U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/87007(DRP)

Docket No. 50-461 License No. NPF-55

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

Facility Name: Clinton Power Station

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: January 26 through February 24, 1986

Inspectors: P. L. Hiland
T. P. Gwynn
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Approved By: RF Warnick for
R. C. Knop, Chief
Projects Section 1B

03/02/87
Date

Inspection Summary

Inspection on January 26 through February 24, 1987 (Report No. 50-461/87007(DRP))
Areas Inspected: Routine, unannounced safety inspection by the resident inspectors and region-based inspectors of licensee action on previous inspection findings; IE Bulletin followup; licensee event report review and followup; monthly maintenance observation; monthly surveillance observation; operational safety verification; onsite followup of events at operating reactors; implementation of strike plans; IP management change; and management meeting.
Results: Of the ten areas inspected, no violations or deviations were identified. A significant unannounced job action occurred late in the inspection period as detailed in paragraph 9 of this report.

DETAILS

1. Personnel Contacted

Illinois Power Company (IP)

*D. Antonelli, Nuclear Training Department
*K. Baker, Supervisor - I&E Interface, Licensing and Safety (L&S)
@#*R. Campbell, Manager - QA
*W. Connell, Manager - Nuclear Station Engineering Department (NSED)
J. Cook, Assistant Manager - Clinton Power Station (CPS)
@# G. Edgar, Attorney
J. Fertic, Director, Quality Systems & Audits
@ R. Freeman, Assistant Plant Manager, Maintenance
@ *W. Gerstner, Executive Vice President
@# J. Greene, Manager - NSED
@#*D. Hall, Vice President, Nuclear
E. Kant, Assistant Manager, NSED
*H. Lane, Manager, Scheduling and Outage Management
J. Miller, Assistant Manager - NSED
J. Palchak, Supervisor - Plant Support Services
J. Peterson, Supervising Engineer - Licensing
@# J. Perry, Manager - Nuclear Program Coordination
@ R. Schultz, Director - Planning & Programming
@ *F. Spangenberg, Manager - L&S
@ E. Till, Director Nuclear Training
#*J. Weaver, Director - Licensing
J. Wemlinger, Supervisor, Operations Training
@#*J. Wilson, Manager - CPS
@ R. Wyatt, Director, Nuclear Program Assessment

Soyland/WIPCO

@ *J. Greenwood, Manager Power Supply

Nuclear Regulatory Commission - Region III

B. Davis, Regional Administrator, Region III
*S. DuPont, Region III
Z. Falevitz, DRS, Region III
E. Greenman, DRP, Assistant Director
P. Gwynn, Senior Resident Inspector, Clinton
@#*P. Hiland, Resident Inspector, Clinton
@# R. Knop, Chief, Projects Section 1B
@ *M. McCormick-Barger, Project Inspector, RIII
# C. Paperiello, Division Director, DRS
@# R. Warnick, Chief, Projects Branch 1

* Denotes those attending the monthly exit meeting on February 24, 1987.
# Denotes those attending the management meeting on January 30, 1987.
@ Denotes those attending the management meeting on February 13, 1987.

The inspector also contacted and interviewed other licensee and contractor personnel.

2. Licensee Action On Previous Inspection Findings (92701)(92702)

a. (Closed) Open Item (461/86024-02): Shielding of plant piping feeding the Associated Technologies Incorporated (ATI) Radwaste Solidification System. An ALARA review of the installed radwaste feed system to the ATI solidification system indicated a need for additional radiation shielding.

During this report period, the inspector was informed that Plant Modification A-39 had been completed. The inspector performed a walkdown of the shield walls installed at the radwaste feed station to the ATI solidification system. For the walkdown performed, the inspector referenced the design drawings contained in Engineering Change Notice (ECN) No. 7495, dated August 8, 1986. The inspector verified by direct field observation that the shield walls installed at the subject radwaste feed station were in accordance with the design drawings. This item is closed.

b. (Closed) Open Item (461/86028-13(PSS)): The licensee was requested to verify the maximum depth of frost and if necessary take corrective actions if needed.

The information provided to the inspector indicated that the licensee is committed to the 1973 edition of NFPA 24, Standard for Outside Protection, Article 9101 which states, "The depth of cover over water pipes should be determined by the maximum depth of frost penetration in the locality where the pipe is laid." The licensee referenced 1971 edition of "Foundation Engineering" which indicated depth of frost at 32 inches.

The licensee indicated that the depth of cover provided is generally 42 inches based on a maximum depth of frost of 32. The licensee also stated in attachment 1 of an interoffice memorandum dated January 5, 1987 from R. S. Frantz to K. A. Baker that "The design basis of 42 inch depth of cover is consistent with the practices of a local municipality and a local water company. The local municipality and water company recommend a minimum depth of cover of 3 1/2 feet for fire protection lines (standing water)." As indicated in the licensee's response package dated December 5, 1986, the licensee performed an evaluation based on design drawings, permanent road, grading, and drainage plan drawings which identified 3 areas of nonconformance with Clinton Power Station 42 inch designed depth of cover criteria. Further investigation by Illinois Power Company, including a survey of the entire underground fire main grade elevations performed by an outside survey contractor, identified an additional thirteen areas of nonconformance.

The licensee states in the response package "Plant Modification FP-53 and FP-53 Supplement 1 and 2 provides the corrective actions

necessary to ensure that a minimum of 42 inches of cover is provided over the fire mains. This has been accomplished through the addition of soil cover above the fire mains, the rerouting of a portion of fire main (OFP02D14) and the capping and abandonment of fire line (OFP36C12)."

The licensee's response package provided to the inspector included several engineering change notices, field engineering change notices, maintenance work requests and fire line ground surface profile report. No items of noncompliance were observed.

The licensee indicated that NFPA 24 does not provide specific requirements with regards to catch basins, underground vaults and manholes in the vicinity of the underground fire main and that NFPA will provide a formal interpretation concerning the intent of the code with regards to the CPS configurations.

Based on the licensee's response and corrective actions, this item is considered closed.

c. (Closed) Open Item (461/86050-01(FRPS)): Results of certain preoperational tests of Offgas (OG) System. An inspector reviewed selected test results of OG Startup Phase and Preoperational tests PTP-OG-02, PTP-VO-01, and XTP-OO-12. The tests appeared to meet the stated objectives and acceptance criteria. The OG system is essentially technical specification operable. This item is closed.

d. (Closed) Open Item (461/86054-02): Electrical penetrations. An inspection performed prior to fuel load identified a number of discrepancies with containment electrical penetrations.

This item was previously reviewed in Inspection Report 50-461/86060, paragraph 2.k. That inspection documented the initial corrective action taken by the licensee and concluded that the licensee's milestone for completion of all corrective actions by initial criticality was reasonable. During this report period, the licensee presented additional information on actions taken to identify and correct all deficiencies on electrical penetrations.

The licensee performed an inspection of all 49 electrical penetrations to identify and document discrepancies. The discrepancies identified included the following:

- Loose/missing enclosure covers
- Loose/broken ground cables
- Sleeves between the inboard and outboard nozzles in the secondary gas boundary.
- Sil Temp cloth wrapped around the feed through conductors in the secondary gas boundary.

- Breather caps and drain open.

- Penetrations were not pressurized with alarms functional.

A number of maintenance work requests (MWRs) and nonconforming material reports (NCMRs) were initiated to correct the above identified discrepancies. Completion of those work activities were reviewed by the inspector with the following results.

- Enclosure covers were installed prior to fuel load (reference Inspection Report 50-461/86060, paragraph 2.k.).

- All loose/broken ground cables were identified on NCMRs and subsequently repaired in accordance with MWRs C-33561 and C-20098.

- The galvanized sheet metal sleeves between the inboard and outboard nozzles in the secondary gas boundary were dispositioned on NCMR 1-2545 as Use As Is. The engineering evaluation concluded the sleeves have no affect on the function of the electrical penetrations or on the seismic design.

- The Sil Temp cloth was removed from the feed through conductors in the secondary gas boundary in accordance with MWR C-11756.

- Breather caps and drains were opened in accordance with MWR C-3160. Several caps were broken or missing; however, the licensee's engineering evaluation concluded this would not impact the operation of the electrical penetrations.

- All electrical penetrations were pressurized with nitrogen in accordance with MWR C-31437. The electrical penetrations do not have an alarm function for low nitrogen pressure. The nitrogen pressure was to be monitored on the PMS computer to assure greater than 4 psi is maintained.

The inspector's review of the above work documents and direct field observation indicated that the licensee had adequately addressed the electrical penetration discrepancies. This item is closed.

e. (Closed) Violation (461/86065-05): Eight examples of failure to follow procedures during the conduct of initial fuel load operations.

This violation was previously inspected as documented in Inspection Report 50-461/87002, paragraph 2.n. The licensee initially responded to this violation in letter U-600806 dated January 6, 1987. At the request of Region III, the licensee provided additional information concerning the corrective actions taken for each of the eight examples cited in letter U-600823 dated January 21, 1987. The licensee's supplemented response to the violation appeared adequate to address the substance of the violations.

The licensee provided an IP QA letter No. Q-05181 dated February 10, 1987, which documented verification of completion of the corrective measures indicated in their response to the Notice of Violation, attachment B. This information, in conjunction with information, observations, and results of personnel interviews briefly discussed in the previous inspection report, provided a substantive basis for closure of this violation.

f. (Closed) Violation (461/86065-07): Four examples of failure to meet plant technical specifications.

As documented in Inspection Report 50-461/87002, paragraph 2., this item remained open pending completion of the inspector's review of the licensee's response. During this report period, the inspector reviewed the licensee's response provided in letter U-600806 dated January 6, 1987.

The first three examples of failure to meet technical specifications (86065-07A,B,&C) were related to Licensee Event Report (LER) 86-009-01. That LER was reviewed by the inspector in Inspection Reports 50-461/86072 (paragraph 6.b.), 50-461/86073 (paragraph 3.b.), and 50-461/87002 (paragraph 5.a.). The major contributor (reference Violation 461/86065-04B) to that event was an inadequate surveillance procedure that was being performed while core alterations were in progress.

For the first three examples, the licensee's corrective action was to suspend core alterations following their identification that the plant technical specifications were violated. Suspension of core alterations placed the plant in compliance with technical specifications.

The licensee's corrective action to prevent recurrence of this violation (86065-07A,B,&C) included a critique of the event, along with lessons learned held with each operating shift. The inspector reviewed the critique of LER 86-009 presented to the operating crews and concluded that it adequately discussed the details of the event as described in LER 86-009-01. The inspector confirmed through review of training records that each operating shift had been briefed on the events resulting in the technical specification violations. In addition, the inspector confirmed during routine inspections in the control room that plant operators were knowledgeable of the particular technical specification requirements.

The fourth example (86065-07D) of failure to meet technical specifications occurred when the licensee changed operating modes. While in mode 5, the licensee commenced core alterations (specified condition #) with only one train of the Standby Gas Treatment (VG) system operable. The plant technical specifications did not allow entry into specified condition # with reliance on the ACTION requirements.

The licensee's corrective action to prevent recurrence was to brief each operating shift on this event and specific counseling was provided to the shift supervisor on duty at the time of the event. The inspector noted through interviews of plant operators at the time of this event that there was some confusion as to whether entering core alterations (specified condition #) was a mode change. Subsequent to the licensee's corrective action, the inspector confirmed through interviews of licensed operators that a clear understanding of what constitutes a "mode change" or "specified condition" was provided in the licensee's briefings.

Based on the inspector's review of training records and interviews of licensed operators, the inspector concluded that the licensee had effectively implemented the corrective action as stated in the response to this violation. This item is closed.

g. (Closed) Violation (461/86074-05): Failure to follow approved procedures for control of temporary modifications. As documented in Inspection Report 50-461/87002, paragraph 2., the licensee responded to this violation in letter U-600819 dated January 20, 1987. At the time of that inspection this item remained open pending completion of corrective actions taken by the licensee. During this report period, the inspector reviewed the completed corrective actions.

During a NRC inspection conducted in December 1986, a number of deficiencies in the administrative control of temporary modifications were identified. These deficiencies included a failure to perform a required monthly audit; a failure to receive prior approval of the power plant manager for temporary modifications installed beyond their approved removal date; and a failure to perform the required review and approval by the Facility Review Group (FRG) within the allotted time.

The licensee performed an audit of the active temporary modifications on December 5, 1986, in response to the deficiencies identified by the inspector. The results of that audit confirmed the above deficiencies. The licensee's immediate corrective action was to document the noted deficiencies on Condition Reports (CRs) 1-86-12-061, 1-86-12-077, and 1-86-12-078.

The corrective action to prevent recurrence of this violation, as stated in the licensee's response to the Notice of Violation, was to revise the Administrative Procedure for Temporary Modifications, CPS No. 1014.03, to clarify requirements for periodic reviews of temporary modifications. The inspector reviewed revision 9 of CPS No. 1014.03 dated December 31, 1986, and noted that the revised procedure directs the plant staff Compliance Department to conduct weekly reviews of outstanding temporary modifications to assure the administrative requirements were adhered to. The inspector noted through review of training records that personnel responsible for control of temporary modifications in accordance with CPS No. 1014.03 had been trained.

The inspector performed a review of the Temporary Modifications index maintained in the main control room to verify the licensee's corrective actions. The inspector noted for the 50 temporary modifications outstanding at the time of this review the extension dates had received prior approval of the power plant manager; the FRG reviews and approvals were performed within the allotted time; and the required audits for January and February 1987 were performed. Based on the inspector's review of the administrative controls in place for temporary modification, the licensee's corrective actions appeared to have been effective in response to this violation. This item is closed.

No violations or deviations were identified.

3. IE Bulletin Followup (92703)(25582)

The bulletins listed below were reviewed and closed in previous inspection reports. The review conducted verified that the written response was within the time period stated in the bulletin; that the written response included the information required to be reported; and that the written response included adequate corrective action commitments based on information presented in the bulletin and the licensee's response. For the purpose of these reviews, the inspector utilized the guidelines contained in Inspection and Enforcement (IE) Temporary Instruction 2515/82.

a. (Closed) IE Bulletin (461/86001-BB): Minimum Flow Logic Problems That Could Disable RHR Pumps.

The inspector's initial review of this bulletin was documented in Inspection Report 50-461/86037, paragraph 3. At the time of that inspection, the bulletin remained open pending issuance of a NRC Temporary Instruction for inspection of this bulletin. The inspector reviewed and closed this bulletin as documented in Inspection Report 50-461/86065, paragraph 5. The bulletin was determined to be not applicable to Clinton Power Station because independent logic systems were provided. This bulletin is closed.

b. (Closed) IE Bulletin (461/86003-BB): Potential Failure of Multiple ECCS Pumps Due to Single Failure of Air-operated Valve in Minimum Flow Recirculation Line.

The inspector's review and closure of this bulletin was documented in Inspection Report 50-461/87002, paragraph 4. The bulletin was determined to be not applicable to the Clinton Power Station because the ECCS minimum flow bypass capability did not have the single failure vulnerability identified in the bulletin. This bulletin is closed.

No violations or deviations were identified.

4. Licensee Event Report (LER) Review and Followup (90712 & 92700)

a. In-Office Review Of Written Reports Of Nonroutine Events At Power Reactor Facilities (90712)

For the LERs listed below, the inspector performed an in-office review of each LER to determine that reporting requirements had been met; that the corrective action discussed appeared appropriate; that the information provided satisfied the applicable reporting requirements; to determine if appropriate actions had been taken on any generic issues present; and to determine if any additional NRC inspection, notification, or other response was appropriate. Where determined appropriate, the LER was scheduled for onsite followup inspection or other necessary action by cognizant NRC personnel.

(1) (Closed) LER 86-017-00, 86-017-01, 86-017-02, and 86017-03 (461/86017-LL) [ENS No. 06670]: Engineered Safety Feature Actuation Due to Spiking on Intermediate Range Monitor A.

The licensee identified the cause of this event to be mechanical vibrations of the IRM detectors induced by movement of adjacent control rods. Subsequent to the root cause determination, the licensee replaced IRM detectors on channels A and G. The inspector noted, as discussed below in paragraph 5, the licensee replaced IRM detectors on channels B and F for similar reasons during this report period. This LER is closed.

(2) (Closed) LER 86-019-00 and 86-019-01 (461/86019-LL): [ENS Nos. 06856 and 07000]: Engineered Safety Feature Actuation Due to a Spurious High Output Alarm on the Main Control Room Air Intake Process Radiation Monitor.

The licensee identified the cause of this event to be electrical connection and grounding problems at the detector-interface box mounted in a location exposed to the outside environment. A plant modification (AR-26) added a positive ground to the detector-interface box and an environmental seal was provided. The licensee plans to revise the process radiation monitor trip logic from the current one-out-of-four to a one-out-of-two taken twice logic (Plant Modification PR-20). This LER is closed.

(3) (Closed) LER 86-024-00 (461/86024-LL) [ENS No. 07152]: Automatic Closure of Group I Containment Isolation Valves B21-F016 and B21-F019 Due to Personnel Error.

The licensee identified the cause of this event was an inadequate review by maintenance planners and engineering personnel when preparing the impact matrix for a maintenance work request. A group I isolation signal was generated due to a low condenser vacuum when the turbine stop valves actuated their open limit switches during testing. Generic corrective action for this type of personnel error was being addressed by the licensee in LER 86-021-00. This LER is closed.

(4) (Open) LER 87-001-00 (461/87001-LL) [ENS No. 07359]: Automatic Initiation of Division II ECCS Due to Spurious Reactor Vessel Water Level Signals.

The licensee is planning to provide a supplemental report on this event. This matter will be reviewed further with the supplemental report.

No violations or deviations were identified.

b. Onsite Followup Of Written Reports Of Nonroutine Events At Power Reactor Facilities (92700)

For the LER listed below, the inspector performed an onsite followup inspection of the LER to determine whether response to the event was adequate and met regulatory requirements, license conditions, and commitments and to determine whether the licensee had taken corrective actions as stated in the LER.

(Closed) LER 86-022-00 and 86-022-01 (461/86022-LL) [ENS No. 07060]: Inadvertent Withdrawal of Control Rod Due to Utility Operator Error.

The licensee identified the cause for this event to be personnel error when a reactor operator unknowingly pushed the rod withdraw pushbutton. This action resulted in control rod 24-21 moving one notch from the "00" position to the "02" position.

The inspector verified by direct field observation that a guard was in place over the rod withdraw switch with the instructions as stated in the licensee's report. The additional corrective action to revise the Clinton Power Station procedure governing inadvertent rod movement (CPS No. 4007.02) was not yet implemented at the conclusion of this report period. However, the licensee had a CCT item 044103 to assure the procedure was revised. This LER is closed.

No violations or deviations were identified.

5. Monthly Maintenance Observation (62703)

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and fire prevention controls were implemented.

The inspector observed maintenance activities being performed in accordance with Maintenance Work Request (MWR) C-49479. This MWR provided instructions for replacement of Intermediate Range Monitor (IRM) detectors B and F at core locations 14-11 and 30-35 respectively. The inspector noted that the maintenance procedure in use at the job site "IRM Detector String Removal and Replacement", CPS No. 8818.01, revision 8, dated October 7, 1986, was the current revision and was properly identified as an Official Working Copy. The inspector verified through review of the MWR package in the field that required QC hold points were adhered to; the pre-installation resistance and voltage checks met the acceptance criteria; the post-installation resistance and voltage checks met the acceptance criteria; and the acceptance criteria for the drive tube pressure checks was met. The inspector verified test equipment in use was within the calibration due dates.

The inspector noted that personnel performing this maintenance activity were knowledgeable of the maintenance procedure and were qualified to perform the task. Since the reactor plant had not yet achieved initial criticality, the radiological controls in place at the work station were less than what would be anticipated after reactor operation. However, the inspector noted that personnel were in compliance with plant procedures for entry into the Radiological Control Area (RCA).

No violations or deviations were identified.

6. Monthly Surveillance Observation (61726)

Station surveillance activities of safety related systems and components listed below were observed/reviewed to ascertain they were conducted in accordance with technical specification (TS) requirements.

The following items were considered during this review: limiting conditions for plant operations were met while components or systems were removed from service; approvals were obtained prior to start of the surveillance; test instrumentation was calibrated; the system was properly restored to service; the test documentation was reviewed and discrepancies were rectified; the test results met TS requirements; the testing was done by qualified personnel; and the surveillance schedule was met and conformed with TS requirements.

The inspector observed performance of a monthly channel functional test required by Clinton Power Station Technical Specification table 4.3.3.1-1, item D.2 (4.16 KV Emergency Bus Undervoltage). Surveillance Procedure CPS No. 9333.01, "Division I 4.16 KV Bus Undervoltage Relay Calibration", section 8.4, provided the necessary instructions to conduct this surveillance. The inspector noted that surveillance personnel obtained approval from the shift supervisor prior to performance of the test; the shift supervisor adhered to plant technical specification by returning division III ECCS to an operable state (HPCS had been temporarily removed from service to allow cleaning in the suppression pool) before authorizing this surveillance to start; and the surveillance procedure (CPS No. 9333.01, revision 21) in use at the job site was the

current revision. The inspector verified that the test equipment in use was within its calibration due date; and the system was returned to service in accordance with the restoration steps contained in the surveillance procedure. The inspector noted that personnel performing this surveillance were qualified based on test observation and questioning.

The surveillance observed identified no discrepancies. The inspector reviewed vaulted test results of this surveillance activity for the last five monthly tests and noted that discrepancies that had been identified in the past were corrected in accordance with the licensee's approved program.

No violations or deviations were identified.

7. Operational Safety Verification (71707)

The inspector observed control room operations, attended selected pre-shift briefings, reviewed applicable logs, and conducted discussions with control room operators during the inspection period. The inspectors verified the operability of selected emergency systems and verified tracking of LCOs. Routine tours of the auxiliary, fuel, containment, control, diesel generator and turbine buildings and the screenhouse were conducted to observe plant equipment conditions including potential for fire hazards, fluid leaks, and operating conditions (i.e., vibration, process parameters, operating temperatures, etc). The inspector verified that maintenance requests had been initiated for discrepant conditions observed. The inspector verified by direct observation and discussion with plant personnel that security procedures and radiation protection (RP) controls were being properly implemented.

During the report period, the inspector observed the actions taken by the licensee to upgrade performance of personnel responsible for plant operations. The steps taken by the licensee are detailed below in paragraph 10. The inspector noted through interviews and direct observation that operation's personnel responded favorably to the licensee's initiatives. The inspector noted an increased attention to detail in maintaining the Control Room Operator log with particular attention to system operations and technical specification requirements.

The inspector accompanied the Assistant Power Plant Manager on a tour of the Containment Dry Well prior to its final closeout in preparation to enter mode 2 operation. In addition, the inspector observed general plant housekeeping/cleanliness conditions. No discrepancies were noted.

No violations or deviations were identified.

8. Onsite Followup of Events at Operating Reactors (93702)

a. General

The inspector performed onsite followup activities for events which occurred during the inspection period. Followup inspection

included one or more of the following: reviews of operating logs; procedures; condition reports; direct observation of licensee actions; and interviews of licensee personnel. For each event, the inspector reviewed one or more of the following: the sequence of actions; the functioning of safety systems required by plant conditions; licensee actions to verify consistency with plant procedures and license conditions; and attempted to verify the nature of the event. Additionally, in some cases, the inspector verified that licensee investigation had identified root causes of equipment malfunctions and/or personnel errors and were taking or had taken appropriate corrective actions. Details of the events and licensee corrective actions noted during the inspector's followup are provided in paragraph b. below.

b. Details

(1) Engineered Safety Feature (ESF) Actuation - Shift of High Pressure Core Spray Suction (ENS No. 07424)

The inspectors review of this event was initially documented in Inspection Report 50-461/87002, paragraph 10.b.(3). Subsequent to that report, the licensee determined that the High Pressure Core Spray (HPCS) suction shift from its preferred source (RCIC storage tank) to the suppression pool was not reportable under 10 CFR 50.73.

The inspector reviewed IP memorandum Y-204135, dated February 4, 1987, which documented the licensee's basis for determining this event was not reportable under 10 CFR 50.73. Since the apparent cause for the HPCS suction valve shift to the suppression pool was due to a specific transmitter failure; the HPCS "system" was not actuated nor did the suction valve shift prevent the HPCS system from performing its ESF function; and the HPCS suction valve shift to the suppression pool did not violate the plant technical specifications, the inspector concluded that the licensee's determination not to report this event under 10 CFR 50.73 was reasonable.

The inspector noted that the licensee had reported a similar event in LER 50-461/86020-00. At the time that this LER was reported, the licensee suspected the root cause for the HPCS suction valve shift to be rust particulate found inside the transmitter. Final determination by the licensee as to the root cause for the HPCS suction valve shift on November 11, 1986 (LER 86020-00), and the root cause for the HPCS suction valve shift on January 9, 1987, is considered an open item pending the inspector's review of the licensee's investigation (461/87007-01).

(2) Inadvertent ESF Actuation During Alternate Rod Insertion Surveillance Test (ENS No. 07468)

The inspector's review of this event was initially documented in Inspection Report 50-461/87002, paragraph 10.b.(4). Subsequent to that report, the licensee determined that this event was not reportable under 10 CFR 50.73.

The inspector reviewed IP memorandum Y-204135, dated February 4, 1987, which documented the licensee's basis for determining this event was not reportable under 10 CFR 50.73. The subject event concerned the closure of scram discharge volume (SDV) vent and drain valves during a routine surveillance of the nonsafety related Alternate Rod Insertion (ARI) system. Due to a procedural deficiency, personnel performing the ARI surveillance did not reset a seal-in logic prior to returning a test switch at the ARI cabinets to normal. This resulted in closure of the SDV vent and drain valves; however, a control room operator immediately identified the cause for the ARI actuation and reset the seal-in logic. This action returned the ARI valves to their original position, opened the SDV vent and drain valves, and prevented the scram valves from opening.

Since the scram discharge volume vent and drain valves are not defined as an ESF in the licensee's Final Safety Analysis Report and the Reactor Protection System (scram valves) did not actuate, the inspector concluded that the licensee's determination that this was not a reportable event under 10 CFR 50.73 was reasonable. No additional information from the licensee concerning this event was requested.

(3) Loss of Emergency Response Facility (ENS No. 07472)

The inspector's review of this event was initially reported in Inspection Report 50-461/87002, paragraph 10.b.(5). This event was reported by the licensee in accordance with 10 CFR 50.72 (b)(1)(v) when the licensee experienced a loss of power to the Emergency Offsite Facility (EOF) for two hours on January 14, 1987. Since 10 CFR 73 does not require the licensee to submit a LER for this event (reference NUREG 1022, supplement 1), no additional information from the licensee concerning this event was requested.

(4) Degraded Emergency Response Capability Due to Snow (ENS No. 07520)

The inspector's review of this event was initially documented in Inspection Report 50-461/87002, paragraph 10.b.(6). This event was reported by the licensee in accordance with 10 CFR 50.72 (b)(1)(iii) when a local snowstorm hampered personnel access to the Clinton Power Station for 2 hours and

20 minutes on January 19, 1987. The inspector discussed with the licensee their determination that this event was not reportable under 10 CFR 50.73. Based on the inspector's review of NUREG-1022, Supplement No. 1, question 5.2, the licensee's determination not to report this event under 10 CFR 50.73 was reasonable. No additional information from the licensee concerning this event was requested.

(5) ESF Actuation - Closure of Shutdown Cooling Suction Valve (ENS No. 07565)

The inspector's review of this event was initially documented in Inspection Report 50-461/87002, paragraph 10.b.(9). Subsequent to that report, the licensee determined that this event was not reportable under 10 CFR 50.73.

The inspector reviewed IP memorandum Y-204135, dated February 4, 1987, which documented the licensee's basis for determining this event was not reportable under 10 CFR 50.73. The subject event concerned the unexpected closure of the inboard Residual Heat Removal (RHR) suction valve 1E12-F009 during restoration of the RHR system following an operational pressure test of the reactor coolant system. During performance of the pressure test, valve 1E12-F009 had been opened and its associated motor operator controller was deenergized to prevent the valve from closing when reactor coolant system pressure was raised above a close signal interlock. This lineup was to allow the operational pressure test to include that portion of the RHR system designed to see reactor pressure. Following performance of the pressure test, the system pressure was reduced to ambient and the motor controller for valve 1E12-F009 was reenergized. However, the close signal interlock was sealed in and valve 1E12-F009 actuated closed.

The interlock that actuated the close signal was intended to prevent operation of the RHR system in the Shutdown Cooling Mode at elevated pressures. The Low Pressure Coolant Injection (LPCI) mode of the RHR system was not actuated nor did closure of valve 1E12-F009 prevent the LPCI mode from operating. The inspector concluded that the licensee's determination not to report this event under 10 CFR 50.73 was reasonable.

However, the inspector noted a contributor to this event was the unannunciated seal-in logic that was present when control power to valve 1E12-F009 was restored. A similar seal-in trip logic was the subject of LER No. 86-004-00 which remains open pending additional information from the licensee. The inspector requested the licensee to evaluate the unannunciated seal-in logic which resulted in valve 1E12-F009 closure as it relates to LER No. 86-004-00. This will remain an open item pending the inspector's review of the licensee's evaluation (461/87007-02).

(6) Safety Relief Valve (SRV) Failure (ENS No. 07628)

At about 10:30 p.m. CST on January 29, 1987, the licensee was performing an operational pressure test of the reactor coolant system. At the same time, C&I technicians were troubleshooting a failure in a SRV logic circuit. During troubleshooting a fuse was replaced and the SRV opened causing loop pressure to drop from 1060 psi to atmospheric (primary loop was solid and approximately 150 degrees F). A reactor water cleanup isolation also occurred during the event due to differential flow.

Air was bled off the SRV to slowly close the valve rather than risk seat damage by operating the valve electrically. Subsequent licensee review indicated a second failure in the SRV logic circuitry.

(7) ESF Actuation - Due to Shift of Control Room Ventilation (ENS No. 07744)

At about 1:10 a.m. CST on February 12, 1987, the licensee experienced an ESF actuation when the Control Room Ventilation (VC) system shifted to the chlorine mode. The VC shift to the chlorine mode occurred when an auxiliary operator attempted to troubleshoot a failed indicating light at a local chlorine detection panel. During performance of a routine surveillance (each shift), the operator noted the flow indicating light at the local panel was extinguished but actual flow was still indicated by the local flow meter. The operator attempted to determine if the flow indicating light "bulb" had failed by removing the indicating light bulb for the optics circuit and placing it in the flow indication socket. When this light bulb was removed, it interrupted the optics circuit (i.e. the indication light bulb and optics light were in series) and caused the VC system to shift to the chlorine mode. The plant operators reset the VC train to its normal mode at about 1:30 a.m. CST. The licensee notified the NRC Operations Center of this event at about 3:30 a.m. CST on February 12, 1987.

(8) ESF ACTUATION - Due to Containment Isolation Valve Closure (ENS No. 07757)

At about 8:40 a.m. CST on February 13, 1987, the licensee identified that a containment isolation valve (Main Steam Line drain valve 1B21-F016) had actuated closed.

At the time of this event, the reactor plant was in mode 4 and the Main Steam Line drain valves were open to provide a vent path to the main condenser. The immediate cause of the valve closure was unknown; however, when the licensee attempted to reopen the drain valve a trip seal-in was still present.

The licensee completed troubleshooting and determined the cause of the isolation was a failed logic circuit card (NS4-2) in the Nuclear Steam Supply Shutoff System (NS4). The failed logic card generated a single trip signal when the (Clinton unique) Self Test System pulsed onto the division 3 logic. Since the card failure was downstream of the sensing circuits, no division 3 annunciator was alarmed. When a routine surveillance generated a second trip signal in the division 2 logic, the 2 out of 4 coincident circuit was satisfied and the containment isolation valve actuated closed. The licensee replaced the failed logic card and restored the system to service. The licensee notified the NRC Operations Center of this event at 11:56 a.m. CST on February 13, 1987.

(9) ESF Actuation - Due to Automatic Shift of Control Room Ventilation (ENS No. 07799 and 07802)

At about 8:50 a.m. and again at 12:30 p.m. CST on February 18, 1987, the licensee experienced ESF actuations when the control room ventilation (VC) system shifted to its chlorine mode. The first event occurred during the conduct of a routine surveillance when an operator attempted to verify proper operation of a chlorine detector paper tape. When the operator placed the local panel switch in the unload position, VC train B shifted to the chlorine mode. Placing the local panel switch in the unload position was a routine operation and the subsequent shift to the chlorine mode was unexpected. The licensee restored the VC system to its normal lineup at about 9:30 a.m. while investigating the cause for the first actuation. At about 12:30 p.m. the second shift of VC train B to its chlorine mode occurred. The licensee determined the trip signal was generated by the same local panel that caused the first actuation. The licensee had taken the local chlorine detector panel out of service while continuing to troubleshoot the root cause of these actuations. The reactor plant was in mode 4 at the time of these events. The licensee notified the NRC Operations Center of these events at 11:49 a.m. and 2:52 p.m. CST on February 18, 1987.

No violations or deviations were identified.

9. Implementation of Strike Plans (92710)

On February 23, 1987, the licensee informed the inspector that 12 of 15 operators (licensed and nonlicensed) had failed to report to work for the first shift. The licensee stated that all 12 individuals had telephoned in sick. The licensee's attempts to call in either offshift personnel or personnel scheduled for second shift were unsuccessful.

The inspector confirmed by direct observation that the licensee was meeting technical specification shift manning requirements with supervisory licensed operators, and nonlicensed operators that had been

scheduled for training. The inspector confirmed the licensee had established a contingency plan that met technical specifications manning requirements in the event additional personnel failed to report to work on subsequent shifts.

The inspector noted that the normal compliment of shift operators reported to work on subsequent shifts.

No violations or deviation were identified.

10. Management Meeting (30702)

a. On January 30, 1987, NRC management met with IP management at the Region III Office in Glen Ellyn, IL to discuss NRC concerns related to plant operations in mode 4, terminating the Project Control Center (PCC), and configuration control of electrical panels. Key personnel attending this meeting are identified by (#) in paragraph 1 of this report.

(1) NRC concerns related to the conduct of plant operations in mode 4 resulted from the sequence of events that led up to an inadvertent actuation of Division I Emergency Core Cooling (ECCS) systems on January 21, 1987. The failure of plant operators to use administrative controls to operate the Reactor Recirculation system under abnormal conditions and the failure to document required surveillances prior to starting Reactor Recirculating Pumps was the subject of this concern. This event was discussed in inspection report 50-461/87002, Paragraph 10.b(7).

The licensee presented their evaluation of the sequence of events that led up to the Division I ECCS actuation on January 21, 1987. Following that presentation, the licensee discussed the lessons learned and the corrective actions planned in response to their review. Corrective actions planned included the following:

(a) A Plant Manager's Standing Order was initiated to provide guidance on overriding interlocks.

(b) The need for procedural compliance and use of existing administrative controls when operating systems in an abnormal mode was to be stressed to plant operators.

(c) The need to enhance log keeping practices was to be stressed to plant operators.

(d) Increased management presence on shift.

(2) NRC concerns related to the termination of the Project Control Center (PCC) was the potential increased work load placed on the operating shift crews.

The licensee explained their reasons for terminating the PCC was due to the decreased construction, testing, and maintenance activities as the plant approaches the operational phase. The licensee had a Shift Outage Manager, Assistant Plant Manager - Operations, and Assistant Plant Manager - Maintenance that were effectively supporting the operating shift crews. In addition, the licensee stated their improved scheduling and reduced scope of work justified the termination of the PCC.

(3) NRC concerns related to the configuration control of electrical panels resulted from recent NRC inspection findings that identified discrepancies in drawings versus as-built configuration, posting of design change documents, and design drawing accuracy.

The licensee presented preliminary results of a walkdown inspection performed on 46 class 1E electrical panels. The licensee discussed the types of discrepancies identified and the significance of each type. The licensee agreed to perform a more detailed analysis of these discrepancies and present their conclusions and corrective action plan to the NRC.

NRC management met again with IP management on February 11, 1987, to discuss the licensee's actions regarding this subject. The results of that meeting are documented in Inspection Report 50-461/87004.

b. On February 13, 1987, NRC management met with IP management at the Clinton Power Station to discuss the status of the facility, the licensee's Monthly Performance Monitoring Management Report and actions being taken to enhance the licensee's performance in several areas. Personnel attending the meeting are identified by (@) in paragraph 1 of this report.

The licensee discussed the status of preparations for initial criticality noting the remaining surveillance tests and maintenance items; the licensee identified that all deferred test activities for initial criticality were complete; and the licensee discussed the plant operator's readiness to commence initial criticality.

The licensee then provided the status of testing deferred beyond initial criticality; the status of their maintenance/modernization program plan during power ascension; and the schedule for power ascension.

The licensee discussed the status of actions being taken to address recent NRC concerns related to the configuration control of electrical panels. The licensee provided an overview of their plan to inspect 92 class 1E electrical panels. The licensee stated that the inspection procedures had been prepared and personnel performing the inspections were trained. The licensee stated that this inspection effort would commence on February 14, 1987.

The licensee discussed actions being taken to improve performance of plant operators. As stated by the licensee, these actions included management monitoring of special evolutions, INPO monitoring of control room activities, ongoing operations monitoring, plant manager briefings, simulator training, and enhanced critiques of events.

NRC (Region III) management acknowledged the licensee's status and plans. The meeting concluded with a tentative agreement to meet again on March 13, 1987, at the Clinton Site with a similar agenda.

11. IP Management Change (71707)

On February 16, 1987, the licensee announced that the IP Manager - Nuclear Planning and Support (NP&S) was taking a lateral transfer to replace the Manager - Nuclear Station Engineering (NSED). The former Manager - NSED had resigned to accept employment with another company. The licensee was not planning to fill the vacated position of Manager - NP&S at the conclusion of this report period. Those responsibilities formerly carried out by the Manager - NP&S will be performed by two directors within the NP&S department.

12. Open Items

Open items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which will involve some action on the part of the NRC or licensee or both. Two open items disclosed during the inspection were discussed in paragraph 8.

13. Exit Meetings (30703)

The inspector met with licensee representatives (denoted in paragraph 1) throughout the inspection and at the conclusion of the inspection on February 24, 1987. The inspector summarized the scope and findings of the inspection activities. The licensee acknowledged the inspection findings.

The inspectors also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspectors during the inspection. The licensee did not identify any such documents/processes as proprietary.

The resident inspector attended exit meetings held between Region III based inspectors and the licensee as follows:

Inspector(s)	Date
DuPont	01/29/87
Gardner	02/10/87
Falevits	02/10/87
Falevits	02/20/87