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April 19, 1996
BECo Ltr. #96-037

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

Docket No. 50-293
License No. DPR-35

Pilgrim's Response to Generic Letter 96-01

Reference: Generic Letter (GL) 96-01, "Testing of Safety-Related Logic Circuits"

Generic Letter (GL) 96-01 alerted licensees of potential problems in Logic System Functional Testing (LSFT) activities. This letter transmits Pilgrim's response to the GL 96-01 required actions.

Pilgrim conducted a review of past and present activities and practices associated with LSFT. This letter's attachment summarizes that review. We believe the concerns of GL96-01 were addressed by this review.

We will re-review two LSFT systems in response to GL96-01. The re-review results will determine the need to review other LSFT systems. Actions associated with GL96-01 will be completed before startup from the next refueling outage (RFO#11). A letter to NRC confirming completion of these actions will be submitted 30 days after completion.

ET Boulette
E. T. Boulette, PhD

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Commonwealth of Massachusetts)
County of Plymouth)

Then personally appeared before me, E. T. Boulette, who being duly sworn, did state that he is Senior Vice President - Nuclear of Boston Edison Company and that he is duly authorized to execute and file the submittal contained herein in the name and on behalf of Boston Edison Company and that the statements in said submittal are true to the best of his knowledge and belief.

My commission expires: April 15, 1999
DATE

NOTARY PUBLIC

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Attachment: Response to Generic Letter 96-01

NRC Requested Actions

The NRC staff requests that all addressees take the following actions:

(1) Compare electrical schematic drawings and logic diagrams for the reactor protection system, EDG load shedding and sequencing, and actuation logic for the engineered safety features systems against plant surveillance test procedures to ensure that all portions of the logic circuitry, including the parallel logic, interlocks, bypasses and inhibit circuits, are adequately covered in the surveillance procedures to fulfill the TS requirements. This review should also include relay contacts, control switches, and other relevant electrical components within these systems, utilized in the logic circuits performing a safety function.

(2) Modify the surveillance procedures as necessary for complete testing to comply with the technical specifications. Additionally, the licensee may request an amendment to the technical specifications if relief from certain testing requirements can be justified.

It is requested the completion of these actions be accomplished prior to startup from the first refueling outage commencing one year after the issuance of this generic letter.

Note: Some licensees may have already performed the requested reviews and taken appropriate corrective actions. These licensees do not need to perform additional review unless modifications have been made to the logic circuits for these systems. In these cases the modifications should be reviewed. Licensees are reminded that following modifications to safety-related logic circuits, full functional testing of the modification should be conducted. Licensees should not rely on routine surveillance testing to confirm proper performance of logic circuits following modifications.

Pilgrim Response

Background

An assessment was performed of Pilgrim's LSFT program, the results of which were reported in LER87-002-01 (January 31, 1991). This assessment identified the requirements for functional testing using Pilgrim's Technical Specifications and Pilgrim's Updated Final Safety Analysis Report (UFSAR). The requirements were compared to the existing LSFT procedures to determine their adequacy.

This effort identified technical inadequacies in LSFT procedures conducted during refueling outages for the following systems:

- Reactor Protection System (RPS)
- Standby Gas Treatment System (SGTS)
- Control Room High Efficiency Air Filtration System (CRHEAF)
- Residual Heat Removal System (RHRS)/Low Pressure Coolant Injection (LPCI) Mode
- Core Spray System (CSS)
- Emergency Diesel Generators (EDG)
- Refueling Interlocks

Our immediate corrective action for these inadequacies was to revise existing LSFT procedures and develop new procedures. Additional action involved broadening the review to include LSFT associated with plant operating modes. This review identified inadequacies within LSFT procedures for the following:

- High Pressure Coolant Injection System (HPCIS)
- Reactor Core Isolation Cooling System (RCICS)
- Automatic Depressurization System (ADS)
- Primary Containment Isolation Control System (PCICS)
- Reactor Building Isolation Control System (RBISCS)
- Radwaste System
- Reactor Manual Control System (RMCS)
- Reactor Building Closed Cooling Water System (RBCCWS)
- Salt Service Water System (SSWS)

Procedures were revised or new procedures developed to correct the LSFT inadequacies for the above systems.

A database was established that correlated applicable components (relays, contacts, etc.) and surveillance procedures used for LSFT. The database was created to document a review of elementary diagrams used in verifying the scope of LSFT. Since the scope of the database is logic testing, certain simulated automatic actuation (SAA) surveillance procedures are also listed in the database but only when the procedure(s) is(are) used to satisfy a logic testing requirement. The database is controlled in accordance with Station Instruction SI-TC.3.2.13, "Control of LSFT/SAA Database". The database provides the means to assure that a change to a surveillance procedure used for logic testing does not adversely impact overall testing of the applicable circuitry. The database includes a listing of the surveillance procedures used for logic testing.

Procedures are controlled in accordance with procedure 1.3.4, "Procedures". The process for a new procedure or the revision of an existing procedure includes a review by the procedure controller and procedure owner. The review includes a check of the draft procedure to a listing of the LSFT/SAA surveillance procedures. If the procedure is a new surveillance procedure or is an LSFT/SAA surveillance procedure, the procedure is reviewed for impact to the LSFT/SAA database and the Master Surveillance Tracking Program.

Modifications are controlled in accordance with Nuclear Engineering Department procedure 3.02, "Preparation, Review Verification, Approval and Revision of Design Documents for Plant Design Changes", and Nuclear Organization Procedure 83E1, "Control of Modifications for Pilgrim Station". The modification process includes considerations regarding control logic and design bases, and instrument channels. The process also includes controls for identifying the need for a new procedure(s) and/or revision of an existing procedure(s).

The Master Surveillance Tracking Program (MSTP) is used for scheduling and tracking the performance of periodic tasks including surveillance procedures. The MSTP is controlled in accordance with procedure 1.8, "Master Surveillance Tracking Program". During Refueling Outage #7 (RFO #7), surveillance procedures used for LSFT/SAA testing were compared to applicable Technical Specifications for surveillance interval compliance. This review, in conjunction with the reviews performed for the completeness and technical adequacy of the surveillance procedures, resulted in consolidation, revision and/or the writing of new procedures. Applicable tests were then performed using these procedures prior to initial startup (December 30, 1988) from RFO #7.

As à result of these efforts, the NRC's Inspection Unresolved Item #86-21-03 was closed in Inspection Report #50-293/88-33 dated January 26, 1989.

Information Notices

Information Notices (IN) #88-83, #91-13, #92-40, #93-15 and #93-38 were reviewed for applicability to Pilgrim through our Operating Experience Review Program (OERP). The review indicated the concern of each IN was addressed by our established LSFT process.

Quality Assurance

Pilgrim's LSFT, Master Surveillance Tracking Program (MSTP) and the LSFT process have been and are subject to routine independent audits by Pilgrim's Quality Assurance Department. Identified deviations or deficiencies are subject to our Corrective Action Program.

Conclusion

Pilgrim performed Generic Letter 96-01 required actions in response to similar concerns prior to its issuance. The actions were inspected by the NRC and Unresolved Inspection Item #86-21-03 was closed by Inspection Report #50-293/88-33, dated January 26, 1989.

Pilgrim has a process in place to ensure these past LSFT actions are not inadvertently degraded. The process and LSFT activities are audited by Pilgrim's Quality Assurance Department to identify non-compliance and process degradation.

Therefore, we conclude that past and present activities ensure LSFT activities at Pilgrim comply with NRC requirements and the events behind issuance of GL 96-01 are made unlikely at Pilgrim by our past actions a d resulting LSFT process.

Commitment

As stated above, we believe our past actions address the concerns of GL96-01. We nevertheless intend to re-review two LSFT systems to confirm the adequacy of our past actions. The results of the re-review will determine the scope of further actions, if any are required. This will be completed by startup from our next refueling outage (RFO#11). A letter to NRC confirming completion of these actions will be submitted 30 days after completion.