

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/86055(DRP)

Docket No. 50-461

License No. CPPR-137

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

Facility Name: Clinton Power Station

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: July 29-August 1, August 4-8, and August 11, 1986

Inspectors:

*F. J. Jachens*  
C. H. Scheibelhut

8/26/86

Date

*F. J. Jachens*  
T. P. Gwynn

8/26/86

Date

Approved By:

*F. J. Jachens*  
R. C. Knop, Chief  
Reactor Projects Section 1B

8/26/86

Date

Inspection Summary

Inspection on July 29-August 1, August 4-8, and August 11, 1986 (Report No. 50-461/86055 (DRP))

Areas Inspected: Routine safety inspection by a NRC Contractor Inspector and the Resident Inspector of applicant actions on previous inspection findings; applicant actions on 10CFR50.55(e) reports; applicant action on IE Bulletins; and a Technical Specifications Review.

Results: Of the four areas inspected, one violation was identified. The violation (see paragraph 2.e.) involved the failure of plant staff to implement corrective actions to a QA audit finding concerning training of personnel to significant changes to plant procedures. No deviations or other safety significant issues were identified.

## DETAILS

### 1. Personnel Contacted

#### Illinois Power Company (IP)

- \*D. Antonelli, Director, Operations
- \*J. A. Brownell, Licensing Specialist
- \*R. E. Campbell, Manager, Quality Assurance
- \*J. H. Greene, Manager, Nuclear Station Engineering Department
- \*D. P. Hall, Vice President, Nuclear
- \*J. F. Palchak, Supervisor, Plant Support Services
- \*J. D. Weaver, Director, Licensing
- \*J. C. Wemlinger, Supervisor, Operations Training

#### WIPCO/Soyland Power

- \*J. Greenwood, Manager, Power Supply

#### Enercon, Inc.

- \*J. Loyd, Operations Consultant

\*Denotes those attending the exit meeting.

The inspector also contacted others of the applicant's staff.

### 2. Applicant Actions on Previously Identified Items (92701)

- a. (Closed) Open Item (461/85005-09): "Verify the installation of drywell vacuum relief valve position indicators." This item was identified in the Clinton Power Station (CPS) Safety Evaluation Report (SER), NUREG-0853, requiring verification by Region III.

The inspector verified by direct observation that position limit switches (open and closed) were installed on each of the four dry well vacuum relief valves and that indicating lights that monitor the valves' position were installed in the control room. The inspector reviewed the approved preoperational test results for PTP-HG-01, "Containment Combustible Gas Control," and found that the position of the valves was correctly indicated in the control room. This item is closed.

- b. (Closed) Open Item (461/85005-14): "Verify that a lockout bypass circuit is incorporated into the design for the Division 1 and 2 diesel generator." If an Emergency Diesel Generator (EDG) is synchronized to the offsite power grid and supplying power to the grid, as it would during surveillance testing, and a fault occurred on the offsite grid (initiating a Loss-of-Offsite-Power (LOOP) event), the breaker connecting the EDG bus to offsite power should open rather than the breaker connecting the EDG to its bus. However, if the fault is on the EDG bus, both breakers should open.

The applicant utilizes overcurrent/undervoltage restraint relays with a timer for the EDG breaker to accomplish the desired result. Drawings E02-IAP99-009, E02-IAP99-010, E02-IAP99-013, E02-IDG99-010, and E02-IDG99-011 show the circuitry that accomplishes the requirement. The applicant performed special startup tests, Startup Test Authorization Form (STAF) 86-108 and 86-109 for EDG Divisions 1 and 2, to demonstrate proper operation of the circuitry.

The inspector reviewed the drawings and the approved results of the STAFs and concluded that the applicant's lockout bypass circuitry operated as designed. This item is closed.

- c. (Closed) Open Item (461/85005-19): "Verify that valves in the fire protection water supply system which are not electrically supervised are key-locked open with strict key control procedures and monthly verification of valve position."

This item was previously reviewed in Inspection Reports No. 50-461/85042, No. 50-461/85065, and No. 50-461/86017. The item remained open pending verification of implementation of CPS No. 1032.01, "Station Keying."

The applicant has fully implemented CPS No. 1032.01.

The inspector made a random selection of valves in the station and determined by direct observation that required fire protection water supply system valves were secured in their proper open position with chains and special break-away locks. The inspector reviewed the fire protection supervisor's key control log and determined that the log identified the designated key holders in the fire protection section and the operations section. CPS No. 9071.19, "Monthly Fire Protection Valve Lineup", required monthly surveillance of fire protection system valve position. The inspector reviewed CPS No. 9071.19.C001 for July 1986 and found that the required monthly valve position surveillance had been done. This item is closed.

- d. (Closed) Unresolved Item (461/85061-02): "IP to develop a program for system turnover with approved procedures and documented evidence of review." The inspector determined that the turnover of systems from the startup organization to the operations organization was accomplished in two steps; step 1, the phase II Final Release, and step 2, the Declaration of Readiness For Fuel Load. Step 1 of the turnover was governed by CPS No. CPS No. 1040.01, "System Release Review and Acceptance." The inspector's review of 1040.01 found that the procedure's recommendations did not require any department to take action or specify that any organization was responsible to track a system as a whole. The procedure did not define minimum criteria for accepting a system or indicate that management controlled the release activity. At the time of the inspection, there was no administrative procedure containing minimum acceptance criteria to govern step 2, the Declaration of Readiness For Fuel Load. Step 2 was accomplished by verbal management directives during scheduled meetings.

The applicant presented this unresolved item to the inspector for closure. At the time of this inspection the applicant had completed step 1 of the turnover process (Phase II Final Release) for all systems using CPS No. 1040.01 revision 5 and earlier revisions. This procedure still contained the shortcomings mentioned above. This action by the applicant was one of the subjects of a management meeting held on August 7, 1986.

The applicant prepared a new procedure, CPS No. 1014.02, "Designating Systems Ready for Fuel Load," to address step 2 of the turnover process. This procedure contained the acceptance criteria for system operability and specified the responsible departments for ensuring the criteria were met. All of the systems that were declared operable prior to the issuance of CPS No. 1014.02 were reevaluated in accordance with the procedure and met the requirements of the procedure.

Inspection Report 50-461/86037, paragraph 8.b. (2)(a), documented an inspection concerning the adequacy of CPS No. 1014.02 to assure that systems were operable in accordance with CPS Technical Specifications. Open item 461/86037-04 was initiated to identify and track the issue. An interim inspection, documented in Inspection Report 50-461/86048, paragraph 2.w., determined that the applicant had made necessary procedure changes and had provided adequate instruction to assure that CPS system would be operable in accordance with the technical specification prior to required milestones. That action by the applicant resolved this item. Completion of the actions necessary to declare systems operable will be tracked separately. This item is closed.

- e. (Closed) Open Item (461/86023-04): IPQA audit Q38-86-10, finding ID-1, documented the failure of the IP plant staff mechanical maintenance department to provide required training in response to procedure changes. The finding was identified during an audit that ended on February 28, 1986. NRC review of the audit finding response provided by the Manager - Clinton Power Station, documented in Inspection Report 50-461/86023, determined that the corrective action statement provided by the plant staff was not adequate to address either the specific or the generic aspects of the audit finding. The Manager - CPS committed to upgrade the response to the specific audit finding and to take appropriate action to address the generic significance of the audit finding. This item was opened to track the resolution of the audit finding.

The applicant presented this item to the inspector for closure. 10CFR50, Appendix B, Criterion II, as implemented by the IP Nuclear Power Operational Quality Assurance Manual (OQAM), requires in part that personnel performing activities affecting quality are appropriately trained in the principles and techniques of the activity being performed; are instructed as to purpose, scope, and implementation of governing documents; and that they maintain the required proficiency. Audit finding Q38-86-10, finding ID-1, addressed this OQAM requirement. Review of the documentation

provided indicated that the applicant took the following actions in response to the audit finding:

- CPS No. 1502.03, "Personnel Qualification for Maintenance Activities", was revised (revision 3) and upgraded to a safety-related classification. Training matrices were developed for each maintenance discipline and were included as Appendix A to the procedure.
- A new maintenance department standing order, MSO-026, "Review of Procedure Revisions", was written and approved to provide instructions for the review of procedure revisions that may impact on the maintenance department. The MSO instructions required identification of training needed to ensure that maintenance department personnel were aware of changes to procedures that impact their work activities.
- CPS No. 1005.01, "Preparation, Review, and Approval of Station Procedures and Documents", was revised (revision 17) to include training requirements for all new or revised procedures. The revision to CPS No. 1005.01 was issued on June 13, 1986 and became effective on June 20, 1986. This was approximately four months after the original audit finding was documented by IPQA.
- Special training sessions were held for all plant staff personnel on 11 critical administrative procedures which define the quality assurance program to be implemented by plant staff.

The inspector reviewed Revision 3 of CPS No. 1502.03 and found that it was classified SNQN (safety related) and contained training matrices for each maintenance discipline in Appendix A. The inspector reviewed revision 0 of MSO-026 and found it controlled the documented review of all procedure revisions that may have impact on the Maintenance Department and to identify training needed by department personnel to be cognizant of the changes. The inspector reviewed Revision 17 of CPS No. 1005.01 and found that it required training of key personnel before the effective date of a procedure revision and training of appropriate personnel within six weeks of the effective date. The inspector reviewed training records associated with the special training sessions held for the plant staff. The review showed that the plant staff received a "Critical Procedures Briefing" on the following procedures:

CPS No. 1003.01, revision 6, "Design Control and Modification"  
CPS No. 1004.02, revision 5, "Plant Procurement"  
CPS No. 1005.01, revision 17, "Preparation, Review, and Approval of Station Procedures and Documents"  
CPS No. 1005.07, revision 5, "Temporary Changes to Station Procedures"  
CPS No. 1006.01, revision 4, "Document Control"  
CPS No. 1014.01, revision 10, "Safety Tagging Procedure"  
CPS No. 1015.01, revision 4, "Nonconforming Materials or Components"  
CPS No. 1016.01, revision 10, "CPS Condition Report"  
CPS No. 1016.02, revision 8, "Nonconforming Material Report"

CPS No. 1029.01, revision 16, "Preparation and Routing of Maintenance Work Requests"

CPS No. 1905.10, revision 3, "Radiation Work Permits"

Based on the results of the reviews, the inspector concluded that the applicant completed the necessary corrective actions and actions to preclude recurrence of the specific audit finding of deficient training in the maintenance department.

Paragraph 8.1.8 of CPS No. 1005.01, revision 17, states that training shall be conducted for appropriate personnel prior to issuance of an approved procedure (or revision) and the training documented in accordance with CPS No. 1017.02, "Training Records." Paragraph 8.3.1.4 of CPS No. 1005.01, Rev. 17, states that an effective date beyond the approval date of the procedure shall be assigned to allow training of key personnel to be completed prior to the issuance of the procedure. It also states that all other appropriate personnel shall be trained within six weeks of procedure issuance. During the course of the inspection on the open item, the inspector tried to determine how the requirements of these two paragraphs were implemented. The inspector found the following:

- (1) CPS No. 1401.01, revision 8, "Conduct of Operations", was issued on July 24, 1986 and contained substantive changes requiring training. Although the applicant stated that training of key personnel was conducted, no documented record of the training existed.
- (2) The "Required Reading Index" in the main control room listed CPS No. 1401.01, revision 8. While this method could document training of appropriate personnel as required by CPS No. 1005.01, the required reading index covered the third quarter (July through September) of 1986; CPS No. 1401.01, which provides the requirements concerning control of the operations department required reading, did not require completion of the required reading until one month after the end of the quarter. Thus the required reading methodology did not meet the CPS No. 1005.01 requirement to complete the training within six weeks. The inspector noted that, at the time of the inspection, none of the applicable personnel had read the procedure revision and signed the required reading index. This inspection was conducted about two weeks after revision 8 to CPS No. 1401.01 became effective.
- (3) At the inspector's request, the applicant provided a list of procedure revisions that had been issued and were effective dated after June 20, 1986 (the effective date of CPS No. 1005.01, revision 17). The inspector reviewed approximately twenty of the applicable procedure approval cover sheets and found that they all contained the statement "No training required." In addition, the inspector interviewed several individuals who should have been in control of key program elements. The interviews revealed that no procedure changes or other documentation had been initiated to implement the

requirements of CPS No. 1005.01, revision 17, paragraphs 8.1.8 and 8.1.3.4. The applicant could not provide any objective evidence that the revised program requirements had been implemented in any department other than the procedure change discussed in (1) above.

10CFR50, Appendix B, Criterion XVI, as implemented by the IP Nuclear Power OQAM, requires in part that each IP organization have a documented corrective action system which assures that conditions adverse to quality are promptly identified, analyzed for causes, corrected to preclude recurrence, and followed up to verify proper implementation of corrective action, and that the corrective action is closed out in a timely manner. The above three findings indicate that the program deficiency identified by IPQA in QA Audit Q38-86-10, finding ID-1, was not promptly corrected by plant staff to preclude recurrence and that proper implementation of the corrective actions taken by plant staff was not adequately verified prior to presentation of this item to the NRC for inspection and closure. These findings represent a violation of 10CFR50, Appendix B, Criterion XVI and the IP OQAM (461/86055-01).

One violation was identified in paragraph 2.e. above. No additional violations or deviations were identified.

3. Applicant Actions on 10CFR50.55(e) Items (92700)

(Closed) 10CFR50.55(e) Item (461/85016-EE): "NAMCO EA-170 and -180 Limit switches not torqued: EQ implications." The inspector reviewed the applicant's actions in Inspection Report 50-461/86042 and found that the steps taken were acceptable. The item was left open pending inspector verification that the Field Engineering Change Notices (FECNs) were posted against the pertinent maintenance manuals and verification that the pertinent maintenance procedures contained the applicable torque requirements for the cover plate screws.

The inspector visited the document control center and determined by review that FECNs 13714 and 13715 were posted on a sampling of pertinent vendor manuals.

Since the limit switches were used on so many different pieces of equipment throughout the plant, the applicant did not attempt to amend all of the pertinent maintenance procedures. Instead, the applicant chose to rely on the Maintenance Work Request (MWR) process to assure maintenance of environmental qualification. CPS No. 1029.01, "Preparation and Routing of Maintenance Work Requests," references Maintenance Standing Order (MSO)-023, "In-house Guidelines for Maintenance Work Requests." This guideline is used during the preparation, scheduling, and closeout of work packages. The MSO references a Nuclear Station Engineering Department (NSED) manual, "Maintenance of Environmentally Qualified Equipment", to identify environmentally qualified equipment and to provide details of the requirements for maintaining the environmental qualification.

The inspector reviewed CPS No. 1029.01 and found MSO-023 referenced in Paragraph 11. The inspector reviewed MSO-023 and found that Paragraph 3 required the use of the NSED manual. The inspector reviewed the NSED manual and found that it identified the pertinent NAMCO limit switches and called for the proper torquing of the cover plate screws. Since all three documents were approved and controlled, the inspector concluded that the environmental qualification of the limit switches will continue to be maintained. This item is closed.

No violations or deviations were identified.

4. Applicant Action on IE Bulletins (92701)

(Open) IE Bulletin 79-18 (461/79018-BB): "Audibility Problems Encountered on Evacuation of Personnel from High-Noise Areas." An incident at an operating reactor required evacuation of personnel from the auxiliary building. The alarm given over the licensee's PA system was not heard by personnel working in a high noise area and their evacuation was delayed. The NRC issued this Bulletin to construction permit holders for information.

The applicant's Architect-Engineer, Sargent and Lundy (S&L), developed specification K2993, "Public Address System", which delineated the requirements of the PA system. A subcontractor, Gaitronics, Inc., supplied the installation drawings and equipment to meet the specification. S&L approved the submission and the equipment was installed. Preoperational Test Procedure (PTP) CQ-01 was performed to test the operation of the system. In Inspection Report 50-461/86048 the results of PTP-CQ-01 were reviewed by an inspector and found to be satisfactory. The applicant's plans for the future include the following activities. Those plant locations for which it is anticipated that noise levels will increase as reactor power level increases (e.g., steam lines, pump areas, etc.) will be surveyed during the startup test program after they have reached their maximum anticipated noise levels. Since these surveys will not be completed until late in the startup test program, and some modifications may not be possible except during an extended shutdown period, all corrective actions may not be completed until the end of the first refueling outage. For those areas identified during the surveys as having deficient audibility, the applicant has committed to provide temporary administrative measures to ensure that these areas are evacuated as required. Their commitment was documented in IP Letter U-600620 dated July 8, 1986.

The inspector considered that these plans were responsive to the concerns of the Bulletin. The Bulletin remains open until a future inspection finds the PA system is fully functional.

No violations or deviations were identified.

5. Technical Specifications Review (71301)

This inspection continued a review of the CPS Technical Specifications to be used in the plant operations phase (reference Inspection Reports 50-461/85045 and 86016). The purpose of this inspection was to verify

resolution of the Region III comments on the Proof and Review copy of the Appendix A Technical Specifications for Clinton Power Station Unit 1. The comments had been sent to the Assistant Director for Safety Assessment, Division of Licensing, USNRC, for resolution.

The inspector reviewed the resolution of the comments and verified that the changes required in the Technical Specifications as a result of comment resolution appeared in the final draft copy of the Technical Specifications.

6. Exit Meeting

The resident inspector met with applicant representatives (denoted in paragraph 1) following the inspection on August 11, 1986. The resident inspector summarized the scope and findings of the inspection. The applicant acknowledged the inspector's findings. The applicant did not indicate that any of the information disclosed during the inspection could be considered proprietary in nature.