DAIRYLAND Power COOPERATIVE • P.O. BOX 817 • 2615 EAST AV. SOUTH • LA CROSSE, WISCONSIN 54601
(608) 788-4000

September 19, 1980

In reply, please
refer to LAC-7142

DOCKET NO. 50-409

Mr. James G. Keppler, Regional Director
U. S. Nuclear Regulatory Commission
Directorate of Regulatory Operations
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

SUBJECT: DAIRYLAND POWER COOPERATIVE
LA CROSSE BOILING WATER REACTOR (LACBWR)
PROVISIONAL OPERATING LICENSE NO. DPR-45
REPORTABLE OCCURRENCE NO. 80-08

References: (1) LACBWR Technical Specifications, Section 3.9.2.b.2
(2) LACBWR Technical Specifications, Section 4.2.2.18
(3) LACBWR Technical Specifications, Section 4.2.18.1

Dear Mr. Keppler:

In accordance with Reference (1), this is to notify you of a plant condition which lead to operation in a degraded mode permitted by a limiting condition for operation.

References (2) and (3) establish the automatic operability requirements for both diesel engine driven pumps supplying the low pressure coolant injection system and the plant fire suppression water system.

During Operating Condition 2 at 0018 on August 18, 1980, Alarm B8-2, "Diesel HP Service Water Trouble", annunciated in the Control Room. This alarm annunciates on high cooling water temperature, low lube oil pressure, overspeed, failure to start (90 second cranking limit), coolant temperature low and battery voltage low for either of the two HPSW (High Pressure Service Water) diesel engines. Neither diesel was operating at the time, so the cause was low battery voltage on one of the diesels.

Each HPSW diesel has two banks of starting batteries. When a diesel's battery charger is in auto, the battery charger alternates charging each of the two banks it services. A battery charger can be set to

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charge one bank of batteries constantly, by placing the battery charger control switch in "Manual A" to charge only Bank A or in "Manual B" to charge only Bank B.

After Alarm B8-2 annunciated, the Shift Supervisor and the auxiliary operator went to the intake building to investigate the cause of the alarm. The voltage reading on the 1B diesel was lower than usual, though still an acceptable value. When the 1B diesel battery charger control switch was switched from "auto" to the "Manual B" position, Alarm B8-2 cleared. When the battery charger control switch was returned to the "auto" position, the alarm did not return.

At 0137, Alarm B8-2 annunciated again. The 1B HPSW diesel battery charger control switch was turned to "Manual B". The alarm cleared, and the switch was left in that position. The Shift Supervisor initiated a Maintenance Request on the failure of the 1B battery bank to maintain its charge with the battery charger in auto.

During the morning of August 19, 1980, the electricians performed the weekly battery check, which involves checking the overall battery voltage and the specific gravity of the pilot cell. The batteries all passed, though the voltage on one of the batteries in the 1B HPSW B battery bank was lower than usual. The electricians also probably returned the 1B diesel battery charger control switch to the "Auto" position.

At 0955 on August 19, with the plant in Operating Condition 1 at 34% Reactor Rated Thermal Power, Alarm B8-2 annunciated again. The Shift Supervisor and an electrician went to the intake building to investigate the problem. The Shift Supervisor requested the turbine operator to start the 1B HPSW diesel from the Control Room. The diesel cranked slower than usual and after approximately 30 seconds, the start attempt was terminated.

It is believed the attempt to start the 1B diesel from the Control Room was terminated prematurely and if the crank had been continued, the 1A battery bank would have started the diesel when the starting batteries alternated.

When the local control switch for an HPSW diesel is in "auto", the diesel can be started remotely from the Control Room and the battery banks alternate supplying starting energy for 10 second periods for up to 90 seconds. When the local control switch is in the "Manual A" position, the A Battery Bank supplies the starting energy and when in "Manual B", the B Battery Bank services the diesel. When the control switch is in either manual position, the diesel can only be started locally.

After the attempt to start the 1B diesel from the Control Room failed, the diesel control switch was placed in "Manual A" and the diesel was successfully started locally. The switch was then placed in "Manual B" and again the diesel started, though it cranked slowly. After the diesel started in "Manual B", Alarm B8-2 cleared. The control switch was then placed in "Auto" and the 1B HPSW diesel was successfully started from the Control Room, approximately 1 hour after the first attempt.

The Electrical Maintenance Department thoroughly checked the 1B HPSW diesel batteries and found a bad cell in one of the two batteries in the B bank. The battery was due for replacement during the upcoming refueling outage. A new battery was filled, charged and then installed on August 20, 1980.

A complete test was also performed on the 1A HPSW diesel battery banks with satisfactory results. The battery which was due to be replaced during the upcoming refueling outage, however, was replaced on August 20 as a precaution. Both HPSW diesels were tested for operation from each of their respective battery banks with satisfactory results.

The HPSW diesels are started monthly for surveillance testing. Both diesels started during the tests conducted on August 1 and August 14 for 1A and 1B, respectively.

A low voltage input signal was added to the HPSW Diesel Trouble Alarm Circuit after a similar incident in 1970. The purpose of the additional alarm condition was to provide the operators with knowledge of an undervoltage condition between tests, so that corrective action could be taken. The alarm fulfilled its design function during this incident.

Authorization for this report to be submitted beyond the 30-day reporting period was granted by L. Goodman by Mr. Boyd on September 18, 1980.

A Licensee Event Report (Reference: Appendix A, Regulatory Guide 1.16, Revision 4) is enclosed.

Should you have any questions concerning this report, please contact us.

Very truly yours,

DAIRYLAND POWER COOPERATIVE

Frank Linder, General Manager

FL:LSG:af
Enclosure

cc: Director, Office of Inspection and Enforcement (30)
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Director, Office of Management Information and (3)
Program Control
U. S. Nuclear Regulatory Commission
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NRC Resident Inspectors