

January 24, 1997

01E01

EA 96-412

Mr. John G. Cook  
Senior Vice President  
Illinois Power Company  
500 South 27th Street  
Decatur, IL 62525

SUBJECT: NRC INSPECTION REPORT NO. 50-461/96010

Dear Mr. Cook:

On November 19, 1996, NRC completed its review of activities associated with the September 6, 1996, shutdown of Clinton Power Station. Specifically, during the evening of September 5, operators were attempting to place the unit in single loop operation to allow continued unit operation by isolating a reactor coolant leak in the "B" reactor recirculation pump shaft seal package. The details of our review of activities associated with this event and additional findings from the independently chartered Operational Safety Team Inspection (OSTI) were provided in Inspection Report No. 50-461/96010 and 50-461/96011.

Based on the results of this review, fifteen apparent violations, some with multiple examples, were identified and are being considered for escalated enforcement action in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600. Accordingly, no Notice of Violation is presently being issued for these inspection findings. The number and characterization of the apparent violations being considered for escalated enforcement are enclosed with this letter. In addition, please be advised that the number and characterization of the apparent violations may change as a result of further NRC review.

A predecisional enforcement conference to discuss these apparent violations has been scheduled for February 4, 1997, at 10:00 a.m. in the NRC Region III Office in Lisle, Illinois. The conference will be transcribed. The decision to hold a predecisional enforcement conference does not mean that the NRC has determined that a violation has occurred or that enforcement action will be taken. This conference is being held to obtain information to enable the NRC to make an enforcement decision, such as a common understanding of the facts, root causes, missed opportunities to identify the apparent violations sooner, corrective actions, significance of the issues and the need for lasting and effective corrective action. Along with discussions addressing the enclosed violations, be prepared to discuss management actions and expectations regarding safety focus versus production and performance while in emergency operating procedures as it relates to the emergency action levels. This discussion should focus on actions and expectations before and after the September 5 event.

9701310160 970124  
PDR ADOCK 05000461  
G PDR

Public 1/1

In addition, this is an opportunity for you to point out any errors in our inspection report and for you to provide any information concerning your perspective on (1) the severity of the violations, (2) the application of the factors that the NRC considers when it determines the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and (3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

James L. Caldwell, Director  
Division of Reactor Projects

Enclosure: As Stated

Docket No. 50-461

cc: Mr. Wilfred Connell, Vice President  
P. Yocum, Plant Manager  
Clinton Power Station  
R. Phares, Manager-Nuclear Assessment  
P. J. Telthorst, Director - Licensing  
Nathan Schloss, Economist  
Office of the Attorney General  
K. K. Berry, Licensing Services Manager  
General Electric Company  
Chairman, DeWitt County Board  
State Liaison Officer  
Chairman, Illinois Commerce Commission

(see continued attached distribution)

J. G. Cook

-2-

the amount of a civil penalty that may be assessed in accordance with Section VI.B.2 of the Enforcement Policy, and (3) any other application of the Enforcement Policy to this case, including the exercise of discretion in accordance with Section VII.

You will be advised by separate correspondence of the results of our deliberations on this matter. No response regarding these apparent violations is required at this time.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

Sincerely,

James L. Caldwell, Director  
Division of Reactor Projects

Enclosure: As Stated

Docket No. 50-461

cc: Mr. Wilfred Connell, Vice President  
P. Yocum, Plant Manager  
Clinton Power Station  
R. Phares, Manager-Nuclear Assessment  
P. J. Telthorst, Director - Licensing  
Nathan Schloss, Economist  
Office of the Attorney General  
K. K. Berry, Licensing Services Manager  
General Electric Company  
Chairman, DeWitt County Board  
State Liaison Officer  
Chairman, Illinois Commerce Commission

J. Lieberman, OE  
J. Goldberg, OGC  
R. Zimmerman, NRR  
Docket File  
OC/LFDCB  
SRI Clinton, Dresden,  
LaSalle, Quad Cities

A. B. Beach  
W. L. Axelson  
H. B. Clayton  
DRP  
PUBLIC IE-01  
RIII PRR  
Project Manager, NRR

Document: P:\br8\clinton.enf

To receive a copy of this document, indicate in the box "C" - Copy without attach/encl "E" - Copy with attach/encl "N" - No copy

OFFICE	RIII					
NAME	Wright	Richard Zimmerman	James L. Caldwell			
DATE	01/23/97	via e-mail	1/24/97			

OFFICIAL RECORD COPY

## Attachment 1: Apparent Violations

1. Clinton Power Station Technical Specification Section 5.4.1 requires that written procedures shall be implemented covering the following activities: the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," (RG 1.33) states, in part, that the following are typical safety-related activities which should be covered by written procedures: procedure adherence; shift and relief turnover; log entries; authorities and responsibilities for safe operation and shutdown; procedures for control of surveillance tests; and, emergency core cooling system tests.

CPS 1005.14, Rev. 4, "Formatting of Procedures and Documents," states that a procedural step or section marked with an \* are to be performed in sequence.

CPS 3302.01, Rev. 18, "Reactor Recirculation," a procedure required by RG 1.33, section 8.2.4 was required to be performed in sequence as indicated by the \* next to the steps.

Contrary to the above, on September 5, 1996, the licensee failed to perform all the steps in Procedure CPS 3302.01, "Reactor Recirculation," Section 8.2.4, in sequence. Specifically steps 8.2.4.5 and 8.2.4.6 were performed prior to the requirements of step 8.2.4.3 being met.

2. Clinton Power Station Technical Specification section 5.4.1 requires that written procedures shall be implemented covering the following activities: the applicable procedures recommended in Regulatory Guide 1.33, Revision 2, Appendix A, February 1978.

Regulatory Guide 1.33, Revision 2, Appendix A, "Typical Procedures for Pressurized Water Reactors and Boiling Water Reactors," (RG 1.33) states, in part, that the following are typical safety-related activities which should be covered by written procedures: procedure adherence; shift and relief turnover; log entries; authorities and responsibilities for safe operation and shutdown; procedures for control of surveillance tests; and, emergency core cooling system tests.

Technical Specification 5.2.2e, "Unit Staff," requires that administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety related functions. Controls shall be included in the procedures such that individuals shall be reviewed monthly by the plant manager, or his designee, to ensure that excessive hours have not been assigned.

10 CFR 50.54(m)(2)(iii), states, when a nuclear power unit is in an operational mode other than cold shutdown or refueling, as defined by the unit's technical specifications, such licensee shall have a person holding a senior operator license of the nuclear power unit in the control room at all times. In addition to this senior operator, for each fueled nuclear power unit, a licensed operator or senior operator shall be present at the controls at all times.

- a. Procedure CPS 3317.01, Rev. 16, "Fuel Pool Cooling Cleanup," a procedure required by RG 1.33, step 8.1.2.16 required that the inlet and outlet valves on the idle spent fuel pool cooling heat exchanger be closed .

Contrary to the above, between September 18 and 25, 1996, operators failed to close the inlet and outlet valves of the idle 'A' train FC heat exchanger.

- b. Procedure CPS 3402.01, Rev. 14, "Control Room HVAC," a procedure required by RG 1.33, Step 8.1.1.1.1, required the final position of the moisture separator drain valve OVC043B to be open and the loop seal fill valve OVC096B to be closed upon completion of filling the make-up (M/U) air filter moisture separator loop seal.

Contrary to the above, on September 18, 1996, the licensee failed to open the moisture separator drain valve and close loop seal fill valve resulting in draining of the control room ventilation loop seal.

- c. Procedure CPS 4001.01, Rev. 7, "Reactor Coolant System Leakage," a procedure required by RG 1.33, Step 4.4 required radiation protection to be notified, by the control room, if unidentified leakage exceeded 5 gpm such that area samples and/or AR/PR trending information could be provided to assist in detecting the location/source of the leak.

Contrary to the above, on September 5, 1996, the control room failed to notify radiation protection of the need to assist in the identification of unidentified leakage in excess of 5 gpm.

- d. Procedure CPS 3005.01, "Unit Power Changes," a procedure required by RG 1.33, Step 6.1.b required the control room notify the chemistry department after a thermal power change of greater the 15% so they could take a gas sample.

Contrary to the, on September 6, 1996, the control room failed to notify the chemistry department after a thermal power change of greater than 15%.

- e. Procedure CPS 1401.01 Rev. 24, "Conduct of Operations," is a procedure required by RG 1.33.

- 1) Section 8.4.3.13 required the Line Assistant Shift Supervisor (LASS) to inform the relief operator of, as a minimum, current plant status, operations in progress and work to be performed in the immediate future.

Contrary to the above, on September 17, 1996, the LASS failed to inform the relief operator of activities in the plant which were going to affect fuel building differential pressure.

- 2) Section 8.3.3.1 requires the shift supervisor remain in a monitoring role during off normal operation unless he determines that the LASS is not able to deal with the situation.

Contrary to the above, on September 6, 1996, the shift supervisor failed to remain in a monitoring role and directed activities to place the unit in single loop operation.

- 3) Section 8.4.4.10 required that significant plant operating data, such as abnormal plant conditions and plant transients, be entered in the shift supervisor and main control room journals.

Contrary to the above, on September 6, 1996, no entry was made in the shift supervisor's journal when suppression pool level exceeded the technical specification limit requiring entry into a limiting condition for operation action statement.

- 4) Section 8.1.6.2.1 requires the Shift Technical Assistant (STA) to assist the shift supervisor in evaluating conditions for possible entry into an emergency classification condition; notifications to outside agencies are not to interfere with his/her primary duties.

Contrary to the above, on September 5, 1996, the STA failed to assist the shift supervisor in evaluating conditions, i.e., containment unidentified leakage, for possible entry into an emergency classification condition.

- f. Procedure CPS 1001.01, Rev. 6, "Control of Working Hours," Step 8.7, which implements the overtime control and review requirements of Technical Specification Section 5.2.2e, requires a group supervisor's review/approval of bi-monthly Time Control Reports as a means of satisfying this control and review requirements.

Contrary to the above, during the period between April 1006 through August 1996, monthly reviews of overtime usage by the Operations Department personnel have not been performed.

- g. Procedure CPS 1001.05, Rev. 8, "Authorities and Responsibilities of Reactor Operators for Safe Operation and Shutdown," which implements the requirements of 10 CFR 50.54(m)(2)(iii), defines the "A" reactor operator (RO) as the individual designated to fulfill the requirements to have a licensed RO or senior reactor operator (SRO) present at the controls of a fueled nuclear power unit at all times.

Contrary to the above, on September 18, 1996, with the reactor fueled, the "A" RO left the at the controls area for approximately 3 minutes without obtaining an appropriate relief.

3. 10 CFR 50 Appendix B, Criterion V requires activities affecting quality shall be prescribed by documented instructions or procedures of a type appropriate to the circumstances.

Contrary to the above:

- a. As of September 1996 procedures CPS 9080.01, Rev. 40, "Diesel Generator 1A (1B) Operability - Manual and Quick Start Operability" and CPS 9080.02, Rev. 37, "Diesel Generator 1C Operability - Manual and Quick Start Operability," activities affecting quality, were not appropriate to the circumstances. Specifically, Step 5.11 in both procedures prescribed preconditioning of the emergency diesel generators, by priming the fuel oil system prior to diesel generator starting, thereby negating the test's validity in demonstrating the emergency diesel generators' ability to perform satisfactorily in service.
  - b. As of September 1996 procedures CPS 9080.01, Rev. 40, "Diesel generator 1A (1B) Operability - Manual and Quick Start Operability" and CPS 9080.02, Rev. 37, "Diesel Generator 1C Operability - Manual and Quick Start Operability," activities affecting quality, were not appropriate to the circumstances. Specifically, Step 5.5.4 in both procedures prescribed preconditioning of the emergency diesel generators, by "barring over" the diesel prior to starting, thereby negating the test's validity in demonstrating the emergency diesel generators' ability to perform satisfactorily in service.
  - c. As of October 1996, procedure CPS 9080.02, Rev. 37, "Diesel Generator 1C Operability - Manual and Quick Start Operability," an activity affecting quality was inappropriate to the circumstances in that it failed to require the high pressure core spray (HPCS) emergency diesel generator to be declared inoperable during testing.
  - d. On September 18, 1996, procedure CPS 9861.02D019, Rev. 26, "LLRT for 1M045" (LLRT for portions of the main steam system), an activity affecting quality, was not appropriate to the circumstances in that it failed to provide necessary steps to bypass and restore a group I containment isolation signal.
4. 10 CFR 50.59(a)(1)(iii), "Changes, Tests and Experiments," states, in part, the holder of a license authorizing operation of a utilization facility may conduct tests or experiments not described in the safety analysis report, without prior Commission approval, unless the proposed change, test or experiment involves a change in the technical specifications incorporated in the license or an unreviewed safety question.
- 10 CFR 50.59(b)(1) requires, in part, that the licensee maintain records of tests carried out pursuant to paragraph (a) of this section. These records must include a written safety evaluation which provides the bases for the determination that the test does not involve an unreviewed safety question.

Contrary to the above:

- a. On August 1, 1996, the licensee performed a test, not described in the safety analysis report, to verify that there was no negative impact on emergency core cooling systems (ECCS) when cycling condensate (CY) to the containment was isolated. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
  - b. On August 1, 1996, the licensee performed a test on the water leg pump (WLP) check valve, 1E12F085A, not described in the safety analysis report, to verify its functionality. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
  - c. Between August 2 and September 18, 1996, the licensee performed a weekly test, not described in the safety analysis report, to verify the operability of check valve 1E12F085A. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
  - d. On May 3, 1995, with the reactor at power, the licensee performed a test, not described in the safety analysis report, of the control rod drive (CRD) pumps to determine whether a drop in CRD pressure was due to leaking valves or CRD pump degradation. The test was performed without performing a written safety evaluation to determine that the test did not involve an unreviewed safety question.
5. 10 CFR 50.59(a)(1)(I), "Changes, Tests and Experiments," states, in part, the holder of a license authorizing operation of a utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval, unless the proposed change involves a change in the technical specifications incorporated in the license or an unreviewed safety question.

10 CFR 50.59(b)(1) requires, in part, that the licensee maintain records of changes in the facility made pursuant to this section to the extent that these changes constitute changes in the facility as described in the safety analysis report. These records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

Contrary to the above:

- a. Since 1989, the licensee has operated the fuel pool cooling and cleanup (FC) system, as prescribed in CPS 3317.01, with a valve line up different from that shown on USAR Figure 9.1-4. For example, the inlet and outlet valves on the idle FC heat exchanger were left in the open position vice the closed position as prescribed in CPS 3317.01. The change was made without performing a written safety evaluation to determine that the change did not involve an unreviewed safety question.



- b. On September 17, 1996, annunciator response books were observed on top of the P-680 main control room panel. USAR section 3.1.2.2.1.0.1 states that the control room had been designed to meet seismic Category I requirements. The change was made without performing a written safety evaluation to determine that the change did not involve an unreviewed safety question.
6. 10 CFR 50.59 (a)(1)(I), "Changes, Tests and Experiments," states, in part, the holder of a license authorizing operations of a utilization facility may make changes in the facility as described in the safety analysis report without prior Commission approval, unless the proposed change involves a change in the technical specifications incorporated in the license or an unreviewed safety question.

10 CFR 50.59(b)(1) requires, in part, that the licensee maintain records of changes in the facility made pursuant to this section to the extent that these constitute changes in the facility as described in the safety analysis report. These records must include a written safety evaluation which provides the bases for the determination that the change does not involve an unreviewed safety question.

10 CFR Part 50, Appendix B, Criterion XVI, "Corrective Actions," states, in part, measures shall be established to assure conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective materials and equipment, and nonconformances are promptly identified and corrected.

Contrary to the above:

- a. As of October 1996, the licensee had neither taken prompt corrective action nor performed a written safety evaluation to determine if an unreviewed safety question existed for the degraded cathodic protection system. Specifically, in August 1995 the licensee had previously identified that the cathodic protection system was not adequate to protect buried piping as stated in the USAR section 9.4.5.2.
- b. As of October 1996, the licensee had neither taken prompt corrective action nor performed a written safety evaluation to determine if an unreviewed safety question exists for the auto-restart of the control room chillers after loss of power. Specifically, in 1993 the licensee had previously identified that a discrepancy existed between the as-built condition of the control room chillers and the system as described in the USAR. The licensee had identified that the chillers may auto-start in 2 minutes after an event while the USAR documented that they would start 20 minutes after an event.