

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION RELATED TO AMENDMENT NO. 183 TO FACILITY OPERATING LICENSE NO. DPR-20

CONSUMERS ENERGY COMPANY

PALISADES PLANT

DOCKET NO. 50-255

1.0 INTRODUCTION

By letter dated March 13, 1998, as supplemented March 30, 1998, the Consumers Energy Company (the licensee) requested an amendment to the Technical Specifications (TS) appended to Facility Operating License No. DPR-20 for the Palisades Plant. The proposed amendment would revise the auxiliary feedwater (AFW) system TS for the Palisades Plant. Specifically, the proposed change would revise TS 3.5, "Steam and Feedwater Systems," Action Statement 3.5.2e, to allow two AFW flow control valves in one train to be inoperable for up to 72 hours. The current TS for the AFW system allows only one flow control valve in each train to be inoperable (for up to 72 hours) at any one time. The proposed change was determined to be necessary to allow the installation of a plant modification without requiring a plant shutdown. However, because the current TS Action Statement is not consistent with the design capabilities of the AFW system, the licensee has proposed a permanent change based on the plant-specific AFW system design, in lieu of a temporary change to perform the modification.

The AFW system basically consists of two trains, each of which provides flow to both steam generators. One train (designated as Train A for this evaluation) includes the use of two pumps (1 motor-driven and 1 turbine-driven), and the other train (Train B) uses only one (motor-driven) pump. Each train supplies flow to each steam generator through a series combination of one control valve and two isolation valves. Thus, each train has one control valve (and two isolation valves) for each steam generator for a total of four control valves. This design is not consistent with the current TS with respect to Train B. If Train B is inoperable because the motor-driven pump is inoperable, the allowed outage time (AOT) is 72 hours; if Train B is inoperable because both flow control valves are inoperable, an immediate shutdown (commencing within 1 hour) is required because the condition is not covered by the TS. Thus, for the same loss of function (one train), the required actions are significantly different.

2.0 EVALUATION

The current Action Statement 3.5.2e specifies:

One flow control valve on each train may be inoperable for a period of 72 hours provided the corresponding redundant flow control valve and a pump in the other

The proposed Action Statement 3.5.2e would read:

pipe train are operable.

One or two flow control valves may be inoperable for a period of 72 hours provided the corresponding redundant flow control valves and an associated pump in the other train are operable.

Both of these Action Statements allow two control valves to be inoperable for up to 72 hours. The current TS allows one control valve in each train to be inoperable provided the corresponding valve (valve in other train to the same steam generator) and a pump in the operable train are operable. This allows one or two control valves to be inoperable for 72 hours. The proposed change would retain the allowances of the current TS, plus provide the same 72-hour allowance for both control valves in a single train provided both of the other train's control valves and a pump in the other train are operable. Under both the current and proposed TS, during the 72-hour AOT there will be 100% of the flow assumed in the safety analyses for one fully operable train available to each steam generator. However, the ability to cope with an additional single failure would not be retained in all cases. The proposed 72-hour AOT for both control valves in one train inoperable is consistent with the current AFW AOT and is consistent with the AOTs for other safety systems in the Palisades TS where the functional capability has been reduced to one 100% train. The proposed AOT is, therefore, acceptable.

The air-operated flow control valves fail open on loss of air or loss of control power. Thus, for most control valve inoperabilities the valves would still be capable of passing design flow. Also, the proposed change would make the AOT for an inoperable train, particularly Train B, consistent regardless of the reason for the inoperability (pump or valves). In all cases, during the AOT the AFW system would be capable of performing its design function for all design-basis events. The provision of the Action Statement that requires the corresponding valve in the other train be operable assures that under all allowable conditions flow is available to both steam generators. The proposed change, therefore, would provide additional operational flexibility without any significant reduction in safety.

Based on the above evaluation, the staff concludes that the proposed changes to Action Statement 3.5.2e more accurately reflect the system design capabilities, correct certain inconsistencies in the current Action Statement 3.5.2e, and provide additional flexibility without any measurable reduction in safety. The staff, therefore concludes that the proposed changes are acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendment. The Michigan State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (63 *FR* 19967). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: June 10, 1998