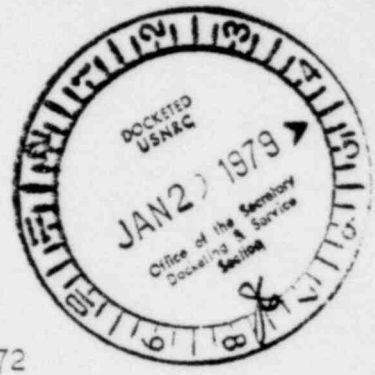

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

ORDER CONCERNING LICENSEE'S OBJECTIONS TO INTERROGATORIES

On November 21, 1978, Mr. and Mrs. Alfred C. Coleman, Intervenors in the above-referenced proceeding, propounded a set of interrogatories entitled "Intervenors First Set of Interrogatories of the Licensee". The Licensee objects to Interrogatories 18, 18(a), 18(b), 19, 19(a), 19(b), 19(c), 20, 21 and 21(a) and, in part, to Interrogatories 13 and 17. The Licensee also moves, pursuant to 10 CFR 2.740(c), for a protective order that the discovery not be had. The Interrogatories read as follows:

Colemans' Interrogatories

13. Please describe why the licensee believes that the increased spent fuel compaction and storage will not affect the consequences of a spent fuel pool accident? (see p. 21) Explain how the consequences of an accident would be affected by acts of sabotage.

17. If in-pool surveilance finds problems requiring repair of spent fuel rods or racks, what are the licensee's contingency plans for removal and repair?

18. Does the page 28 reference to "two phase flow" signify that local boiling can occur? If so, how many bundles and for how long would such boiling have to occur to reduce the water level to the top of the fuel?

18(a). Please describe the circumstances or situations which would lead to two phase flow.

18(b). Please provide a worst case analysis and an average or typical case analysis for the coolant mass flow rate for each fuel assembly.

19. Regarding spent fuel cooling capacity (at p. 30) please provide the basis for the licensee's determination that "the spent fuel cooling system can provide the necessary cooling for the normal annual discharge as early as 100 hours after reactor shutdown."

19(a). What is the minimum delay between a shutdown and full core discharge?

19(b). Assuming a full spent fuel pool (but with full core discharge space available and after shutdown) when could the core be discharged to the spent fuel pool and still receive adequate cooling from the spent fuel cooling system?

19(c). What are the volumes, masses, heat rates, flow rates, temperatures, and all other pertinent variables calculated and plotted as a function of time after shutdown? Show the calculations.

20. Please describe the allowable distortion or damage for fuel storage cells. (see p. 33) What is the sensitivity of the K eff to damage or distortion of the cell dimensions?

21. What are the results of the seismic non-linear analysis and structural analysis described at the bottom of p. 34? Please provide a copy of the relevant analysis and study.

21(a). Similarly, please provide the results and a copy of (1) the analysis described on p. 36 ("Time history analysis"), (2) the postulated dropped fuel assembly accidents (p. 36), (3) the cases to be evaluated regarding fuel assemblies dropped inside the storage cell, and (4) the fuel assembly dropped from above the racks but with the assumption that the assembly rotates as it drops and impacts a row of storage cells. (see p. 37)

The Licensee objects to the second sentence of Interrogatory 13, which requests an explanation of "how the consequences of an accident would be affected by acts of sabotage", on the ground that no contention pertaining to this subject has been admitted as an issue in the proceeding. The Licensee objects to the other Interrogatories on substantially the same grounds. Concerning Interrogatories 18, 18(a), 18(b), 19, 19(a), 19(b) and 19(c), which relate to the flow characteristics and cooling capability of the cooling system for the spent pool fuel, the Licensee notes that no contention pertaining to this matter presently is

in the case. The same objection is made to Parts 2 through 4 of Interrogatory 21(a), which relates to accidents caused by handling spent fuel, and Interrogatory 21 and Part 1 of Interrogatory 21(a), which relate to seismic questions. The Licensee objects to Interrogatory 17, which relates to contingency plans for removal and repair of spent fuel rods and racks, insofar as it concerns the rods, and objects to Interrogatory 20, which relates to distortion of fuel storage cells. The Colemans have not responded to the Licensee's motion.

The Nuclear Regulatory Commission has provided in its Rules of Practice standards which specifically govern the scope of discovery. Under 10 CFR 2.740(b)(1), "... discovery... shall relate only to those matters in controversy which have been identified... in the prehearing order entered at the conclusion of... [the] prehearing conference.... It is not ground for objection that the information sought will be inadmissible at the hearing if the information sought appears reasonably calculated to lead to discovery of admissible evidence." In this case, the matters in controversy are the contentions which the Board has admitted. Those contentions are:

Colemans' Contentions

2. The licensee has given inadequate consideration to the occurrence of accidental criticality due to the increased density or compaction of

the spent fuel assemblies. Additional consideration of criticality is required due to the following:

A. deterioration of the neutron absorption material provided by the Boral plates located between the spent fuel bundles;

B. deterioration of the rack structure leading to failure of the rack and consequent dislodging of spent fuel bundles;

6. The licensee has given inadequate consideration to qualification and testing of Boral material in the environment of protracted association with spent nuclear fuel, in order to validate its continued properties for reactivity control and integrity.

9. The licensee has given inadequate consideration to alternatives to the proposed action. In particular, the licensee has not adequately evaluated alternatives associated with the Nuclear Regulatory Commission adopting the "no action" alternative for licensee's application, which would implicate the following:

A. expansion of spent fuel storage capacity at reprocessing plants;

B. licensing of independent spent fuel storage installations;

C. storage of spent fuel from Salem No. 1 at the storage pools of other reactors;

D. ordering the generation of spent fuel to be stopped or restricted (leading to the slow-down or termination of nuclear power production until ultimate disposition can be effectuated); and

13. The licensee has failed to give adequate consideration to the cumulative impacts of expanding spent fuel storage at Salem Nuclear Generating Station Unit 1 in association with the recently filed proposed amendment to the application for an operating license at the sister unit, Salem Unit 2. (See Amendment No. 42, Docket No. 50-311, filed April 12, 1978 which proposes modifications of spent fuel storage which the intervenor believes are similar in scope to the Salem Unit 1 application.) For example, the licensee assumes an increase in releases of Kr-85 by a factor of 4.5 -- due to the factor of 4.5 increase in spent fuel (licensee's application, at 10). A similar increase, absent exceptional controls, can be expected at Salem No. 2, resulting in a cumulative increase in Kr-85 emissions by a factor of 9 -- almost a full order of magnitude increase. (If similar spent fuel increases are postulated for the companion units, Hope Creek 1 and 2, now under construction, the cumulative increase could rise by a factor of 18, or almost two full orders of magnitude.)

It is evident that none of the above contentions relate to sabotage (Interrogatory 13), contingency plans for removal and repair of fuel rods (Interrogatory 17), flow or capability of the spent fuel cooling system (Interrogatories 18, 18(a), 18(b), 19, 19(a), 19(b), 19(c)), fuel handling accidents (Interrogatory 21(a), Parts 2 through 4), or seismic questions (Interrogatory 21 and Part 1 of Interrogatory 21(a)). Moreover, the Board does not see how the information requested by these Interrogatories could, with respect to these contentions, be reasonably calculated to lead to the discovery of admissible evidence. Interrogatory 20, however, insofar as it is concerned with allowable distortion of fuel storage cells as it affects K eff cells, could be relevant to the Colemans' Contention 2.

This Board must, under 10 CFR 2.740(b)(1), limit discovery to the matters in controversy. See, e.g., Allied-General Nuclear Services, et al. (Barnwell Fuel Receiving and Storage Station), LBP-77-33, 5 NRC 489 (1977) and cases cited therein. The Board must therefore sustain Licensee's objections to Interrogatories 13, 17, 18, 18(a), 18(b), 19, 19(a), 19(b), 19(c) and 21. These Interrogatories need not be answered. Interrogatory 20 is proper, however, insofar as it relates to distortion, and must be answered to that extent. The Licensee does not object to Interrogatory 17 insofar as it relates to spent fuel racks, rather than spent fuel rods.

IT IS SO ORDERED.

FOR THE ATOMIC SAFETY AND LICENSING BOARD

Gary L. Milhollin, Chairman

Dated at Madison, Wisconsin,

this 29th day of January, 1979.