

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

March 16, 1987

Docket Number 50-461

Mr. A. B. Davis
Acting Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Response to the Notice of Violation in Inspection Report
50-461/86073

Dear Mr. Davis:

This letter is in response to your letter which transmitted Inspection Report 50-461/86073 dated January 12, 1987. The resolutions provided herein are the results of discussions between members of your staff and Illinois Power.

Attachment A provides the details of Illinois Power's response to the apparent lack of design control. Attachment B provides the details of Illinois Power's response to the apparent inadequate procedures.

I trust that this response is satisfactory for ensuring compliance with regulatory requirements.

Sincerely yours,

F. A. Spangenberg
Manager - Licensing and Safety

JAB/ckc

Attachments

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Inspector's Office
Illinois Department of Nuclear Safety

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Attachment A
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The Notice of Violation states in part:

- a. "IPC failed to assure that safety related connection diagrams and design change documents associated with SGT Panel OPL39JB, and Schematic diagrams associated with the Leak Detection system were correct in that numerous design discrepancies and inconsistencies were identified."
- b. "IPC failed to assure that the design drawings associated with SGT Panel OPL39JB reflect the intended design and the as-built configuration of the plant installations."
- c. "IPC failed to establish appropriate measures to assure that design engineers use all design change documents posted against a drawing, and that the design change documents are utilized during activities relating to changes."

I. Corrective Actions Taken and Results Achieved

- a) The discrepancies and inconsistencies consisted of an incorporation error on drawing E03-OPL39JB-001. This specific discrepancy has been corrected; an extensive review of drawings and additional electrical panel walkdowns have been conducted. This panel walkdown consisted of a detailed review of 46 Class 1E electrical panels (28 HVAC/18 LH13-P700 termination cabinets) and their associated physical electrical wiring diagrams. Approximately 175,000 attributes were checked and 494 inconsistencies were identified. Each of the exceptions noted has been evaluated, categorized and preliminary resolutions identified.

This panel verification was subsequently expanded to the scope discussed in IP letter U-600852, dated February 18, 1987. Inconsistencies identified during the expanded panel inspections are being reviewed in a similar manner.

- b) Specific discrepancies (i.e., design documents not identical to as-built configuration) were analyzed associated with paragraph a above. In addition to discrepancies on drawings (or in panels), a small number of erroneous postings were found in the Design Status System (DSS). All posting problems have been corrected, and drawing/hardware inconsistencies have been resolved.

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- c) The Sargent & Lundy instructions for generating change documents (PI-CP-004 and PI-CP-022) did not include specific direction to check DSS to identify all outstanding changes. The S&L instructions do explicitly require a "check of existing design", which is interpreted to mean the latest revision of a document and all outstanding changes. It was explained by S&L supervision and engineers that a check of DSS is a standard practice prior to issuing new design changes.

II. Corrective Actions Taken to Prevent further Violations

1. Sargent & Lundy (S&L) has emphasized the requirement to check DSS to determine current design and to strive for error free design documents through training sessions with S&L site electrical engineering and design groups.
2. Sargent & Lundy Management at Clinton Power Station (CPS) has emphasized the requirement for attention to detail and personal accountability for producing error free design documents, through iteration of standing S&L policy.
3. S&L Project Instructions (PI-CP-205 and PI-CP-206 for the operational phase) are being written to include specific provisions for checking DSS prior to issuance of new design changes.
4. IP Nuclear Station Engineering (NSED) Procedure D.20 has been revised to include a requirement for the NSED engineer to conduct a more complete technical review of each design change document included in a Plant Modification.

III. Date When Full Compliance Will be Achieved

Illinois Power will be in full compliance on March 31, 1987.

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The Notice of Violation states in part:

- a. "Approved but unauthorized FECN-15413 superseded FECN-13095 which had been completely implemented in the field; Posting of FECN-13095 was removed from SGT panel connection diagrams E03-OPL39JB, Sheets 1 and 2; FECN-15413 which changed the design of FECN-13095 was not posted against the drawings because it had not been authorized. Contrary to applicable procedures this resulted in a condition in which electrical components have been added and wired in the panel while the drawings and the design change documents against the drawings did not reflect these additions to the panel. In addition, ECN-7870 had not been posted against Panel OPL39JB drawings as required by the procedure."
- b. "Documented evidence (as required by applicable procedures) indicating that a walkdown and or/document review to assure that system and components added by superseded FECN-13095 are in pre-modification configuration was not available for review. Furthermore, the requirement to coordinate with Drafting Supervisor to ensure that all control room drawings are marked to show as-built condition relative to superseded FECN-13095 had not been accomplished as of the date of this inspection."
- c. "On October 30, 1986, contrary to applicable procedures Superseded FECN-10436 was noted to be posted against drawing E03-1P741E-002, Revision N. In addition, approved and authorized document FECN-14391 was not posted against E03-1P741E-002 as required by the procedure."
- d. "As of November 20, 1986, contrary to applicable procedures Drawing E03-OPL39JB, Sheets 1 and 2, which fall into the sub-tier "B" Category (Documents requiring rapid update in order to maintain equipment) have contained more than three outstanding change documents posted against the drawings."

I. Corrective Actions Taken and Results Achieved

- a) The error in posting of Field Engineering Change Notice (FECN) 13095 was attributable to a transition in modification control programs and a delay in authorizing the superseding change document (FECN 15413). FECN 13095 was originally authorized for work under a construction phase program and work was actually completed.

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Because FECN 15413 covered the same scope as FECN 13095 it was not physically checked in the field prior to being entered into the Design Status System (DSS). Work for FECN 15413 was controlled under the operational phase Modification Program and had not been authorized at the time of the inspection. Because posting to affected drawings is not performed until work is authorized, the DSS and drawings did not reflect actual field conditions.

ECN 7870 superseded ECN 7789. Neither of these was work authorized and no physical posting was therefore required. These changes have been corrected in DSS.

- b) NSED Procedure D.20 did not, at the time of the inspection, require any specific documentation for system walkdowns that are used to verify configuration prior to modification/change document voiding/superseding. Item a) above identifies that the walkdown was not adequate and remedial action was taken to identify other potential cases of this type. Procedure D.20 has been revised to require a Condition Report to be generated for walkdowns that identify changes to system configuration that may have occurred prior to cancellation of the modification. Additionally, Procedure K.0 requires that Configuration Management ensure all attendant actions (including change document voiding/superseding) be completed prior to cancellation of the modification.

To determine if other instances of this type of error exist, all current unauthorized design change documents and their associated design drawings were analyzed. A total of eleven instances were found where design change documents originally authorized under the construction phase program were superseded by change documents not yet authorized under the operational Plant Modification Program; this included the previously identified instances of FECN's 13095 and 15413. Each of the other ten change documents was field verified to determine if any previously authorized work was actually performed, creating similar conflicts between the DSS and as-built conditions. Three documents were found to be worked in the field and not work authorized, therefore, not properly posted. These discrepancies have been corrected.

The program used to modify the Control Room drawings is a computer based set of reports. These reports are run from the DSS Data Base. The failure to update that data base identified in a) above resulted in the failure to modify the drawings. The action has been taken to correct the data base and, as a result, the computer program flagged the subject drawings for markup. Applicable drawings have been marked to show field conditions.

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- c) The posting error against E03-1P741E-002 has been corrected. The library where this error was discovered is periodically reviewed by document control. IP considers this an isolated occurrence, in that the periodic reviews have not shown other errors.
- d) Illinois Power has established a set of standards that governs the number of changes and the frequency of drawing revisions. These standards are for the operational phase of the plant. A situation exists where a number of drawings have greater than the standard number of changes open against them. This is due to the large number of backlogged construction changes. A plan and a specific time schedule was established in the 4th Quarter of 1986 to incorporate the changes. The incorporations are proceeding with the highest priority being E03 drawings that have greater than three (3) changes open against them. After the drawings are revised they fall under the operational phase incorporation standard.

II. Corrective Action Taken to Prevent Further Violations

For all instances identified in the investigation where design status conflicted with as-built conditions, correction entries were made into the computerized tracking system to either re-post the superseded change document or reflect authorization for work of the new change document. Corresponding physical posting on controlled copies of the affected drawings was also conducted. These actions have resulted in consistency between the Design Status System, affected drawings and the as-built condition for all designs associated with this investigation. This investigation also verified that no other programmatic errors are being introduced into the computerized design status tracking system through these data entry program faults.

Procedural controls in existence for the operational Plant Modification Program minimize the possibility for allowing conflicts between the Design Status System (drawing plus changes) and the actual plant configuration. Field walkdowns are required, prior to the approval of each design change/modification, and the plant configuration will be field verified prior to any change document cancellation.

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To further ensure that time delays in processing or authorizing modifications do not create temporary conflicts between the Design Status System and the plant configuration, a change to the sequence of certain data entry has been made. Design change documents (FECN, ECN FDDR, etc.) will be entered against affected documents when received from the approving design organization; the design change approval date will be entered when the associated modification package is approved and cancellations will be made only when a superseding change is authorized for work (physical posting to drawings is done at this time). This has ensured a more accurate as-designed and as-built status in the computer tracking system at all times.

III. Date when Full Compliance Will Be Achieved

Illinois Power is in full compliance.