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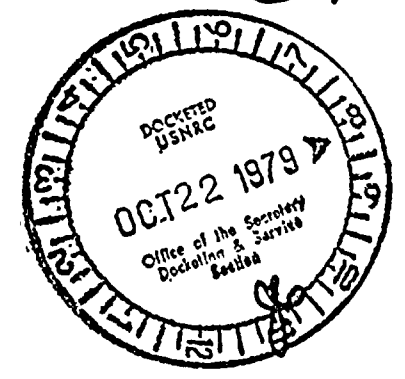
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Charles Bechhoefer, Chairman
Dr. Oscar H. Paris, Member
Glenn O. Bright, Member



In the Matter of
PENNSYLVANIA POWER & LIGHT COMPANY
and
ALLEGHENY ELECTRIC COOPERATIVE, INC.
(Susquehanna Steam Electric Station,
Units 1 and 2)

Docket Nos. 50-387
50-388

MEMORANDUM AND ORDER CONCERNING CLASS 9
ACCIDENT CONTENTION
(October 19, 1979)

On August 30, 1979, the Susquehanna Environmental Advocates (SEA), an intervenor in this operating license proceeding, filed a "Petition For Modification of Special Prehearing Conference Order" which asked us to reconsider our earlier ruling which rejected as an issue in controversy SEA's contention which sought to litigate the consequences of so-called "Class 9" accidents. In responses dated September 19, 1979 and September 27, 1979,^{1/} respectively, the NRC Staff and the Applicants each opposed the requested modification. No other party has filed a response to the petition. For reasons hereinafter set forth, we grant in

^{1/} Although SEA's petition includes a statement that all parties were served, the Applicants claim they did not receive the petition from SEA but rather were furnished a copy by the NRC Staff. In addition, not all of the Board members were personally served. We remind SEA that motions such as this must be furnished to all parties, as well as the Board and the Commission's Secretary (10 CFR §2.730(a)). In this instance, we will consider the petition and will accept the Applicants' response as timely filed.

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part and deny in part SEA's petition.

1. Before turning to the petition before us, we believe it desirable first to review what a "Class 9" accident is. As explained by the Appeal Board in Consumers Power Co. (Midland Plant, Units 1 and 2), ALAB-123, 6 AEC 331, 346-48 (1973), the "Class 9" designation stems from the Commission's December, 1971 proposed rulemaking entitled "Consideration of Accidents in Implementation of the National Environmental Policy Act of 1969" (NEPA), published at 36 Fed. Reg. 22851 (December 1, 1971). That proposal recognized that NEPA, as construed by the Commission, requires a discussion of at least certain types of accidents as part of the environmental review conducted for reactor licensing. Midland, supra, 6 AEC at 346. It would have added an Annex to 10 CFR Part 50, Appendix D, the Commission's then-existing rules governing the implementation of NEPA in licensing proceedings, to delineate the manner in which various categories of accidents should be taken into account in that environmental review.

In the proposed Annex, the Commission divided the theoretical spectrum of accidents — ranging from the most trivial to the potentially most serious — into 9 separate categories or classes. Under the Annex, each class is "characterized by an occurrence rate and a set of consequences." And each class of accidents, save Classes 1 and 9, is required to be analyzed as

part of environmental reports and statements. Class 1 accidents "need not be considered because of their trivial consequences." Accidents falling in Classes 2 through 8 are stated to have "significant adverse environmental effects" and are to be "evaluated as to probability, or frequency of occurrence, to permit estimates to be made of environmental risk or cost * * *." The most severe of the accidents to be evaluated, those in Class 8, are generally described as "Accident Initiation Events Considered in Design Basis Evaluation in the Safety Analysis Report." According to the Annex, such events "are used, together with highly conservative assumptions, as the design-basis events to establish the performance requirements of engineered safety features." See Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831, 834 (1973). In other words, from a safety standpoint, a plant must be designed either to preclude or minimize the occurrence, or to mitigate the consequences, of a Class 8 accident.

Accidents in Class 9 cannot be defined in terms of any particular sequence of events or occurrences or types of failure. Rather, they embrace the totality of "more severe" accidents — of many different sorts — which do not fall within the other classes. They represent "an indefinable number of conceivable types of accidents which are more severe than the design basis accidents of Class 8." Id. at 834-35. According to the Annex,

these events, including their consequences, need not be discussed for the following reasons:

The occurrences in Class 9 involve sequences of postulated successive failures more severe than those postulated 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 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.

2. SEA asks us to reconsider the portion of our Special Prehearing Conference Order of March 6, 1979, LBP-79-6, 9 NRC 291, in which we rejected SEA's Contention 10. Id. at 323-24. In relevant part, that contention reads:

A serious accident at the plant site involving a major release of radiation and the consequences of this are not even discussed in the ER or the FSAR of PP & L. Studies showing that the risk is so small that this does not even need to be discussed are irrelevant. These studies have been in large part discredited and regardless of the extent of the risk the extent of the possible damage demands discussion of this possibility.

We want to know the consequences of such an accident in terms of the health, welfare and employment of people of the Wyoming Valley Area. * * *2/

The basis we assigned for rejecting the foregoing portion of SEA's Contention 10 was as follows:

SEA 10: This contention seeks a discussion of the consequences of a "serious" (presumably Class 9) accident. As a basis, it cites the recent "discredit[ing]" of studies indicating that the risks of such an accident are small. Although not identified, the allegedly discredited study is undoubtedly that represented by WASH-1400, with respect to some conclusions of which the Commission has recently withdrawn its endorsement. Nonetheless, the Commission has, since long before WASH-1400, taken the position that the consequences of such accidents need not be discussed because of the low probability of their occurrence, and this position has been upheld by the courts. Porter County Chapter v. AEC, 533 F.2d 1011, 1017-18 (7th Cir.), cert. denied, 429 U.S. 945 (1976); Carolina Environmental Study Group v. AEC, 510 F.2d 796 (D.C. Cir. 1975); Ecology Action v. AEC, 492 F.2d 998 (2d Cir. 1974); see also Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194 (1978); Long Island Lighting Company (Shoreham Nuclear Power Station), ALAB-156, 6 AEC 831 (1973). The policy in no manner was

2/ The remainder of the contention concerns the payment of monetary costs of a Class 9 accident. We earlier rejected that part of the contention as an impermissible challenge to the Price Anderson Act, 9 NRC at 324; nothing in SEA's current petition takes issue with that ruling, and we therefore need not further discuss it here.

premised upon the results of WASH-1400. Moreover, unless and until repudiated by the Commission, the policy is binding upon us.

SEA would now have us abrogate this ruling as a result of the recent accident at the Three Mile Island (TMI) facility. It claims that the accident at TMI was a Class 9 accident and that "[t]he Board, and the NRC, can no longer state that the probability of such an accident occurring is so low or remote as to preclude discussion." It adds: "TMI effectively destroys all of the elaborate probability studies." As a result, SEA seeks to have admitted a contention "which would serve to litigate the effects of a Class 9 Accident, and its effect on the cost benefit analysis of the Plant."

In opposing SEA's petition, the Staff indicates that the TMI accident was indeed a "Class 9" accident. In doing so, it reiterated in this proceeding a similar position which it had taken in another proceeding (Salem Nuclear Generating Station, Unit No. 1, Docket No. 50-272), and it relied essentially on the brief it filed in that proceeding.^{3/} The Applicants took no position on this question but premised their opposition to SEA's petition on the assumption that the Staff's views were accepted. Both the Applicants and Staff, however, asserted

^{3/} The Staff also furnished us with the contrary views of two of its members.

that Class 9 accidents could not be considered in this proceeding because of the proposed Annex and Commission, Appeal Board and judicial decisions applying the policies encompassed by that Annex.

3. The proposed Annex has never been formally adopted by the Commission. But that does not mean that it cannot or should not be applied in this proceeding. And an examination of adjudicatory and judicial precedents clearly indicates that we should do so.

To begin with, the Annex is entitled to be accorded greater weight than would normally be given to a proposed regulation. Midland, ALAB-123, supra, 6 AEC at 347. This is because, at the time of the Annex's promulgation, the Commission pointed out that its provisions "will be useful as interim guidance until such time as the Commission takes further action on them." 36 Fed. Reg. at p. 22851 (December 1, 1971). And three years later, when replacing its NEPA-implementing regulations in 10 CFR Part 50, Appendix D, with new regulations in 10 CFR Part 51, the Commission took pains to point out that Part 51 did not affect the proposed Annex to Appendix D and that "[t]he proposed Annex is still under consideration by the Commission." 39 Fed. Reg. 26279 (July 18, 1974).

Furthermore, reliance on the Annex has been sanctioned by a host of adjudicatory decisions and has been upheld by the

courts. See, e.g., Midland, ALAB-123, supra; Wisconsin Electric Power Co. (Point Beach Nuclear Plant, Unit 2), ALAB-137, 6 AEC 491, 502 (1973); Shoreham, ALAB-156, supra; Commonwealth Edison Co. (Zion Station, Units 1 and 2), ALAB-226, 8 AEC 381, 407-08 (1974); Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-355, 4 NRC 397, 415-16 (1976); Ecology Action v. AEC, 492 F.2d 998 (2d Cir. 1974); Carolina Environmental Study Group v. AEC, 510 F.2d 796, 798-800 (D.C. Cir. 1975); Porter County Chapter v. AEC, 533 F.2d 1011, 1017-18 (7th Cir.), cert. denied, 429 U. S. 945 (1976). A recent manifestation of judicial acceptance of the Commission's reliance on the Annex is the decision of the United States Court of Appeals for the District of Columbia Circuit in Hodder v. NRC, Nos. 76-1709 and 78-1149 (December 26, 1978), which held that the Commission did not violate NEPA by failing to examine the environmental effects of Class 9 accidents because of the extreme improbability of their occurrence. See 48 LW 3203 (October 2, 1979). The Supreme Court on October 1, 1979 denied certiorari of that decision (No. 78-1652, 48 LW 3218, October 2, 1979).

In its most recent ruling interpreting the provision of the proposed Annex dealing with Class 9 accidents, the Appeal Board held that the Annex should not be applied to floating nuclear plants because the policy reflected in the Annex was "developed and adopted without any focus on the floating nuclear plant or the discrete problems it presents." Offshore Power Systems (Floating Nuclear Power Plants), ALAB-489, 8 NRC 194, 219 (1978). But the Appeal Board, after reviewing various "Class 9" precedents, also emphasized that, with regard

to land-based plants, the policy of the Annex is to be applied and is consistent with the mandates of NEPA. 8 NRC at 212-13.

The Appeal Board later certified the question of whether Class 9 accidents at floating plants should be considered to the Commission. ALAB-500, 8 NRC 323 (1978). The Commission agreed that they should be. CLI-79-9, 10 NRC ____ (September 14, 1979). In that Memorandum and Order, the Commission explicitly declined to resolve the generic issue of consideration of Class 9 accidents at land-based reactors; it noted that "[s]uch a generic action is more properly and effectively done through rulemaking proceedings in which all interested persons may participate." Id. at ____ (slip op., p. 9). But it expressed its intent to complete the rulemaking begun by the Annex and to re-examine Commission policy in this area. Further, it directed the Staff to develop recommendations, for Commission consideration, as to further interim guidance pending completion of the rulemaking.

Given this authority, we agree with the Applicants and Staff that general consideration of the consequences of Class 9 accidents at land-based plants such as the Susquehanna units would be inconsistent with Commission policy as expressed in the proposed Annex and in numerous Appeal Board decisions. Moreover, through its Offshore ruling, the Commission left in force at least on an interim basis the Appeal Board's interpretation of the requirements governing the treatment of Class 9 accidents at land-based

plants. For these reasons, SEA's petition, to the extent it seeks a general exploration of the consequences of Class 9 accidents, must be denied.

In taking this action, we wish to note that the occurrence of the TMI accident — assuming, although not deciding, that it falls within the Class 9 category — may well have undermined the probability thesis upon which the Annex premises its treatment of Class 9 accidents. But if that were so, a number of questions would still remain. Would it do so for every Class 9 accident? Or only those Class 9 accidents arising from sequences of events comparable to those occurring at TMI? Or is there some other way of determining which, if any, Class 9 accidents have a probability sufficiently high to warrant their analysis in the Commission's environmental reviews? In our view, these types of questions can more appropriately be answered through rulemaking than through individual licensing actions. As previously indicated, the Commission in its Offshore decision elected to follow this course. We, of course, are bound by that Commission determination. Unless the Commission should modify its outstanding guidance, we are not free to adopt a contrary policy. If the rules should be changed prior to the termination of this proceeding, we of course will be bound by such change. Potomac Electric Power Co. (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 AEC 79, 82-83 (1974).

4. Our disposition of SEA's general contention does not resolve the entire "Class 9" question before us. For while it is clear that the proposed Annex and interpretive decisions preclude our consideration of the consequences of Class 9 accidents generally, they do not necessarily preclude our consideration of every Class 9 accident.

Thus, the proposed Annex indicates that accident assumptions other than those specified in the Annex "may be more suitable for individual cases." 36 Fed. Reg. at 22852. In Midland, ALAB-123, supra, the Appeal Board interpreted this permissible flexibility as sanction for "an affirmative showing" — not there made — that the regulatory judgments used in the calculation of Class 9 accidents are not correct. 6 AEC at 348. In Point Beach, ALAB-137, supra, that Board went on to state that the guidelines of the Annex regarding Class 9 accidents do not "preclude a party from demonstrating that other assumptions [are] more appropriate." 6 AEC at 502. Later, the Appeal Board held that a party which wishes to have the consequences of a particular type of Class 9 accident explored first has the obligation of establishing the likelihood of occurrence of such an accident. Shoreham, ALAB-156, supra, 6 AEC at 836; Zion, ALAB-226, supra, 8 AEC at 407-08. Finally, in Offshore Power Systems, ALAB-489, supra, the Appeal Board observed that "only a showing of special circumstances that increase the probability of [a Class 9] event necessitates its consideration." 8 NRC at 212 (emphasis supplied).

Applying these teachings to the petition before us, it appears that SEA has identified at least one accident that — even assuming it to be a Class 9 accident — may be explored under its proposed Contention 10. That accident is a series of events of the type which actually occurred at TMI.^{4/} SEA describes that accident as involving "significant core damage and releases of radioactivity" in the order of 13 million curies of radioactivity. And, most important, SEA stresses that "[t]he accident at TMI happened" and that it can no longer be said "that the probability of such an accident occurring is so low or remote as to preclude discussion." We agree. The fact that the TMI events occurred constitutes a prima facie showing of the probability of occurrence of such an accident, sufficient to form the basis for an acceptable contention.

To be sure, there may be sufficient differences between the boiling water reactors involved in this proceeding and the pressurized water reactor involved in the TMI accident to preclude a similar or comparable accident from occurring at Susquehanna. But that is a matter of factual proof, not of legal prescription. In that connection, we note that the report of the Commission's "lessons-learned" task force, which studied the TMI accident and

^{4/} We disagree with the Applicants' statement that SEA's petition does not seek to litigate the consequences for Susquehanna of the particular sequence of events which occurred at TMI. SEA's petition seeks more than that, but it does not disavow interest in examining the TMI sequence of events.

made certain short-term recommendations for application to other reactors, included a number of measures applicable solely or in part to boiling water reactors. NUREG-0578, July, 1979.^{5/}

We accordingly admit the following contention:

19. The ER and FSAR are inadequate in that they do not discuss an accident such as actually occurred at the Three Mile Island Unit 2 facility, either in terms of the consequences of such an accident, their effect on the cost-benefit balance for the facility, or measures to prevent or mitigate the occurrence or effects of such an accident.

This contention includes both environmental and safety considerations. As in the case of other contentions where this is true, we will hear this contention along with the safety contentions. Discovery on this contention may begin immediately but will be governed by the terms of a discovery and scheduling order which we plan to issue in the near future.

For the reasons stated, SEA's "Petition For Modification of Special Prehearing Conference Order" is granted in part and denied in part.

^{5/} On August 6, 1979, all parties to this proceeding were served with a copy of this report.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND
LICENSING BOARD



Charles Bechhoefer, Chairman

Dated at Bethesda, Maryland,
this 19th day of October, 1979.