a consideration of Class 9 accidents in the Staff's FES in the OPS proceeding was appropriate because "it presents risks of a different kind than those associated with plants ashore,"[18/] the Board did not depart from the long-standing rule that Class 9 events need not be considered as to land-based reactors. Referring to this proposition urged by the applicant, the Appeal Board responded:

> Certainly insofar as land-based reactors are concerned, the applicant reads the Annex correctly. The policy that environmental statements on those plants generally need not consider Class 9 accidents rests on a 1971 Commission judgment that their likelihood is so remote as to make them incredible. The Annex does not tie the need to make such assessments to the consequences which may flow from such an accident; only a showing of special circumstances that increase the probability of such an event necessitates its consideration.
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> That result was not unintended. It follows from the problem the Commission faced in 1971: to what extent did the National Environmental Policy Act of 1969 require evaluation of possible accidents at nuclear power plants? As is now settled, NEPA mandates assessment of those environmental consequences that are reasonably anticipatable; possibilities unlikely to occur as a result of the proposed activity need not be considered. Moreover, the decision to tie the need to discuss reactor accidents--no matter how serious their theoretical consequences--to a showing

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18/ Id. at 218 (i.e., the existence of a liquid pathway that would disperse radioactive releases more rapidly over a greater area than through groundwater).

> of a reasonable likelihood of occurrence was an approach that has since gained judicial acceptance. 19/

Accordingly, the Appeal Board in OPS determined that, as to land-based reactors, consideration of Class 9 accidents rests solely on strict probability analysis.

The relevant authorities were once again reviewed by the Licensing Board in the Allens Creek proceeding. 20/ The Board there rejected intervenors' Class 9 contentions premised on the Risk Assessment Review Group Report, NUREG/CR-0400 (Sept. 7, 1978) and its reevaluation of reactor safety findings in the Rasmussen Report, WASH-1400. In declining to accept their Class 9 contentions, the Licensing Board disapproved the intervenors' premise that the proposed Annex was based on WASH-1400 or was changed by a recent policy statement:

> . . . WASH-1400 would not have been the basis for precluding consideration of such a Class 9 accident initiator and the movants do not tell us how, or, for that matter, allege that the Commission's Policy Statement of January 18, 1979 has voided the Proposed Annex. Moreover, in Consolidated Edison Company (Indian Point Unit No. 2), CLI-72-29, 5 AEC 20 (1972), the Commission indicated that protection against the consequences of pressure vessel failure need not be required for a facility unless it has been determined that for the facility in question there are special considerations that make it necessary that vessel failure be considered.

19/ 8 NRC at 212-213.

20/ Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), Docket No. 50-466, Supplemental Order Ruling Upon Intervention Petitions (March 15, 1979).

> See also Duke Power Company (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 415-16 (1976) wherein the Appeal Board affirmed that a Licensing Board justifiably can refuse to consider a "breach of containment" contention absent a showing that special circumstances rendering such an occurrence more likely at the facility being reviewed than in power reactors generally. 21/

Moreover, the Licensing Board in this very proceeding has already recognized that it should not and need not consider postulated events whose severity exceed that of design basis accidents. In its "Order Following Special Prehearing Conference," dated May 24, 1978, the Board rejected Contention 1 and Part C of Contention 2 of the amended petition for intervention filed by Eleanor G. and Alfred C. Coleman, Jr. The Board's statement and analysis of the proposed contentions demonstrates its adherence to the principal that Class 9 accidents are not to be considered in licensing proceedings:

> In Contention 1 and Part C of Contention 2 the Petitioner asserts that the increased number of spent fuel assemblies which are proposed to be placed in the spent fuel pool should require the Licensee to reconsider the design criteria of the pool. More specifically, the Petitioner contends that the Licensee should reconsider the design with respect to tornadoes, hurricanes, turbine missiles, and seismological events.
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> When the Licensee's construction permit was considered, Licensee was re-

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21/ Id. at 3-5. Likewise, in this proceeding, there has been no showing that any reliance has been placed upon WASH-1400 for the issuance of an operating license for Salem Unit 1.

quired to satisfy the design criteria set forth in Criterion 2 of Appendix A of Part 50 of the Commission's regulations (10 CFR 50). Criterion 2 provides that the design of elements such as the spent fuel pool shall be sufficient to;

> . . . withstand the effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami and seiches without loss of capability to perform their safety functions. The design bases . . . shall reflect . . . the most severe of the natural phenomena that have been historically reported for the site . . ."

Because the Licensee's design for the spent fuel pool was approved, that necessarily meant that the pool satisfied the criteria established for the most severe external phenomena reported in the vicinity of the Salem site. The probability of failure of the design to withstand these phenomena cannot be affected by the presence of additional fuel assemblies in the pool. The design is a function of the phenomena and not a function of the number of assemblies stored. If the number of assemblies could change the importance of the safety function to be performed, then it might be appropriate to consider a change in the design criteria (see number "3" of the factors influencing design bases mentioned in Criterion 2, above). Since the safety function to be performed is to safeguard all assemblies from the effects of outside phenomena, the safety function is unchanged by the presence of additional assemblies. Contention 1 and Part C of Contention 2 are therefore rejected as outside the scope of this review. [Emphasis in original.]

Also, in an earlier Memorandum and Order Following Prehearing Conference dated November 26, 1973, the Licensing Board

in this proceeding rejected proposed Contention 10 by intervenor Citizens Opposed to Radiation Pollution on the ground that "no 'special considerations' involving Salem Units 1 and 2 have been shown by the intervenor which would warrant inquiry into the question of pressure vessel failure."[22/]

These many controlling precedents are in accord with the general statutory approach of providing "reasonable assurance" for safeguarding public health and safety in licensing proceedings. "Reasonable assurance" that the health and safety of the public will be protected -- and not analysis of hypothetical events for which there is no initiating mechanism -- is the cornerstone of the regulatory scheme for licensing under the Atomic Energy Act of 1954, as amended. As the Supreme Court stated in Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519 (1978), the regulatory scheme is premised on the conclusion that "there is reasonable assurance that the proposed plant can be constructed and operated without undue risk."[23/]

Moreover, the Commission's acceptance heretofore of the proposed Annex to Appendix D of 10 C.F.R. Part 50, predicated on the assumption that a Class 9 accident would en-

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22/ Order at 7 (relying upon the Commission's Indian Point test discussed supra.

23/ 435 U.S. at 526 n.4 (emphasis added).

tail severe consequences, has coincided with the approval of this construction of NEPA by which Class 9 accidents are excluded from environmental considerations because the probability of occurrence is so remote. Thus, the Commission's NEPA approach in its treatment of such remotely probable accidents was validated in Carolina Environmental Study Group v. United States, 510 F.2d 796 (D.C. Cir. 1975). The Court was specifically considering whether the record in that proceeding could be adequate without the consideration of the occurrence of Class 9 accidents in the Final Environmental Statement. The Court held that the Commission, as set forth in its proposed Annex to Appendix D, 10 C.F.R. Part 50, properly concluded that the probability was so low that they need not be considered. The Court concluded:

> Because each statement on the environmental impact of a proposed action involves educated predictions rather than certainties, it is entirely proper, and necessary, to consider the probabilities as well as the consequences of certain occurrences in ascertaining their environmental impact. There is a point at which the probability of an occurrence may be so low as to render it almost totally unworthy of consideration . . . . Recognition of the minimal probability of such an event is not equatable with nonrecognition of its consequences. 24/

24/ 510 F.2d at 799. See also Porter County Chapter of the Izaak Walton League of America, Inc. v. AEC, 533 F.2d 1011, 1017-18 (7th Cir.), cert. denied, 429 U.S. 945 (1976); Union of Concerned Scientists v. Atomic Energy Commission, 499 F.2d 1069, 1088-91 (D.C. Cir. 1974); Ecology Action v. United States Atomic Energy Commission, 492 F.2d 998 (2d Cir. 1974).

The Court of Appeals for the Ninth Circuit, in Trout Unlimited v. Morton, 509 F.2d 1276 (9th Cir. 1974) also approved the exclusion of matters from an EIS which are remote and highly speculative. In that case, the appellants argued that the environmental impact statement was inadequate because it failed to discuss "many possible environmental consequences."[25/] The Court rejected appellants' position, holding:

> Many of these consequences while possible are improbable. An EIS should not discuss remote and highly speculative consequences. EDF v. Corps of Engineers, 348 F.Supp. 916, 933 (N.D. Miss. 1972), aff'd, 492 F.2d 1123 (5th Cir. 1974). This is consistent with the (CEQ) Council on Environmental Quality Guidelines and the frequently expressed view that adequacy of the content of the EIS should be determined through use of a rule of reason. Lathan v. Brinegar, supra; EDF v. Corps of Engineers, 492 F.2d 1123 (5th Cir. 1974); Life of the Land v. Brinegar, supra; Natural Resources Defense Council v. Morton, 458 F.2d 827 (D.C. Cir. 1974). A reasonably thorough discussion of the significant aspects of the probable environmental consequences is all that is required by an EIS. 26/

Other courts have similarly held that NEPA's "rule of reason"[27/] obviates consideration of occurrences of extremely

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25/ Trout Unlimited v. Morton, supra at 1283.

26/ Id. (emphasis supplied).

27/ See Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551 (1978); New York v. Kleppe, 429 U.S. 1307, 1311 (1976)(Opinion of Mr. Justice Marshall in Chambers).

low probability. Therefore, NEPA requires only that an agency describe the anticipated environmental effects of a proposed action such that only reasonably foreseeable environmental effects should be considered. Environmental Defense Fund, Inc. v. Hoffman, 566 F.2d 1060, 1067-68 (8th Cir. 1977); Warm Springs Dam Task Force v. Gribble, 565 F.2d 549, 552 (9th Cir. 1977); Sierra Club v. Hodel, 544 F.2d 1036, 1039 (9th Cir. 1976); Swain v. Brinegar, 542 F.2d 364, 368 (7th Cir. 1976)(en banc); Scientists' Institute for Public Information, Inc. v. AEC, 481 F.2d 1079, 1092 (D.C. Cir. 1973); International Harvester Co. v. Ruckelshaus, 478 F.2d 615, 650 n.130 (D.C. Cir. 1973); Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827, 837 (D.C. Cir. 1972); Columbia Basin Land Protection Association v. Kleppe, 417 F.Supp. 46, 53 (E.D. Wash. 1976); Concerned About Trident v. Schlesinger, 400 F.Supp. 454 (D.D.C. 1975), aff'd, 555 F.2d 817 (D.C. Cir. 1977); Environmental Defense Fund, v. Corps of Engineers, 348 F.Supp. 916, 933 (N.D. Miss. 1972), aff'd, 492 F.2d 1123 (5th Cir. 1974).

Neither environmental nor safety analysis under the Commission's Class 9 policy, particularly the proposed Annex to Appendix D of 10 C.F.R. Part 50, contemplates or requires that such remotely probable events be included in the NRC's environmental or safety analysis. Common sense dictates that there must be some cut-off point beyond which pos-

tulated events are so improbable that they fall outside the environmental or safety risks the Commission's rules intend its boards to assess in a practical, realistic manner. This has been the unambiguous policy from which the Commission has never deviated, and fully accords with the stated requirement throughout 10 C.F.R. Part 50 that "reasonable assurance" be given for the protection of the public health and safety. To breach this consistently held principle now would create great uncertainty in this and all future proceedings as well as expose all licensees to the prospect of reopened proceedings upon assertions of Class 9 consequences not previously considered.[28/] Although the Commission may one day decide to negate its policy of not considering Class 9 occurrences, this Licensing Board is without the authority to override established Commission policy by considering Class 9 matters absent a clear mandate to do so.[29/]

28/ Because of the very limited nature of this proceeding, any consideration of so-called Class 9 accidents would undoubtedly involve the expenditure of significant time totally out of proportion to the time devoted to contentions considered as a result of the Commission's Notice in this proceeding. Moreover, considering the undefined nature of the question and the large number of novel issues which may be ultimately involved, there is no assurance that there will be any meaningful outcome.

29/ Licensee submits that the NRC's review of the Three Mile Island incident is not sufficiently complete to draw any meaningful conclusions with regard to the issues presented here. In any event, it is up to the Commission to review the vast information gathered and the resulting recommendations, rather than this Board, and to set any new policies relating to consideration of Class 9 accidents.

II. Under The Notice Of Hearing The Board's Authority Is Limited

This Board was established by the Commission for the limited purpose of considering "the application of the Public Service Electric & Gas Company (the Licensee) for an amendment to Facility Operating License No. DPR-70, which presently authorizes the Licensee to possess, use and operate the Salem Nuclear Generating Station, Unit 1, located in Salem County, New Jersey."[30/] This amendment relates solely to the request to modify the spent fuel storage pool to increase its capacity. As this Board has already recognized, a hearing on the spent fuel pool racks did not signal a wholesale reappraisal of the design, construction or operation of the facility. The Commission has made all requisite findings with regard to issuance of the construction permit and operating license for Salem Unit 1 respecting the assurance of the health and safety of the public and compliance with the National Environmental Policy Act and 10 C.F.R. Parts 50 and 51. This Board may not redo or re-evaluate the detailed review or findings of the Commission with regard to the operation of the Station by virtue of its charge to evaluate the design of the new racks. To

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30/ Notice of Hearing on Amendment of Facility Operating License (emphasis added).

hold otherwise would result in the tail wagging the dog.

As previously noted, in ruling on contentions, this Board has consistently held that design aspects of the Station and of the spent fuel pool unrelated to the rack change would not be reexamined. See discussion pp. 18-20, supra. Inasmuch as there has been a finding by the Commission that the design of the facility meets all applicable regulations and the facility has been constructed in accordance with the application, any challenge to the design criteria would likely represent a prohibited challenge to the regulations such as the NRC Emergency Cooling Criteria, 10 C.F.R. §50.46 and Appendix F to 10 C.F.R. Part 50. See 10 C.F.R. §2.758.[31/]

III. The Staff's Motion For An Extension Of Time Should Be Granted And The Licensee Should Be Given A Similar Extension

The Staff has moved for an extension of time in which to file testimony responding to that portion of the Board's question to which it has taken objection. The Staff noted the Chairman's absence from the country and the fact that its motion with regard to exclusion of Class 9 accidents would not be decided until after the scheduled date for submission of testimony. As discussed previously, if the Board

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31/ Northern States Power Co. (Tyrone Energy Park, Unit 1), ALAB-464, 7 NRC 372, 375 (1978); Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 2), ALAB-456, 7 NRC 63, 65 (1978); Arizona Public Service Co. (Palo Verde Nuclear Generating Station, Units 4 and 5), "Memorandum and Order," Docket Nos. 50-592 and 50-593 (May 18, 1979).

decided that matters resulting from a "meltdown" and "explosion" need be considered, a significant effort would be required to generate such testimony. Such substantial effort would be wasted should the Board exclude consideration of Class 9 accidents from its guestions. Therefore, the Staff's request for an extension of time should be granted. For the same reasons, Licensee moves for an extension of time to file any testimony related to this issue. Licensee would request that the length of such extension be set after the Board's ruling on the necessity for consideration of Class 9 accidents.

IV. If The Licensing Board Should Deny The Staff's Objection, An Appeal Should Be Certified To The Commission

As discussed above, the policy against consideration of Class 9 accidents is expressed in a number of the Commission's decisions as well as NRC regulations and regulatory guidelines adopted or approved by the Commission. Accordingly, since any consideration of other than design basis accidents by the Licensing Board would necessarily effect a departure from the established rules, the Board should certify the question to the Commission pursuant to 10 C.F.R. §2.718(i) or refer the matter to the Commission pursuant to 10 C.F.R. §2.730(f) if it overrules the Staff's objection.

This request meets the standards for certification or referral, that is, "failing a certification, the public interest will suffer 'an' unusual delay or expense will be encountered." Public Service Company of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-271, 1 NRC 478, 483 (1975). Obviously, consideration of Class 9 events would cause substantial delay in deciding the narrow issues arising from Applicants' proposed amendment to its operating license to expand the capacity of the facility's spent fuel storage pool. Moreover, consideration of Class 9 events would, for the reasons discussed in Part II, supra, exceed the Licensing Board's authority under the limited charter given it by the Commission and would consequently affect "the basic structure of the proceeding in a pervasive or unusual manner." Public Service Company of Indiana (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-405, 5 NRC 1190, 1192 (1977).

Indeed, it is most instructive that the Appeal Board's review of the Commission's Class 9 policies in Offshore Power Systems, supra, came by way of the certification process. If the Licensing Board should overrule the Staff's objection, the same relief is logically and equitably appropriate here, even more so because Salem Unit 1 is a land-based reactor, not subject to liquid pathway risks discussed

in the Offshore Power Systems proceeding. Also, the consideration of Class 9 events by the NRC Staff in the Offshore Power Systems proceeding pertained to the risk of a Class 9 accident itself, not its incidental or incremental affect on other narrower phases of the licensing proceedings after both the construction permit and operating license had been issued.

CONCLUSION

For the reasons discussed above, the Licensing Board should sustain the Staff's Objection to that portion of Question 3 propounded by the Board relating to the effect of a hypothesized "explosion" and "meltdown" on the spent fuel pool of Salem Unit 1 and should grant the requested extensions of time. In addition, the Staff's and Licensee's response should be stayed while the question is certified to the Commission.

Respectfully submitted,

CONNER, MOORE & CORBER

Mark J. Wetterhahn
Counsel for the Licensee

June 18, 1979

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

CERTIFICATE OF SERVICE

I hereby certify that copies of "Licensee's Response to NRC Staff Objection to Board Question and Motion for Extension of Time to File Response to Board Question Relating to Class 9 Accidents," dated June 18, 1979 in the captioned matter, have been served upon the following by deposit in the United States mail this 18th day of June, 1979:

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