POWER AUTHORITY OF THE STATE OF NEW YORK

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December 10, 1979
IPN-79-90

Director of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Mr. Albert Schwencer, Chief
Operating Reactors Branch No. 1
Division of Operating Reactors

Subject: Indian Point 3 Nuclear Power Plant
Docket No. 50-286
Short Term Requirements of TMI Lessons Learned

Reference: Letter, Paul J. Early (PASNY) to Albert Schwencer (NRC), dated December 4, 1979 (IPN-79-88)

Dear Sir:

Enclosed please find revised pages 2, 4, 7, 8 and 10 of Attachment 1 to the referenced letter.

These changes respond to the items discussed in phone conversations on December 6 and 7, 1979 between your staff and the Authority staff. It is our understanding that these changes satisfy all the outstanding NUREG-0578 items for the Indian Point 3 facility. If you have any questions on these items, please contact us.

It is the Authority's position to comply with the requirements of the referenced letter for its Indian Point 3 facility. In a phone conversation on December 7, 1979 between your Mr. L. Olshan and the Authority staff, it was indicated that the Authority will complete all the short term lessons learned items for Indian Point 3 prior to the return to power of the unit. It is presently anticipated that these items will be accomplished prior to February 1, 1980.

Very truly yours,

Paul J. Early
Assistant Chief Engineer-Projects

cc: Mr. T. Rebelowski, Resident Inspector
U. S. Nuclear Regulatory Commission
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Section 2.1.2 - Performance Testing for PWR Relief and Safety Valves

The Authority is a member of the Westinghouse PWR Owner's Group. As a member of this group, the Authority is working with Westinghouse the other PWR owners and the Electric Power Research Institute (EPRI) to develop a program for qualification of relief and code safety valves under expected operating and transient conditions. The program description and schedule will be submitted by the date specified, January 1, 1980, by each utility member when the information is made available.

Section 2.1.3.a - Direct Indication of Power-Operated Relief Valve and Safety Valve Position for PWRs and BWRs

All of the pressurizer power operated relief valves (PORV) and their associated motor-operated block valves (MOV) have positive position indication in the control room. An alarm will be provided in the control room for the PORV's to meet the 1/1/80 date depending upon component lead time and equipment availability. In addition, downstream temperature indication, Pressurizer Relief Tank temperature, level and pressure indication will also indirectly indicate valve position.

While we firmly believe that the existing instrumentation is sufficient for detecting leakage from the code safety relief valves, via indirect valve indication as mentioned above, an acoustic monitoring system for position indication of these valves will be installed. At this time, none of the commercially available equipment has been qualified to safety grade standards; however, testing is going on to support qualification. Present delivery time on off-the-shelf systems has been quoted as up to 16 weeks after receipt of order. We are proceeding with the purchase design and installation of an acoustic monitoring and alarm system, but may not be able to meet the January 1, 1980 completion date due to equipment availability.

Continued operation of the plant pending installation of the acoustic monitoring system for the safety valves is acceptable and could not lead to a TMI type of event for the following reasons:

a) the PORVs and the MOVs have position indication.

b) Temperature sensing elements are provided downstream of each safety valve. An additional temperature senor is located in the common manifold joining the discharge of the PORVs and safety valves. The readouts for this instrumentation are in the Central Control Room.

c) The discharges from the safety valves are piped into the pressurizer relief tank (PRT) which has pressure, temperature and liquid level sensors. The readouts for this instrumentation is located in the Central Control Room.

thermocouples. The difference in reactor coolant system pressure from saturation will be indicated on a recorder in the Control Room.

However, we expect to complete installation of the subcooling meter with single channel temperature and pressure inputs. The equipment necessary for redundant channel inputs will not be available to support a January 1, 1980 deadline. The subcooling meter will be upgraded to include redundant channel inputs as soon as the equipment is available. To date, we have not received a firm delivery date of this equipment.

In lieu of the above system, a supplemental means utilizing the plant computer is being programmed and will continuously read the subcooling conditions. This system will compute the saturation pressure due to either the average hot leg temperature or the average incore thermocouples. The reactor coolant pressure is then compared to this and the difference can be displayed on the Cathode Ray Tube (CRT) or logged on the computer recorders. Two alarms will annunciate depending on whether the reactor coolant is below the saturation pressure or at a preset band above the saturation pressure.

The above mentioned plant modification will not adversely impact the reactor protection or engineering safeguard system.

Further information on the subcooling meter will be provided by 1/1/80 as requested by the attachment in section 2.1.3.b of the 10/30/79 letter.

A procedure is in effect to recognize inadequate core cooling. It will be revised to include the use of the subcooling meter, as well as other related plant parameters. These revised procedures and the retraining of the operators will be completed by January 1, 1980.

Section 2.1.5.a - Dedicated Hydrogen Control Penetrations

Indian Point 3 has redundant hydrogen recombiners located in containment. No requirement for external recombiners is associated with this facility, therefore, no further action is required on this item.

Section 2.1.5.b - Rulemaking to Require Inerting BWR Containments

Not applicable to IP-3.

Section 2.1.5.c - Capability to Install Hydrogen Recombiners at Each Light Water Nuclear Power Plant

A confirmatory review of the existing hydrogen recombiners system is being conducted. The procedures and basis for recombiner

Section 2.1.7.b - Auxiliary Feedwater Flow Indication to Steam Generators for PWR's

A confirmatory review of the Auxiliary Feedwater flow indication to steam generators in the control room has been conducted.

Based on the clarification letter issued by the NRC dated 10/30/79, the resultsof this review are as follows.

The existing auxiliary feedwater flow instrumentation provides local and remote indication and meets the control grade requirements in that the instrumentation is powered from the vital instrument bus.

Flowmeters are provided in the common auxiliary feedwater connections to the main feedwater line of each steam generator. These indicate flow remotely in the control room and also in the auxiliary feed pump room. Steam generator water level indicators also are located in the control room and auxiliary feed pump room which are powered from the vital instrument buses. The present configuration meets the single failure criteria considering the S.G. level as a backup to the flow indicators in the control room. It is worth noting that loss of flow indication (and flow) to one steam generator will not compromise the heat removal capability from the reactor. Testability exists for the flow and level indications. The instrument error inaccuracy of the flow and level indicator channels are less than 10%.

Based upon the above finding, the operation of the IP-3 facility does not present an undue hazard to the public health and safety.

Section 2.1.8.a - Improved Post Accident Sampling Capability

A review of the shielding requirements necessary for sampling and analysis required under accident conditions without incurring a radiation exposure to any individual in excess of permissible limits is in progress and will be completed in December. Upon completion of this review, procedures necessary to perform sampling and analysis will be prepared and implemented and the requirements for any plant modifications will be specified by January 1, 1980.

Implementation of plant modifications determined to be required will be installed in compliance with the 1/1/81 date specified in NUREG-0578 except where component lead time and equipment availability preclude meeting this date.

Section 2.1.8.b - Increased Range of Radiation Monitors

The review addressed in 2.1.8.a. above is also determining accessibility of locations for monitoring plant effluents over the ranges required in this section. Upon completion of this review, procedures necessary to perform this monitoring will be prepared and implemented by January 1, 1980.

Specifications for high range effluent and area radiation monitors are being prepared. Orders will be placed for delivery and installation of such monitors consistent with a January 1, 1981 schedule date except where component lead time and equipment availability preclude meeting this date.

Section 2.1.8.c - Improved In-Plant Iodine Instrumentation Under Accident Conditions

We presently have instrumentation capable of sampling atmospheres for iodine-131 and cart-mountable single channel analyzers to evaluate collected samples. New procedures will be prepared and implemented by January 1, 1980 to use this instrumentation under accident conditions to assess the need for respiratory protection.

Section 2.1.9 - Analysis for Design and Off-Normal Transients and Accidents

Transient and Accident Analysis

Analysis of small break loss-of-coolant accidents, symptoms of inadequate core cooling, required action to restore core cooling, and analysis of transient and accident scenarios including operator actions not previously analyzed, are being performed on a generic basis by the Westinghouse PWR Owners Group. The small break analyses have been completed and are reported in WCAP-9600, which was submitted to the Bulletins and Order Task Force by the Owners Group on June 29, 1979. The work required to address the other two areas, inadequate core cooling and the transient and accident scenarios  is being performed in conjunction with the Bulletins and Orders Task Force. The definition of requirements and schedules for submittal of program results are being established with the B&O task force. The results of these programs will provide the bases for the adequacy of existing instrumentation or define the requirements for additional instrumentation or controls in accordance with Item 2.1.3.b. The results of the transient and accident analyses will be completed by January 1, 1980. The necessary emergency procedures and training of the operators will be completed by February 1, 1980.

In addition to the above-outlined program, the Owners Group is providing pre-test predictive analysis of the LOFT program in accordance with the schedule established by the Bulletins and Order Task Force.

Containment Pressure Monitor

A review of the existing containment pressure monitoring system design is being conducted to check compliance with Regulatory Guides 1.89 and 1.97. The implementation of the required modifications will be made consistent with the 1980 and 1981 dates, as specified in NUREG-0578, except where component lead time and equipment availability preclude meeting these dates.

The shift supervisor, until properly relieved, shall remain in the control room at all times during accident conditions to direct the activities of the control room operators. Management personnel authorized to relieve the shift supervisor shall be defined in the administrative procedures, shall hold a valid SRO license, and the formal transfer of authority shall be recorded in the plant log.

Upon the absence of the shift supervisor from the control room during routine operations, the senior reactor operator shall be designated to assume the control room command function. These temporary duties, responsibilities and authority will be defined in the administrative procedures.

3. The training program for shift supervisors in the responsibility for safe operation and the management function will be expanded to include the requirements of ANS. 3.1 (Draft) section 5.2.1.8.

4. The Power Authority commits to having the administrative duties of the shift supervisor reviewed by the senior officer responsible for plant operations. Administrative functions that detract from or are subordinate to the management responsibility for assuring the safe operation of the plant will be delegated to other operations personnel not on duty in the control room.

2.2.1.b - Shift Technical Advisor

The Authority will provide a shift technical advisor as required, by January 1, 1980.

12/10/79