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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)	
)	
Philadelphia Electric Company)	Docket Nos. 50-352
)	50-353
(Limerick Generating Station,)	
Units 1 and 2))	

APPLICANT'S RESPONSE TO "THE NRC STAFF'S
USE OF LIMERICK PRA AND LIMERICK ECOLOGY
ACTION RESPONSE TO LICENSING BOARD'S
ORDER OF MAY 16, 1983"

The Atomic Safety and Licensing Board's Memorandum and Order Confirming Schedules Established During Prehearing Conference (May 16, 1983) ("Order Confirming Schedules") permits Applicant, Philadelphia Electric Company, to file a response to "The NRC Staff's Use of Limerick PRA" ("Staff Use of PRA") which is appended to the NRC Staff response to the Licensing Board's Order of May 16, 1983 and Limerick Ecology Action Response to Licensing Board's Order of May 16, 1983 (May 31, 1983).^{1/} To follow the Board's directive of avoiding repetition, the Applicant will, to the extent possible, reference its comprehensive treatment of probabilistic risk assessments in licensing contained in

1/ Order Confirming Schedules at 6.

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Applicant's Answer to the Further Particularization of Intervenor's Conditionally Admitted Contentions (April 27, 1983) ("Applicant's Answer").

The NRC Staff's Use of Limerick PRA

In response to the Licensing Board's inquiry, the Staff states that to the extent such information has some significant relationship to the Limerick design, it will use information derived from its review of other PRAs to test the reasonableness of data and assumptions used in and conclusions resulting from the Limerick PRA.^{2/} Applicant has no quarrel with this approach; however, it must be understood that the ultimate uses to which the PRA may be put in the licensing process are not broadened by such a comparison of specific data, models or significant sequences. The use of information from other PRAs to test the reasonableness of data in the Limerick PRA is certainly a recognized method for determining whether the Limerick PRA fulfills a legitimate regulatory purpose. That does not mean, however, that the use of such comparative data or information opens up a subsidiary question of what the risk from the Limerick Station is compared to that from another facility. As discussed in Applicant's Answer, this use has been prohibited by the Commission.^{3/}

2/ Staff Use of PRA at 1.

3/ Applicant's Answer at 15.

In the second part of its reply, the Staff states that it will compare the overall risk of Limerick with the overall risk of other facilities to assess whether the risk at Limerick is significantly greater than that associated with other reactor facilities, in general, with the ultimate goal of determining whether the risk of Limerick is disproportionate.^{4/} The Commission has found that PRAs which have been carried out are not comparable. The assumptions and methodology are sufficiently different such as to prevent a direct comparison.^{5/}

In recognition of this, an early part of the two year review which the Commission has mandated prior to even any decision on the use of PRAs in licensing is to prepare a reference document that describes the current status of knowledge concerning the risks of plants licensed in the United States. The Commission found that it was essential that a reference document be prepared and receive peer review so that the Staff, licensees and public have, inter alia, a common base of information on the dominant contributors to the probability of core-melt and to the public risk

^{4/} Staff Use of PRA at 1-2. The Staff has repeatedly stated that it has no present basis to believe that this is the case.

^{5/} For example, some use mean values for expressing the results while others use medians. The methods of calculating and expressing uncertainties may also differ markedly.

and the usefulness of PRA as a technique.^{6/} Thus, to the extent the Staff wishes to compare the Limerick facility with another facility utilizing probabilistic risk assessment techniques, this is, in Applicant's view, an improper procedure for judging the licensability of Limerick. This comparison is not a permissible issue before the Licensing Board.

In its latest pleading, the Staff has failed to demark the boundary between its responsibilities in attempting to improve the licensing process, e.g., fulfilling the requirements of the Commission for the two year study mandated by the Statement of Policy, and its role in determining the licensability of the Limerick Station under the Commission's present regulations.^{7/} As Applicant has discussed previously, in the hypothetical case that the NRC Staff finds that the risk of Limerick is significantly greater than for other reactor facilities, even though the Limerick Generating Station meets all present deterministic regulatory requirements, the only permissible course is for the Staff to bring such to the attention of the Commissioners outside of the hearing process.^{8/}

^{6/} Safety Goal Policy Statement, 48 Fed. Reg. at 10779.

^{7/} The Staff did make that distinction in its prior statement on the matter, Statement of the NRC Staff's Use of Limerick PRA at 2-3 (April 13, 1983).

^{8/} Applicant's Answer at 18-19.

If assuming, arguendo, that matters related to the environmental impact of the Limerick Station are before this Board, the Applicant does agree with the Staff that the proper question is whether the environmental impacts of Limerick are outweighed by the benefits of the operation of Limerick. This judgment clearly does not involve any comparison between the Limerick Generating Station and any other facility.

LEA's Position on the Use of PRA

Applicant takes issue with the central theme of LEA's position that the Commission intended to split the considerations of actual numerical safety goals from the consideration of probabilistic risk assessment methodology in licensing.^{9/} Rather, it is Applicant's view that the Commission has found that the PRA methodology is not an appropriate tool for implementation of the NRC regulations as part of the licensing of particular facilities at this time. Thus, Applicant submits that the Commission's policy statement acts as a bar to the present use of PRA methodology in licensing, as well to the consideration of how such results would meet or exceed some proposed safety goals.

The Commission has stated that "[t]he Staff should continue to use conformance to regulatory requirements as

^{9/} Limerick Ecology Action's Response to Licensing Board's Order of May 16, 1983 at 6-7.

the exclusive licensing basis for plants."^{10/} This is a clear ratification of the use of the present regulations as a basis for licensing. Certainly probabilistic risk assessment methodology is not part of the current regulations nor has it been used generally in assessing conformance with the regulations.^{11/}

To emphasize this point, the Commission expressed satisfaction with its current regulations and the ability of existing methodology to assess compliance with such regulations:

To provide adequate protection of the public health and safety, current NRC regulations require conservatism in design, construction, testing, operation and maintenance of nuclear power plants. A defense-in-depth approach is mandated in order to prevent accidents from happening^{12/} and to mitigate their consequences.^{12/}

LEA points to a number of general regulations which it claims are authority for its hypothesis. It completely fails to give a single example of the use of PRA methodology in NRC licensing. To the contrary, as previously discussed, the Commission's regulations are essentially deterministic

^{10/} Emphasis supplied. Safety Goal Policy Statement, 48 Fed. Reg. at 10775.

^{11/} Nor could it be. For example, the present regulations utilize the single failure concept while consideration of multiple failures are inherent in a PRA methodology.

^{12/} Id.

in nature. The Commission has over a substantial period of time set up the body of regulations and interpretations and guidance which, taken in their entirety, answer questions as to whether the general regulation cited by LEA are met, including the reasonable assurance, and the substantial additional protection standards.^{13/} In summary, the present Commission regulations and PRA methodology are divergent and inconsistent. The latter cannot be used to assess compliance with the former.

Response to Specific Contentions

In order to avoid repetition, Applicant has only commented where it has perceived a change in LEA's position. Unless discussed herein, Applicant's position on each contentions is unchanged from that stated in Applicant's Answer.

Contention I-8. In effect, LEA attempts to incorporate the Brookhaven National Laboratory comment regarding the probability of the loss of offsite power as its contention, but provides no independent basis therefore. LEA assumes that if Brookhaven's calculation is adopted, this contention would be satisfied. Applicant remains of the view that this does not present a litigable contention.

Contention I-11. Even as revised, Applicant submits that this is an improper contention. As previously

^{13/} See also Applicant's Answer at 16-18 and n.26 at 16.

discussed, the licensability of the Limerick Station is not dependent upon a comparison with other facilities. There is no Commission requirement that Limerick be compared with plants surrounded by "average sized populations" whatever that may reveal. In any event, this contention is entirely speculative in that it makes no assertion that the effects of equipment aging would actually present any problem at the Limerick Station.

Contention I-12. This contention remains similarly speculative in that no "poor construction practices" have been specifically identified at Limerick. There is no assertion as to how such hypothesized practices could or should be taken into account. This contention is speculative, lacks specificity and basis and should be denied.

New PRA Contention 4. Applicant's position remains unchanged. Intervenor LEA has not provided a basis for this contention.

As a final matter, LEA volunteers to have its consultant respond to any questions the Board may wish to ask regarding the PRA. Applicant does not quite understand why LEA's consultant could not participate directly in the preparation and review of LEA's pleadings. In any event, Applicant submits that LEA's consultant should only be heard

as a witness, under oath, with the other parties having their procedural rights in place. We submit that this request should be denied.

Respectfully submitted,

CONNER & WETTERHAHN, P.C.

A handwritten signature in cursive script, appearing to read "Mark J. Wetterhahn".

Mark J. Wetterhahn
Counsel for Applicant

June 10, 1983

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CERTIFICATE OF SERVICE

I hereby certify that copies of "Applicant's Response to 'The NRC Staff's Use of Limerick Ecology Action Response to Licensing Board's Order of May 16, 1983'" dated June 10, 1983, in the captioned matter have been served upon the following by deposit in the United States mail this 10th day of June, 1983:

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