



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

APR 29 1986

Docket No. 50-322

Mr. John D. Leonard
Vice President - Nuclear Operations
Long Island Lighting Company
Shoreham Nuclear Power Station
P.O. Box 618
Wading River, NY 11792

Dear Mr. Leonard:

SUBJECT: FIRE PROTECTION - SHOREHAM NUCLEAR POWER STATION

On April 10, 1986, representatives from your office met with members of the NRC staff to discuss certain open items related to the fire protection program at Shoreham. These items arose from the NRC fire protection inspection performed at Shoreham during the week of December 3, 1985, as reported in Inspection Report 50-322/84-86. You initially responded to the Inspection Report on January 29, 1985 (SNRC-1141), and further supplemented your response in letters dated June 3, 1985 (SNRC-1168), November 16, 1985 (SNRC-1211), December 9, 1985 (SNRC-1220), and January 16, 1986 (SNRC-1222). At the time of the April 10, 1986 meeting, the Office of Nuclear Reactor Regulation had closed all open items in the Inspection Report for which it was responsible except Item 84-46-17. This closure was documented in Supplement 9 to NUREG-0420, dated December, 1985.

The only remaining open item concerns the alternative shutdown capability of the facility in the event of a fire in the control room. Specifically, it deals with the effects of fire-induced spurious signals on high/low pressure system interfaces. The first system of concern to the staff is the Automatic Depressurization System (ADS) and the 8 safety/relief valves (S/RVs) associated with it. These S/RVs are controlled solely from the control room and cannot be overridden from the remote shutdown panel, as the three remaining S/RVs can. The spurious opening of these valves would constitute an uncontrolled loss of coolant, which the staff finds unacceptable.

In SNRC-1222 and at the April 10, 1986 meeting, you stated your preference to allow the ADS system to remain in automatic operation in the event of a fire in the control room. You stated that the spurious operation of any S/RVs could be controlled automatically by the ADS or responded to manually by disabling the errant valve. This would involve dispatching an operator to the relay room below the control room to observe the valve indicating lights and the valve tailpipe temperatures. As justification for this plan of operation, you cited the GE Emergency Procedure Guidelines (EPG), which advise operators not to defeat the automatic operation of any ECCS system without having at least two positive indications that such operation is unwarranted.

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We have carefully considered your arguments and have determined that we cannot accept your proposal to deal with this possible scenario on an ad hoc basis. First, we have noted that Step RC/L-2 on page RC-3 of Revision 3 of the EPG specifically states an example of a case where an ECCS system (in fact, the ADS system) should be prevented from automatically operating. In the case where an operator can maintain a sufficient water level in the reactor, he should reset the ADS timer (and thus effectively prevent it from operating automatically) if the timer has started. This shows that the EPG recognizes that the maintenance of a safe, stable reactor condition sometimes take precedence over the automatic initiation of ECCS equipment. The staff believes that your application of certain of the EPGs to the case of a severe fire in the control room is inappropriate, because such an event is outside the boundary of events which were considered in developing the EPGs. The staff believes that the overriding concern in the event of such a fire, besides extinguishing it and regaining control from the control room, should be to maintain the reactor in a safe, stable condition. Without positive control of the ADS valves, this level of stability cannot be assured.

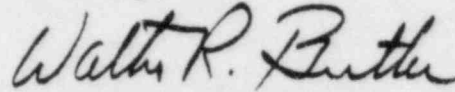
We, therefore, require that you demonstrate the ability to maintain positive control over the ADS valves in the event of a fire in the control room. If you believe that use of the ADS valves is essential to your safe shutdown capability, you should install transfer switches (to isolate the control of the valves from the control room) and ADS instrumentation and controls in the remote shutdown panel. The new instrumentation and controls must comply with the guidelines identified in IE Information Notice 85-09. In addition, you must verify that the first action to be taken by an operator upon leaving the control room is to transfer control of the ADS from the control room to the remote location. This open item requires resolution prior to issuance of a full power license.

In a similar vein, the staff has noted that several check valves in the RHR and core spray systems have small bypass valves (1E11*MOV081A, B and 1E21*MOV081A, B) whose spurious operation could result in the over-pressurization of low pressure systems outside containment, thus causing an unisolatable intersystem LOCA. We require that you take action to prevent a LOCA by this path. This item also requires resolution prior to issuance of the full power license.

Finally, we noted during the April 10 meeting that Attachment 1 to SNRC-1222 was confusing in setting forth the location of the permissives for high/low pressure interlocks. We, therefore, request that you provide us with a complete list of all such interlocks, describing their locations and describing whether a fire in any single fire area could disable all of the interlocks for any pressure isolation valve.

If you have any questions regarding this letter, please contact Mr. Ralph Caruso (301-492-9475).

Sincerely,

A handwritten signature in cursive script that reads "Walter R. Butler". The signature is written in dark ink and is positioned above the typed name and title.

Walter R. Butler, Director
BWR Project Directorate No. 4
Division of BWR Licensing

cc: See next page

Mr. John D. Leonard, Jr.
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If you have any questions regarding this letter, please contact Mr. Ralph Caruso (301-492-9475).

Sincerely,

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