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MICHIGAN'S PROGRESS

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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT - INSERVICE TESTING (IST)
PROGRAM RELIEF REQUESTS - ADDITIONAL INFORMATION (TAC NO. M81064)

By letter dated June 28, 1991, Consumers Power Company submitted a revised Palisades IST program. This submittal superseded previous program revisions, reflected plant modifications made during the 1990 refueling outage and indicated that compliance with Generic Letter (GL) 89-04 guidance had been achieved. The NRC Staff, with assistance from Brookhaven National Laboratory, reviewed and evaluated our response to GL 89-04 and the IST program relief requests that are part of our IST program. The results of that review were provided in a Safety Evaluation Report (SER) and supplemented by the Brookhaven National Laboratory Technical Evaluation Report (TER) in the NRC's July 15, 1992 letter to Consumers Power Company.

As stated in the SER, some of the requested reliefs were granted and several of these approved relief requests were granted based upon the NRC's stated interpretation of our request. For those relief requests that were denied, the safety evaluation directed us to comply with the Code requirements or submit a revised relief request within the first quarter after receiving the safety evaluation, except where interim relief had been granted. Our December 29, 1992 letter provided the additional information concerning those items for which relief was denied. Interim relief was granted for specific relief requests which were denied. The interim relief was granted because the NRC determined that immediate imposition of the Code requirements upon the licensee would be an undue burden without a compensating increase in the level of safety. The interim relief was for a period of one year or until the end of the next refueling outage whichever is later.

Subsequent reviews of the actions needed to implement the Palisades IST program have determined that two of our approved relief requests need to be revised. Revision of these relief requests will require NRC concurrence with resultant changes in the Palisades IST program. Valve relief request 6, which was part of our June 28, 1991 program submittal, addressed the two check valves that prevent backflow from the safety injection and refueling water tank (SIRW) into the containment sump. Valve relief request 7 was contained

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in the same June 28, 1991 submittal, and addressed the two check valves that prevent the back flow of containment sump water into the SIRW tank. Based on the information contained in these relief requests, the NRC granted approval of the requests in the July 15, 1992 SER. Through subsequent reviews, we now better understand the constraints that were part of our justification for the original relief requests. Specifically, we have found that some activities originally thought to require a full core off load can be accomplished during a normal refueling outage. However, we do not believe it is prudent to attempt these activities without a full core off load. Consequently, the relief requests need to be revised to indicate that the basis for the request is not a legal issue but a prudency issue.

We will submit revised relief requests for these two sets of valves by the end of the 1993 refueling outage. This timetable is consistent with the schedule for submittal of additional information required for the relief requests that were denied but given interim relief in the IST program SER.

Provided below are explanations as to why the relief requests need to be revised and what actions we are taking in conjunction with these revisions.

Containment Sump Check Valves

Valve relief request 6 covered the two containment sump discharge check valves (CK-ES3166 and CK-ES3181).

The basis for valve relief request 6 was that these valves could not be full stroke tested during any mode of operation. This conclusion was based on the amount of radwaste water that would be generated to complete the test, the extensive filtering that would be required of the water used for the test before it could be returned to the SIRW tank, and that plant technical specifications would not allow the removal of one of the two engineered safeguards pump suction headers during power operations.

As an alternative to full stroke testing, we proposed to disassemble and inspect one valve during the 1993 refueling and the other during the 1994 refueling. The first disassembly was scheduled for the 1993 refueling because this outage was expected to be the next scheduled full core off-load. A full core off-load was desired to complete the first valve disassembly to avoid the consequences of loss of normal core cooling should shutdown cooling be interrupted. Subsequent to the submittal of relief request 6, the schedule for the next full core off-load was changed to coincide with the 1994 refueling but relief request 6 was not changed accordingly. As a result, our IST program still requires the disassembly and inspection for the first containment sump check valve during the 1993 refueling instead of the next full core off-load.

The NRC's July 15, 1992 letter approved relief request 6 by granting relief from full stroke exercising the valves open in accordance with the recommendations of Generic Letter 89*04, Position 2.

During the 1993 refueling outage planning reviews, it was determined that the

disassembly and inspection of these valves could only occur during an outage when the core was totally off-loaded, due to loss of shutdown cooling concerns. After investigation into other possible inspection or testing techniques (including non-intrusive testing), outage planning work for disassembly and inspection of these valves during the 1993 refueling outage was stopped. Plans were made to revise the relief request to reflect the additional constraints of needing a full core off-load to complete the valve disassembly.

Additional reviews conducted during the relief request revision process revealed that the valves could legally be disassembled and inspected during a normal refueling outage. However, due to the system interface concerns with shutdown cooling, disassembly and inspection during normal refueling is not considered to be prudent.

The 1993 refueling outage is presently scheduled to begin in early June. The containment sump check valves are of a particularly cumbersome design such that considerable planning, work procedures, and special rigging techniques need to be developed in order to successfully disassemble, inspect and rebuild the valves. The valves are a split body type and come apart at a flange connection at the middle of the valve. Preliminary reviews show that once disassembled, one of the valve pieces and its connecting pipe will need to be temporarily supported, since the existing pipe hanger location is not adequate to support the valve during disassembly. Consequently, engineering analysis needs to be completed for a temporary pipe or valve support to facilitate the valve disassembly. Also, work needs to be completed to assure that spare valve parts are available to complete a valve rebuild (if required).

No engineering work was started in preparation for the 1993 refueling outage when it was thought that these valves could only be disassembled during an outage when the core is totally off-loaded. Therefore, necessary planning, engineering and procurement cannot be completed to be able to disassemble, inspect and rebuild the containment sump check valves during the 1993 refueling outage.

SIRW Tank Check Valves

Relief request 7 covered the two SIRW tank discharge check valves (CK-ES3239 and CK-ES3240).

The basis for the valve relief request 7 was that these valves cannot be full flow exercised during any plant condition other than a full core off-load and when fuel pool cooling requirements are low, since system adjustments cannot be made which will pass the required full flow rate. The relief request also stated that the valves cannot be disassembled since they cannot be isolated from the SIRW tank.

In our June 28, 1991 letter submitting relief request 7, we proposed a quarterly partial stroke test, which we now conduct, coupled with valve disassembly at each full core off-load when fuel pool cooling loads are low. The disassembly would occur nominally once every ten years.

The NRC letter dated July 15, 1992, TER sections 3.1.5 and 5.13, states that the requested relief from full stroke exercising the valve open was granted in accordance with the generic letter, provided the licensee meets all of the criteria in Position 2 of the generic letter including those required to justify extending the disassembly and inspection interval.

Our verification of the granted relief has shown that we do not meet the recommendations of Position 2 of Generic Letter 89-04 and thus would not qualify for an extended inspection interval. However, relief request 7 is not intended to meet Position 2 of Generic Letter 89-04. Due to system interface with shutdown cooling it is not considered prudent to disassemble and inspect these valves each refueling outage. Therefore, NRC concurrence is required to allow disassembly and inspection of both valves at each full core off-load.

As noted above, the 1993 refueling outage is presently scheduled to begin in early June. No engineering or planning for a disassembly and inspection of the SIRW tank check valves was started in preparation for the 1993 refueling outage because it was thought that these valves met the criteria for an extended interval disassembly and inspection coupled with the quarterly partial stroke testing. Therefore, necessary planning, engineering and procurement cannot be completed to perform a disassembly and inspection of the SIRW tank check valves during the 1993 refueling outage.

Conclusion

Adequate time does not exist to prepare for disassembly and inspection of the containment sump and SIRW tank check valves in the 1993 refueling outage to comply with Generic letter 89-04 recommendations. Because the valves are partially stroke tested in accordance with our previous IST program requirements, assurance exists that the valves can fulfill their design function.

We plan to submit a revised relief request prior to the end of the 1993 refueling outage that will formally address our plans for these valves. We believe the situation with these valves parallels that identified for the relief requests submitted but denied as part of our IST program. In these requests, the NRC denied our requested relief, but granted an interim relief period where the plant could take the needed time to evaluate properly and implement an IST program change or submit a revised relief request. That interim period will end at the completion of the 1993 refueling outage. By that time we will have completed our evaluations to determine future testing and relief request plans for the containment sump and SIRW tank discharge check valves.



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