



Illinois Power Company
Clinton Power Station
P.O. Box 678
Clinton, IL 61727
Tel 217 935-5623
Fax 217 935-4632

Wilfred Connell
Vice President

U-602588
4F.190

WC-172-96
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Docket No. 50-461

Document Control Desk
Nuclear Regulatory Commission
Washington, D.C. 20555

Subject: Reply to Notice of Violation Contained in
Inspection Report 50-461/96004(DRP)

Dear Sir:

The attachments to this letter contains the Illinois Power (IP) response to the violation of Nuclear Regulatory Commission (NRC) requirements documented in NRC inspection report 50-461/96004(DRP). IP admits that the violation occurred. The notice of violation lists two examples of violations of Technical Specification 5.4.1 that states, "written procedures shall be established, implemented, and maintained covering the activities recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978." The two examples given are responded to separately because the cause and corrective action for each example is different.

IP is also taking actions, in addition to those described in the response to this notice of violation, to improve the pre-planning of maintenance work performed at Clinton Power Station, including providing the necessary guidance to assess switchyard and plant vulnerability. IP believes that these actions will improve the maintenance process at Clinton Power Station. Details of these improvements have been provided to the NRC resident inspectors. IP is confident that these responses address the concerns identified with this notice of violation.

Sincerely yours,

Wilfred Connell
Vice President

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Q PDR

MRS/csm

Attachments

cc: NRC Clinton Licensing Project Manager
NRC Resident Office, V-690
Regional Administrator, Region III, USNRC
Illinois Department of Nuclear Safety

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Response to Notice of Violation 50-461/96004-01a(DRP)

The Notice of Violation states in part:

Technical Specification (TS) 5.4.1 states that written procedures shall be established, implemented, and maintained covering the activities recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

RG 1.33, Appendix A section 4, states that, "Instructions for energizing, filling, venting, draining, startup, shutdown, and changing modes of operations should be prepared, as appropriate for systems including the Reactor Core Isolation Cooling System."

Contrary to the above, on April 9, 1996, instructions for defeating the reactor core isolation cooling suction transfer logic were not appropriate in that the reactor operator was instructed to manipulate an automatic [sic] trip module incorrectly.

Background and Reason for Violation

On April 9, 1996, operators were using Clinton Power Station Emergency Operating Procedure (EOP) support procedure 4410.00C002, "Defeating High Suppression Pool Water Level RCIC Suction Transfer," to defeat the automatic transfer of the suction of the reactor core isolation cooling (RCIC) system pump. This automatic transfer shifts the RCIC pump suction from the RCIC storage tank to the suppression pool when the suppression pool has a high water level. The procedure directed the operators to turn a setpoint adjustment screw on an analog trip module (ATM) in the control room in the clockwise direction in order to defeat the automatic transfer of the RCIC pump suction. The procedure should have directed the operator to turn the setpoint adjustment screw on the ATM in the counterclockwise instead of the clockwise direction. Because the procedure was not correct the operators could not immediately defeat the automatic shift of the RCIC pump suction from the RCIC storage tank to the suppression pool. When the operators discovered during the event that they were turning the ATM setpoint adjustment screw the wrong direction, they were able to correct the procedure error, and change the RCIC pump suction source from the suppression pool to the RCIC storage tank.

The reason for this violation was that, during procedure development, there was a lack of understanding of the physical operation of the ATM and how the turning of the setpoint adjustment screw affects the desired output. The individuals that performed the verification of these procedures believed that they understood the logic used by the ATM well enough to determine the proper direction to turn the ATM setpoint adjustment screw.

Corrective Steps Taken and Results Achieved

The operations crew recognized the error on what direction to turn the ATM setpoint adjustment screw and were able to correct this error during the use of the procedure. A review of the EOP support procedures that manipulate an ATM setpoint adjustment screw was conducted to determine if the direction to turn the setpoint adjustment screw in these procedures were correct. This review determined that there were four additional EOP support procedures that manipulate ATM setpoint adjustment screws and that all four procedures provided instructions that turned the ATM setpoint adjustment screws in the wrong direction. The affected procedures have been revised to provide accurate instructions for turning the ATM setpoint adjustment screw to get the appropriate response from the ATM.

A method to validate the proper direction to turn the setpoint adjustment screw on the ATMs installed in the plant was developed. This method was used to verify that the five EOP support procedures that manipulate an ATM setpoint adjustment screw provide accurate instructions on the proper direction to turn the ATM setpoint adjustment screw.

Corrective Steps Taken to Prevent Further Violations

Clinton Power Station (CPS) procedure number 1005.12C001, "EOP Support Procedure Verification Checklist," provides instructions on how to conduct a verification of EOP support procedures. This procedure was revised to include a new question dealing specifically with ATM usage, including a technical discussion of the ATM's operation. This technical discussion provides sufficient information for the procedure writer and reviewer to understand the affect of turning the ATM setpoint adjustment screw in a specific direction.

Date When Full Compliance Will Be Achieved

Illinois Power is in full compliance with Technical Specification 5.4.1 as it relates to the issue of improper instructions for manipulating an ATM as cited in this notice of violation.

Response to Notice of Violation 50-461/96004-01b(DRP)

The Notice of Violation states in part:

Technical Specification (TS) 5.4.1 states that written procedures shall be established, implemented, and maintained covering the activities recommended in Regulatory Guide (RG) 1.33, Revision 2, Appendix A, February 1978.

RG 1.33, Appendix A, Section 9, states that, "Maintenance that can affect the performance of safety-related equipment should be properly pre-planned and performed in accordance with written procedures, documented instructions, or drawings appropriate to the circumstances.

Contrary to the above, procedures which govern the pre-planning of preventive maintenance activities did not provide the necessary guidance to assess switchyard and plant vulnerabilities associated with performing maintenance on GCB 4522 prior to beginning work on April 9, 1996.

Background and Reason for Violation

The cause of this violation is the same as the cause of the loss of auxiliary power and subsequent reactor scram that occurred on April 9, 1996. The background and cause of this event is completely described in Licensee Event Report (LER) 96-004-00, IP letter U-602581, dated May 8, 1996. A summary of that information is contained in this response to the violation.

On April 9, 1996, utility electrical maintenance personnel, with the assistance of the equipment vendor, were performing preventive maintenance task PEMSYM004 on gas circuit breaker (GCB) 4522. In order to perform this work the breaker was electrically isolated from the rest of the switchyard through the use of a "clearance" (which is similar to a tagout, in that it provides personnel protection while performing work on a component) issued by the IP load dispatcher. The clearance did not remove the control power from the breaker failure relay circuitry, because control power was required for performance of portions of the preventive maintenance task. An impact matrix, which is a written description of the consequences of changing a component's configuration on other plant equipment, was not completed before starting work on the preventive maintenance task. The CPS procedure that requires an impact matrix be completed does not require an impact matrix if the work is, "within the boundaries of a tagout." Electrical maintenance personnel believed that the "clearance" they were issued met this requirement, even though control power to the breaker was left energized. The equipment vendor was contracted to assist with the work because this was the first time that this preventive

maintenance task had been performed on GCB 4522, and GCB 4522 is different than the other switchyard breakers. The job instruction that the maintenance personnel were following that ultimately caused the reactor scram was to "perform work as required under (the vendor's name) direction."

As LER 96-004-00 states, "The cause of the event was attributed to inadequate job preparation brought on by a false sense of security on the part of the individuals involved with preventive maintenance task PEMSYM004. This false sense of security was based on the belief that the "clearance" would prevent them from adversely affecting the plant, previous successful completion of similar preventive maintenance tasks on other GCB's in the switchyard, and reliance on the vendor's expertise." The necessary procedures and guidance which would have prevented this event existed, but the individuals involved did not fully understand or were not completely aware of these requirements.

Corrective Steps Taken and Results Achieved

LER 96-004-00 contains the corrective actions for this violation. The corrective actions are restated in this section for clarity. After the event the breaker failure relay logic for gas circuit breaker (GCB) 4522 was isolated to prevent any impact from this logic on the plant during the completion of the preventive maintenance task. A system impact matrix was added to preventive maintenance task PEMSYM004 to ensure that all of the potential impacts for performing this task have been identified. Since the reactor scram on April 9, 1996, there has been a heightened awareness of what maintenance work requires the preparation of an impact matrix and assessment of plant vulnerabilities.

Corrective Steps Taken to Prevent Further Violations

As discussed in LER 96-004-00 the following actions will be taken to address the elements of the cause related to the false sense of security. Appropriate work control procedures will be revised to define what, "within the boundaries of a tagout," means when determining whether or not an impact matrix is required. A briefing of appropriate maintenance planners, maintenance technicians, engineers and operators will be conducted to describe when a system impact matrix is required, including a definition of what constitutes working within the boundaries of a tagout. Also, CPS procedure number 1007.02, "Contractor Management," will be revised to require a work plan or detailed job instructions when tasks are performed at the direction of a vendor.

Currently, a requirement exists to perform an impact assessment when work is performed in the Clinton Power Station switchyard. Requirements to perform a written impact assessment were not followed because personnel were not aware of the requirements. Appropriate procedures will be revised to describe what elements should be included in

the switchyard impact assessment, when one is necessary, and who initiates the impact assessment. Individuals involved in switchyard activities will be briefed on these requirements. These actions will ensure a thorough plant vulnerabilities assessment is performed when necessary prior to performing maintenance.

Date When Full Compliance Will Be Achieved

Illinois Power is in full compliance with Technical Specification 5.4.1 as it relates to the issue of pre-planning of maintenance activities in the switchyard. The corrective actions for this violation, which are primarily enhancements of the existing requirements, will be complete by August 30, 1996.