

ILLINOIS POWER COMPANY



1605-L
U-0567

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

October 19, 1982

Docket Number 50-461

Mr. James G. Keppler
Regional Administrator, Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Dear Mr. Keppler:

Deficiency 82-07

10 CFR 50.55(e)

Potential Breakdown in Quality Assurance Program
Criteria X, Inspection, and XVI, Corrective Action
Clinton Power Station

On July 8, 1982, Illinois Power notified Mr. R. C. Knop, NRC Region III, (ref: IP memorandum Y-13621, 1605-L, dated July 8, 1982) of a potential breakdown in the Construction Quality Assurance Program, in that certain portions of Criteria X and XVI of 10 CFR 50, Appendix B, may not be effectively implemented. This notification was followed by one (1) interim report (IP letter U-0525, W. C. Gerstner to J. G. Keppler, 1605-L, dated August 6, 1982). Although our investigation into this matter continues, we have determined that this matter represents a reportable deficiency per 10 CFR 50.55(e). This letter represents an interim report per 10 CFR 50.55(e)(3).

Statement of Reportable Deficiency

Concerning Criterion X, INSPECTION, it has been determined that a program of quality control inspections to verify conformance with documented instructions, procedures, and drawings for accomplishing construction work was not conducted in a timely manner. Concerning Criterion XVI, CORRECTIVE ACTION, it has been determined that conditions adverse to quality were not corrected promptly. Together these elements indicate that a breakdown in the construction quality assurance program has occurred.

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Investigation Results

Criterion X

Regarding Criterion X, Inspection, which reads in part, "A program for inspection of activities affecting quality shall be established and executed...", it has become apparent that numerous final inspections have not been conducted in a timely manner due to the manner in which field work was controlled and scheduled. Of particular concern are inspections which affect the following components:

1. Large bore pipe and supports
2. Small bore pipe and supports
3. Instrumentation
4. Electrical hangers
5. Electrical conduit
6. Structural steel

As a result of these and other concerns, three (3) STOP WORK ACTIONS were issued by Baldwin Associates (IP contractor), in the areas of conduit installation (SWA 016), structural steel (SWA 019), and electrical instrumentation installation (SWA 017). Restraints have been placed on new construction in the areas of pipe hangers, piping, instrumentation, and electrical hangers to tie more closely the final QC inspections to the time that the work is conducted by the craft personnel. This is an on-going project effort which is under written controls of the BA quality assurance program. Evaluation of the effectiveness of this effort is presently being conducted and will continue.

In the area of electrical inspection, investigation by the Electrical Recovery Plan Committee determined that procedures for the control of installation and inspection of conduit did not provide for timely inspections. Installation of electrical hangers by craft personnel occurred at a faster rate than inspections were performed by QC personnel due to the manner by which the work packages were processed. As a result, the final reviews of electrical hanger hardware installations and associated documentation were delayed and a hardware/software backlog developed. The Recovery Plan calls for program enhancements in the form of procedural changes to strengthen controls by which electrical conduit and hangers are installed and inspected. Additionally, new work in the areas of electrical hangers and conduit will be restrained until the backlog of work requiring inspection is reduced to an acceptable level. This will be accomplished utilizing a "Traveler Control Group", which allows only limited amounts of work to be in-process at any given time, and requires the completion and inspection of in-process work before new

work is undertaken. This action forces the inspection of electrical hangers to occur in a more timely manner following installation. Additional manpower has been added, and existing manpower reallocated, to eliminate the existing documentation backlog in the final review process of electrical hanger installation and inspection documentation. Implementation of these actions have not yet shown a significant decrease in the backlog of electrical hanger inspection and documentation. Similarly, the backlog of uninspected conduit has not been reduced. Further efforts at improving the work and inspection process are in preparation.

In the area of piping and supports, investigation by the Piping/Mechanical Recovery Plan Committee is still in progress. Preliminary results have determined that the present systems for installation and inspection of piping and supports do not provide for timely inspections. Also, inspection delays occur due to delays in the process of revising installation traveler documents required for the performance of quality control inspections. Corrective action to resolve these concerns include the restraining of new work which can be performed, utilizing the "Traveler Control Group", until in-process work is complete and inspected, thereby creating incentives for timely completion of installation and inspection activities. This action, together with other corrective action measures being investigated and evaluated as part of the Piping/Mechanical Recovery Plan, should decrease the existing backlog of inspections of piping and supports.

In the area of structural steel, it was determined that Quality Control inspections do not lag behind construction. It was found, however, that installation and inspection documentation for structural steel was not being finalized, reviewed, and forwarded to the CPS Document Records Center in a timely manner. This situation is being corrected by placing additional emphasis on the timely review and finalization of structural steel inspection records.

Criterion XVI

Regarding Criterion XVI, Corrective Action, which states in part, "Measures shall be established to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected", it has become apparent that corrective action for some identified nonconformances is not being promptly implemented. This problem has evidenced itself with an apparent trend where Nonconformance Reports (NCRs) and Deviation Reports (DRs) are written, with the rate of closure not keeping pace. Other evidence of this problem is shown in the number of open NRC inspection items, 10 CFR 50.55(e) deficiencies, IP Quality Assurance surveillance findings, IP Management Corrective Action Requests, and Baldwin Associates Corrective Action Requests. As a result of these concerns, two (2) recovery plans are being developed to investigate, evaluate, and identify corrective action to resolve this problem.

A NCR/DR Recovery Plan has been generated and implemented to evaluate and improve the system for processing and closing NCRs/DRs and to reduce the backlog of open NCRs/DRs. This plan calls for the dedication of appropriate manpower to reduce existing backlogs and to expedite processing of new NCRs/DRs. Additionally, a Project Controls Group has been given the responsibility to implement a program to track the processing of NCRs/DRs and to provide management with periodic reports on the timeliness of NCR/DR processing. Implementation of this plan thus far has shown a positive trend in reducing the number of open NCRs and DRs.

A Corrective Action Recovery Plan is being prepared at this time to evaluate corrective action systems for providing timely resolution to new quality problems and preventing their recurrence, and will provide recommendations for enhancing the system to assure timely corrective action. Additionally the plan assigns responsibility to a project compliance group for establishing project priorities and tracking of the open concerns and measuring the success of reducing the backlog of concern. Although this plan has not been approved, certain aspects have been implemented. At this time, a trend in reducing the number of open quality issues has not been evidenced, but is expected upon full implementation of the plan.

Summary

Concerning Criterion X, INSPECTION, it has been determined that a program of quality control inspections to verify conformance with documented instructions, procedures and drawings for accomplishing construction work was not conducted in a timely manner. The procedure for processing craft completed construction work into inspected, documented construction work was inadequate. These processes resulted in quality inspections not being conducted in a timely manner. The in place quality control inspection elements may have been adequate, however, they were not exercised fully.

Concerning Criterion XVI, CORRECTIVE ACTION, it has been determined that conditions adverse to quality were not corrected promptly. Many organizational elements participate in the correction of deficiencies. Although individual deficiency correction may not be a specific quality assurance function, the overall management and support is an integral part of an effective quality assurance program.

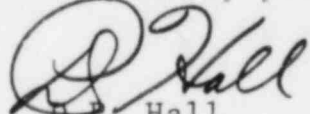
In both these investigations, the expenditure of resources could not be specifically identified as extensive because of other on-going and parallel events which result in a large overall expenditure of resources.

In evaluating all these elements and the guidance provided in amplification of 10CFR50.55(e), it was concluded that the total quality assurance program did not support the desired process of documenting inspection of construction work and therefore a breakdown had occurred.

The results of the investigations being performed in conjunction with the development of the various recovery plans will have significant bearing on our determination of corrective action to resolve this matter and to prevent recurrence. Until these plans are developed, reviewed, and approved, the full extent of necessary corrective action cannot be determined. It is anticipated that approximately ninety (90) days will be necessary to complete the investigation, to determine corrective action, and to file our final report on this deficiency.

We trust that this interim letter provides you sufficient background information to perform a general assessment of this reportable deficiency and overall approach to resolution of concerns.

Very truly yours,



D.P. Hall
Vice President

cc: H.H. Livermore, NRC Resident Inspector
Director, Office of I&E, USNRC, Washington, D.C. 20013
Illinois Department of Nuclear Safety
Director-Quality Assurance