U.S. NUCLEAR REGULATOR COMMISSION

REGION III

Report No. 50-461/86058(DRS)

Docket No. 50-461 License No. CPPR-137

Licensee: Illinois Power Company
500 South 27th Street
Decatur, IL 62525

Facility Name: Clinton Nuclear Power Station, Unit 1

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: August 19-21, 1986

Inspector: J. H. Neisler J W Muffett for 9/23/86
Date

Approved By: J. W. Muffett, Chief J W Muffett 9/23/86
Plant Systems Section Date

Inspection Summary

Inspection on August 19-21, 1986 (Report No. 50-461/86058(DRS))
Areas Inspected: Unannounced, special inspection of allegations, 10 CFR 21 reports, and open items.
Results: No violations or deviations were identified.

DETAILS

1. Persons Contacted

Illinois Power Company

*D. P. Hall, Vice President
*E. Connigan, Director, Quality Engineering
*J. Wilson, Clinton Plant Manager
*J. Weaver, Director, License
*J. Greene, Manager, Nuclear Station Engineering
*J. Morris, Director, Nuclear Programs and Scheduling
*J. S. Penny, Manager, Nuclear Program Coordinator
*F. Spangenberg, Manager, Licensing and Safety
*R. Schaller, Director, Nuclear Training
*J. Cook, Assistant Plant Manager
*K. Baker, Supervisor, NRC Interface
R. Legkuecher, Licensing Engineer
J. Puzuaskas, Supervision, Procurement Quality Assurance
D. Glenn, Director, Safeteam
M. Guirguis, Staff Engineer, Electrical Group
P. Dimopoulos, Staff Engineer, Qualification Group
T. Elkins, Staff Engineer, Seismic Qualification
J. Taylor, Supervisor, Document Control
N. Williams, Director, Support Services
O. Villarreal, Staff Engineer
S. Bachuwar, Chairman, Fire Pump Investigation

*Denotes those persons attending exit meeting.

The inspector also contacted other persons in the quality, craft, operations, and engineering areas.

2. Licensee Actions on Previously-Identified Items

(Closed) Open Item (461/85023-01): Further review of document control procedures. The inspector reviewed procedure NP&S 2.51, Revision 1, July 17, 1986, "Document Control Procedure," and standard RMS 4.01, Revision 0, January 13, 1986, "Standard for the Receipt, Recording, Filing, Distribution, and Maintenance of Controlled Documents." These procedures delineate responsibilities, identify types of controlled documents, establish distribution, accountability, receipt and retrieval of controlled documents. The procedures appear to be adequate to assure control of quality assurance documentation during the operation of the plant.

(Closed) Open Item (461/85023-02): Design change control program incomplete. The inspector reviewed design control Procedures No. D-35, D-36, D-37, and D-38. These procedures establish design control methods within the Nuclear Station Engineering Department (NSED). The licensee has contracted with the architect/engineer, Sargent and Lundy, for

continuing engineering services for design and design change development and review. This represents an acceptable method of controlling design changes.

(Closed) Open Item (461/85059-01): Review of administrative control procedures for surveillance testing and surveillance scheduling. The inspector reviewed administrative procedures CPS 1011.00, Revision 0, December 18, 1985, "Surveillance Testing Program," CPS 1011.02, Revision 6, July 30, 1986, "Implementation and Control of Surveillance Testing," CPS 1011.05, Revision 1, June 6, 1986, "CPS Surveillance Guidelines," CPS 1011.06, Revision 2, August 8, 1986, "Routine Surveillance Tracking and Scheduling," and the latest, August 1986, Monthly Surveillance Schedule. These surveillance testing and surveillance scheduling procedures are acceptable.

3. (Closed) Allegation No. RIII-86-A-0061

a. The NRC Resident Inspection Office at Clinton was informed that Condition Report No. CR-1-85-07-055 had been improperly invalidated by the Plant Manager on the basis that fire hoses were not part of the fire protection system.

NRC Review

The NRC inspector reviewed CR-1-85-07-005. The document had been invalidated upon recommendation of a member of the plant staff. The inspector also reviewed memorandum JVS-86-285 Sipek/Wilson, Subject: CR-1-85-07-055. This memorandum was issued by the plant manager, technical director and quality assurance manager to restore CR-1-85-07-055 to active status. The condition report was then closed according to Procedure No. 1016.01. The individual identified by the alleger as having knowledge of the invalidation of the document was not available for interview.

Procedure No. 1016.01 permits the plant manager to invalidate condition reports that are duplicates of previously issued reports, that do not represent nonconforming conditions or deficiencies upon recommendation of the plant staff. Each invalidated condition report must then be reviewed by the Compliance Section and by the Quality Assurance Department according to the condition report procedure.

In this instance, the condition report was invalidated but the mistake was identified by quality assurance and appropriate corrective action, restoring the CR validation had been implemented prior to the NRC inspection. No additional incorrectly invalidated CRs were identified by the inspector through review of the CR log and computer printouts.

Conclusion

The allegation is correct in that Condition Report No. CR-1-85-07-055 was improperly invalidated. However, the deficiency was identified by the licensee's Quality Assurance Program and appropriate corrective action was implemented.

b. The individual stated that the plant staff was not following approved procedures. The individual cited two design change packages that he claimed were not processed in accordance with approved procedures for plant modifications (CPS 1003.01, Design Control and Modification). The design change packages were modification requests (PMR-34) and (PMR-37). The individual stated that safety evaluations conducted for the modifications conflicted but that the approved procedures did not provide a mechanism for resolution of the conflict.

NRC Review

The inspector reviewed design change packages No. FP-34, FP-36, FP-37, FP-38, FP-41 and FP-44. When a plant modification request (PMR) is logged into the system it is given a number and the acronym PMR is deleted. The above design change packages were compared to the criteria in Procedure No. CPS-1003.01. The package reviews met the requirements of the procedure except neither plant operations or plant maintenance were included in the reviews. Omitting plant operations and maintenance from the review process for these design change packages was authorized by a blanket authorization for modification to the fire protection system to satisfy Appendix R requirements by direction of licensee management. The systems had not been turned over from the start-up organization; therefore, operations and maintenance section reviews would not have been appropriate.

Design change packages No. FP-34 and FP-37 were for the installation of additional fire detectors in the fuel building and the control building. Documentation in the packages provided evidence that the changes had been reviewed pursuant to 10 CFR 50.59 and that safety evaluations had been performed. No conflicts in the evaluations were observed. Other documentation indicated that the design changes were being included in the Clinton fire hazards analysis report. The inspector determined that design change No. FP-37 was in response to NRC Appendix R review comments and findings so that procedural resolution of conflicts were inappropriate. For other resolutions, Procedure No. 1003.01 delineates responsibilities for managers of each element involved in a design changes so that conflicts are resolved by the chain of command and their architect engineer where technical issues are involved.

Conclusion

This allegation is not substantiated. The inspector found no evidence that the design change packages had been improperly evaluated.

4. (Closed) Allegation No. RIII-86-A-0110: On June 12, 1986, the NRC resident inspector at Clinton received an allegation that the licensee had not reported a construction deficiency per the requirements of 10 CFR 50.55(e). The individual stated that the initial 10 CFR 50.55(e)

evaluations were based on the failure of the fire pumps to meet the wrong acceptance criteria and not the station engineering identified problem of incorrectly supplied impellers.

NRC Review

The NRC inspector ascertained by review of the Clinton 10 CFR 50.55(e) Referral Form dated June 6, 1986, that the fire pump deficiency review for reportability had been initiated on that date. The licensee reported a potential construction deficiency relative to the fire pumps on June 13, 1986. The deficiency was reported as failure of the pumps to meet the acceptance criteria of 2500 gpm at 330 TDH. The formal written report of the 10 CFR 50.55(e) was dated July 11, 1986. This final report included the results of the licensee's investigation and corrective action.

The inspector reviewed the investigation report and corrective action and concluded that both were acceptable. The fire pumps' capacities were increased to meet the acceptance criteria by adding a fourth stage to each pump. The diesel prime movers were modified by the manufacturer and approved by Underwriters Laboratories to increase the engine power to the extent necessary to drive the modified fire pumps.

The inspector reviewed results of the tests performed on the pumps after the modifications. Both pumps met the acceptance criteria for flow and pressure. There is no requirement as to how many impellers are on the pumps so long as required flows are obtained. The diesel engines temperatures and vibration were within acceptable limits during testing. Included with the fire pump documentation was evidence that the architect/engineer had reviewed vendor test data for the other 28 pumps in the plant that had been supplied under specifications developed by the architect/engineer.

The inspection of this allegation relative to the Clinton diesel driven fire pumps also closes construction deficiency Report No. 461/86003-EE.

Conclusion

This allegation is not substantiated because the licensee properly submitted a construction deficiency report pursuant to 10 CFR 50.55(e).

5. (Closed) Allegation No. RIII-85-A-0169:

Concern 1: NCR 35898 did not provide any corrective action and as a result, numerous similar installations would be made that are not in accordance with design and without prior approved design changes. NCR No. 35898 states "cable tray end caps are not installed per design. Installed end cap constructed of light gage metal."

NRC Review

The inspector examined cable tray end plates with and without flexible conduit penetrations in the reactor building and auxiliary building. No indications of failure due to the use of sheetmetal end plates were observed.

The inspector reviewed Sargent and Lundy Specification No. K-2999 Amendment No. 10 dated August 16, 1984, Section No. 801.3.b. which states, "The installation of cable tray end plates is optional. Information concerning the location of end plates as shown on the cable tray vendor's drawings may be disregarded." Amendment No. 10 was issued over a year before NCR No. 35898 was initiated.

The NCR was reviewed and dispositioned use-as-is by the architect/engineer after field observations by the designer who determined that the installed condition provided adequate structural capacity.

Conclusion

Since the design was reviewed by the architect/engineers and the end plates are optional, this allegation is not substantiated as having an impact on plant safety.

Concerns 2 and 3: The individual stated that the use-as-is disposition of NCRs is running rampant on site and the lack of corrective action taken essentially gave the craft the go ahead to violate Quality Assurance (QA) Program requirements and the approval for construction design. He stated that Quality Control (QC) inspectors were becoming reluctant to write programmatically required NCRs such as NCR No. 35898 because of the use-as-is dispositions.

NRC Review

The NRC inspector reviewed NCR's No. 36000 through No. 36100. Of the NCRs reviewed approximately 40 percent were dispositioned use-as-is. Review of the use-as-is dispositions of these NCRs did not reveal any that the inspector judged to be wrongfully dispositioned. Over 10% of all the NCRs reviewed could be considered programatic such as NCR No. 35898 to indicate that QC inspectors were not reluctant to write NCRs, although most of the NCRs related to minor hardware discrepancies. The contractor has demobilized and none of the QC inspectors are left on site; therefore, none of the QC inspectors were interviewed to determine whether there was a reluctance to write NCRs.

Conclusion

This allegation could not be substantiated. No hardware deficiencies were identified during the inspection of these concerns.

Concern 4: The individual stated that the training of cables in cable trays was some of the worst he has seen. He stated that the problem was most apparent in the auxiliary building, west side, 781' elevation above the switchgear and anywhere there is a bend in a cable riser.

NRC Review

The inspector examined the cables above the switchgear on the 781' elevation on both west and east sides of the auxiliary building and at bends and risers. The cables were not laid side by side and in numerous instances crossed each other in the trays and risers to facilitate entrance into components. No violations of minimum bend radii were observed. Cables were not kinked, there was no apparent damage to the cable jackets, nor were any separation violations identified in this area. Placing cables in neatly stacked rows within raceways is not required by regulations, nor is it a desirable practice in solid bottom covered trays.

Conclusion

This allegation is not substantiated as having a deleterious effect on plant safety.

6. (Closed) Allegation No. RIII-86-A-0094: A contract individual expressed a concern that ITE Model No. J-13P relays used in Class IE electrical components at Clinton might be commercial grade. This concern was based on the individuals experience with J-13P relays at another nuclear plant in 1972, where he states that numerous problems were encountered with the relays such that eventually lead to the other nuclear plant's decision to replace all J-13P relays in safety related systems. The individual had informed the licensee's Safe Team of his concern prior to his leaving the site. The licensee's investigation report stated that the relays were not used in safety-related applications.

NRC Review

The NRC inspector ascertained from drawings and conversations with site engineers that the J-13P relays are used in safety-related applications, principally in load centers and motor control centers. The relays used at Clinton are J-13P-A a later model of the J-13P relay used at Oconee in 1972 and is now manufactured by Telemecanique not ITE Corp. The inspector reviewed environmental qualification data showing the relays to be qualified as to seismic, radiation, temperature, humidity, aging, and operability requirements. The qualification test results have been reviewed by the architect/engineer and approved as acceptable for the Clinton application.

The inspector determined that three relays have been replaced because of damage or failure. These are:

a. November 3, 1984 damage due to improper installation identified during preoperational test.

b. December 17, 1985 broken contact blocks identified by construction contractor QC. Apparent construction damage.

c. April 29, 1986 replaced as part of the replacement of faulty breaker cubical in a motor control center.

There were no identified failures of the J-13PA relays during preoperational testing or during system operations during this inspection.

Conclusion

The relays at Clinton are qualified relays, not commercial grade. There have been no operational failures identified. This allegation is not substantiated.

7. 10 CFR 21 Reports

(Closed) 10 CFR 21 Report (461/86007-PP): Possible cut harness wires on Brown-Boveri K600/K800 circuit breakers (55-86-03). The wiring harness from the 52 L auxiliary switch can be damaged by the teeth of the racking shaft gear. The licensee has purchased the modification kit, (gear guard) as recommended by the manufacturer. Wiring harness inspection has been added to the normal maintenance routine on K600 breakers. The inspector visually examined the wiring harness on accessible breaker and observed no apparent damage to the harness from the racking gear. The licensee's actions are acceptable and adequate to close this item.

8. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection and summarized the scope and findings of the inspection activities. The licensee acknowledged the inspectors comments. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.