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DUKE POWER

April 5, 1993

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Catawba Nuclear Station
Docket No. 50-413
LER 413/93-004

Gentlemen:

Attached is Licensee Event Report 413/93-004, concerning MISSED TECHNICAL SPECIFICATION SURVEILLANCE OF AC OFFSITE POWER SOURCES.

This event was considered to be of no significance with respect to the health and safety of the public.

Very truly yours,

M.S. Tuckman

M. S. Tuckman

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LICENSEE EVENT REPORT (LER)

TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 500 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (0150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
Catawba Nuclear Station, Unit 1	05000413	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	02 OF 05
		93	004	00	

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

BACKGROUND

The Diesel Generator [EIIIS:GEN] (D/G) system operates to provide standby AC power to the equipment required to safely shutdown the reactor in the event of a loss of the normal power source and to supply power to the safeguards equipment as required during a major accident coincident with a loss of the normal power source. There are two D/Gs, Train A and B, for each of the two units.

The Nuclear Service Water [EIIIS:BI] (RN) system serves as the ultimate heat sink in providing the station with a nuclear safety related cooling system. Most of the heat loads are cooled directly by heat transfer to the once-through river water. The RN system is shared between the two units and consists of fully redundant A and B trains. The cooling water for the D/Gs is provided by the RN system. Train A RN provides cooling water to the Train A D/Gs on both units and likewise for Train B.

During the RN Train A In-Service Inspection (ISI) hydro test, the Train A D/Gs would be technically inoperable. A contingency plan was used to maintain the Unit 1A D/G available. The contingency plan would provide cooling water to the 1A D/G if a D/G start signal was received.

PT/1/A/4350/02C, Available Power Source Operability Check, is used to verify the operability of the remaining AC offsite power sources when one or more offsite power sources or D/Gs becomes inoperable.

OP/0/A/6400/06C, Nuclear Service Water System, Enclosure 4.14, Operability Actions with Both RN Pumps [EIIIS:P] and/or Its Associated D/Gs on One Train (Loop) Inoperable, is used to ensure the proper operability actions are taken when both RN pumps and/or its associated D/Gs on one train are inoperable.

OP/1(2)/A/6350/02, Diesel Generator Operation, Enclosure 4.15, Removing (Returning) D/G 1A From (To) Service, is used to ensure the proper actions are taken when removing or returning D/G 1A from or to service.

Technical Specification 3.8.1.1 requires, as a minimum, that the following AC electrical power sources shall be operable during Modes 1, Power Operation; 2, Startup; 3, Hot Standby; and 4, Hot Shutdown:

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- 1) Two physically independent circuits between the offsite transmission network and the Onsite Essential Auxiliary Power System, and
- 2) Two separate and independent diesel generators (D/G).

With one D/G inoperable, action is required to demonstrate the operability of the AC offsite sources by performing surveillance requirement 4.8.1.1.1a within one hour and at least once per eight hours thereafter. Unless the inoperability of the D/G was due to preplanned testing or maintenance, the operability of the remaining D/G shall be demonstrated operable within twenty-four hours. The D/Gs must be restored to operable status within seventy-two hours, or the Unit must be in at least Hot Standby within the next six hours and in Cold Shutdown within the following thirty hours.

EVENT DESCRIPTION

On March 5, 1993, Unit 1 was operating in Mode 1, Power Operation, at 100 percent power.

Operations D Shift was supporting the RN Train A ISI Hydro Test.

At 2012 hours, Operations entered procedure OP/0/A/6400/06C.

At 2201 hours, the Train A D/Gs were declared inoperable, due to the RN alignment for the RN Train A ISI Hydro Test. Per procedure OP/0/A/6400/06C, the inoperable Train A D/Gs were entered into the Technical Specification Action Item Log (TSAIL) computer program. The applicable T/S was 3.8.1.1 and the required operable time was March 8, 1993 at 2201 hours.

At this time, Operations was using a contingency plan to maintain the 1A D/G functionally available during the RN Train A ISI Hydro Test. The 1A D/G was not placed in maintenance mode.

At 2301 hours, the required T/S one hour surveillance to determine the operability of AC offsite sources was due. This surveillance was not performed.

On March 6, at approximately 0630 hours, Operations Shift Turnover was performed. Operations A Shift was the oncoming shift.

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TEXT (if more space is required, use additional copies of NRC Form 365A) (17)

At approximately 0900 hours, Operations A Shift realized they had not received turnover concerning when the next offsite power source surveillance was due. Operations immediately entered PT/1/A/4350/02C, Available Power Source Operability Check.

At 0920 hours, Operations A Shift completed PT/1/A/4350/02C.

At 1420 hours, Train A D/Gs were declared operable.

At 1830 hours, during Operations Shift Turnover, A Shift and D Shift discussed the required surveillance and determined that the surveillance had not been performed.

CONCLUSION

Technical Specification Surveillance Requirement 4.8.1.1.1a was not met when AC offsite power sources were not verified operable within one hour of the 1A D/G being declared inoperable. The root cause of this incident is attributed to deficient work practices, the required verification of AC offsite power sources was not performed.

The Train A D/Gs were declared inoperable due to the alignment of RN Train A for the ISI hydro test. The 1A D/G was to be maintained functionally available during the hydro test, per a contingency plan that would provide cooling water to the D/G in case the D/G received a start signal. T/S 3.8.1.1 did not apply to the 2A D/G because Unit 2 was not operating in either of Modes 1 through 4. The shift supervisor entered the Train A D/Gs into TSAIL to track their operability status, but did not ensure the required surveillance was performed. The shift supervisor stated, after this incident, that he knew to perform the surveillance when the D/G was inoperable, but because of the contingency plan he did not think to. Immediately following this incident all Senior Reactor Operators (SRO) were informed of this incident and the events leading to it.

A contributing cause of this incident is deficient written communication. Relevant information was omitted from procedure OP/0/A/6400/06C. Operations was using this procedure to perform the operability actions necessary with both RN pumps and its associated D/Gs inoperable. Step 1.3 of this procedure states: "If a D/G is functionally inoperable, it has been removed from service per OP/1(2)/A/6350/02 (Diesel Generator Operation)". Once in the D/G Operation procedure the user is directed to perform PT/1/A/4350/02C (Available Power Source Operability Check), which would have satisfied the T/S surveillance requirement. However, in this incident the D/G was functionally available per the contingency plan. Since the D/G was functional, the

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user was not directed to procedure OP/1/A/6350/02 (Diesel Generator Operation) and the procedure step to perform PT/1/A/4350/02C. Operations has revised procedures OP/0/A/6400/06C and OP/1(2)/A/6350/02 to ensure the appropriate actions are taken when a D/G is rendered inoperable.

A review of the Operating Experience Program (OEP) database for the 24 months prior to this incident identified one incident (LER 413/93-002) which involved a missed T/S surveillance of AC offsite power sources. The root cause of that incident was attributed to the policy guidance not being well defined or understood. Also a review of incidents occurring in the past 24 months and involving a missed T/S surveillance was performed. There were no missed T/S surveillances attributed to deficient work practices. This incident is not considered to be recurring.

CORRECTIVE ACTIONSSUBSEQUENT

- 1) Operations performed PT/1/A/4350/02C, Available Power Source Operability Check.
- 2) All Senior Reactor Operators were informed of this incident and the events leading to it.
- 3) Operations revised procedures OP/0/A/6400/06C (Nuclear Service Water System) and OP/1(2)/A/6350/02 (Diesel Generator Operation) to ensure the appropriate actions are taken when a D/G is rendered inoperable.

SAFETY ANALYSIS

Between 2201 hours on March 5, 1993, and 0920 hours on March 6, 1993, the operability of AC offsite power sources was not verified as required by T/S 4.8.1.1.1a. AC offsite power sources had been verified on March 5, 1993 at 1300 hours, before the train A D/Gs were declared inoperable at 2201 hours and again at 0920 hours on March 6, 1993, after Operations realized the surveillance had not been performed. In the event of a loss of offsite power, annunciators would have alerted Control Room personnel. No related alarms were received during this time period. Therefore, it is apparent that redundant AC offsite power sources were available the entire time the train A D/Gs were inoperable.

The health and safety of the public were not affected by this incident.