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U. S. NUCLEAR REGULATORY COMMISSION
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Gentlemen:

DOCKET NOS. 50-266 AND 50-301
GENERIC LETTER 88-17 SUPPLEMENTAL RESPONSE
REACTOR VESSEL LEVEL INSTRUMENTATION
POINT BEACH NUCLEAR PLANT UNITS 1 AND 2

By letter dated February 2, 1989, we submitted to you our plans and proposed actions for satisfying the recommendations contained in Generic Letter 88-17, "Loss of Decay Heat Removal". A review was conducted of our implementation of the recommendations in the generic letter and documented in Inspection Reports 266/90014 and 301/90014. The results of that review indicated that there may not be sufficient independence between redundant reactor vessel water level instruments used during reduced inventory operations. Inspection Reports 266/91008 and 301/91008 dated June 6, 1991, concluded that the reactor vessel level instrumentation used during reduced inventory operations on both Point Beach Nuclear Plant units was not sufficiently redundant. We committed to revise our response to the generic letter to address the redundancy issue.

Generic Letter 88-17 recommended that two independent reactor vessel level instruments be provided for use during reduced inventory operations. However, it was recognized that complete independence may not be possible in all cases. In such cases, compensatory measures were to be taken to insure operability. Possible compensatory measures included draining or flushing the reference or variable leg as necessary to insure no blockage occurs which would affect both instruments.

In our February 2, 1989, response we indicated that we would install a second reactor vessel level instrument, LI-447A, that would use the same variable leg tap as the then existing instrument, LI-447, and an independent reference leg. We also indicated the design would allow periodic venting, draining, or flushing of either leg. During the design of the redundant

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instrument, we determined that the best alternative utilized the same reference and variable leg taps as the existing level instrument.

The reference legs for both instruments are connected to a tap off of the pressurizer vent line. This is the high point in the system and, therefore, technically the best location for the connection. The vent line between the reference leg tap and the pressurizer steam space consists of approximately one foot of four inch pipe which is then reduced to three inch pipe for an additional foot before a 3/4 inch line is tapped. Immediately downstream of this 3/4 inch tap, the line branches off to the reference legs for each level instrument and is completely independent from this point on. There are no valves or other components common to the reference legs which could result in an active failure of the instruments. Nitrogen backfill enters the pressurizer vent line during reactor coolant system draindown which insures the vent line remains clear of obstructions. When the instruments are placed in service during the performance of OP-4D, "Draining The Reactor Coolant System," the reference legs are drained to insure no liquid is present and a flow of nitrogen is verified to insure no other blockage is present.

The variable legs for the level instrument are connected to a common tap off of a thimble tube. When the instruments are placed in service during the performance of OP-4D, the variable leg is vented and a solid stream of water verified to insure no gas or blockage is present. The differential pressure cells used are also vented and drained as appropriate to insure proper operation. Once placed in service, the liquid in the variable legs is essentially in a static condition with minimal probability of blockage occurring. However, the liquid is disturbed when the thimbles are moved resulting in perturbations in level indication. We have revised ICP 10.29, "Seal Table Operations For Refueling," alerting operators that perturbations in level indications may occur when thimble movement is in progress. Steps have also been added to the procedure to vent the variable leg of one of the level instruments after thimble movement to insure no blockage occurred during the thimble movement.

In accordance with OP-4D, during draining operations, the trend on the level instruments is compared to the response of the Reactor Vessel Level Indication System, RVLIS, which is used during normal operations, to insure proper response. When the partially drained condition, 3/4-pipe, is reached, level indication is verified by comparing it to a local standpipe indication, LI-447B, to verify the level indication. LI-447B is independent of LI-447 and

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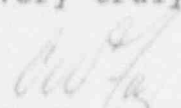
LI-447A. The reference leg for this indication is valved into the reactor coolant loop between the reactor coolant pump suction and the steam generator and the variable leg is vented to containment atmosphere. OP-5A, "Reactor Coolant System Volume Control," also directs the operators to use LI-447B to verify the indication on LI-447 and LI-447A if they do not agree with the RVLIS.

We believe the design of LI-447 and LI-447A, including the procedural controls on placing them in service as well as verifying their indications, adequately addresses the compensatory measures suggested in the Generic Letter 88-17 for situations where redundant level instrumentation is not completely independent.

Notwithstanding the above, we will reevaluate the variable leg configuration to determine if an alternate location for one instrument tap is preferable. We expect this evaluation to be completed by September, 1993.

If you have any additional questions or concerns on this issue, we are willing to discuss them at your convenience.

Very truly yours,


C. W. Fay
Vice President
Nuclear Power

copy to: NRC Regional Administrator, Region III
NRC Resident Inspector