ROOM H2-331
HOUSE OFFICE BUILDING ANNEX NO. 2
PHONE (202) 226-2500

U.S. House of Representatives

Committee on Energy and Commerce

SUBCOMMITTEE ON ENERGY AND POWER

Washington, DC 20515

March 16, 1987

The Honorable Lando W. Zech
Chairman
Nuclear Regulatory Commission
1717 H Street
Washington, DC 20555

Dear Chairman Zech:

The Subcommittee on Energy and Power is investigating the implications for the safety of nuclear power plants of the recent Surry accident. In particular, we are concerned that (1) despite the designation of the failed feedwater line as "a nonsafety related system," a similar failure in a Boiling Water Reactor could result in the release of radioactive steam outside the containment structure; and (2) standards established for new nuclear power plants and inspection procedures for operational plants may not adequately take into account the possibility of deterioration of materials.

We are requesting your response to the following questions:

1. The NRC Augmented Inspection Team Reports Nos. 50-280/86-42 and 50-281/86-42 (NRC team reports) indicate that the failure at the Surry Station was caused by service induced deterioration of the feedwater suction line between the condenser and the feedwater pump.

   (a) What codes, standards, specifications and regulatory requirements are applied to the failed feedwater line and associated equipment (condenser, feedwater pumps, steam turbine, pipelines and components)? Are these systems classified as nuclear or non-nuclear? Are they classified as safety or nonsafety related systems?

   (b) Are these requirements different than those applicable to other portions of the feedwater and steam lines that are closer to the steam generators and reactor vessel? If so, why are they, and do you think this distinction is appropriate in view of what occurred in the Surry Plant accident? What is the safety justification for the differences?

(c) If a failure in the feedwater piping occurred at a similar location, e.g., between the condenser and feedwater piping in a Boiling Water Reactor nuclear power plant, could radioactive material be released outside the containment?

(i) If so, how much could be released and what would be the consequences to the surrounding area?

(ii) How are these areas of the feedwater and steam lines classified in Boiling Water Reactors?

(iii) In view of the Surry accident, do you think that the classifications of these areas of the power plant (including the steam turbine, condenser and feedwater pumps) are appropriate?

(d) What additional requirements could be applied to the feedwater lines, steam lines, steam turbine, feedwater pumps, condenser and related equipment to improve the safety of nuclear plant operation?

(e) Does the Commission plan to make any changes in its regulatory requirements for Surry or other nuclear power plants in order to implement lessons learned from the Surry accident?

2. The NRC team report cited erosion/corrosion induced thinning of the pipe metal as the cause of the failure at the Surry Station. Do the design, construction, maintenance and integrity monitoring codes, standards, or other regulations applied to nuclear power plants adequately provide for finding or make allowances for deterioration of plant components and piping in service? If not, does the Commission plan any regulatory changes to incorporate these factors in plant design, inspection and maintenance requirements?

3. The two Surry Station nuclear units are very similar in design, nuclear reactor system and age. The units also "share" some support and auxiliary functions.

(a) In view of this dependency, can you explain why Unit 1 was not shut down immediately when the failure occurred in Unit 2? Whose responsibility was it to decide whether or not to shut it down immediately? In your view, should Unit 1 have been shut down immediately?

(b) Should the NRC issue any new regulatory guidance for such situations?

4. Changes in the control room ventilation system were being implemented while the plant was running and at the time of the accident. The NRC inspection team reports conclude that the modification work resulted in the control room being flooded with potentially lethal carbon dioxide gas.

(a) Are NRC regulations adequate for modifications being performed while plants are operating? Were these rules being observed at the time of the accident?

(b) Do you feel that different procedures should have been used? Is the Commission considering any regulatory changes to prevent ongoing modification work from compromising operational safety?

5. The NRC inspection team reports indicate the accident was initiated by an improperly maintained valve.

(a) Does it seem appropriate that the plant was allowed to operate with this valve not functioning properly? Are there adequate inspection requirements for such valves?

(b) Does the Commission plan any regulatory changes as a result of the maintenance deficiencies discovered during the investigation of this accident?

Thank you for your assistance with this investigation. We would appreciate having your response no later than April 10.

Sincerely,

Philip R. Sharp
Chairman

PRS:bh

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