



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NSIC

NOVEMBER 28 1979

Docket No. 50-293

Mr. G. Carl Andognini
Boston Edison Company
M/C NUCLEAR
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Andognini:

You responded by letters dated January 9, 1979 and August 21, 1979 to our letter of November 29, 1978 concerning Containment Purging. In your response you have attempted to justify unlimited operation of only those valves involved in the containment differential pressure operation.

During the course of our review of your submittals, we identified several areas where additional information is necessary to enable us to complete our review in the mechanical area. The enclosed request for additional information was previously transmitted to you by facsimile service on November 11, 1979. Please provide your response within 60 days of your receipt of this letter.

Further, we are in the process of completing our review of your design in the electrical area. To this extent, we have provided our electrical review criteria as an enclosure to this letter. We will be contacting your staff in the near future to discuss the details of this review and arrange for a meeting, if necessary.

Sincerely,

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosure:

1. Request for Additional Information
2. Electrical Review Criteria

cc w/enclosure:
see next page

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Mr. G. Carl Andognini
Boston Edison Company

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cc:

Mr. Paul J. McGuire
Pilgrim Station Acting Manager
Boston Edison Company
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Anthony Z. Roisman
Natural Resources Defense Council
917 15th Street, N. W.
Washington, D. C. 20005

Henry Herrmann, Esquire
Massachusetts Wildlife Federation
151 Tremont Street
Boston, Massachusetts 02111

Plymouth Public Library
North Street
Plymouth, Massachusetts 02360

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ENCLOSURE 1

REQUEST FOR ADDITIONAL INFORMATION
FOR CONTAINMENT PURGE SYSTEM AND
CONTAINMENT VENTING SYSTEM FOR
PILGRIM NUCLEAR POWER STATION, UNIT 1
DOCKET NO. 50-293

1. With regard to the containment purge system (18" and 20" lines), provide the following information:
 - a. Discuss the provisions made to ensure that isolation valve closure will not be prevented by debris which could potentially become entrained in the escaping air and steam.
 - b. Provide an analysis to demonstrate the acceptability of the provisions made to protect structures and safety-related equipment; e.g., fans, filters, and ductwork, located beyond the purge system isolation valves against loss of function from the environment created by the escaping air and steam.
 - c. For the containment purge isolation valves, specify the differential pressure across the valve for which the maximum leak rate occurs. Provide test results (e.g., from vendor tests of leakage rate versus valve differential pressure) which support your conclusion.

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ENCLOSURE 2

ELECTRICAL REVIEW CRITERIA

The primary intent of this evaluation is to determine if the following NRC staff criteria are met for the safety signal to all purge and ventilation isolation valves:

- (1) Criterion no. 1 - The overriding* of one type of safety actuation signal (e.g., radiation) must not cause the blocking of any other type of safety actuation signal (e.g., pressure) to the isolation valves.
- (2) Criterion no. 2 - Sufficient physical features (e.g., key lock switches) are provided to facilitate adequate administrative controls.
- (3) Criterion no. 3 - The system-level annunciation of the overridden status is provided for every safety system impacted when any override is active.

Incidental to this review, the following additional NRC staff design criteria were used in the evaluation:

- (1) Criterion no. 4 - Diverse signals should be provided to initiate isolation of the containment ventilation system. Specifically, containment high radiation, safety injection actuation, and containment high pressure should automatically initiate CVI. This is in conformance with Branch Technical Position 6.4 of Section 6.2.4 of the Standard Review Plan.
- (2) Criterion no. 5 - The instrumentation and control systems provided to initiate CVI should be designed and qualified as safety-grade equipment.
- (3) Criterion no. 6 - The overriding or resetting* of the isolation actuation signal should not cause the automatic reopening of any isolation/purge valve.

*The following definition is given for clarity of use in this evaluation:
Override: The signal is still present, and it is blocked in order to perform a function contrary to the signal.

Reset: The signal has come and gone, and the circuit is being cleared to return it to the normal condition.

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