

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-461/87039(DRP)

Docket No. 50-461

License No. NPF-62

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

Facility Name: Clinton Power Station

Inspection At: Clinton Site, Clinton, IL

Inspection Conducted: November 25, 1987 through January 11, 1988

Inspectors: P. Hiland
S. Ray

Approved By: *R C Knop*
R. C. Knop, Chief
Projects Section 1B

1/24/88

Date

Inspection Summary

Inspection on November 25, 1987 through January 11, 1988 (Report No. 50-461/87039(DRP))

Areas Inspected: Routine, unannounced safety inspection by the resident inspectors of licensee action on previous inspection findings; IE bulletin followup; onsite followup of written reports of nonroutine events at power reactor facilities; operational safety verification; monthly maintenance observation; monthly surveillance observation; training effectiveness; onsite followup of events at operating reactors; regional requests; and management meeting.

Results: Of the 10 areas inspected, one violation with two examples was identified in the area of onsite followup of events. This violation is receiving licensee management attention. In addition, one violation of Technical Specifications was identified in the area of onsite followup of events for which a Notice of Violation was not issued in accordance with 10CFR2, Appendix C, Paragraph V (Inoperable Drywell Pressure Transmitters - paragraph 10.b.(3)).

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DETAILS

1. Personnel Contacted

Illinois Power Company (IP)

- * K. Baker, Supervisor I&E Interface
- *#R. Campbell, Manager - Quality Assurance
- * J. Cook, Manager, Nuclear Planning and Support
 - E. Corrigan, Director Quality Engineering and Verification
 - J. Fertic, Director, Quality Systems & Audits
- * R. Freeman, Manager, Nuclear Support Engineering Department
 - #W. Gerstner, Executive Vice President
 - K. Graf, Director - Operations Monitoring Program
- *#D. Hall, Vice President, Nuclear
 - D. Hillyer, Director - Plant Radiation Protection
 - D. Hoiesinger, Assistant Plant Manager
 - E. Kant, Director - Design Engineering
- #W. Kelley, President and Chairman of the Board
- * A. MacDonald, Director - Nuclear Program Assessment
- * J. Miller, Manager, Scheduling & Outage Management
- * J. Perry, Manager - Nuclear Program Coordination
- *#F. Spangenberg, Manager - Licensing & Safety
- * J. Weaver, Director - Licensing
- *#J. Wilson, Manager - Clinton Power Station
- * R. Wyatt, Director - Nuclear Training Department

Soyland/WIPCO

#J. Greenwood, Manager Power Supply

Nuclear Regulatory Commission

- *#P. Hiland, Senior Resident Inspector, Clinton
- #S. Ray, Resident Inspector, Clinton
- #R. Knop, Chief, Section 1B, Region III
- #C. Paperiello, Deputy Regional Administrator, Region III
- #D. Muller, Director, Project Directorate, NRR
- #J. Stevens, Clinton Project Manager, NRR
- *M. McCormick-Barger, Project Inspector, Region III

Denotes those attending the management meeting on November 30, 1987.

* Denotes those attending the monthly exit meeting on January 11, 1988.

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

2. Previously Identified Items (92701)(92702)

- a. (Closed) Open Item (461/85005-28): SER, paragraph 12.3.1 - Verify that procedures and a scheduled maintenance program are implemented to monitor leakage and reduce detected leakage outside containment (TMI Item III.D.1.1).

This item was previously reviewed by the inspector as documented in Inspection Report 50-461/87011, paragraph 2.b. At the time of that inspection, this item remained open pending the licensee's completion of testing and submittal of test results to the NRC. The licensee's completed test results were submitted via IP letter U-600947 dated May 22, 1987.

During this report period, the inspector reviewed the completed test results and the status of corrective action detailed in the licensee's submittal. The inspector noted that maintenance work requests (MWRs) initiated during the licensee's testing effort had been completed with the exception of MWR C40825. In addition, the inspector noted during routine plant tours that the licensee routinely identified and took appropriate corrective action for system leakage identified during surveillance testing.

Based on the establishment of the licensee's leakage reduction program previously documented in Inspection Report 50-461/87011 and the inspector's review of completed test results submitted by the licensee, the inspector concluded that the licensee was satisfying the requirement of TMI Action Item III.D.1.1. This item is closed.

- b. (Closed) Open Item (461/86054-14): Deferred Testing Activities.

The Clinton Power Station Operating License paragraph 2.D. granted a number of scheduler exemptions to the performance of test activities. These exemptions deferred testing to a specific milestone. The status of these deferred test activities was previously reviewed by the inspector as documented in Inspection Reports 50-461/87002, paragraph 2.g., and 50-461/87011, paragraph 2.d. Those reports identified that one deferred test remained to be completed prior to offloading irradiated fuel.

During this report period, the licensee completed the last deferred test activity. The inspector reviewed completed test summary for deferred testing of the Inclined Fuel Transfer System (PTP-FH-01). This review verified that test results were reviewed and approved in accordance with the licensee's program.

Based on the completion of all deferred test activities that had been granted scheduler exemptions as detailed in paragraph 2.D. of the Clinton Power Station Operating License, this item is closed.

- c. (Closed) Violation (461/87031-05): Locking Devices Not Installed On Valves.

This item was previously reviewed by the inspector as documented in Inspection Report 50-461/87032, paragraph 2.g. At the time of that review, this item remained open pending additional corrective action to assure "locked valve" tags were understood and adhered to by appropriate plant personnel.

During this report period, the inspector reviewed plant staff training records and interviewed plant technicians to verify that plant personnel understood the requirement to restore locking devices, where required, following valve manipulation. The inspector noted that IP memoranda JWW-3056-87 was distributed to appropriate personnel and that it provided clear instructions to personnel on restoring locking devices. Interviews with plant technicians indicated a clear understanding of the training provided.

Based on the completion of corrective action as previously documented in Inspection Report 50-461/87032 and the inspector's verification of additional corrective action as noted above, this item is closed.

- d. (Open) Unresolved Item (461/87031-01): Periodic Inspection Of Seismic Monitoring Instrumentation.

This item was left unresolved in Inspection Report 50-461/87031, paragraph 3. pending further review by NRR. An NRR staff member visited the Clinton site to review the seismic monitoring system on December 1-2, 1987.

At the conclusion of that review, the staff discussed site observations and suggestions for improvements in the seismic monitoring instrumentation with the licensee at an exit meeting on December 2, 1987. The licensee provided responses to this item that were still being reviewed by the staff at the conclusion of this report period. This item will remain open pending the inspector's review of the NRR staff member's report.

No violations or deviations were identified.

3. IE Bulletin Followup (92703)(25026)

(Open) NRC Compliance Bulletin No. 87-02 (461/87002-BB): Fastener Testing To Determine Conformance With Applicable Material Specifications.

During this report period, the inspector participated in the licensee's selection of fastener samples required by Bulletin 87-02. The subject bulletin required the licensee to select a representative sample of 40 fasteners and perform chemical, mechanical and/or hardness testing in accordance with the requirements of the fasteners specification. During

the selection process, the inspector requested the licensee to include in its sample one fastener (licensee sample #4) that was found not to have the required stock code information. The licensee agreed to include that sample. The inspector witnessed the packaging of the selected samples.

At the conclusion of the report period, the licensee had not yet prepared its response to Bulletin 87-02 and they were still awaiting final test results. However, the licensee initiated Condition Report (CR) No. 1-87-12-060 for 5 samples that did not meet all test parameters for mechanical properties. This item will remain open pending the inspector's review of the completed test results and the inspector's review of licensee's actions for identified deficiencies.

No violations or deviations were identified.

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

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

- a. (Closed) LER No. 87-015-00 (461/87015-LL): Reactor Core Isolation Cooling Steam Tunnel Temperature Timers Not Adequately Tested Due to Deficient Functional Test Procedure.

This event was previously documented in Inspection Report 50-461/87011, paragraph 9.c. The event was considered a licensee identified violation for which no notice of violation was issued. The inspector reviewed CPS No. 9432.10, CRVICS and Main Steam Tunnel Differential Temperature E31-N605A and E (B and F) Channel Functional/Calibration, revision 30, which added a step to test the timers. The inspector also reviewed audit Q38-87-14 which was performed to check other surveillance procedures for similar deficiencies. The audit disclosed four findings. The inspector verified that the findings have been resolved. Based on the inspector's confirmation that the corrective actions stated in the LER had been completed, this item is closed.

- b. (Closed) LER No. 87-016-00 (461/87016-LL): Automatic Actuation of Containment Isolation Valve 1E51-F063 Due to Control and Instrumentation Technician Error.

This event was previously documented in Inspection Report 50-461/87011, paragraph 11.b.(8) and reviewed in Inspection Report 50-461/87019, paragraphs 6.e. and 6.f. The inspector reviewed training records to verify that Control and Instrumentation Department personnel had been briefed on the lessons learned from this event. The need to lift leads during the performance of instrument and control surveillances was a significant source of

problems to the licensee. As a result of an ESF actuation (LER 87-067-00) which occurred on November 24, 1987, and was discussed in Inspection Report 50-461/87036, paragraph 11.b.(9), the licensee is evaluating modifications to minimize the need to lift leads routinely. These modifications may have prevented the error discussed above. The inspector will review the results of the evaluation with LER 87-067-00. Based on the inspector's confirmation that the corrective actions discussed in LER 87-016-00 (461/87016-LL) had been completed, this item is closed.

- c. (Closed) LER 87-017-00 (461/87017-LL): Manual Scram of Reactor Following Automatic Closure of Instrument Air Valves 1IA005 and 1IA008 Due to Utility Operator Error.

This event was previously documented in Inspection Report 50-461/87011, paragraph 11.b.(11). The inspector reviewed CPS No. 9030.01, Analog Trip Module (ATM) Channel Functional and Calibration Check Instructions, revision 25, and its associated checklists and verified the procedure revisions discussed in the LER had been incorporated. This event was also the cause for the licensee to make a Notification of an Unusual Event (ENS No. 08128). The notification will be reviewed separately. The report date in block 7 of the LER was 31 days after discovery of the event and therefore did not meet the reporting requirements of 10 CFR 50.73(a), but the date on the cover letter accompanying the LER was one day earlier and, if correct, did meet the 30 day reporting requirement. Based on the inspector's confirmation that the corrective actions stated in the LER had been completed, this item is closed.

- d. (Closed) LER 87-018-00 (461/87018-LL): Manual Start Of Shutdown Service Water Pump "A" Due To Operator Error.

This event was previously documented in Inspection Report 50-461/87011, paragraph 11.b.(12). The inspector reviewed completed maintenance work request (MWR) C-30465 which documented the repairs made to SX pump minimum flow valve 1SX-173A which failed during the event. Based on the inspector's confirmation that corrective actions stated in the LER had been completed, this item is closed.

- e. (Closed) LER 87-035-00 (461/87035-LL): Violation of Plant's Technical Specifications Due To Utility Personnel Error Resulting From A Deficient Surveillance Procedure.

This event was previously documented in Inspection Report 50-461/87030, paragraph 11.b.(1). The event was considered a licensee identified violation (461/87030-04) for which no notice of violation was issued. The inspector reviewed CPS No. 9911.75, Radiological Environmental Surveillance Annual Land Use Census, revision 22, as well as other documents to verify that corrective actions had been taken. Based on the inspector's confirmation that the corrective actions stated in the LER had been completed, this item is closed.

- f. (Closed) LER 87-036-00 (461/87036-LL): Automatic Scram On High Flux Level Due To Loose Transducer On Reactor Recirculation Flow Control Valve.

This event was previously documented in Inspection Report 50-461/87031, paragraph 10.c.(8). The inspector reviewed completed maintenance work request (MWR) C-50622 which documented the repairs made to the recirculation flow control valve linear velocity transducers. The inspector also reviewed additional corrective actions discussed in the critique report of this event. Based on the inspector's confirmation that corrective actions stated in the LER had been completed, this item is closed.

- g. (Closed) LER No. 87-041-00 (461/87041-LL): Violation of Plant's Technical Specifications Due To Utility Personnel Error Resulting From Procedural Deficiencies.

This event was previously documented in Inspection Report 50-461/87031, paragraph 10.c.(3). The event was considered a licensee identified violation (461/87031-09) for which no notice of violation was issued. The inspector reviewed CPS No. 9861.02, Local Leak Rate Testing Requirements, revision 29, and its associated appendices, data sheets, and valve lineups to verify that the test medium specified was in accordance with Technical Specification Table 3.6.4-1. The inspector also reviewed the calculations used to convert air leakage rates to the equivalent water leakage rates through the valves which had been improperly tested with air. The inspector also reviewed additional corrective actions discussed in the critique report of this event. Based on the inspector's confirmation that corrective actions stated in the LER had been completed, this item is closed.

- h. (Closed) LER No. 87-047-00 (461/87041-LL): Violation Of The Plant's Technical Specifications Due To Utility Personnel Error Resulting From Failure To Perform An Inservice Inspection Surveillance.

This event was previously documented in Inspection Report 50-461/87030, paragraph 11.b.(5). The event was considered a licensee identified violation (461/87030-06) for which no notice of violation was issued. The inspector reviewed CPS No. 9053.04, Residual Heat Removal (RHR) A/B/C Valve Operability Checks, revision 27, to verify that the valves which had not been tested were now in the procedure. The inspector also reviewed NSED Instruction FE-10, Pump and Valve Test Results, Evaluation and Tracking, revision 1, AIC No. 1 to verify that it required positive identification of out of service equipment. Based on the inspector's confirmation that the corrective actions stated in the LER had been completed, this item is closed.

- i. (Closed) LER No. 87049-00 (461/87049-LL): Violation Of The Plant's Technical Specifications Due To Utility Personnel Error Resulting From Exceeding The Daily Surveillance Interval.

This event was previously documented in Inspection Report 50-461/87030, paragraph 11.b.7. The event was considered a licensee identified violation (461/87030-08) for which no notice of violation was issued. The inspector reviewed CPS No. 9000.01D001, Control Room Operator Surveillance Log - Mode 1, 2, 3 Data Sheet, revision 26, to verify that the procedure had been changed to require the operator to record the next date/time that the surveillances which had been missed were due. Shortly after this event, a series of events occurred, all involving problems in identifying and tracking short term surveillances and LCO action requirements. The events were grouped into one violation (4601/87032-01). Additional corrective actions have been taken as a result of that violation to track short term requirements. These generic actions should also help prevent events like the one described in this LER. Based on the inspector's confirmation that the corrective actions stated in the LER had been completed and the inspector's review of additional generic corrective actions, this item is closed.

- j. (Closed) LER 87-045-00 (461/87045-LL): Automatic Actuation of the Main Control Room Ventilation System Into The High Radiation Mode Due To Circuit Card Failure.

This event was previously documented in Inspection Report 50-461/87031, paragraph 10.c.(14). This event was similar to LER 86-019-01 which involved actuations of trip functions of one-out-of-four logic process radiation monitors (PRM). Based on the results of that LER review, the licensee initiated and approved Plant Modification PR-20 which was to change the trip logic to one-out-of-two taken twice. PR-20 was authorized on December 22, 1986, and scheduled for installation in February, 1987, but was not installed due to plant conditions at the time. PR-20 could have prevented the event discussed above had it been installed. The inspector verified that as part of the corrective action for LER 87-045-00, PR-20 was installed and testing completed on September 4, 1987. Based on the inspector's confirmation that the corrective actions discussed in the LER had been completed, this item is closed.

- k. (Closed) LER 87-053-00 (461/87053-LL): Violation Of The Plant's Technical Specifications Due To Incomplete Surveillance Performance Resulting In Failure To Bypass Valve Thermal Overload Protection.

This event was previously document in Inspection Report 50-461/87032, paragraph 10.b.(4). The event was considered one of six examples of violations (461/87032-01B) involving failure to track short term LCO ACTION and surveillance requirements. The generic corrective actions for the violations will be reviewed separately. The inspector reviewed CPS No. 9061.03, Containment/Drywell Isolation Valve Three Month Operability, revision 27, to verify that the discontinuity problem in the procedure which led to the event was corrected. During the licensee's review of CPS No. 9016.03, revision 27, an additional problem was discovered in

that the procedure called for placing the CGCS system MOV Test Prep switch in Test but a step did not exist to return it to normal. A comment control form (CCT) was issued to assure that the procedure was changed prior to the next scheduled performance of this test. CCT#047039 tracked completion of the commitment. Additionally, the inspector reviewed IP Memo Y-206628 dated December 4, 1987, detailing a review of other surveillance procedures to verify that no other problems with manipulation of thermal overload bypass switches existed. No other discrepancies were found. Based on the inspector's confirmation that all corrective actions stated in the LER had been completed and the licensee's commitment to correct the remaining discrepancy in CPS No. 9016.03, this item is closed.

1. (Closed) LER No. 87-054-00 (461/87054-LL): Violation Of The Plant's Technical Specifications Resulting From Failure To Adequately Track And Perform A Chemistry Surveillance.

This event was previously documented in Inspection Report 50-461/87032, paragraph 10.b.(5). The event was considered one of six examples of violations (461/87032-01c) involving failure to track short term LCO ACTION and surveillance requirements. The generic corrective actions for the violations will be reviewed separately. The inspector reviewed training records to verify that all chemistry technicians had been trained on the lessons learned from this event. Based on the inspector's confirmation that all corrective actions stated in the LER had been completed, this item is closed.

No violations or deviations were identified.

5. 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 inspector verified the operability of selected emergency systems and verified tracking of LCOs. Routine tours of the auxiliary, fuel, containment, control, diesel generator, 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.

Inspections were routinely performed to ensure that the licensee conducts activities at the facility safely and in conformance with regulatory requirements. The inspections focused on the implementation and overall effectiveness of licensee's control of operating activities, and the performance of licensed and nonlicensed operators and shift technical advisors. The following items were considered during these inspections:

- Adequacy of plant staffing and supervision.
- Control room professionalism including procedure adherence, operator attentiveness and response to alarms, events, and off normal conditions.
- Operability of selected safety-related systems including attendant alarms, instrumentation, and controls.
- Maintenance of quality records and reports.

On November 25, 1987, while the inspector was observing operations in the control room, the licensee experienced an unexpected trip of reactor recirc pump 1A. The inspector observed control room operators respond to this unexpected transient and noted appropriate actions were implemented in accordance with the requirements of Technical Specification 3.4.1.1. The inspector noted that all the requirements of the 4 hour action statement had been met or were in the process of being satisfied when the reactor recirc pump was restarted about 3 1/2 hours after the initial trip. The cause of the recirc pump trip was due to the phase A overcurrent relay actuating. The licensee identified the root cause for the phase A overcurrent relay actuating was due to the "trip time" being grossly out of adjustment. The inspector noted that maintenance activities and appropriate surveillance testing was performed prior to restart of the A reactor recirc pump.

No violations or deviations were identified.

6. Monthly Maintenance Observation (62703)

Selected portions of the plant maintenance activities on safety-related systems and components were observed or reviewed to ascertain that the activities were performed in accordance with approved procedures, regulatory guides, industry codes and standards, and that the performance of the activities conformed to the Technical Specifications. The inspection included activities associated with preventive or corrective maintenance of electrical, instrumentation and control, mechanical equipment, and systems. The following items were considered during these inspections: the 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; functional testing and/or calibration was performed prior to returning the components or systems to service; parts and materials that were used were properly certified; and maintenance of appropriate fire prevention, radiological, and housekeeping conditions.

The inspector observed/reviewed the following work activities:

<u>Maintenance Work Request No.</u>	<u>Activity</u>
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C-50706	Reactor Recirc Pump Trip Relay Repair
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C-39584	Division III Diesel Generator Repair
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No violations or deviations were identified.

7. Monthly Surveillance Observation (61726)

An inspection of inservice and testing activities was performed to ascertain that the activities were accomplished in accordance with applicable regulatory guides, industry codes and standards, and in conformance with regulatory requirements.

Items which were considered during the inspection included whether adequate procedures were used to perform the testing, test instrumentation was calibrated, test results conformed with technical specifications and procedural requirements, and that tests were performed within the required time limits. The inspector determined that the test results were reviewed by someone other than the personnel involved with the performance of the test, and that any deficiencies identified during the testing were reviewed and resolved by appropriate management personnel.

The inspector observed/reviewed the following activities.

<u>Surveillance/Test</u>	
<u>Procedure No.</u>	<u>Activity</u>

CPS No. 9436.04	Scram Discharge Volume Water Level
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	C11-N017B Channel Calibration
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No violations or deviations were identified.

8. Training and Qualification Effectiveness (41400 & 41701)

The effectiveness of training programs for licensed and nonlicensed personnel were reviewed by the inspector during the witnessing of the licensee's performance of routine surveillance, maintenance, and operational activities and during the review of the licensee's response to events which occurred during the months of November/December 1987. Personnel appeared to be knowledgeable of the tasks being performed.

No violations or deviations were identified.

9. 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) Technical Specification Violation Due To Inoperable Containment Isolation Valve

On December 1, 1987, the licensee commenced performance of Surveillance Procedure CPS No. 9433.36, "High Pressure Core Spray System Response Time Test". At the time the surveillance was initiated, the High Pressure Core Spray (HPCS) system was inoperable due to planned maintenance activities on the Division III (HPCS) emergency diesel generator.

The surveillance being performed tested the HPCS actuation logic which initiated a HPCS start signal and a close signal to the HPCS full flow test return line containment isolation valve 1E22F023. As stated above, the HPCS system had been declared inoperable due to maintenance activities; however, containment isolation valve 1E22F023 was not declared inoperable when the surveillance activity exceeded the 2 hour grace period allowed by Technical Specification 3.3.2 (footnote a.). Technical Specification Table 3.6.4-1 (item 14) identified the containment isolation signal required for valve 1E22F023.

Surveillance Procedure CPS No. 9433.36 was commenced on December 1, 1987, at 9:52 a.m. On December 3, 1987, at 2:20 a.m., the licensee identified that isolation instrumentation for 1E22F023 was inoperable and entered the appropriate LCO by installing a simulator tripping the High Drywell Pressure sensor under test.

Technical Specification Table 3.3.2-1, item 1.a., footnote a., allows a channel to be inoperable for up to 2 hours for required surveillance testing without placing the trip system in the tripped condition. Failure of the licensee to place the High Drywell Pressure sensor (1B21-N067C) in a tripped condition after the 2 hour grace period had expired (11:52 a.m. on December 1, 1987) is a violation of Technical Specification 3.3.2 (461/87039-01A(DRP)).

The inspector noted that the licensee's report of this event detailed in LER No. 87-069-00 addressed specific corrective action to be taken. However, that report did not address additional weaknesses that were identified during the critique process. Those additional weaknesses included 1) inadequate understanding by the plant staff of the minimum channels required to be operable by Technical Specification 3.3.2-1 and 2) the initial evaluation of the event concluded that containment integrity required by Technical Specification 3.6.4 was being satisfied by the "Closed Loop Outside Containment" design inherent in the HPCS system. These additional weaknesses were being addressed by the licensee at the conclusion of the report period.

(2) Filter Media Missing From Standby Gas Treatment System High Range Radiation Monitor

On December 11, 1987, the licensee discovered that the filter paper for collecting particulate was missing from the Standby Gas Treatment System (SGTS) High Range Radiation Monitor (ORIX-PR008). A critique was held later the same day to try to determine the cause for the filter being missing. Although the initial investigation could not determine the cause for the missing filter, a chemistry log entry was found which stated that the filter was checked to be in place on July 11, 1987, when it was inspected in response to LER 87-040-00 in which the same filter was found to be missing from ORIX-PR012 (that event was documented in Inspection Report 50-461/87031, paragraph 10.c.(2)). No maintenance had been performed on the monitor since July 11, 1987, and the monitor had not been placed in operation between July 11, 1987, and December 11, 1987, except to perform routine monthly surveillances. The monthly surveillance was run remotely and would not have detected a missing filter.

Technical Specification Table 3.3.7.5-1 item 13 required the SGTS Exhaust High Range Radioactivity Monitor (ORIX-PR008) to be operable in operational conditions 1, 2, and 3. Failure of the licensee to maintain SGTS Exhaust High Range Radioactivity Monitor operable between July 11, 1987, and December 11, 1987, while in operational conditions 1, 2, and 3 is a violation (50-461/87039-01B(DRP)).

(3) Inoperable Drywell Pressure Instruments Due To Installation Of Temporary Modification

On December 16, 1987, the licensee identified that a temporary modification that was installed on December 7, 1987, had the potential for degrading the operability of Division 1 Drywell Pressure Transmitters.

Due to the complex method the licensee had been using to verify drywell to containment differential pressure, the plant manager directed that absolute pressure gauges be installed to allow plant operators to verify by direct readings the drywell to containment differential pressure (i.e. Technical Specification 3.6.2.5 required $-.2$ to $+1.0$ psig).

The installation of the absolute pressure gauges was accomplished in accordance with Administrative Procedure CPS No. 1014.03, "Temporary Modifications". For monitoring containment pressure, an absolute pressure gauge was placed on the refuel floor of containment which allowed the plant operators to record existing containment pressure during their plant tours. For monitoring drywell pressure, an absolute pressure gauge was installed by tapping into a division 1 drywell pressure sensing line at instrument's 1B21-N094A calibration connection. Instrument 1B21-N094A was located in containment outside the drywell and installing the absolute pressure gauge at this location allowed plant operators to record existing drywell pressure during their plant tour and make a direct comparison to the absolute pressure gauge located on the containment refuel floor.

As noted above, installation of the absolute pressure gauge onto the division 1 drywell pressure sensor was performed under the licensee's administrative controls for temporary modifications. The drywell absolute pressure gauge was tapped into the calibration port for instrument 1B21-N094A by use of a nylon tube. The required safety evaluation was prepared by a technical staff engineer and approved by a technical department supervisor before installation. That evaluation addressed the question of a drywell bypass path in the event of a break in the nylon tubing; but, the issue of impacting sensor operability through the installation of unqualified equipment was not considered. In addition, drywell pressure transmitter 1B21-N094A shared a common sensing line with 1B21-N094E and 1C71-N050A.

The administrative procedure allowed installation of the subject temporary modification before final approval of the safety evaluation by the Facility Review Group (FRG). FRG approval was required within 14 days. During the time period from initial installation on December 7 and December 16, 1987, the safety evaluation was reviewed in accordance with the governing procedure and the issue of unqualified equipment was identified. The licensee's immediate corrective action was to isolate the installed temporary modification and the administrative procedure was revised to require the approval of the safety evaluation by the FRG before installation of a temporary modification.

Technical Specification 3.3.1, Action a.1. required the licensee to place the Reactor Protection System Drywell Pressure Transmitter 1C71-N050A in a tripped condition within 48 hours. Technical Specification Table 3.3.3-1, Action 30, required the licensee to place the inoperable Drywell Pressure Transmitters 1B21-N094A/E in a tripped condition within 1 hour.

Failure of the licensee to meet the action requirements of Technical Specifications 3.3.1 and 3.3.3-1 between December 7, 1987, (date of installing temporary modification) and December 16, 1987, is a licensee identified violation (461/87039-02) which meets the requirements of 10CFR2, Appendix C, Paragraph V; consequently, no Notice of Violation will be issued, and this matter is considered closed.

The licensee reported this event in LER 87-070-00 submitted on January 15, 1988. The LER will be reviewed separately.

(4) Unexpected ESF Actuation - Isolation of Reactor Water Cleanup System [ENS No. 11103]

On January 1, 1988, while a utility operator was checking steam tunnel temperatures by reading instrument E31N605A, Main Steam Line (MSL) Tunnel Differential Temperature, Division I, three valves in the Reactor Water Cleanup (RWCU) system isolated. At the same time, a MSL tunnel temperature alarm occurred. Another valve, G33-F004, which normally isolated with the other three valves (G33-F034, G33-F039, and G33-F054) did not isolate. Extensive troubleshooting by the licensee could not determine the cause of the isolation, nor could the event be recreated. The licensee was investigating the possibility that a static discharge into the actuation circuit occurred when the operator touched the "READ" switch on the module. The inadvertent initiation signal apparently was long enough to latch in the isolation trip on the three valves which closed, but not long enough to latch in the isolation trip on G33-F004 which was located on another logic card. The isolation logic for valve G33-F004 was subsequently tested and found to be working satisfactorily. The temperature module involved in the actuation was replaced.

The licensee notified the NRC Operations Center of this event via the ENS at about 11:00 a.m. CST on January 1, 1988. Licensee Event Report (LER) 88001 was initiated to track the licensee's investigation and corrective action for this event. The inspector's review of that LER will be documented in a future inspection report.

(5) Loss of Offsite Notification System [ENS No. 11128]

At 11:40 a.m. on January 5, 1988, the licensee determined that their offsite notification (siren) system was inoperable. While performing a monthly test of the sirens the system did

not actuate from the local sheriff's office. The licensee then attempted to actuate the system from the backup location at the local fire department. Again, the sirens did not actuate. The licensee then dispatched the system contractor to investigate and notified the NRC Operations Center via the ENS at about 12:15 p.m. CST on January 5, 1988.. The contractor discovered a shorted wire in the transmitter and the system was restored and a sample of the sirens were tested on January 5, 1988. On January 6, 1988, the full test was reperformed and 14 out of 41 sirens failed.

On January 11, 1988, the inspector was informed that repairs had been made on the 14 sirens that failed to function on January 6, 1988. The licensee stated the failures were due to a combination of mechanical failure and prevailing weather conditions.

(6) ESF Actuation - Standby Gas Treatment System Actuation Due To Spiking Radiation Monitor [ENS No. 11149]

On January 6, 1988, the licensee experienced an unexpected actuation of both trains of the Standby Gas Treatment System (SGTS) when a spike was received on 1RIX-PR042A, Continuous Containment Purge Exhaust Duct Radiation Monitor. The SGTS actuated on a one-out-of-two taken twice logic with the four channels of exhaust duct monitors. The actuation occurred because a second channel, 1RIX-PR042D, had been placed in the tripped condition on January 5, 1988, due to a failed channel functional test. Channel PR042A had a history of spiking and a Maintenance Work Request (MWR) had been written on December 17, 1987, to investigate the problem but the MWR had not been worked at the time of the actuation. The control room operators were aware of the potential SGTS actuation with one channel tripped and another channel spiking and were prepared to implement the proper procedures when the event happened. All equipment responded as expected to the SGTS actuation.

The licensee notified the NRC Operations Center of this event via the ENS at about 1:00 a.m. CST on January 7, 1988. Licensee Event Report (LER) 88002 was initiated to track the licensee's investigation and corrective action for this event. The inspector's review of that LER will be documented in a future inspection report.

One violation with 2 examples and one licensee identified violation was identified.

10. Regional Request (92701)

During an inspection at another facility, NRC inspectors noted excessive temperatures (approaching 100 degrees F.) in areas containing electrical equipment and instrumentation. The high temperatures noted at the time of that inspection were primarily due to the prevailing hot weather

conditions. The inspector discussed with licensee personnel the concern identified and performed a limited review of the licensee's capability to monitor temperatures, in areas containing electrical equipment and instrumentation.

The inspector requested the licensee provide information on what requirements are in place to monitor temperatures in areas containing electrical equipment and instrumentation. The inspector requested this information to verify that appropriate limits were established based on equipment performance capabilities. The inspector's review of this information will be documented in a future inspection report. Open Item (461/87039-03).

11. Special/Management Meetings (30702)

On November 30, 1987, NRC management met with IP management at the Clinton Power Station Visitor's Center to discuss the SALP 7 Board Report (50-461/87001) for the Clinton Power Station, covering the period of September 1, 1986, to August 31, 1987. This meeting was open to the public. Key NRC and licensee personnel in attendance at this meeting are denoted by # in paragraph 1. of this report.

NRC management presented a summary of the SALP report content to IP management. Following presentation of the SALP 7 report, NRC management answered questions from the public in attendance. The licensee provided a written response to the SALP 7 report in IP letter U-601104, dated December 17, 1987. That written response did not take exception to any facts or statements contained in the SALP 7 report.

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. One open item disclosed during the inspection was discussed above in paragraph 10.

13. Violations For Which A "Notice of Violation" Will Not Be Issued

The NRC uses the Notice of Violation as a standard method for formalizing the existence of a violation of a legally binding requirement. However, because the NRC wants to encourage and support licensee's initiatives for self-identification and correction of problems, the NRC will not generally issue a Notice of Violation for a violation that meets the tests of 10CFR2, Appendix C, Section V.A. These tests are: (1) the violation was identified by the licensee; (2) the violation would be categorized as Severity Level IV or V; (3) the violation was reported to the NRC, if required; (4) the violation will be corrected, including measures to prevent recurrence, within a reasonable time period; and (5) it was not a violation that could reasonable be expected to have been prevented by the licensee's corrective action for a previous violation. Violations of regulatory requirements identified during the inspection for which a Notice of Violation will not be issued are discussed in paragraph 9.b.(3).

14. Exit Meetings (30703)

The inspector met with licensee representatives (denoted in paragraph 1) throughout the inspection and at the conclusion of the inspection on January 11, 1987. The inspector summarized the scope and findings of the inspection activities. The licensee acknowledged the inspection findings.

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 documents/processes as proprietary.

The inspector attended exit meetings held between Headquarters based inspectors and the licensee as follows:

<u>Inspector</u>	<u>Date</u>
G. GIESE-KOCH	12-02-1987