

July 20, 2005

Mr. Christopher M. Crane
President and Chief Nuclear Officer
Exelon Nuclear
Exelon Generation Company, LLC
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION
NRC INTEGRATED INSPECTION REPORT 05000461/2005007

Dear Mr. Crane:

On June 30, 2005, the U.S. Nuclear Regulatory Commission (NRC) completed an integrated inspection at your Clinton Power Station. The enclosed report documents the inspection findings which were discussed on July 6, 2005, with Mr. R. Bement and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and to compliance with the Commission's rules and regulations and with the conditions of your license. The inspector reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, one NRC-identified finding of very low safety significance (Green) was identified. This finding did not involve violation of NRC requirements and was the result of closing an unresolved item (URI) from December 2003.

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Sincerely,

/RA/

Mark A. Ring, Chief
Branch 1
Division of Reactor Projects

Docket No. 50-461
License No. NPF-62

Enclosure: Inspection Report No. 05000461/20050007
w/Attachment: Supplemental Information

See Attached Distribution

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C. Crane

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REGION III

Docket No: 50-461
License No: NPF-62

Report No: 05000461/2005007

Licensee: AmerGen Energy Company, LLC

Facility: Clinton Power Station

Location: Route 54 West
Clinton, IL 61727

Dates: April 1 through June 30, 2005

Inspectors: B. C. Dickson, Senior Resident Inspector
C. E. Brown, Resident Inspector
D. Tharp, Resident Inspector
T. Ploski, Senior Emergency Preparedness Analyst
H. A. Walker, Senior Engineering Inspector
D. Zemel, Illinois Emergency Management Agency
Inspector
C. Matthews, Illinois Emergency Management Agency
Inspector

Approved by: M. Ring, Chief
Branch 1
Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000461/2005007, AmerGen Energy Company LLC, on 04/01/2005 - 06/30/2005 Clinton Power Station; Other activities, routine integrated inspection report.

This report covers a 3-month period of baseline resident inspection and announced baseline inspection on emergency preparedness. The inspection was conducted by Region III inspectors and the resident inspectors. One Green finding resulting from the closure of an unresolved item (URI) from December 2003 was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be "Green" or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

A. Inspector-Identified and Self Revealing Findings

Cornerstone: Mitigating System

- Green. In December 2003 the inspectors identified a discrepant condition on the 4160 volt Bus 1C1 Reserve Feed potential transformer cubicle. The inspectors considered this to be an inspection finding with no violations of NRC requirements identified.

The inspectors determined that the issue was more than minor because the finding could be reasonably viewed as a precursor to a significant event, which if left uncorrected, could render safety related equipment inoperable. The issue was a design/seismic qualification deficiency that was determined not to cause a loss of a safety related function by the licensee's evaluation. Based on this conclusion, this finding was determined to be of very low safety significance using the Phase 1 worksheets. (Section 4OA5)

B. Licensee-Identified Violations

No findings of significance were identified.

REPORT DETAILS

Summary of Plant Status

The plant entered the inspection period operating at approximately 92.5 percent rated thermal power (maintaining 100 percent electrical output). On April 29, 2005, power was reduced to 50 percent in response to two of the four main turbine control intercept valves (CIV) going closed. Following repairs and testing of turbine CIVs, plant operators commenced raising reactor power on April 29, 2005 and returned the unit to 92.5 percent on April 30, 2005. On May 1, 2005, operators lowered reactor power to 85 percent for the performance of a rod pattern adjustment, and then returned the plant to 92.5 percent power. On May 9, 2005, reactor power was raised to the summer operating level of 94.5 percent (maintaining 103 percent rated electrical output). On May 22, 2005, power was lowered to 65 percent to perform a rod sequence exchange and then raised to 82 percent for main turbine control valve testing. Following these evolutions, power was raised to 95.2 percent (maintaining 103 percent rated electrical output). On June 5, 2005, operators lowered reactor power to 90 percent for a rod line adjustment. The plant was returned to approximately 95 percent power (maintaining 103 percent rated electrical output) and remained there throughout the remainder of the inspection period.

1. **REACTOR SAFETY**

Cornerstone: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather (71111.01)

a. Inspection Scope

The inspectors verified that the licensee had completed seasonal preparations before hot weather presented a challenge. The licensee used CPS 1860.02, "Summer Readiness Operation," Revision 0a, to prepare for hot weather. The inspectors reviewed the licensee's completed procedure and verified that it adequately covered risk-significant equipment and ensured that the equipment was in a condition to meet the requirements of the Clinton Improved Technical Specifications (TS), Operational Requirements Manual (ORM), and Updated Safety Analysis Report (USAR) with respect to protection from hot temperatures. The inspectors verified that minor issues identified during the inspection were entered into the licensee's corrective action system. Based on their importance for availability as mitigating systems, the inspectors conducted more detailed system reviews and walkdowns of selected systems. This activity represented one inspection sample.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignments (71111.04Q)

.1 Complete Semi-Annual

a. Inspection Scope

The inspectors conducted a complete system alignment inspection of all three divisions of the shutdown service water (SX) system. This system was selected based on its high risk significance and mitigating systems function. The inspectors reviewed plant procedures, drawings, and the USAR to identify proper system alignment and visually inspected system valves, instrumentation, and electrical supplies to verify proper alignment, component accessibility, availability, and current material condition. The inspectors also completed a review of corrective action documents, work orders, and operator work around and challenges to ensure there were no current operability concerns with the system. Documents reviewed during this inspection are listed in the attachment. These activities completed one inspection sample.

b. Findings

No finding of significance were identified.

.2 Partial Walkdowns

a. Inspection Scope

The inspectors performed partial walkdowns of accessible portions of divisions of risk-significant mitigating systems equipment during times when the divisions were of increased importance due to the redundant divisions or other related equipment being unavailable. The inspectors utilized the valve and electric breaker checklists listed in the attachment to verify that the components were properly positioned and that support systems were lined up as needed. The inspectors also examined the material condition of the components and observed operating parameters of equipment to verify that there were no obvious deficiencies. The inspectors reviewed outstanding work orders and condition reports (CRs) associated with the divisions to verify that those documents did not reveal issues that could affect division function. The inspectors used the information in the appropriate sections of the Updated Safety Analysis Report (USAR) to determine the functional requirements of the systems. The documents listed at the end of this report were also used by the inspectors to evaluate this area.

The inspectors performed 3 samples by verifying the alignment of the following divisions:

- Residual Heat Removal C during Division 1 (Low Pressure Core Spray and Residual Heat Removal A) work week.
- Division 1 Emergency Diesel Generator during planned 7 day outage of Division 2 Diesel Generator.
- Division 2, Emergency Diesel Generator, due to Reactor Core Isolation Cooling System being out-of-service for planned maintenance and surveillance window.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05Q and 05A)

.1 Quarterly Fire Zone Walkdowns

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of fire fighting equipment, the control of transient combustibles and ignition sources, and on the condition and operating status of installed fire barriers. The inspectors selected fire areas for inspection based on their overall contribution to internal fire risk, as documented in the Individual Plant Examination of External Events with later additional insights, their potential to impact equipment which could cause a plant transient, or their impact on the licensee's ability to respond to a security event. The inspectors used the documents listed at the end of this report to verify that fire hoses and extinguishers were in their designated locations and available for immediate use, that fire detectors and sprinklers were not obstructed, that transient material loading was within the analyzed limits, and that fire doors, dampers, and penetration seals appeared to be in satisfactory condition. The inspectors verified that minor issues identified during the inspection were entered into the licensee's corrective action program.

The inspectors reviewed portions of the licensee's Fire Protection Evaluation Report (FPER) and the USAR to verify consistency in the document analysis with installed fire protection equipment at the station.

The inspectors completed 7 samples by inspection of the following areas:

- FZ CB-5a, 5b, 5c Division 3 Switchgear Room, Division 3 Battery Room, and Division 1 and 2 Cable Risers.
- FZ A-1b, Elevation 737'-0" General Access Area (North)
- Fire Area C-2, Elevations 755', 778', 803', and 828'-3
- Fire Area D-2 712 and 719 Division 1 Diesel Generator Fuel Tank Room; Fire Zone D-5a; 737' Division 1 Diesel Generator; and Fire Zone D-5b, 737' Division 1 Diesel Generator Day Tank Room.
- Fire Zone CB-6B, 800 Operation Admin Area
- Fire Zones T-1 and T-1h, Elevation 737'-0" General Access Area, and 762'-0" and 785'-0" General Access and Equipment
- Fire Area D-3, 712 and 719, Division 2 Diesel Generator Fuel Tank Room; Fire Zone D6a; 737 Division 2 Diesel Generator Room.

b. Findings

No findings of significance were identified.

.2 Annual FP Drill Assessment

a. Inspection Scope

The inspectors assessed the fire brigade performance and the drill evaluators' critique for an unannounced fire brigade drill for a simulated fire with an injured man in the 762' EM Satellite Work Room as described by Fire Drill Scenario No. 2005-13 on June 15, 2005. The inspectors focused on command and control of the fire brigade activities; fire fighting and communications practices, material condition and use of fire fighting equipment, and implementation of pre-fire plan strategies. The inspectors evaluated fire brigade performance using the licensee's established fire drill performance criteria. The inspector also evaluated the licensing critique of the fire brigade performance during the unannounced drill. The inspectors verified that minor issues identified during the inspection were entered into the licensee's corrective action program. The documents listed in the Attachment to this report were used by the inspectors to evaluate this area. This activity represents one inspection sample.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07)

a. Inspection Scope

On May 19, 2005, the inspectors observed the licensee's inspection of the Division 2 Diesel Generator Heat Exchangers and reviewed the results of the engineering evaluation of reduced wall thicknesses on the heat exchanger divider plate and end bells. The inspectors verified that inspection results and eddy current data met the pre-defined engineering criteria for acceptance and that the frequency of inspection and testing was adequate. The inspectors discussed heat exchanger performance and corrosion/biofouling controls with the Generic Letter 89-13 engineer. These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11Q)

a. Inspection Scope

The inspectors reviewed licensed-operator requalification training to evaluate operator performance in mitigating the consequences of a simulated event, particularly in the areas of human performance. The inspectors evaluated operator performance attributes which included communication clarity and formality, timely performance of appropriate operator actions, appropriate alarm response, proper procedure use and adherence, and senior reactor operator oversight and command and control.

Crew performance in these areas was compared to licensee management expectations and guidelines as presented in the following documents:

- ESG-LOR-46, "Reactor Core Isolation Cooling inter-system LOCA," Rev. 00a
- OP-AA-101-111, "Roles and Responsibilities of On-Shift Personnel," Rev 0;
- OP-AA-103-102, "Watchstanding Practices," Rev 2;
- OP-AA-104-101, "Communications," Rev 1; and
- OP-AA-106-101, "Significant Event Reporting," Rev 2.

The inspectors also assessed the performance of the training staff evaluators involved in the requalification process. For any weaknesses identified, the inspectors observed that the licensee evaluators also noted the issues and discussed them in the critique at the end of the session. The inspectors verified all issues were captured in the training program and licensee corrective action process.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors reviewed the effectiveness of the licensee's maintenance efforts in implementing the maintenance rule (MR) requirements, including a review of scoping, goal-setting, performance monitoring, short and long-term corrective actions, and current equipment performance problems. These systems were selected based on their designation as risk significant under the MR, or being in the increased monitoring (MR category (a) (1)) group. In addition, the inspectors interviewed the system engineers and maintenance rule coordinator. The inspectors also reviewed condition reports and associated documents for appropriate identification of problems, entry into the corrective action system, and appropriateness of planned or completed actions. The documents reviewed are listed at the end of the report. The inspectors completed one sample by reviewing the following:

- Rod Control and Information System.

Findings

b. No findings of significance were identified.

1R13 Maintenance Risk Assessment (71111.13)

a. Inspection Scope

The inspectors observed the licensee's risk assessment processes and considerations used to plan and schedule maintenance activities on safety-related structures, systems,

and components particularly to ensure that maintenance risk and emergent work contingencies had been identified and resolved. The inspectors completed six samples by assessing the effectiveness of risk management activities for the following work activities or work weeks:

- Plant walkdown of protected systems during Division 2 Diesel Generator outage.
- Reviewed licensee action and risk assessment during standby liquid control valve operability and pump runs.
- Reviewed procedures and work schedule associated with rod control and information system outage.
- Review of maintenance activities associated with planned maintenance activities of the reactor core isolation cooling system.
- Reviewed licensee activities related to undervoltage and degraded voltage functional testing.
- Reviewed licensee risk assessment for planned maintenance activities associated with Division 3 essential switchgear.

b. Findings

No findings of significance were identified.

1R14 Non-routine Evolutions (71111.14)

a. Inspection Scope

The inspectors reviewed personnel performance during planned and unplanned plant evolutions and selected licensee event report focusing on those involving personnel response to non-routine conditions. The review was performed to ascertain that operator responses were in accordance with the required procedures. In particular, the inspectors reviewed personnel performance during the following three plant events:

- Turbine combined intercept valves 2 and 4 going shut unexpectedly.
- Troubleshooting of the 6A feedwater heater normal level control valve.
- Loss and recovery of the reserve auxiliary transformer due to a switchyard fire in current transformer of gas circuit breaker 4522.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

a. Inspection Scope

The inspectors reviewed the following operability determinations and evaluations affecting mitigating systems to determine whether operability was properly justified and the component or system remained available such that no unrecognized risk increase had occurred. The inspectors completed four samples of the operability determinations and evaluations by reviewing the following:

- Division 2 diesel generator heat exchanger tube sheet and end bell divider plate wall thinning.
- Pressurization of the piping between residual heat removal (RHR) shutdown cooling isolation valves (F008 and F009) and the RHR “A” and “B” pump suction valves (F006A and F006B).
- Test and lockout switch for A turbine driven reactor feedwater pump was placed in lockout and operators noted no change in indication.
- Shutdown service water system, following the discovery that backwash strainer timers were mounted incorrectly/reversed.

b. Findings

No findings of significance were identified.

1R16 Operator WorkArounds (71111.16)

a. Inspection Scope

The inspectors completed a cumulative effects review of all operator workarounds to identify any potential effect on the functionality of mitigating systems by reviewing all documented operator work arounds, challenges, and compensatory actions to evaluate their effect on mitigating systems ability to function as required during emergencies and ensure that operators would be able to take necessary actions under emergency conditions. The inspectors also reviewed issue reports and work orders related to corrective actions to remove the workarounds or compensatory actions.

b. Findings

No findings of significance were identified.

1R17 Permanent Plant Modifications (71111.17)

a. Inspection Scope

The inspectors reviewed one permanent plant modification to verify that modifications performed during increased risk-significant configurations did not place the plant in an unsafe condition. The inspectors reviewed the following design change package:

- ECR 354802, “Revise Operating Logic to Allow Operation of Four Condensate Pumps,” Revision 0, dated April 19, 2005.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing (71111.19)

a. Inspection Scope

The inspectors reviewed the post maintenance testing activities associated with maintenance or modification of important mitigating, barrier integrity, and support systems that were identified as risk significant in the licensee's risk analysis. The inspectors reviewed these activities to verify that the post maintenance testing was performed adequately, demonstrated that the maintenance was successful, and that operability was restored. During this inspection activity, the inspectors interviewed maintenance and engineering department personnel and reviewed the completed post maintenance testing documentation. The inspectors used the appropriate sections of the TS and USAR, as well as the documents listed at the end of this report, to evaluate this area.

The inspectors completed seven inspection samples by observing and evaluating the following testing activities:

- Residual heat removal A pump breaker abnormal resistance during rack out.
- Reviewed the plan for and the accomplishment of turbine on-line valve testing as post maintenance testing for the repairs to 1TGC1V2.
- Division 2 diesel generator 4.16KV protective relay functional test following diesel maintenance outage window.
- Lower containment air lock local leak rate testing performed following maintenance resulting from periodic inspection and lubrication.
- Division 2 diesel generator overcrank delay timer test following outage work.
- Reviewed the results of post maintenance testing activities associated with Division 2 diesel generator integrated testing following the outage.
- Review of WO# 572756-02 and 727505-02, CPS 9080.02 Revision 47a, Diesel Generator Overspeed Trip Test, Rev 3a, Section 8.1.2, DG 1B Overspeed Trip Solenoid Verification.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

a. Inspection Scope

The inspectors witnessed selected surveillance testing and/or reviewed test data to verify that the equipment tested using the surveillance procedures met the TS, the ORM, the USAR, and licensee procedural requirements, and demonstrated that the equipment was capable of performing its intended safety functions. The activities were selected based on their importance in verifying mitigating systems capability and barrier integrity. The inspectors used the documents listed at the end of this report to verify that the testing met the frequency requirements; that the tests were conducted in accordance with the procedures, including establishing the proper plant conditions and prerequisites; that the test acceptance criteria were met; and that the results of the tests

were properly reviewed and recorded. In addition, the inspectors interviewed operations, maintenance and engineering department personnel regarding the tests and test results.

The inspectors completed seven inspection samples by evaluating the following surveillance tests:

- Reactor Core Isolation Cooling flow, remote shutdown panel controller, loop calibration.
- Emergency core cooling system low pressure coolant injection minimum flow E12-N052A Channel Calibration.
- Reviewed results of CPS 9333.40 Division III 4.16 KV bus undervoltage relay (degraded voltage) functional test. WO#809631.
- CPS 3309.01 "High Pressure Core Spray", Revision 15, May 4, 2005
- CPS 9069.02 "Shutdown Service Water Operability", Revision 32b, May 5, 2005
- CPS 9333.30 "Division II 4.16 KV Degraded Voltage Trip - functional test", revision 2, July 29, 2003
- 9054.02 Reactor Core Isolation Cooling valve operability checks, Revision 35d, August 29, 2000

b. Findings

No findings of significance were identified.

1R23 Temporary Modifications (71111.23)

a. Inspection Scope

The inspectors reviewed one temporary plant modification to verify that the instructions were consistent with applicable design modification documents and that the modification did not adversely impact system operability or availability. The inspectors interviewed operations, engineering and maintenance personnel as appropriate and reviewed the design modification documents and the 10 CFR 50.59 evaluation against the applicable portions of the USAR. The documents listed at the end of the report were also used by the inspectors to evaluate this area. The following temporary plant modification was reviewed:

- EC 356005 000, "To provide temporary vent for shutdown cooling (SDC) suction header."

b. Findings

No findings of significance were identified.

2. EMERGENCY PREPAREDNESS

1EP2 Alert and Notification System (ANS) Testing (71114.02)

a. Inspection Scope

The inspectors discussed with Emergency Preparedness (EP) staff the design, equipment, and periodic testing of the public ANS for the Clinton reactor facility emergency planning zone to verify that the system was properly tested and maintained. The inspectors also reviewed procedures and records for a 6-month period ending June 2002, related to ANS testing, annual preventive maintenance, and non-scheduled maintenance. The inspectors reviewed the licensee's criteria for determining whether each model of siren installed in the emergency planning zone would perform as expected if fully activated. Records used to document and trend component failures for each model of installed siren were also reviewed to ensure that corrective actions were taken for test failures or system anomalies.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentation Testing (71114.03)

a. Inspection Scope

The inspectors reviewed the licensee's ERO augmentation testing to verify that the licensee maintained and tested its ability to staff the ERO during an emergency in a timely manner.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level and Emergency Plan Changes (71114.04)

a. Inspection Scope

The inspectors performed a screening review of Revision 6 of the Clinton Power Station Annex to the Exelon Standardized Emergency Plan to determine whether the changes made in Revision 6 decreased the effectiveness of the licensee's emergency planning. This screening review of Revision 6 did not constitute an approval of the changes and, as such, the changes are subject to future NRC inspection to ensure that the emergency plan continues to meet NRC regulations.

These activities completed one inspection sample.

b. Findings

No findings of significance were identified.

4 OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems (71152)

.1 Routine Review of Identification and Resolution of Problems

a. Inspection Scope

As discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that they were being entered into the licensee's corrective action system at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Minor issues entered into the licensee's corrective action system as a result of inspectors' observations are generally denoted in the report.

b. Findings

No findings of significance were identified.

.2 Semiannual Review for Trends

a. Inspection Scope

The inspectors performed a semi-annual review of corrective action program documents to identify trends that could indicate the existence of a more significant safety issue. In addition to the items discussed in Section 4OA2.1, the inspectors reviewed issue reports that were generated during the time period between April 1, 2005 and June 30, 2005, as well as licensee CAP trending reports, maintenance rule assessment reports, focused area self assessments, and operator challenge lists to identify any adverse trends in equipment or human performance.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 TI 2525/163, Operational Readiness of Offsite Power

The objective of TI 2515/163, "Operational Readiness of Offsite Power," was to confirm, through inspections and interviews, the operational readiness of offsite power (OSP) systems in accordance with NRC requirements. On May 22 - 25, 2005, the inspectors reviewed licensee procedures and discussed the attributes identified in TI 2515/163 with licensee personnel. In accordance with the requirements of TI 2515/163, inspectors evaluated licensee procedures against the attributes discussed below.

The operating procedures that the control room operator uses to assure the operability of the OSP have the following attributes:

1. Identify the required control room operator actions to take when notified by the transmission system operator (TSO) that post-trip voltage of the OSP at the nuclear power plant (NPP) will not be acceptable to assure the continued operation of the safety-related loads without transferring to the onsite power supply.
2. Identify the compensatory actions the control room operator is required to perform if the TSO is not able to predict the post-trip voltage at the NPP for the current grid conditions.
3. Identify the notifications required by 10 CFR 50.72 for an inoperable offsite power system when the nuclear station is either informed by its TSO or when an actual degraded voltage condition is identified.

The procedures to ensure compliance with 10 CFR 50.65(a)(4) have the following attributes:

1. Direct the plant staff to perform grid reliability evaluations as part of the required maintenance risk assessment before taking a risk-significant piece of equipment out-of-service to do maintenance activities.
2. Direct the plant staff to ensure that the current status of the OSP system has been included in the risk management actions and compensatory actions to reduce the risk when performing risk-significant maintenance activities or when loss of offsite power (LOOP) or station blackout (SBO) mitigating equipment are taken out-of-service.
3. Direct the control room staff to address degrading grid conditions that may emerge during a maintenance activity.
4. Direct the plant staff to notify the TSO of risk changes that emerge during ongoing maintenance at the nuclear power plant.

The procedures to ensure compliance with 10 CFR 50.63 have the following attribute:

1. Direct the control room operators on the steps to be taken to try to recover offsite power within the SBO coping time.

The results of the inspectors' review were forwarded to office of Nuclear Reactor Regulation for further review and evaluation.

.2 (Closed) Unresolved Item (URI) 50-461/2003007-02: Improperly secured 4160V Equipment Doors.

a. Inspection Scope

Inspectors reviewed actions taken by licensee personnel following the NRC's discovery that the Bus 1C1 Reserve Feed potential transformer (PT) drawer was misaligned and not properly secured. In addition, a review of a related issue by NRC inspectors during a subsequent inspection was also reviewed.

b. Findings

Introduction: The inspectors identified a finding of very low safety significance for a discrepant condition on the 4160 volt Bus 1C1 Reserve Feed potential transformer cubicle. No violations of NRC requirements were identified.

Description: During a system walkdown of the plant electrical system in December 2003, NRC engineering inspectors identified that the 4160 volt Bus 1C1 Reserve Feed potential transformer cubicle door was misaligned and not properly secured. The matter was considered unresolved pending actions to be taken by licensee personnel to correct the problem and evaluate the degraded equipment for operability.

During the inspection the licensee corrected the discrepant condition by closing the misaligned door. Following the inspection, the licensee performed a review of other switchgear to ensure similar conditions did not exist. Licensee personnel determined that despite the cubicle drawer not being aligned as indicated by the design and the qualification report, the potential transformer would remain operable during a seismic event. The inspectors reviewed the operability determination and determined that no other switchgear had doors misaligned and not secured. Therefore, the inspectors considered the corrective actions adequate.

Analysis: The inspectors determined that the failure to maintain 4160V equipment panels in a qualified configuration was a performance deficiency warranting a significance evaluation in accordance with Manual Chapter 0612, "Power Reactor Inspection Reports," Appendix B, "Issue Disposition Screening." The inspectors determined that the finding was greater than minor because it affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. Specifically, Bus 1C1 Reserve Feed potential transformer drawer configuration could result in inoperable Division 3 switchgear.

The inspectors entered the significance determination process using Manual Chapter 0609, Appendix A, "Significance Determination for Reactor Inspection Findings for At-Power Situations," and performed a Phase 1 analysis. Because the potential transformer would remain operable during a seismic event, the inspectors, determined that the finding was of very low safety significance (Green) (**FIN 05000461/2005007-01**).

Enforcement: The inspectors determined that no violations of NRC requirements occurred. Because the licensee's corrective actions were acceptable, both the unresolved item and the finding are closed.

4OA6 Meetings

.1 Exit Meeting

The inspectors presented the inspection results to Mr. R. Bement and other members of licensee management at the conclusion of the inspection on July 6, 2005. The

inspectors asked the licensee whether any materials examined during the inspection should be considered proprietary. No proprietary information was identified.

.2 Interim Exit Meetings

Interim exits were conducted for:

- Emergency Preparedness inspection with Mr. M. Friedman on May 13, 2005.

.3 Re-Exit Meetings

- Re-exit meeting for unresolved item "Improperly Secured 4160V Equipment Doors" with Mr. R. Bement on July 14, 2005.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Bement, Site Vice President
M. McDowell, Plant Manager
J. Cunningham, Work Management Director
R. Davis, Radiation Protection Director
R. Frantz, Regulatory Assurance Representative
M. Friedman, Emergency Preparedness Manager
W. Iliff, Regulatory Assurance Director
T. Marini, Nuclear Oversight Manager (Acting)
J. Domitrovich, Maintenance Director
D. Schavey, Operations Director
J. Madden, Chemistry Manager
C. Williamson, Security Manager
R. Peak, Site Engineering Director
W. Carsky, Shift Operations Superintendent

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000461/2005007-01 FIN Improperly Secured 4160V Equipment Doors

Closed

05000461/2003007-02 URI Improperly Secured 4160V Equipment Doors

05000461/2005007-01 FIN Improperly Secured 4160V Equipment Doors

Discussed

None

LIST OF DOCUMENTS REVIEWED

The following is a list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspectors reviewed the documents in their entirety but rather that selected sections of portions of the documents were evaluated as part of the overall inspection effort. Inclusion of a document on this list does not imply NRC acceptance of the document or any part of it, unless this is stated in the body of the inspection report.

1R01 Adverse Weather

CPS 1860.02, Summer Readiness Operation; Revision 0a
EN-CL-402-005, Extreme Heat Implementation Plan; Revision 1
WC-AA-107, Seasonal Readiness; Revision 1
Memorandum, Clinton Power Station Summer Readiness Certification; dated
May 13, 2005
IR 159030, Condenser Butterfly Inlet and Outlet Valve Optimization; May 15, 2003

1R04 Equipment Alignments

CPS 3312.01V001, Residual Heat Removal Valve lineup; Revision 15d
CPS 3312.01E001, Residual Heat Removal Electrical lineup; Revision 14
CPS 3312.01V002, Residual Heat Removal Instrument Valve lineup; Revision 9
CPS 3211.01V001, Shutdown Service Water Valve Lineup; Revision 25
CPS 3211.01E001, Shutdown Service Water Electrical Lineup; Revision 17c
CPS 3211.01V002, Shutdown Service Water Instrument Valve Lineup; Revision 9
CPS 3506.E001, Diesel Generator and Support Systems Electrical Lineup, Rev. 18a.
Apparent Cause Report (324015-05); ACE to determine the Work Management,
Maintenance & Operations process breakdown for allowing scaffolding to be started but
not completed to meet Seismic Qualifications.
AR 00324015; Scheduling Scaffold Preps For Division II Diesel Generator Outage
Operation Policy #18
MA-AA-796-024 Scaffolding Build request.
NES-MS-04.1 Scaffodling qualification.

1R05 Fire Protection

USAR Appendix E, Section 3.4.5 Fire Area CB-5; Revision 1, January 2005
USAR Appendix E, Figure FP-13a, Fire Zone Boundaries control building floor plan -
EL. 781'0"
USAR Appendix E, Figure FP-13b, Fire Protection Features control building floor plan -
EL. 781'0"
USAR Section 3.2.1.2 Fire Zone A-1b; Elevation 737'-0" General Access Area (North);
Revision 11, January 2005
IR 314557, IDR-263: Top latch does not work and bottom latch is broken; March 18,
2005
IR 334579, Duplicate - airlock not operating properly; May 12, 2005
USAR App E., Section 3.3.2, Fire Area C-2; Revision 11, January 2005
OP-AA-201-009, Control of Transient Combustible Materials; Revision 004

OP-AA-201-003, Attachment 3, Fire Drill Scenario No. 2005-13; June 15, 2005
CC-AA-211, Fire Protection Program: Revision 2
CPS 1893.04, Fire Fighting; Revision 10a
Reviewed USAR figures FP-10b, FP-01a, FP-8a and FP-9a
USAR Section 3.9.16, Fire Zone T-1f, Elevation 737'-0" General Access Area;
Revision 11
USAR Section 3.9.1.8, Fire Zone T-1h, Elevations 762'-0" and 785'-0" General Access
and Equipment; Revision 11
WO 663983, 1FP034A is extremely difficult to manipulate; February 9, 2004
WO 687085, C1R09 Lesson-FP MPT Deluge isolation valves need work 1FP034C;
April 4, 2004
Reviewed USAR figures FP-10b, FP-8a and FP-9a

1R07 Heat Sink Performance

WO 750664, Inspect/Boroscope/Eddy Current/Clean IDG01KB Heat Exchangers;
May 12, 2005
CPS 8130.01, Heat Exchanger Maintenance/Repairs; Revision 1a
IR 333403, Division 2 Diesel Generator outage - 12 Cyl HX 1DG11AB end bell needs
repair; May 9, 2005
IR 333389, Biological Activity in the Division II Diesel Generator HX; May 9, 2005

1R13 Maintenance Risk Assessment

CPS 3506.01E001; Diesel Generator and Support Electrical Lineup
CPS 9015.01; Standby Liquid Control Valve operability, Section 8.1 and 8.2
WC-AA-101; Work Control Process

1R15 Operability Evaluations

IR 333391, Wall thickness degradation of the 1DG12AB divider plate; May 9, 2005
IR 260247, Degradation (pitting) of the 1DG12AA tube sheet; October 5, 2004
EC 351672, Division I, II, III DG Heat Exchanger tubesheet ASME/TEMA minimum wall
requirements; Revision 00
Drawing no. D-9654, Details "CPK Heat Exchanger #17084; Revision 1
Reg Guide 1.45; Reactor Coolant Pressure Boundary Leakage Detection Systems
Op Eval # 342801-02; Residual Heat Removal; Revision 0
AR 00334531; Backwash Timers Mounted On Cubicle Door Were Switched

1R16 Operator Work-Arounds

Operations Workarounds and Challenges list; June 2, 2005
Operator Compensatory Actions list; May 31, 2005

1R19 Post Maintenance Testing

IR 331217, Residual Heat Removal-A Pump breaker has abnormal resistance during
rack out; May 3, 2005.

CPS 8501.50, Division II Diesel Generator 4.16KV Protective Relay Functional Test; Revision 3.
WO 813551, Uper Exterior shaft seal bolts loose; May 25, 2005
CPS 9861.03, Type B Local Leak Rate Testing; Revision 26a
CPS 98612.03D003, Lower Air Lock Barrel Leak Rate Test Data Sheet; Revision 22b
IR 336887, 1MC02W Airlock equalizing valve suspect potential failure; May 19, 2005
IR 336888, 1MC02W-Upper exterior shaft seal bolts loose; May 19, 2005

1R22 Surveillance Testing

ECR-369773, Reactor Core Isolation Cooling Flow Loop Data Out of Spec, IR 324551; April 15, 2005.
IR 324551, Unable to obtain SAT Reactor Core Isolation Cooling flow loop as left data; April 14, 2005.
IR 203927, Flow loop GETARS point 20 out of tolerance; February 25, 2004
CPS 9437.05 Remote Shutdown system Reactor Core Isolation Cooling flow E51-N003 Channel calibration; Revision 36c.
CPS 9437.05D001, Remote shutdown system Reactor Core Isolation Cooling flow E51-N003 Channel Calibration Data sheet; Revision 36b.
RG 1.105, Setpoints for safety-related instruments; Revision 3.
ANSI/ISA-S67.04.01-2000, Setpoints for nuclear safety-related instrumentation.
E02-1RS99, Remote shutdown System, sht 103; Revision T.
E02-1R199, Reactor Core Isolation Cooling, Sht 005; Revision M.
CPS 9433.38, Emergency Core Cooling System minimum flow E12-N052A Channel Calibration; Revision 37b.
CPS 9433.38D001, Emergency Core Cooling System Low Pressure Coolant Injection minimum flow E12-N052A Channel calibration data sheet; Revision 35a.
WO 0062707801, 9433.38A21 CC Emergency Core Cooling System Low Pressure Coolant Injection minimum flow E12-N052A CC; May 4, 2005.

1R23 Temporary Plant Modifications

EC 356005, Provide temporary vent for shutdown cooling (SDC) suction header; June 27, 2005
WO 820231, Residual Heat Removal shutdown header pressure high; June 27, 2005
Assignment Report 342801, Op Eval# 342801-02; Revision 1

1EP4 Emergency Action Level and Emergency Plan Changes

Clinton Power Station Annex to the Exelon Standardized Emergency Plan; Revision 6

OA5 Other Activities

IP-Q-0475; Document Impact Assessment of Improperly Latched PT Drawer; Revision 0
CR 182734; Division 3 Reserve Feed Potential Transformer Drawer Assessment

LIST OF ACRONYMS USED

ADAMS	Agency wide Documents Access and Management System
ANS	Alert and Notification System
CIV	Control Intercept Valves
CRs	Condition Reports
EP	Emergency Preparedness
ERO	Emergency Response Organization
FPER	Fire Protection Evaluation Report
GDC	General Design Criterion
IMC	Inspection Manual Chapter
MR	Maintenance Rule
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
ORM	Operational Requirements Manual
OSP	Offsite Power
PARS	Publicly Available Records
PT	Potential Transformer
RHR	Residual Heat Removal
SDC	Shutdown Cooling System
SDP	Significant Determination Process
SX	Shutdown Service Water
TI	Temporary Instruction
TS	Technical Specifications
TSO	Transmission System Operator
URI	Unresolved Item
USAR	Updated Safety Analysis Report