



CHAIRMAN

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

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October 12, 1979

The Honorable Pierre S. du Pont
Governor of Delaware
Dover, Delaware 19901

Dear Governor du Pont:

I am pleased to respond to your letter of May 31, 1979 expressing your concerns and requests regarding certain aspects of licensing and inspection of nuclear power plants in light of recent events at Three Mile Island Unit 2 (TMI-2).

To assure that incidents similar to the TMI-2 incident will not occur at the Salem 1, Peach Bottom 2 and 3 or other power reactor plants, you requested that the NRC increase the level of inspection at these facilities and that inspections be expanded to include all safety and operational systems. In regard to this request, I can assure you that the NRC has initiated specific actions as a result of the TMI-2 incident to provide assurance that a similar incident does not occur. Actions taken by the NRC as a result of the TMI incident, with emphasis toward their application to the Salem and Peach Bottom power reactor facilities, are presented in Enclosure 1. These actions include special NRC inspections, the primary purpose of which is to provide direct and independent NRC verification that the operation of the Salem and Peach Bottom facilities, as well as other operating power reactors, is in conformance with license conditions, with particular emphasis given to those plant systems and procedures involved in the TMI-2 incident.

Also in your letter you recommend that the present practice of grouping nuclear power plants be discontinued. Current NRC licensing criteria require that adjacent nuclear plants be designed such that there is a high degree of isolation between systems that contain radioactive materials in adjacent plants. This minimizes the probability that an event in one plant can have an adverse effect on an adjacent plant. Current NRC regulations require that structures, systems and components important to safety shall not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, an orderly shutdown and cooldown of any other unit. The sharing of structures, systems and components proposed by one unit must be determined to be in conformance with this criterion before a construction permit can be issued for additional units at the same location. NRC has established a Siting Policy Task Force to consider what changes in our siting requirements should be made. The Task Force Report has been submitted to the Commission and includes consideration of the TMI-2 accident. Enclosure 2 is a copy of the Task Force Report. Commission action on the recommendations of the Task Force is anticipated in the near future.

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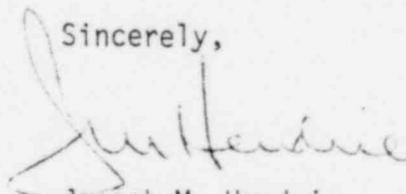
With respect to the issue of clustering of reactors at a single site, you may be interested in reviewing a study performed in response to past Congressional interest in investigating the advantages of locating a number of nuclear facilities at a central location. The Energy Reorganization Act of 1974 mandated that NRC study the feasibility and practicality of nuclear energy centers which would include power plants as well as other elements of the nuclear fuel cycle. This study was completed in 1975 and the results reported in NUREG-0001, entitled "Nuclear Energy Center Site Survey - 1975." Enclosed (Enclosure 3) is the Executive Summary of this report.

With regard to the TMI-2 incident, the NRC staff is currently conducting a thorough investigation of the accident. This investigation includes the review of all aspects of the accident which might lead to information that would improve the safety of nuclear power plants. The NRC has also established several task forces to determine and apply the lessons learned from the Three Mile Island accident. These are recommending both short-term and long-term modifications of equipment, procedures and training. Enclosed is a copy of report NUREG-0578 entitled, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations" (Enclosure 4).

The major emphasis of the current staff effort is focused on nuclear power plants that are presently licensed to operate. These efforts include evaluations and special inspections of each operating facility as discussed in Enclosure 1. However, the results of the staff's investigations will also be applied to plants that are currently under construction and plants for which construction permits have been applied for but not yet issued.

I would like to assure you that we are making our best effort to evaluate and consider all recommendations for changes to the regulatory process that may enhance the safety of nuclear facility operations. I trust that this is responsive to your concerns.

Sincerely,



Joseph M. Hendrie

Enclosures:

1. Actions Taken at Salem and Peach Bottom as a Result of the TMI-2 Incident
2. Siting Policy Task Force Report
3. Executive Summary of NUREG-0001
4. NUREG-0578

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Enclosure

Actions Taken at Salem and Peach Bottom as a Result of the TMI Accident

Shortly after the Three Mile Island (TMI) accident, the NRC issued a series of Inspection and Enforcement (IE) Bulletins addressing the lessons learned. The IE Bulletins provided information about the series of events that had occurred at TMI and required each licensee consistent with the reactor design, to make changes to certain equipment and operating procedures and to conduct special operator training. The licensee was requested to provide NRC, in writing, the details for completion of the immediate actions and plans for completion of the longer term items required by the Bulletins. NRC is currently evaluating this information, on a plant-by-plant basis, to ensure the proposed action is suitable for each individual plant.

Salem Unit 1, located in Salem, New Jersey, has a nuclear reactor designed by Westinghouse Electric Corporation; whereas, TMI nuclear reactors were designed by Babcock and Wilcox. Both use the pressurized, light water reactor design concept but there are major differences in detailed design. These differences resulted in the Babcock and Wilcox design being more sensitive to certain operating transients.

IE Bulletins 79-06 dated April 11, 1979 and 79-06A dated April 14, 1979, were issued to the Public Service Electric and Gas Company and other Westinghouse pressurized water reactor facility operators. These IE Bulletins require the Salem Unit 1 operator (Public Service Electric and Gas Company, New Jersey) to conduct reviews of facility operations and procedures, perform engineering evaluations of the facility design, and implement any changes that may be required to ensure that the factors which contributed to the TMI accident do not exist at the Salem Unit 1 facility. All areas requiring action by these Bulletins are subject to review and verification by the resident inspector assigned to the Salem site and the NRC staff.

To reinforce the urgency placed on this effort, during the period of April 18, through April 23 six teams, each comprised of an IE team leader, an NRC examiner from the Office of Nuclear Reactor Regulation and a third member from the IE Regional Office, visited all operating pressurized water reactor facilities, except Babcock and Wilcox facilities. The purpose of each visit was to discuss with the licensee's operation personnel and station management the chronology of the TMI accident and to clarify licensee actions specified in the applicable IE Bulletins. The visit took place at Salem Unit 1 on April 20, 1979.

Peach Bottom Units 2 and 3, located near Delta, Pennsylvania, are boiling water reactors designed by the General Electric Company. The basic design of these reactors is different from the TMI, Babcock and Wilcox designed pressurized water reactors. IE Bulletin 79-08 dated April 14, 1979, was issued to the Philadelphia Electric Company and other boiling water facility operators. This IE Bulletin requires the Peach Bottom Units 2 and 3 facility operators (Philadelphia Electric Company) to perform a series of specific reviews and actions regarding aspects of the TMI accident that have generic applicability

to these facilities. All areas requiring action by this IE Bulletin are subject to review and verification by the resident inspector assigned to the Peach Bottom site and the NRC staff.

Special instructions to the NRC inspectors have been issued requiring followup inspections, on a priority basis, of the actions taken by the licensees in response to the Bulletins. These inspections will ensure that the actions proposed by the licensee are in fact carried out.

An NRC resident inspector is assigned to both the Salem and Peach Bottom sites. As part of his assignment, he routinely monitors plant operation and conducts inspections to verify that the facility is being operated safely and in conformance with NRC requirements. Since the TMI accident their efforts have also been directed toward assuring that commitments by the licensee to the requirements of applicable IE Bulletins have been completed, and that specific safety-related equipment is in a state of readiness to perform its function if needed. In addition to the resident inspectors, specialists from the regional office continue to make frequent inspections at Salem and Peach Bottom.

As a matter of interest, the Salem Unit 1 facility is currently in scheduled refueling outage and has been in a cold shutdown condition since April 4, 1979. Early in the refueling outage two problems were found. One problem involved damage to some of the mechanisms that retain the relative position of the fuel (grid straps). It is believed the damage occurred during fuel handling. The other problem involved a defect to some of the assemblies that support the reactor control rods. This problem has been traced to components supplied by one particular vendor. There has been no damage to the fuel rods as a result of either of these problems. Both of these problems have been corrected.

More recently, radiography of a steam generator feedwater nozzle to pipe weld has revealed indication of a crack. Evaluation to verify the extent and depth of the crack has begun. This problem must be resolved and NRC approval obtained prior to restart of the Salem 1 reactor.

In summary, the NRC has taken steps to identify the specific cause of the Three Mile Island accident and to require immediate upgrading of equipment, training and operation. A detailed evaluation is continuing on the need for additional long-term changes. A special on-site inspection effort at each plant continues to assure that necessary actions have been put into effect.

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Report of the Siting Policy Task Force

Office of Nuclear
Reactor Regulation

U.S. Nuclear Regulatory
Commission

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NUREG-0001-ES
PB 248 611

Nuclear Energy Center Site Survey - 1975

(NECSS-75)

JANUARY 1976

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Executive Summary

PRICES SUBJECT TO CHANGE

Approved by:
NATIONAL TECHNICAL
INFORMATION SERVICE
U.S. Department of Commerce
Springfield, VA 22151

United States Nuclear Regulatory Commission



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**TMI-2 LESSONS LEARNED TASK FORCE
STATUS REPORT AND
SHORT-TERM RECOMMENDATIONS**



Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission

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