SYSTEM ENERGY RESOURCES, INC.

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February 19, 1988

U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Document Control Desk

Gentlemen:

SUBJECT: Grand Gulf Nuclear Station
Unit
Docket No. 50-416
License No. NPF-29
Report No. 50-416/87-35
Dated January 20, 1988
(NAEC-88/0012)
AECM-88/0041

System Energy Resources, Inc. hereby submits response to violation 50-416/87-35-01.

Yours truly,

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NOTICE OF VIOLATION

Technical Specification (TS) 6.8.1 requires that the applicable procedures recommended in Appendix A of Regulatory Guide (RG) 1.33 be established, implemented and maintained. Appendix A of RG 1.33 states that the performance of maintenance should be covered by written procedures appropriate to the circumstances.

Contrary to the above, the licensee failed to provide the necessary controls to ensure that work and testing were accomplished and plant conditions were maintained in accordance with prescribed requirements. Four examples of failure to follow procedures or failure to provide adequate procedures are as follows:

1. On November 30, 1987, inadequate work instructions for re-energizing electrical bus 16AB, which had been de-energized for maintenance activities, resulted in the residual heat removal shutdown cooling suction valve E12-F009 to go to the shut position and a temporary loss of shutdown cooling.

2. On November 11, 1987, a 3/4 inch sensing pipe for the A channel narrow and wide range containment post accident monitors was capped which rendered the containment pressure monitors inoperable. Although drawings and procedures did not provide for installation of a pipe cap, the local leak rate test procedure implied caps should be installed.

3. On December 8, 1987, while restoring from a residual heat removal containment spray initiation logic system functional test, an operator performed procedure 06-OP-1E12-R-0022 step 5.2.33 prior to completing step 5.2.32, even though a caution note existed, resulting in a Division 2 Engineered Safeguards Features actuation.

4. On December 12, 1987, an inadequate Modification Special Test Instruction 1C11-87-001-05 resulted in the isolation of the instrument air supply from the reactor protection system scram pilot valve headers causing the scram valves to drift open and a subsequent reactor scram.

I. Admission Or Denial Of The Alleged Violation

System Energy Resources, Inc. (SERI) admits to the alleged violation. This violation had no affect on the health and safety of the public.

II. The Reason For The Violation If Admitted

1. The November 30, 1987 incident occurred as a result of operations personnel performing a task that was not specifically covered by a plant procedure. Division 2 Engineered Safeguards Feature (ESF) Bus 16AB had been de-energized to allow the performance of maintenance and outage related activities. Hand written instructions were provided to operations shift personnel which required the circuit breaker to containment isolation valve E12-F009 to be open prior to restoring power to bus 16AB. This action would prevent E12-F009 from closing once power was re-established.

The open and closed valve position indicator lights for E12-F009 were de-energized which led Control Room operators to believe that the breaker was already open. However, the breaker was actually closed and the lights were out because the bus was de-energized.

Re-energizing bus 16AB caused valve E12-F009 to shut, subsequently isolating shutdown cooling. This event resulted because personnel involved failed to recognize the de-energized conditions of the isolation logic. And no written procedure was available to govern electrical restoration of the bus. This event was reported in LER 87-021.

2. Local Leak Rate Testing (LLRT) procedure 06-ME-1M61-V-0001 step 5.9 and the associated valve alignment procedure require the test connection to be secured. The procedures imply this is to be done by installing a cap on the test connection. The 3/4 inch sensing pipe for the A Channel narrow and wide range containment pressure post accident monitors was capped becaus personnel performing the LLRT installed the cap as implied by the procedures.

3. The December 8, 1987 incident occurred during restoration from Residual Heat Removal (RHR) Containment Spray Initiation Logic System Functional Test when a licensed reactor operator instructed an Instrumentation and Control (I&C) technician to perform step 5.2.33 before the operator had physically performed step 5.2.32.i. The operator was aware of the need to reset the RHR B/RHR C initiation logic, but neglected to inform the I&C technician that the steps should be performed in sequence. The failure to follow verbatim an approved procedure caused Division 2 Load Shedding and Sequencing (LSS) to actuate resulting in several ESF actuations. This event was reported in LER 87-023.

4. A Modification Special Test Instruction (MSTI) was written to verify proper operation of design changes implemented in accordance with 10CFR50.62. During performance of this test, the scram air header pressure diminished faster than anticipated causing the scram valves to drift open and allowing water to fill the Scram Discharge Volume (SDV). When SDV level reached the scram setpoint, a Reactor Protection System (RPS) actuation occurred. The actuation occurred as a result of actions delineated in the approved test instruction. However, if the instruction had required the SDV bypass switch to be placed in the "BYPASS" position during testing, as allowed by Technical Specification 4.3.1.1 for the plant condition at the time of the test, the RPS actuation would have been prevented. This event was reported in LER 87-024.

A review of the four aforementioned incidents and the events that occurred during the first refueling outage was conducted to identify a common cause or causes. The review findings indicate that improvements made to control overall outage activities have been successful; however, additional management controls are required to control certain individual activities.

III. The Corrective Steps Which Have Been Taken And The Results Achieved

The corrective steps which have been taken for the events discussed in Section II, items 1, 2, 3, and 4 are:

1. For the remainder of the second refueling outage, a licensed individual on the Operation's support staff reviewed major electrical outages and tagouts. In addition, this individual developed clearly written instructions and impact statements for energizing and de-energizing equipment. Plant procedures will be developed for major power outages and power restorations.

2. The cap on the containment post-accident monitor 3/4 inch sensing line was immediately removed. Additional corrective actions were:

   - A list was generated of all similar instrument lines that must remain open during plant operation.

   - Threaded ends of all identified instruments line were removed.

   - A field walkdown was performed and "DO NOT CAP OR OBSTRUCT" caution signs were installed on the containment and drywell pressure sensing lines that are required to remain open.

   - Applicable LLRT procedures were reviewed and are being revised to eliminate ambiguities which could cause similar incidents.

   - Operations procedure 03-01-01-1 was changed to require inspection of these lines prior to startup from a refueling or extended maintenance outage.

3. Individuals involved in the performance of surveillance procedure 06-OP-1E12-R-0022 were disciplined and counseled on the failure to follow an approved procedure. These actions were taken based on review by the incident review team.

4. As a result of the December 12, 1987 incident, responsible system engineers within the Plant Modification and Construction (PM&C) Section have been counseled on the importance of maintaining an awareness of how modification test activities for a specific component or system may affect other components or systems.

   Additionally, Modification Special Test Instruction 15-S-03-2 will be changed to establish criteria for the conduct of operational impact reviews (i.e., actuations, scrams, etc.) related to the performance of the test when such a review is required. Consistent with current procedures, operational impact reviews are performed by a licensed SRO.

IV. The Corrective Steps Which Will Be Taken To Avoid Further Violation

1. It is SERI's philosophy and practice to conduct extensive outage critiques to identify and correct problem areas noted. A critique was conducted at the conclusion of the Grand Gulf Nuclear Station First Refueling Outage which identified certain deficiencies in controlling safety systems during an outage. Appropriate corrective actions were instituted as a result.

2. At the present time SERI is conducting an in-depth review of the Second Refueling Outage activities. A specific action will include a review of potential additional programmatic controls necessary to ensure control of safety-related equipment and control of plant safety systems.

3. As discussed in Section III, each of the events cited in the Notice of Violation have been reviewed and specific corrective actions have been identified and, for the most part, completed. These events have been included in the outage review currently in progress to identify any broader issues regarding planning, execution, or control that require additional corrective actions.

V. Date When Full Compliance Will Be Achieved

Full compliance for Section IV will be achieved by June 29, 1988.

Plant procedure development regarding major power outages discussed in Section III.1. will be achieved prior to the third refueling outage or earlier if needed.