



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS  
WASHINGTON, D. C. 20555

February 15, 1979

Honorable Joseph M. Hendrie  
Chairman  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: REPORT ON SALEM NUCLEAR GENERATING STATION UNIT 2

Dear Dr. Hendrie:

During its 226th meeting, February 8-10, 1979, the Advisory Committee on Reactor Safeguards completed its review of the application of the Public Service Electric and Gas Company, et al for authorization to operate the Salem Nuclear Generating Station Unit 2. This project was initially considered in connection with the review of Salem Unit 1 and at a Subcommittee meeting in Washington, D. C. on January 24, 1979. A tour of the facility was made by Committee members on January 25, 1979. During its review the Committee had the benefit of discussions with representatives and consultants of the Public Service Electric and Gas Company, the Westinghouse Electric Corporation, and the Nuclear Regulatory Commission (NRC) Staff, as well as comments from members of the public. The Committee also had the benefit of the documents listed.

The Committee reported on the application for a construction permit for the Salem Nuclear Generating Station Units 1 and 2 in its letter of June 21, 1968. The Committee reported on the application for an operating license for Unit 1 in its letter of February 14, 1975, at which time it deferred its operating license review of Unit 2 until a time somewhat closer to the expected start of operations.

In January 1978, the NRC Staff began a re-review of Salem Unit 2 to consider changes in NRC regulations or requirements, changes in the design of the plant, and operating experience with Salem Unit 1. One phase of this re-review has included current generic matters such as fire protection, industrial security, emergency planning, and ATWS. For these matters, the NRC Staff is reviewing both Units 1 and 2, and it is expected that the resolution will be substantially the same for both units.

The other phase of the re-review has addressed the degree to which Salem Unit 2 conforms to the provisions of Regulatory Guides and Branch Technical Positions that have been adopted since the operating license review was made for Salem Unit 1. These items include those classified by the

Regulatory Requirements Review Committee as Category 2 (backfit on a case-by-case basis) and as Category 3 (backfit on all plants). A comparable review of Salem Unit 1 (which initially was identical to Unit 2) is being carried out by the Division of Operating Reactors on a different time scale. The NRC Staff has stated that the reviews for Units 1 and 2 are, or will be, coordinated to provide consistency between the two units.

The NRC Staff's re-review of Salem Unit 2 is essentially complete and will be completed before an operating license is issued. There are four outstanding issues still under review or for which complete documentation has not yet been received. There are also six items for which the NRC Staff requires only confirmatory documentation regarding their resolution. The Committee believes that all of these outstanding issues and confirmatory items can and should be resolved to the satisfaction of the NRC Staff.

In its review of Salem Unit 1 and of the Hope Creek units at the same site, the Committee expressed its concern about the possibilities of accidents involving waterborne traffic on the Delaware River that might be of such a nature as to affect the safety of the plants. This question has been addressed by the NRC Staff and the Applicant on a probabilistic basis in connection with the reviews of both the Salem and Hope Creek plants. The Committee believes that the results of these studies provide a reasonable basis for assuming that the probabilities, and thus the risks, of such accidents are sufficiently low as not to provide an undue risk to the health and safety of the public. The Committee, however, continues to be concerned about accidents of this nature and believes that the potential hazards should continue to be reviewed from time to time as the local conditions may change and as the extent and reliability of the data base may be increased.

The Committee recommends that the NRC Staff establish criteria for the implementation of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," as soon as practicable. The Committee believes that Position C.3 of this Guide should be implemented on Salem Unit 2 to the extent practicable.

With regard to the generic items cited in the Committee's report, "Status of Generic Items Relating to Light-Water Reactors: Report No. 6," dated November 15, 1977, those items considered relevant to Salem Unit 2 are: II-2, 3, 5B, 6, 7, 9, 10; IIA-2, 3, 4; IIB-2; IIC-1, 2, 3A, 3B, 4, 5, 6; IID-1, 2; IIE-1. These matters should be dealt with by the NRC Staff and the Applicant, as appropriate, when solutions are found.

The Advisory Committee on Reactor Safeguards believes that, if due regard is given to the matters mentioned above, and subject to satisfactory completion of construction and preoperational testing, there is reasonable assurance that the Salem Nuclear Generating Station Unit 2 can be operated at power levels up to 3411 Mwt without undue risk to the health and safety of the public.

Mr. J. J. Ray did not participate in the Committee's review of this project.

Sincerely,



Max W. Carbon  
Chairman

#### References

1. Salem Nuclear Generating Station, Units 1 and 2, Final Safety Analysis Report, with amendments 1 through 43.
2. Safety Evaluation Report, Supplement No. 3, by the Office of Nuclear Reactor Regulation, U. S. Nuclear Regulatory Commission in the matter of Public Service Electric and Gas Company, et al, Salem Nuclear Generating Station, Unit 2, NUREG-0492, dated December 29, 1978.
3. Letter to O. D. Parr, U. S. Nuclear Regulatory Commission, Light Water Reactors Branch 3, from R. L. Mittl, Public Service Electric and Gas Company, concerning additional information on single failure criteria related to pump seal for RCP, dated January 4, 1979.
4. Letter to O. D. Parr, U. S. Nuclear Regulatory Commission, Light Water Reactors Branch 3, from R. L. Mittl, Public Service Electric and Gas Company, concerning additional information on emergency action levels, dated January 8, 1979.
5. Letters from members of the Public:
  - a. Letter to E. G. Igne, ACRS Staff, from Phyllis Zitzer, of the Committee for Application of Nuremberg Principles to U. S. Nuclear Power Production, dated January 18, 1979.
  - b. Letter to E. G. Igne, ACRS Staff, from Joseph Blotnick, dated January 25, 1979.
  - c. Letter to E. G. Igne, ACRS Staff, from Jill Higgins, of the Delaware Safe Energy Coalition, dated January 25, 1979.

- d. Letter to E. G. Igne, ACRS Staff, from Nanci L. Reynolds, dated January 26, 1979.
- e. Letter to E. G. Igne, ACRS Staff, from Roy Money, dated January 29, 1979.
- f. Letter to E. G. Igne, ACRS Staff, from Frieda Berryhill, of Coalition for Nuclear Power Plant Postponement, dated January 30, 1979.
- g. Letter to E. G. Igne, ACRS Staff, from Mary Lesser, dated February 4, 1979.