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Power**

**POWERING
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

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Nuclear Regulatory Commission
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DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT - UPDATED SCHEDULES FOR COMPLETION OF SELECTED EDSFI AND DIESEL GENERATOR FUEL OIL SYSTEM UPGRADE COMMITMENTS

The Palisades plant has recently completed a 118 day forced outage which began February 16, 1994 and ended June 18, 1994. During that time an NRC DET evaluation was completed. Prior to the forced outage and DET evaluation, the NRC also completed a detailed Service Water System Operational Performance Inspection at the Plant. All of these activities required an intense focus of plant resources sometimes away from previously planned projects or analysis.

We have recently reviewed our existing forecast work load especially as it relates to activities which have been communicated to the NRC as commitments. As a result of these reviews we find that the following NRC committed activities can no longer be completed on the schedule we originally forecast. Identification of each activity and the revised schedule for completion of the work is provided below.

EDSFI Commitments

- A. Section 3.1.2 of the NRC's January 31, 1992 EDSFI Inspection report is entitled "Degraded Grid Voltage Relaying." The NRC inspection team determined that the second level of under-voltage protection at Palisades for Class 1E systems did not meet the intent of Branch Technical Position PSB-1. The team considered the lack of an adequate time delay on the second level under-voltage relays to be a design weakness.

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Palisades is committed to evaluating the effectiveness of the second level under-voltage relays. This work was scheduled to be completed by July 1, 1994, but is now scheduled to be completed by November 1, 1994. Although our existing second level under-voltage relay time delay setting is shorter than that recommended in Branch Technical Position PSB-1 and may result in unnecessary emergency diesel generator starts, the early EDG start in response to an under-voltage condition on the 2400V safety-related buses is considered to be a conservative response to the under-voltage condition.

- B. During the EDSFI, as a result of an NRC information request, we committed to updating the original Bechtel E-46 load tabulation for normal loads.

This work was scheduled to be completed by July 1, 1994, but is now scheduled to be completed by November 1, 1994. This commitment was identified as information request 32 in Table 2 of our February 25, 1994 letter to the NRC.

The plant has determined that obtaining actual field measurements of battery charger normal loads will yield more realistic and accurate load information. Currently the plant has three years of recorded battery charger normal load data. Plant operating experience indicates that these recorded normal loads have not caused any of the plants battery chargers to be inoperable. Therefore, the original Bechtel E-46 load tabulation for normal loads will not be updated. Instead, actual field measurements of battery charger normal loads will be taken and compared to the E-46 load tabulation and evaluated against the battery charger capability.

- C. Section 3.1.3 of the NRC's January 31, 1992 EDSFI inspection report identified as an open item the situation where the plant operating procedures did not adequately direct corrective actions to be taken in the event of higher voltage than 2400V on the Class 1E buses that was caused by a stuck safeguards or startup transformer tap changer.

Besides agreeing to limit the voltage on the 2400V Class 1E buses to less than 2530V, we also committed to revise procedures to identify operator actions to be taken to maintain voltages below 2530V during stuck tap changer conditions. The procedure changes were scheduled to be completed by July 31, 1994, but are now scheduled to be completed by April 1, 1995. This commitment was identified as open item 91-19-02, concern number 46, in Table 1 of our February 25, 1994 letter to the NRC.

The plant shares the concern relating to the possibility of over-voltages on Class 1E station equipment. Plant operating personnel have indicated that a stuck tap changer has never been encountered at the plant. Under-voltages on Class 1E station equipment would most likely be experienced and corrected by the 2400V

system's second level under-voltage relays.

- D. Section 3.1.5 of the NRC's January 31, 1992 EDSFI inspection report noted that the cables from startup transformer 1-2 to safety-related 2400V buses 1C and 1D were overloaded during small LOCA transients and the NRC was concerned that our analysis had not quantified the cable rating in terms of total allowable time at cable temperature beyond 90°C.

The timetable for completing additional studies to quantify the time for operating beyond 90°C rating of the cable and incorporating these limits into appropriate operating procedures was scheduled to be completed by July 31, 1994, but is now scheduled to be completed by April 1, 1995.

The plant agrees that the cable overload concern warrants proper resolution. However, the Safeguards Transformer (SGT 1-1) is the normal feed to Buses 1C and 1D via cables that are not overloaded during a LOCA condition. Startup transformer 1-2 serves as an alternate feed to Buses 1C and 1D via cables that would be overloaded during a LOCA condition. However, the overloaded cables would not instantaneously experience insulation degradation. It would require at least 100 hours at the LOCA loading to initiate cable insulation degradation. Other means of feeding Buses 1C and 1D would be provided within 100 hours into the LOCA event.

Diesel Generator Fuel Oil Supply System

During a recent evaluation of the emergency diesel generator fuel oil supply system it was determined that portions of emergency diesel generator fuel oil transfer system, including the storage tank, are not tornado protected. Further reviews also revealed that the fuel oil transfer pumps were not protected from a design basis seiche on Lake Michigan. The description of the details of our analysis of this event and our justification for continued operation of the plant with this identified condition was described in the LER on the event dated April 7, 1994, along with submittals dated May 23, 1994, June 3, 1994 and June 6, 1994.

As part of our justification for continued operation we noted that a seiche at the current lake level would not likely flood the fuel oil transfer pumps which are protected by a one foot dike. We also stated that until the fuel oil transfer pumps are protected from the design basis seiche, the manual transfer scheme using an air operated pump and hoses could be used to transfer fuel oil to the emergency diesel generator day tanks.

At the time of these submittals we had planned to resolve the flooding concern for the fuel oil transfer pumps by installing a higher dike around

the pumps. The submittals noted that the dike was expected to be completed by June 30, 1994. Based on our revised work reviews we now estimate that the dike around the fuel oil transfer pumps will be completed by July 31, 1994. Until that time the manual transfer scheme will fulfill the fuel oil transfer systems intended design function. Although the lake level is expected to continue to rise over the next month to a predicted level (per the Army Corp of Engineers) of approximately 580.33 feet, the probability of a seiche flooding the pumps remains very unlikely. The end of May lake level was 579.79 feet.

On June 7, 1994, the NRC issued a letter replying to our justification for continued operation of the EDG fuel oil supply system. The NRC concluded that continued operation is acceptable until permanent modifications are in place and reiterated in our commitment to install the protective dike by June 30, 1994. Due to our delay in completing the committed action Consumers Power Company requests concurrence with this July 30, 1994 completion date. This date has been discussed with the NRC Palisades Project Manager.



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CC: Administrator Region III, USNRC
Resident Inspector, Palisades