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Writer's Direct Dial Number:

C321-92-2241  
September 9, 1992

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

Gentlemen:

Subject: Oyster Creek Nuclear Generating Station  
Electrical Distribution Functional Inspection  
IR No. 50-219/92-80  
Unresolved Inspection Items

In your letter (dated July 9, 1992), you requested that we provide a schedule for the resolution of the inspection items and any actions taken or planned to enhance the functionality of the electrical distribution system. We have enclosed two attachments which satisfy your request. Please note that our response to the Notice of Violation (92-80-01) was sent by a separate letter.

Attachment A delineates our proposed actions and schedule for addressing the ten unresolved items identified in the inspection report. Attachment B provides additional information on our actions or comments to those areas which you identified as a concern or weakness.

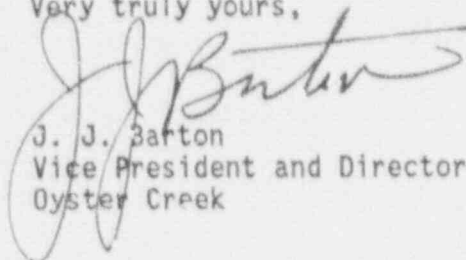
The schedule for addressing the unresolved items and comments was developed with the consideration of multiple aspects of GPUN activities. Each item was assessed with respect to its safety significance and integrated into the total work scope for GPU Nuclear. The estimated completion dates incorporate priority and resource availabilities. GPUN has a long term program associated with electrical analyses of Oyster Creek and TMI Unit 1. The actions associated with the Electrical Distribution Functional Inspection serve as a subset of this total program.

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If you have questions on this letter or our response to the Notice of Violation, please contact Tom Blount (609 971-4007) or David Jerko (201 316-7976).

Very truly yours,



J. J. Barton  
Vice President and Director  
Oyster Creek

Attachments

JJB/DGJ

cc: Administrator, Region I  
NRC Resident Inspector  
Oyster Creek NRC Project Manager

Attachment A

Inspection Report No. 50-219/92-80  
GPUN Proposed Actions and Schedule  
For  
Unresolved Items

- Item: 92-80-01      Notice of Violation - Safety related components not functionally tested
- GPUN response:      The response to the NOV is provided by separate letter.
- Item: 92-80-02      Adequacy of MCC Control Circuit Voltage
- GPUN response:      The adequacy of voltages at safety related AC motor control center control circuit equipment will be analyzed by the end of February 1994.
- Item: 92-80-03      Adequacy of Voltage to AC Components
- GPUN response:      The adequacy of voltages at safety related AC equipment terminals down to the 120VAC level will be analyzed by the end of August 1994.
- Item: 92-80-04      RFP Start on Auxiliary Transformer
- GPUN response:      Starting of the Reactor Feed Pumps is controlled by administrative procedures which require the downstream valves to be closed when the pumps are started. The reduced pumping load will limit the motor starting time to values less than the degraded grid relay timer settings. But in order to provide additional documentation of motor starting capability, a study will be completed by the end of February 1994.
- Item: 92-80-05      Adequacy of Voltage to DC Components
- GPUN response:      The adequacy of voltages at safety related DC equipment terminals will be analyzed by the end of March 1994.
- Item: 92-80-06      Adequacy of DC Short Circuit Protection
- GPUN response:      The DC short circuit duty of concern is associated with DC Distribution Center C and its downstream panels. Should the static battery charger contribution exceed 500% of full load current as suggested, there is still more than adequate margin between available fault current and equipment ratings. An evaluation will be performed to determine the available short circuit contribution of our particular static chargers and if needed, the calculation will be updated by the end of February 1994. Please note that the MG set short circuit contribution used in our calculations was 750% of charger rating not 75%.

Item: 92-80-07      Adequacy of HVAC Temperature Control to 4kv and 480v Switchgear Rooms

GPUN response:      GPUN will provide guidelines for monitoring room temperatures and establish the maximum allowable room temperatures for the 4kV and 480V switchgear rooms. These guidelines will be provided by the end of April 1993.

Item: 92-80-08      Adequacy of EDG Battery Hydrogen Level during Normal Operation

GPUN response:      An engineering evaluation was completed on 6/12/92. The resulting data indicated no detectable hydrogen in any vent opening of the battery boxes in either diesel unit. Based on this assessment no further action is considered necessary.

Item: 92-80-09      Seismic Qualification of C Battery Room Heater

GPUN response:      The electric heater for Battery Room C was installed to maintain a minimum temperature of 65 F dry bulb during winter outages of the plant. An evaluation of the seismic qualification of the heater will be completed by the end of October 1992.

Item: 92-80-10      Adequacy of TS Minimum Battery Voltage to Start Hot EDG

GPUN response:      An engineering evaluation to collect and review data available on the EDG battery low voltage concerns is expected to be completed by the end of September 1992.

Item: 92-80-11      Adequacy of Coordination between ADS Breakers and Fuses

GPUN response:      An evaluation will be conducted to determine the appropriate tripping and melting/clearing times for the associated breakers in the DC power panel and the fuses in the ADS circuits. This evaluation will be completed by the end of February 1993.

Attachment B

Inspection Report 50-219/92-80  
GPUN Additional Actions or Comments

- NRC comment: The dc control power for the switchyard consists of a single battery and battery charger. The absence of a program to periodically test the battery to verify its continued operability to provide power for its design period (48 hours) is an area of potential concern. (page 6, section 2.1)
- GPUN response: Discussions are in progress between GPU Nuclear and Jersey Central Power & Light to address general maintenance and housekeeping activities in the switchyards. The discussions will lead to an action plan being developed to address concerns such as equipment maintenance, general housekeeping and tours by plant operations.
- NRC comment: Two cases were identified in which valve bus voltages had been incorrectly selected from a previously prepared analysis of distribution voltages. The failure to identify the correct bus voltage in these two cases was of minor safety significance because the voltages used in the calculation (from the wrong bus) were more limiting than the correct voltages. The licensee committed to correct the calculation and to review all other loads reassigned in the same modification. (p. 10, sec. 2.4)
- GPUN response: GPUN is in the process of addressing the concerns associated with NRC Generic Letter 89-10 for motor operated valves. The calculation reviewed during the EDSFI was an interim calculation prepared to address GL 89-10 supplement 3 concerns on operability of certain MOV's. This calculation will be updated along with other studies as part of the overall response to GL 89-10. Other electrical equipment will be evaluated in response to unresolved item 92-80-03.
- NRC comment: The EDG cold starting load limitation was not clearly defined in the licensee's analyses and, in one case (Calculation 5350-003), specifically omitted. Even though the loading requirements identified were well within the EDG rating, this limitation is necessary to properly evaluate future load additions. The team concluded this item to be a weakness in documentation and not a safety concern. (pgs. 10,11, sec. 2.5)
- GPUN response: The EDG cold starting load limitation will be evaluated and calculations will be revised as necessary by the end of October 1993.
- NRC comment: The major loads on the EDG were revised by the licensee from the original automatic loading schedule. Consequently, only one core spray booster pump starts automatically. The team noted that the FSAR had not yet been revised to reflect this modification. (p. 17, Sec. 3.1)

GPUN response:

The Core Spray System is a low pressure emergency core cooling system which consists of two independent subsystems. Each subsystem contains two main pumps and two booster pumps (one primary and one backup) which can receive emergency power from their own respective diesel generator.

A 13R modification locks out the backup booster pump if the primary booster pump on the same electrical division is running.

A change was made to the FSAR (Section 6.3.1.3.3.C) to reflect this modification; however, changes were not made to Tables 8.3-1 and 8.3-2. A Plant FSAR Update was initiated during the inspection and the appropriate change will be incorporated in Update 7 (December 1992).

NRC comment:

Marinite board, originally installed to enhance cable separation and protection, was found in a number of cases to be loose, missing, or damaged. The licensee acknowledged the team's concern and committed to repair the identified board deficiencies, inspect for similar deficiencies, and conduct periodic reinspections. (p.20, Sec. 4.1)

GPUN response:

A Material Non-Conformance Report was generated to address the immediate concern of the damaged M-board in 480 volt switchgear room. Disposition of this MNCR included correction of the deficiencies by issuing a work request. A Job Order was then issued and the scope was expanded to include directions for the replacement of the M-board. The work is scheduled to be completed by the end of September 1992.

A deviation report was initiated to :

Perform a root cause analysis of the M-Board problem. Completion is expected by the end of September 1992.

Conduct a plant walkdown of major plant areas where the M-board is expected to be installed. Guidelines will be provided to identify possible M-board deficiencies. Completion of walkdowns is expected by the end of September 1992.

Review the results of the walkdown to establish the need to expand the inspection to other plant areas. Identify the deficient M-board locations. Completion is expected by the end of October 1992.

Planned Additional actions include:

Provide guidelines in procedures and engineering specifications on how to maintain the M-board installations. Completion is expected by the end of October 1992.

Training will be provided to plant personnel to educate and enhance their awareness about the need to maintain the M-board in its as-installed configuration. Completion is expected by the end of November 1992.

The need for documentation of future M-board installations was reviewed and it was determined that periodic walkdowns would be more appropriate. This periodic walkdown inspection program will be established to identify M-board deficiencies which may occur over time. Completion of the program is expected by the end of October 1992.

NRC comment:

The team identified that the duty cycle for EDG-2 battery had not been established. TS section 4.7.B was not clear in that the duty cycle rating was not specified. The licensee committed to establish the EDG battery duty cycle and to submit the appropriate TS amendment request. (p.21, sec. 4.2.1)

GPUN response:

The duty cycle for the EDG-2 battery will be determined and the need for a Technical Specification Change Request will be evaluated by the end of August 1994.

NRC comment:

The team identified that neither the generic procedure nor the PMs provided good acceptance criteria for testing breaker instantaneous trip elements. The team considered this to be a weakness. The licensee initiated actions to incorporate acceptance criteria in new and existing PMs for the MCCs. (p. 22, sec. 4.2.4)

GPUN response:

Motor Control Center Preventive Maintenance Procedure A100-SME-3915.01 is presently being revised. This revision includes the acceptance criteria for fixed and adjustable instantaneous trip elements; it is expected that it will be issued for use by the end of September 1992. All new and revised PM tasks are being developed using the acceptance criteria in accordance with the revised procedure.

The PM task upgrade activity to address this concern will continue over an extended period of time due to the significant number of tasks involved. In addition, major enhancements to extend the scope beyond the instantaneous trip tests will be included. Completion is expected by the end of December 1994.

NRC comment:

The calculations initiated as a result of the design basis reconstitution program were good and presented in a comprehensive manner. However, the status of old and superseded calculations was not clearly annotated to prevent potential design errors. (p. 33, sec. 5.8)

GPUN response:

The Technical Functions Division prepares calculations using Procedure 5000-ADM-7311.01 (EP-006). This procedure provides general guidelines for the documentation of computer and manual calculations.

Prior to revision 3-01, EP-006 provided no guidance for engineers doing new work to be familiar with previous calculations and overtly void, supersede or revise previous calculations when appropriate based on the currently ongoing calculation activities. In 1990, Section 4.5 of EP-006 was revised to include a note:

The originator of a calculation shall review or be aware of previous calculations for the system for which the calculation is being completed. These previous calculations will be voided, superseded, or revised as applicable.

By this change, the Technical Functions Division has already initiated corrective action to improve the performance in this area.