



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 36 TO FACILITY OPERATING LICENSE NO. DPR-66

DUQUESNE LIGHT COMPANY

OHIO EDISON COMPANY

PENNSYLVANIA POWER COMPANY

BEAVER VALLEY POWER STATION, UNIT NO. 1

DOCKET NO. 50-334

Introduction

In a submittal of May 14, 1980 Duquesne Light Company (the licensee) proposed multiple changes to the Technical Specifications in Appendix A of License No. DPR-66. Five of these requests have been sufficiently simple to review that we are incorporating them into a single amendment. Our evaluations of these proposed changes are as follows.

Installation of New Hydraulic Snubbers

Technical Specification 3.7.8.12 lists all hydraulic snubbers that are required to be operable to ensure that the structural integrity of the reactor coolant system and all other safety related systems is maintained during and following a seismic or other event initiating dynamic loads. The licensee has proposed to install seven additional snubbers which will be included in this list. These snubbers are identified as follows:

(1 and 2) RC-HSS-130 and 131 - installed on the Reactor Coolant Pump in an inaccessible, high radiation zone.

(3) SI-HSS-337 - installed on the Safety Injection System for the reactor in an accessible, non-high radiation zone.

(4, 5, 6, 7) SI-HSS-002, 3, 9 and 10 - installed on the Safety Injection System in an accessible, non-high radiation zone.

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Snubber SI-HSS-337 was installed as the result of the seismic analysis made in response to the Commission's Show Cause Order and, subsequently, IE Bulletin 79-07. The other snubbers were installed during previously reviewed activities that were performed under provisions of 10 CFR 50.59. The inclusion of these snubbers in Table 3.7.4 of Appendix A of License DPR-66 (T.S. 3.7.8.12) will require that they be considered in the surveillance requirements. Consequently, this action increases the level of plant safety and is acceptable.

Revised Surveillance Requirements for Auxiliary Feedwater System

The surveillance requirements in Technical Specification 4.7.1.2(a) have been developed to ensure that each auxiliary feedwater (AFW) pump is operable and each valve in the auxiliary feedwater flow path is in its correct position. As the result of our review of lessons learned from the TMI-2 accident, the staff determined that all licensees should confirm flow path availability of an AFW system flow train that has been out of service.

In fulfillment of the staff's recommendation GS-6, the licensee has proposed four additional surveillance Technical Specifications for the AFW system:

- (a) Verification of status and position of each valve will be performed by a second and independent operator.
- (b) Maintenance of constant communications with the control room while any discharge valve is closed during testing.
- (c) Verification of operability of each River Water Auxiliary Supply Valve.
- (d) Verification of flow path from the Primary Plant Demineralizer Water Storage Tank (WT-TK-10) to the Steam Generators.

These actions satisfy the intent of the staff's recommendation and are acceptable.

The licensee has assured the staff that the three River Water valves can be exercised, one at a time, without allowing river water to enter the suction lines of the AFW pumps.

Auxiliary Feedwater Rate Indication of Remote Shutdown Panel

The licensee has proposed a change in the frequency of demonstrating the operability of the flow indicators in the auxiliary feedwater (AFW) flow train. Feedwater from the AFW pumps is pumped to each steam generator through normally open control valves when this emergency source of water

is required. Flow is monitored in each line by flow indicators. The valves that control AFW flow can be manually adjusted from both the control room and the shutdown control panel. Currently, the Technical Specifications for monitoring the AFW train require demonstration of the flow indicators operability on a monthly frequency. Such a check is not meaningful unless the AFW system is operating and feeding the steam generators.

The licensee proposes that the AFW flow rate be checked when the AFW system is being used during plant startup. This schedule assures that the indicator will be checked at least once per fuel cycle as well as after each scheduled or unscheduled shutdown that result in an extended outage.

Although each AFW pump must be demonstrated to be operable once per 31 days, such a check does not require actuation of flow to the steam generator since both motor and steam operated pumps are equipped with recirculation paths upstream from the flow indicator.

We find the licensee's proposal to check the AFW flow indicator after each extended outage to be acceptable because it is only when the plant has been in Mode 5 (Cold Shutdown) that the AFW pumps are used.

Containment Liner Weld Channels and Plugs Integrity

The licensee has proposed two additional criteria to be met for assuring an acceptable structural integrity of the containment. In addition to visually inspecting and verifying that containment surfaces appear normal, a similar inspection of liner test channels and the dome area shall be made. These requirements expand the scope of "Type A Tests" as defined in Appendix J to 10 CFR Part 50 and Technical Specification 4.6.1.2.

The licensee's proposal implies that an acceptable surveillance of containment test channels is equivalent to an acceptable visual inspection of the containment liner welds that are obscured by the test channels. Where these channels are found to have flaws that would impair the integrity of the containment, the channels are to be removed.

Similar reasoning underlies the inclusion of test channels in a visual inspection of the dome. Inasmuch as visual inspection of the channels complements the use of the channels to verify the integrity of the liner joints, such a procedure is acceptable.

Redefining the Term "Operable"

In response to the Staff's request dated April 10, 1980, the licensee, by letter of May 14, 1980, proposed changes to Appendix A, Safety

Technical Specification 3/4.0. These changes reflect the Staff's current definition of the term "operable" as it applies to the single failure criterion for safety systems in power reactors.

The NRC's Standard Technical Specifications (STS) were formulated to preserve the single failure criterion for systems that are relied upon in the safety analysis report. By and large, the single failure criterion is preserved by specifying Limiting Conditions for Operation (LCOs) that require all redundant components of safety related systems to be OPERABLE. When the required redundancy is not maintained, either due to equipment failure or maintenance outage, action is required, within a specified time, to change the operating mode of the plant to place it in a safe condition. The specified time to take action, usually called the equipment out-of-service time, is a temporary relaxation of the single failure criterion, which consistent with overall system reliability considerations, provides a limited time to fix equipment or otherwise make it OPERABLE. If equipment can be returned to OPERABLE status within the specified time, plant shutdown is not required.

LCOs are specified for each safety related system in the plant, and with few exceptions, the ACTION statements address single outages of components, trains or subsystems. For any particular system, the LCO does not address multiple outages of redundant components, nor does it address the effects of outages of any support systems - such as electrical power or cooling water - that are relied upon to maintain the OPERABILITY of the particular system. This is because of the large number of combinations of these types of outages that are possible. Instead, the STS employ general specifications and an explicit definition of the term OPERABLE to encompass all such cases. These provisions have been formulated to assure that no set of equipment outages would be allowed to persist that would result in the facility being in an unprotected condition.

To achieve the necessary clarification, the Staff provided the licensee with model Technical Specifications that have been accepted and re-submitted without change. We, therefore, find these changes to be acceptable. The licensee shall implement appropriate procedures to assure that the necessary records, such as plant logs or similar documents, are reviewed to determine compliance with these specifications.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment

Involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: November 23, 1980