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C1299-17

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U. S. Nuclear Regulatory Commission
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Donald C. Cook Nuclear Plant Units 1 and 2
SUPPLEMENT TO THE GENERIC LETTER (GL) 96-01 RESPONSE


Reference: Letter from Indiana Michigan Power Company to the Nuclear Regulatory Commission (NRC), AEP:NRC:1246B, "Response to GL-96-01, 'Testing of Safety Related Logic Circuits,'" dated January 30, 1999.

In the referenced letter, Indiana Michigan Power Company (I&M) notified the NRC that the Donald C. Cook Nuclear Plant (CNP) Engineering Department would reexamine its GL 96-01, "Testing of Safety Related Logic Circuits," existing documentation and related activities based on its determination that the original GL review did not meet current management expectations. This letter provides the results of that CNP Engineering Department reexamination, which was accomplished through a third party independent assessment.

The attachment contains the results of the independent assessment of the original response to GL 96-01. There are no new commitments identified in this correspondence.

Should you have any questions, please contact Robert C. Godley, Director of Regulatory Affairs at (616) 466-2698.

Sincerely,


M. W. Rencheck
Vice President – Nuclear Engineering

/dms

Attachment

A067

c: J. E. Dyer
MDEQ – DW & RPD, w/o attachment
NRC Resident Inspector
R. Whale, w/o attachment

ATTACHMENT TO C1299-17

The Donald C. Cook Nuclear Plant (CNP) Engineering Department reexamined its Generic Letter (GL) 96-01 existing documentation and related activities based on its determination that the original GL review did not meet current management expectations. The results of that CNP Engineering Department reexamination follow and were accomplished through a third party independent assessment.

The independent assessment of the Indiana Michigan Power (I&M) effort provides an overview of the adequacy of the work performed in response to GL 96-01. During the assessment, the scope of equipment falling under the scope of GL 96-01 was identified. CNP Technical Specifications (T/S) were then examined to determine what functions fell within the range of the GL. The scope was further clarified by the guidance given by the NRC at the Nuclear Energy Institute's (NEI) GL 96-01 workshop: "If the T/S, surveillance procedures, and logic are the same for both trains in more than one unit, then there is no need to repeat the review for both trains or for other units. However, if there are differences between the two trains or units, then the differences need to be reviewed." I&M's review analyzed Unit 1, Train A and Channel 1. Also examined were the other trains, channels, and unit to identify differences. Additional analysis was performed where differences were found. The assessment then evaluated the work performed by I&M to ensure the GL concerns were fully addressed.

Based on the independent assessment, the previous I&M activities performed in response to GL 96-01 generally satisfied the GL recommendations (and NEI guidance); however, five key discrepancies exist, four of which warrant further attention. The four key discrepancies were determined to be reportable under 10 CFR 50.73(a)(2)(i)(B). The related conditions and corrective actions were reported in LER 315/99-021-00. The identified discrepancies are briefly described below:

- Control Room Ventilation System

The Control Room Ventilation system does not have a surveillance procedure to test the system on a control room high radiation signal.

- Permissive Signals

Surveillance procedures do not fully test the actuation of the Solid State Protection System (SSPS) input relays associated with Permissive Signals P-6, P-11, and P-12.

- Essential Services System (ESS) Voltage Available Relays

The logic circuits for each of the ESS loads fed from busses T11A, T11D, T21A, and T21D contain three parallel voltage available relays. The surveillance testing procedures do not individually test each of the three relays associated with each bus.

- Emergency Diesel Generators (EDG) Breaker Trip and Blocking Relays

The blocking relays that prevent operator intervention during the load shedding and sequencing process, as well as Relay 5X-CD, which prevents EDG output breaker closure for 2 seconds upon a loss-of-offsite power and/or safety injection signal, are not verified during surveillance testing.

- Spent Fuel Pool (SFP) Ventilation

The original I&M generic letter review did not include a review of surveillance testing procedures for SFP ventilation. However, the above mentioned independent assessment indicates that I&M calibration procedure 12 IHP 4030.STP.058 (Revision 7), "Spent Fuel Area Monitor (R-5) Surveillance Test (Monthly)," provides adequate testing to meet the SFP ventilation testing requirements related to GL 96-01. As such, the omission of SFP ventilation from the original GL 96-01 review created no outstanding issues.

The discrepancies were identified through the independent reexamination and interpretation of the following:

- 1) GL 96-01 recommendations and references;
- 2) the NEI GL 96-01 workshop published Questions and Answers;
- 3) Regulatory Guide (RG) 1.118, "Periodic Testing of Electric Power and Protection Systems";
- 4) RG 1.32, "Criteria for Safety-Related Electric Power Systems for Nuclear Power Plants";
- 5) Title 10 Code of Federal Regulations (CFR) Part 50.55a, "Codes and Standards";
- 6) 10 CFR 50, Appendix A, General Design Criteria (GDC) 18, "Inspection and Testing of Electric Power Systems," and GDC 21, "Protection System for Reliability and Testability";
- 7) 10 CFR 50, Appendix B, Criterion XI, "Test Control"; and
- 8) the original I&M GL 96-01 documentation.

GL 96-01 stipulates review of surveillance and test procedures to ensure that adequate overlap testing is performed to meet T/S requirements. The logic circuits which require review are integral to the Reactor Protection System, the Engineered Safety Features

Actuation System (ESFAS), as well as the Emergency Diesel Generator load shed and sequencing circuit systems.

The following sections of the T/Ss were identified as requiring periodic surveillance testing to ensure compliance with GL 96-01:

Section	Description
3/4.3.1	Reactor Trip System Instrumentation
3/4.3.2	Engineered Safety Features Actuation System Instrumentation
Table 3.3-1	Reactor Trip System Interlocks for Permissives P-6, P-7, P-8, and P-10
Table 3.3-3	Engineered Safety Features Interlocks for Permissives P-11 and P-12
3/4.8.1	A.C. Sources (Electrical Power Systems)
3/4.5	Emergency Core Cooling Systems (ECCS)
3/4.6.2.1	Containment Spray System
3/4.7.1.2	Auxiliary Feedwater System
3/4.6.3	Containment Isolation Valves
3/4.7.3	Component Cooling Water System
3/4.7.4	Essential Service Water System
3/4.7.5	Control Room Emergency Ventilation System
3/4.6.2.2	Spray Additive System
3/4.7.6	ESF Ventilation System
3/4.6.5.6	Containment Air Recirculation Systems
3/4.9.12	Storage Pool Ventilation System
3.4.9.3	Reactor Coolant System – Overpressure Protection Systems
3.4.11	Reactor Coolant System Relief Valves – Operating

Each listed T/S was reviewed to determine functions that fall within the scope of GL 96-01. A comparison between testing requirements, plant logic drawings, elementary diagrams, system flow drawings, and existing surveillance procedures was performed to determine whether testing and T/S requirements corresponded. The result was the discovery of the identified discrepancies. These discrepancies are being addressed via the CNP corrective action program. Resolution of the aforementioned discrepancies is scheduled to be completed prior to Mode 4 entry for each unit.