

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION '84 FEB 16 A10:24

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))

LEA CONTENTIONS ON THE ENVIRONMENTAL ASSESSMENT
OF SEVERE ACCIDENTS AS DISCUSSED IN THE NRC STAFF
DRAFT ENVIRONMENTAL STATEMENT, SUPPLEMENT NO. 1

This document constitutes LEA's contentions on the NRC Staff DES, Supplement No. 1, and discusses the Catawba balancing test for "late filed" contentions. It is filed pursuant to the Board's order of January 20, 1984.

Catawba Balancing Test For Late-filed Contentions

The Board has earlier directed the parties to address the factors set forth in the Catawba decisions,¹ which factors the Board will then balance in determining whether or not so-called "late-filed" contentions are admissible. The five factors of 10 CFR §2.714(a) (1) are as follows:

- (i) good cause, if any, for failure to file on time;
- (ii) the availability of other means whereby the petitioner's interest will be protected;

1. Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 NRC 460-70 (1982); Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 18 NRC _____, slip op. at 5-6 (July 1, 1983).

- (iii) the extent to which the petitioner's participation may reasonably be expected to assist in development of a sound record;
- (iv) the extent to which the petitioner's interest will be represented by existing parties;
- (v) the extent to which the petitioner's participation will broaden the issues or delay the proceeding.

The three-part test overlayed by the Appeal Board in Catawba (and affirmed by the Commission as appropriate in an admissibility determination) is that the contention:

- (a) is wholly dependent upon the content of a particular document;
- (b) could therefore not be advanced with any degree of specificity (if at all) in advance of the public availability of the document; and
- (c) is tendered with the requisite degree of promptness once the document comes into existence and is accessible for public examination.

LEA is submitting its DES Supplement No. 1 contentions at this time in accordance with the Board's order of January 20, 1984, and addresses the five 2.714 (a) (1) factors as overlaid by the three-part test.

The DES consideration of severe accidents was prepared by the NRC Staff, after preparation and submission of the Applicant's licensing application, and therefore was not available to

intervenors for review at the time contentions were originally due in this proceeding. Consequently LEA has good cause for failure to file its DES contentions at that time -- the document upon which the contentions are based was not available.

LEA's contentions are either based wholly on the DES or are contentions partially or totally carried over from PRA contentions previously submitted. (The Board and parties are all well aware of the evolution of the severe accident analysis from the Limerick PRA to SARA to the DES and that need not be reiterated here.) Thus, in fact, some of LEA's DES contentions are not "new" in the sense addressed in the Catawba decisions.

The contentions are now being "tendered with the requisite degree of promptness, "since they are being submitted according to the schedule ordered by the Board.

LEA has no other means to protect its interests as stated by these contentions, in that no other regulatory or judicial body has jurisdiction to hear these matters, either at the federal, state or local level. It is the NRC's duty, under its licensing authority, to review all safety matters and to issue an adequate environmental impact statement related to licensing and operation of the facility, and that authority cannot be usurped by any other body.

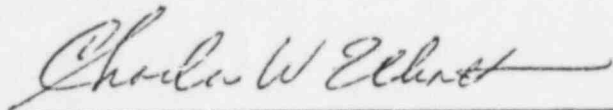
Nor will LEA's interests be adequately protected by any party currently participating in this proceeding. None of the governmental entities participating presently can reasonably be expected to adequately represent LEA's interests, considering the nature of the competing political and other interests that may

influence their decision-making. Only two other intervenors have the resources available to them to be represented by counsel, and the scope of their interests (for Del-AWARE, the matter of Point Pleasant, and for the Graterford prisoners, their own health and safety during an emergency at the Limerick facility) is very narrow.

LEA's participation in contentions related to the DES Chapter 5 can be expected to assist in developing a sound record, in that many of the issues LEA raises it has raised previously, in the context of the PRA and SARA. Thus LEA has demonstrated an interest in pursuing its issues to their conclusion. In addition, LEA has obtained expert assistance for pursuing many of its contentions, which, while not required for licensing proceedings, is an aid to the Board as well as to LEA.

Admission of LEA's DES contentions will broaden the issues and delay the proceeding only in the broadest sense. Certainly, if the environmental risk numbers in the DES are not litigated, litigation time for this proceeding will be shortened. However, LEA has not raised in these contentions any truly new issues. Rather, the focus of litigation has turned from the PRA to the DES, due to changes in the "rules of the game"-- due to new policy statements issued by the Commission. However, it is still LEA's intention to focus on mitigation/prevention of accidents during operation of the facility. In that sense nothing has changed and the scope of the proceeding would not be broadened by admission of the DES contentions.

For the reasons set forth, LEA believes that it is appropriate for the Board to admit its DES Chapter 5 contentions.

A handwritten signature in cursive script, reading "Charles W. Elliott", is written over a horizontal line.

Charles W. Elliott

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DES-1 (LEA)

The DES' severe accident consequence modeling assumes the relocation of the public from contaminated areas beyond the 10 mile plume exposure EPZ. CDES, Supp. 1, pp 5-21 to 5-22). Such an assumption in Limerick's case is implausible and without foundation in fact.

BASIS:

No planning exists or is presently contemplated for such a "relocation". While NRC emergency planning guidance contemplates the possibility of ad hoc response beyond the approximate 10-mile plume exposure EPZ, in the case of Limerick such an ad hoc relocation beyond the 10-mile radius, even if limited to sectors of high contamination, is impracticable. The population in the year 2000 of sector SE between 10 and 25 miles from the reactor is 680,330 (SARA, p 10-33); of sector ESE, is 505,011 (SARA, p 10-33). No precedent exists for the ad hoc "relocation" of such numbers of people.

(Note: See also LEA SARA - 3)

DES -2 (LEA)

The DES' severe accident consequence modeling uses an assumption of a uniform two-hour evacuation delay time in its emergency response model. (DES, Supp. 1, pp 5-21 to 5-22). This assumption understates the likely delay time for a high population density site such as Limerick. This understatement of delay time results in an understatement of Limerick's risk, because accident consequence calculations are sensitive to evacuation time delay assumptions.

BASIS:

NUREG/CR - 2300, "PRA Procedures Guide", (Review Draft) (Sept. 1981), Section E.2.3, p E-7.; Aldrich and Jones, "A Model of Public Evacuation for Atmospheric Radiological Releases", SAND 78-009, (Sandia National Laboratory, June 1978). Based upon these authorities, a more appropriate delay time would be in excess of three hours, inasmuch as the EPA evacuation data suggests a mean evacuation delay time of three hours.

(Note: See also, SARA-4)

DES-3 (LEA)

The DES' severe accident consequence modeling fails to account for the probability that a portion of the population will fail to take protective action despite planning and instructions, thus understating the actual consequences of a severe accident at Limerick.

BASIS:

Hans and Sell estimate that a percentage of the population ranging from 6% to 50% will not evacuate despite instructions to do so. See, Hans and Sell, "Evacuation Risks - An Evaluation", EPA - 520/6-74-002, U.S. EPA (June 1974).

(Note: See also, SARA-4)

DES-4 (LEA)

All significant consequences of severe accidents at Limerick must be fully disclosed and factored into the Limerick cost/benefit analysis for purposes of compliance with the National Environmental Policy Act of 1969. The DES' cost/benefit analysis fails to adequately consider certain consequences that will result from a severe accident at Limerick, and considers other consequences in a manner that conceals, rather than discloses, the environmental impact of a severe accident at Limerick.

BASIS:

- (A) The DES Supplement fails to adequately disclose or consider:
- (1) Total latent health effects due to both initial and chronic radiation exposure, other than those resulting in fatalities, including genetic effects, non-fatal cancers, spontaneous abortions, and sterility (See, e.g., BEIR I-III);
 - (2) The total land area in which crops will be interdicted;
 - (3) The total land area in which milk will be interdicted;
 - (4) The socio-economic cost of compensation required for health effects induced by radiation exposure;
 - (5) Industrial impacts beyond the first year following the accident, and quantification of costs beyond the "output loss" mentioned in DES, p 5-46;
 - (6) The quantification of the cost of medical treatment of health effects;
 - (7) The loss of important resources such as livestock, mineral resources, health care facilities, and scenic and aesthetic resources;
 - (8) The population within the land areas to be interdicted.

- (B) By treating some environmental costs in a CCDF format and treating other quantifiable costs in a non-quantitative, subjective manner, the DES format obscures the total impact of severe accidents at Limerick.
- (C) The DES cost/benefit summary (DES Supplement No.1, p 6-1) ignores all severe accident impacts other than the incompletely calculated adverse radiological health effects.

(Note: See also SARA-5)

DES-5 (LEA)

The environmental risk of accidents during operation of the Limerick facility as proposed for licensing is significant, and preventative and/or mitigative alternatives to the design, mode of operation, procedures, and /or number of reactors presently proposed must be considered for purposes of compliance with the National Environmental Policy Act of 1969 and with 10 CFR §§51.20(b), 51.21, 51.23(c) and 51.26. None have been considered.

BASIS

At the construction permit stage, the environmental review of proposed plant operation did not include a comprehensive review of the risk posed by severe accidents at Limerick, pursuant to Commission policy of that era. The Commission's Statement of Interim Policy, "Nuclear Power Plant Accident Considerations Under the National Environmental Policy Act of 1969," 45 FR 40101 et seq. (Interim Policy on Severe Accidents Under NEPA), altered that policy and mandated a review of the "environmental risks (impacts) attributable to accidents at the particular facility." *Id.* at 40103.

By issuing its Interim Policy Statement on Severe Accidents Under NEPA, the Commission has in effect made the threshold determination regarding the significance of the risk of severe accidents. From the requirement to include such consideration in its NEPA review flows the requirement to consider alternatives to reduce or avoid impacts. 10 CFR §§51.20(b), 51.21, 51.23(c) and 51.26.

In any case, in its Interim Policy Statement on Severe Accidents Under NEPA, the Commission directs the Staff to "take steps to identify additional cases that might warrant early consideration of either additional features or other actions which would prevent or mitigate the consequences of serious accidents." Id. at 40103. Limerick has been so identified, due to the abnormally large population surrounding the site-- Philadelphia Electric Company is the first applicant for an operating license to have been required, as part of its application, to submit a severe accident risk assessment (PRA/SARA).

The risk at Limerick exceeds that posed by the Reactor Safety Study BWR, and all other reactors for which risk assessments have been performed with the sole exception of the Indian Point facility. See DES, pp 5-56 to 5-60. Intervenor's contend that the risk is significant enough, even if one accepts the DES risk estimates as accurate, to warrant a detailed examination of alternatives to the present facility design and operation proposed for licensing, as required by 10 CFR §§51.20(b), 51.21, 51.23(c) and 51.26, and by NEPA. 10 CFR §§51.20(b) and 51.23(c), respectively, require that the applicant's environmental report and the Staff's environmental impact statement "include a cost-benefit analysis which considers and balances the environmental (and other) effects of the facility and the alternatives available for reducing or avoiding adverse environmental (or other) effects." (Emphasis added.)

The Staff and its contractors are investigating design alternatives for Limerick which reduce the adverse environmental effects of severe accidents. See NUREG/CR-2666, Chapter 7, "Further Considerations of Mitigative Features for Specific Plants: Limerick," and documentation of studies under NRC Contract NRC-03-83-092, attached to LEA's earlier filing of October 10, 1983, "LEA's Reply to Applicant and Staff Response to Severe Accident Risk Assessment Contentions". An examination of cost-effective alternatives which would reduce the adverse environmental consequences of the licensing action is therefore feasible, and mandated by the Commission's regulations, and by NEPA. These alternatives should be considered in the Staff's NEPA review. LEA incorporates hereby the legal arguments set forth in "LEA's Reply to Applicant and Staff Response to Severe Accident Risk Assessment Contentions", and the FOIA documents attached to that reply.

DES-6 (LEA)

The DES does not include a consideration of the whole range of accident scenarios necessary to produce a reliable and realistic cost-benefit analysis, and thus does not comply with NEPA, the Commission's Interim Policy Statement on Severe Accidents Under NEPA, or 10 CFR §§51.20(b), 51.21, 51.23(c) and 51.26.

BASIS

- (a) Sabotage, both externally and internally initiated, during both construction and operation, was not included. (See, excerpt from Sholly, Steven, "Report on Review of Severe Accident Risk Assessment, Limerick Generating Station," UCS, August, 1983, attached to LEA's SARA contention filing.)
- (b) Human errors of commission during accident or transient mitigation were not included.

(Note: See also SARA-7)

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OFFICE OF SECRETARY
DOCKETING & SERVICE 50-352
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CERTIFICATE OF SERVICE

I hereby certify that "LEA Contentions on the Environmental Assessment of Severe Accidents As Discussed In the NRC Staff Draft Environmental Statement, Supplement No. 1" have been served upon the following by first class mail, postage prepaid, on February 13, 1984; those marked with an asterisk (*) were served by Express Mail on the same date.

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