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Docket No. 50-366

HL-5430

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

Edwin I. Hatch Nuclear Plant - Unit 2
Reply to a Notice of Violation

Gentlemen:

In response to your letter dated June 17, 1997, and according to the requirements of 10 CFR 2.201, Southern Nuclear Operating Company (SNC) is providing the enclosed response to the Notices of Violation associated with Inspection Report 97-03. In the enclosure, a transcription of the NRC violation precedes SNC's response.

Sincerely,

H. L. Sumner, Jr.

CLT/eb

Enclosure: Violation 97-03-04 and SNC Response

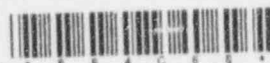
cc: Southern Nuclear Operating Company
Mr. P. H. Wells, Nuclear Plant General Manager
NORMS

U. S. Nuclear Regulatory Commission, Washington, D. C.
Mr. N. B. Le, Project Manager - Hatch

U. S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. B. L. Holbrook, Senior Resident Inspector - Hatch

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Enclosure

Edwin I. Hatch Nuclear Plant - Unit 2
Violation 97-03-04 and SNC Response

VIOLATION 97-03-04

10 CFR 50, Appendix B, Criterion V states that activities affecting quality shall be prescribed by documented instructions or drawings of a type appropriate to the circumstances.

Hatch Unit 2 Technical Specification 5.4 requires that written procedures be established, implemented, and maintained covering activities delineated in Appendix A of Regulatory Guide (RG) 1.33, Revision 2, February 1978.

RG 1.33, Appendix A, Typical Procedures for Pressurized Water Reactors, paragraph 8.b, recommends specific written procedures for surveillance tests and paragraph 9.a recommends general procedures for control of maintenance and modification work.

Administrative Control Procedure 40AC-ENG-003-0S, Design Control, Revision 8, Section 8.2.2, requires, in part, that design packages will be field installed in accordance with the maintenance program and that procedural requirements for maintenance activities such as functional testing shall apply to the design implementation.

Modification Support Procedure 17MS-MMS-002-0S, Design Change Request Processing, Revision 1, Section 7.4.3, requires, in part, that when developing post-modification tests, consideration will be given to the need to demonstrate proper functioning of modified equipment and that functional tests that are not described by existing plant procedures shall be performed by a special purpose procedure.

Contrary to the above, the following examples of inadequate testing procedures were identified:

1. Unit 2 Special Purpose Procedure 17SP-032697-PH-1-2S, Design Change Request 95-054 Dynamic Functional Test of the Feed Water Control System, Revision 0, did not demonstrate proper functioning of recently modified equipment in that, on April 22, 1997, an unexpected plant transient occurred due to a Reactor Recirculation System Pump runback. Section 7.4.38 of the procedure was not changed to reflect the modification. As a result, Unit 2 operated for a short period of time in the "Operation Not Allowed Region" of the reactor power-to-flow map.
2. An activity affecting quality on April 13, 1996, was not prescribed by documented instructions of a type appropriate to the circumstances. Unit 2 Surveillance Test Procedure 42SV-R43-008-2S, Diesel Generator 2A LOCA/LOSP LSFT, Revision 5,

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ED 1, did not contain precautions, prerequisites or identify appropriate pretest conditions to prevent an unexpected engineering safety feature actuation during testing.

This is a Severity Level IV Violation (Supplement 1).

RESPONSE TO VIOLATION 97-03-04

Reason for the violation:

The cause of the first example of the Notice of Violation was personnel error. Personnel involved in a field change to the feedwater flow signal processors did not perform adequate dynamic or integrated testing of the change prior to its implementation. Additionally, they did not revise the functional test procedure to prevent potential inadvertent or unwanted system interactions during testing. Consequently, an unanticipated aspect of the field change, that is, generation of a negative feedwater loop flow signal and/or loss of output from the loop processor, caused a lower than anticipated flow signal when one of the two loop inputs to the total feedwater flow circuitry was disabled during testing. This caused the total feedwater flow signal to decrease to less than twenty percent and the reactor recirculation pumps to runback on low feedwater flow.

It should be noted that Unit 2 did not operate in the "Operation Not Allowed Region" of the power-to-flow map as a result of this event as stated in the Notice of Violation. This is a designated region on the single-loop power-to-flow map given in Unit 2 Technical Specifications Figure 3.4.1-1, "Power-Flow Operating Map with One Reactor Coolant System Recirculation Loop in Operation." However, this power-to-flow map was not applicable to this event because the unit was never in single loop operation. Instead, the reactor recirculation pump runback resulted in operation for a short period of time in the "Immediate Exit Region" of the power-to-flow map that appears in Attachment 1 to plant procedure 34GO-OPS-005-2S, "Power Changes." This map, which was applicable to the event, does not have an area or section designated as the "Operation Not Allowed Region." Therefore, the Notice of Violation should have stated Unit 2 operated in the "Immediate Exit Region" of the power-to-flow map for a short period of time.

The cause of the second example of the Notice of Violation was an inadequate procedure. Surveillance procedure 42SV-R43-008-2S, "D/G 2 - OCA/LOSP LSFT," did not contain the necessary steps to ensure the Vital AC system was powered from its normal supply prior to its alternate power supply breaker being racked to the test position as required by step 7.4.13. As a result, an unexpected Group 2 Primary Containment Isolation System signal was generated on loss of power when the Vital AC system

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alternate supply breaker was racked to the test position while the system was powered from the alternate supply.

Contributing to the event described in the second example was personnel error. Responsible personnel failed to verify the Vital AC system power supply source prior to racking the alternate supply breaker to the test position.

Corrective steps which have been taken and the results achieved:

In response to the event described in the first example, the following corrective actions were taken:

1. Involved personnel were counseled regarding this event and its consequences.
2. Special Purpose Procedure 17SP-032697-PH-1-2S, "Design Change Request 95-054 Dynamic Functional Test of the Feed Water Control System," was revised to prevent an inadvertent reactor recirculation pump runback on a false low feedwater flow signal.
3. The feedwater flow signal processors were changed to prevent the generation of a negative feedwater loop flow signal upon loss of output from a loop flow processor. This change was tested on a simulator prior to its implementation and tested successfully following its installation.
4. This event was discussed with the Architect/Engineer in an Engineering Quality Improvement Program meeting.

In response to the event described in the second example, the involved individual was counseled on the need to ensure systems are aligned properly to allow performance of testing.

Corrective steps which will be taken to avoid further violations:

A Departmental Directive describing the first example in the Notice of Violation, its causes, and lessons learned will be issued by 8/24/97 to personnel who implement Field Change Requests. This event also will be included in the site Plant Modification and Maintenance Support department Lessons Learned document by 8/24/97.

Surveillance procedure 42SV-R43-008-2S, and other similar Unit 1 and Unit 2 Diesel Generator testing procedures, will be revised by 10/15/97 to include a requirement to ensure the Vital AC system is powered from its normal supply prior to racking the alternate supply breaker to the test position.

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Date when full compliance will be achieved:

For the first example, full compliance was achieved on 4/22/97 when Special Purpose Procedure 17SP-032697-PH-1-2S was revised.

For the second example, full compliance will be achieved by 10/15/97 when procedure 42SV-R43-008-2S and other similar Unit 1 and Unit 2 Diesel Generator testing procedures are revised.