



UNITED STATES  
ATOMIC ENERGY COMMISSION  
WASHINGTON, D.C. 20545

FORMAL DOCKET  
COPY

IN REPLY REFER TO:

Docket No. 50-219

NOV 20 1967

Jersey Central Power and Light Company  
Madison Avenue at Punch Bowl Road  
Morristown, New Jersey 07960

Attention: Mr. John E. Logan  
Vice President

Gentlemen:

At the meeting held on November 15, 1967, with representatives of your company and the General Electric Company, we indicated the results of our review, at that time, of your application for a provisional operating license for the Oyster Creek reactor plant. As stated to your representatives at this meeting, we believe that changes to the proposed plant design and other actions are necessary before issuance of a provisional operating license. We also indicated that these matters have not yet been discussed with the Advisory Committee on Reactor Safeguards, but would be discussed in our safety evaluation report to the Committee for review at its December 1967 meeting.

While all of these matters must be resolved prior to issuance of a provisional operating license, implementation of certain actions identified below may be deferred until after issuance of the license. These matters are in addition to those items previously identified as requiring either action or additional information by letters dated October 16, 1967 and November 7, 1967; i.e., reports on the control rod stub tube weld cracks, quality control program at the site, and items related to the emergency core cooling system.

A. Actions on the following matters are to be completed before issuance of the provisional operating license:

1. Definition and discussion of the requirements to be satisfied before turnover of the plant by General Electric to your organization should be provided. What technical support will be provided to the operating staff after turnover? What authority and responsibility will be assigned to this group and how will these relate to those of the operating group and to higher management?

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2. Automatic isolation capability, designed to reactor protection system standards, is required for the mechanical vacuum pump system to reduce the radiological consequences of the design basis accident of control rod drop-out while in the hot standby condition.
3. The relocation of the diesel generator structure to within the potential drop zone of the elevated water storage tower could lead to a loss of emergency power in the event that the water tower collapsed due to either a tornado or earthquake. We have concluded that provisions should be made to prevent damage to the diesel generators due to failure of the water tower.
4. Provisions are required to assure that the containment and core spray pump compartments have adequate cooling in the event of a design basis accident. In addition, modifications are required to assure adequate cooling for the control rod drive pumps in the event of loss of off-site power.
5. Wind speed and direction indications should be provided in the control room to allow for continuous readout capability in the unlikely event of an accident resulting in the release of radioactivity to the environs.
6. The results of the final analysis on the dynamic response of the suction header connected to the suppression chamber should be provided for our evaluation.
7. The proposed buffer system in the Standby Liquid Control System should be replaced with a more effective system to suppress hydraulically induced vibrations in the poison injection sparger.
8. In order to prevent bypass flow in the event of pressure relief valve failure in the Standby Liquid Control System, a check valve downstream of each relief line in the pump discharge circuit should be installed.
9. An AC interlock on the auto-relief system should be provided to prevent blowdown in the unlikely event that AC power is not available.
10. A second radiation monitor should be added to the liquid effluent line to the discharge canal as a backup to the proposed single monitor.

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11. A leak rate test of the as-built primary containment system as follows:
    - (a) leak rate test at peak accident pressure (including pre-purge condition) in the drywell and torus separately
    - (b) composite leak rate test at 20 psig in the drywell and torus.
  12. Provision to allow manual variation of the neutron flux level trip set point. The objective is to permit a safety system trip point setting at reduced flow similar to that for the 100% power and flow condition.
- B. Matters to be resolved prior to issuance of the provisional operating license by submission of a design or program for review and a commitment to implement at a later date:
1. The information provided in response to previous questions on the adequacy of the main steam line isolation valves is not sufficient to support a basis that these valves would operate as designed in the unlikely event of a steam line rupture. To evaluate the adequacy of these valves we require the following information:
    - (a) the results from the two-phase blowdown tests on one-inch valves, including the basis and justification for extrapolating these results to the full scale valve design
    - (b) the results of an analytical evaluation of two-phase blowdown on the mechanical integrity of the valves, including the effects of impact forces
    - (c) an evaluation of the proposed on-site plant test as compared to the predicted accident phenomena that could occur in the unlikely event of a main steam line rupture
    - (d) assurance of the main steam line isolation valve leak tightness following an accident

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- (e) assurance that mechanical damage to internal reactor vessel components (e.g., dryers) would not occur during blowdown that could cause debris to be carried through the steam lines and affect proper valve closure.

In addition to the foregoing, a proposal describing the details of a test program for full scale valve testing under simulated accident conditions is required for review prior to issuance of the provisional operating license. We believe that this program should be conducted and the results properly analyzed so that a report can be submitted for our review within one year after the provisional operating license is issued.

2. Improved leakage detection capability for the reactor primary system located in the drywell is necessary to detect leakage less than the proposed 5 gpm capability of the sump level monitoring system prior to licensing.
3. Provisions are required for protection of the spent fuel storage pool against the effects of missile damage to stored spent fuel assemblies and the loss of cooling water due to a tornado before storage of spent fuel in the pool.
4. Provision is required for additional protection to the charcoal absorber in the standby gas treatment system to prevent iodine desorption and/or ignition due to a reduction of loss of air flow. This should be done prior to licensing if at all possible.
5. Additional protection to primary containment and other engineered safety features against failure due to pipe-whip and missiles is required. Implementation should be accomplished before licensing if at all possible, but in any case, as soon as feasible.

In addition, we request that information regarding the design provisions considered for cathodic protection for metal plant structures and components be provided for our review before issuance of a license.

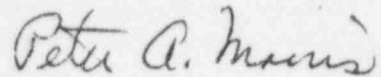
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We shall be available to discuss and clarify any of the foregoing matters with you.

Sincerely yours,

A handwritten signature in cursive script that reads "Peter A. Morris".

Peter A. Morris, Director  
Division of Reactor Licensing