UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, IL 60532-4352

January 27, 2009

Mr. Charles G. Pardee
Senior Vice President, Exelon Generation Company, LLC
President and Chief Nuclear Officer (CNO), Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION NRC INTEGRATED INSPECTION REPORT 05000461/2008-005

Dear Mr. Pardee:

On December 31, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Clinton Power Station. The enclosed report documents the inspection results, which were discussed on January 15, 2009, with Mr. F. Kearney and other members of your staff.

This inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors 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 was identified. The finding involved a violation of NRC requirements. However, because of the very low safety significance, and because the issue was entered into your corrective action program, the NRC is treating the issue as a Non-Cited Violation in accordance with Section VI.A.1 of the NRC Enforcement Policy.

If you contest the subject or severity of a Non-Cited Violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001, with a copy to the Regional Administrator, U.S. Nuclear Regulatory Commission - Region III, 2443 Warrenville Road, Suite 210, Lisle, IL 60532-4352; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the Resident Inspector's Office at the Clinton Power Station.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS), accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

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

cc w/encl: Site Vice President - Clinton Power Station
Plant Manager - Clinton Power Station
Manager Regulatory Assurance - Clinton Power Station
Senior Vice President - Midwest Operations
Senior Vice President - Operations Support
Vice President - Licensing and Regulatory Affairs
Director - Licensing and Regulatory Affairs
Manager Licensing - Clinton, Dresden and Quad Cities
Associate General Counsel
Document Control Desk - Licensing
Assistant Attorney General
J. Klinger, State Liaison Officer,
Illinois Emergency Management Agency
Chairman, Illinois Commerce Commission

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Letter to C. Pardee from M. Ring dated January 27, 2009

SUBJECT: CLINTON POWER STATION NRC INTEGRATED INSPECTION REPORT 05000461/2008-005

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No:	50-461
License No:	NPF-62
Report No:	05000461/2008-005
Licensee:	Exelon Generation Company, LLC
Facility:	Clinton Power Station
Location:	Clinton, IL
Dates:	October 1 through December 31, 2008
Inspectors:	B. Kemker, Senior Resident Inspector D. Lords, Resident Inspector N. Feliz-Adorno, Engineering Inspector G. Hausman, Senior Engineering Inspector R. Winter, Engineering Inspector N. Valos, Senior Operations Engineer S. Mischke, Resident Engineer, Illinois Emergency Management Agency
Approved by:	M. Ring, Chief Branch 1 Division of Reactor Projects

Enclosure

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SUMMARY OF FINDINGS

IR 05000461/2008-005, 10/01/08 – 12/31/08, Clinton Power Station, Unit 1, Fire Protection.

This report covers a three-month period of inspection by the resident inspectors and announced inspections by regional inspectors. One Green finding, which had an associated Non-Cited Violation (NCV), 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 4, dated December 2006.

A. NRC-Identified and Self-Revealed Findings

Cornerstone: Initiating Events

- Green. The inspectors identified a finding of very low safety significance with an associated NCV of the Clinton Power Station Unit 1 Operating License (NPF-62, Section 2.F). The licensee failed to implement the Fire Protection Program in accordance with program requirements by failing to follow approved Fire Protection Program procedures for the control of transient combustible materials. The licensee promptly removed transient combustible materials found by the inspectors and subsequently completed a detailed walk down of the plant's transient combustible free zones to identify and remove any additional transient combustible materials.

  The inspectors concluded that this finding could be reasonably viewed as a precursor to a significant event (i.e., a fire affecting more than one train of safe shutdown equipment). Specifically, the presence of transient combustible materials in a combustible free zone could reasonably result in degradation of the fire protection defense-in-depth elements in place to prevent fires from starting and mitigate the consequences of fires. In addition, based on review of Example 4k in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," the issue would not be considered to be of minor significance because the identified transient combustibles were found in a combustible free zone required for separation of redundant trains. The finding was of very low safety significance because the items found in the combustible free zone would not be considered transient combustibles of significance as defined in IMC 0609, Appendix F, "Fire Protection SDP," Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," and therefore the issue was assigned a "low degradation" rating. The inspectors concluded that this finding affected the cross-cutting area of problem identification and resolution. Specifically, the licensee missed an opportunity to identify and remove the transient combustible materials while implementing corrective actions for previous inspector identified findings involving the control of transient combustible materials. (IMC 0305 P.1(a)) (Section 1R05.1)

B. Licensee-Identified Violations

No violations of significance were identified.

REPORT DETAILS

Summary of Plant Status

The unit was operated at or near full power during the inspection period with the following exceptions:

On December 4, 2008, the licensee reduced power to about 87 percent due to low demand for electrical power. On December 7th, the licensee further reduced power to about 68 percent to perform control rod pattern adjustment and to repair a main turbine control valve electro-hydraulic control fluid leak. The licensee raised power to about 80 percent later the same day upon completion of turbine control valve maintenance and testing. The unit was operated at about 80 percent power until December 20th, when power was reduced to about 65 percent in response to grid reliability concerns resulting from the loss of a 345-kilovolt line north of the plant. The licensee returned the unit to about 80 percent power on December 21st and maintained power at that level until December 31st, when the unit was returned to full power.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

.1 Readiness For Impending Cold Weather Conditions

a. Inspection Scope

The inspectors evaluated the licensee's preparations for cold weather conditions, focusing on the reactor core isolation cooling system and the shutdown service water system. The inspectors focused on plant specific design features and implementation of procedures for responding to or mitigating the effects of cold weather conditions on the operation of the plant. The inspectors reviewed system health reports and system engineering winter readiness review documents for the above systems. Additionally, the inspectors reviewed selected action requests for the identification and resolution of procedure and equipment deficiencies associated with adverse weather mitigation.

This inspection constituted one seasonal extreme weather readiness inspection sample as defined by Inspection Procedure (IP) 71111.01.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment (71111.04)

.1 Quarterly Partial System Walkdowns (71111.04Q)

a. Inspection Scope

The inspectors performed partial system walkdowns of the following risk significant systems:

- Control Room Ventilation System Train 'A' during maintenance on Control Room Ventilation System Train 'B'
- Division 3 Emergency Diesel Generator (risk significant single train system)
- Low Pressure Core Spray System (risk significant single train system)

The inspectors selected these systems based on their risk significance relative to the reactor safety cornerstones. The inspectors reviewed operating procedures, system diagrams, Technical Specification (TS) requirements, and the impact of ongoing work activities on redundant trains of equipment. The inspectors verified that conditions did not exist that could have rendered the systems incapable of performing their intended functions. The inspectors also walked down accessible portions of the systems to verify system components were aligned correctly and available as necessary.

In addition, the inspectors verified that equipment alignment problems were entered into the licensee's corrective action program with the appropriate characterization and significance. Selected action requests were reviewed to verify that corrective actions were appropriate and implemented as scheduled.

This inspection constituted three partial system walkdown inspection samples as defined in IP 71111.04.

b. Findings

No findings of significance were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors performed fire protection tours in the following plant areas:

- Fire Zone CB-1e, Control Building General Access Area - Elevation 751' - 0"
- Fire Zone A-2a, Reactor Core Isolation Cooling Pump Room - Elevation 707' - 6"
- Fire Zone F-1b, High Pressure Core Spray Pump Room - Elevation 712' - 0"
- Fire Zone A-6, General Access Area (North) - Elevation 707' - 6"

The inspectors verified that transient combustibles and ignition sources were appropriately controlled and assessed the material condition of fire suppression systems, manual fire fighting equipment, smoke detection systems, fire barriers and emergency lighting units. The inspectors verified that fire hoses and extinguishers were

in their designated locations and available for immediate use; that fire detectors and sprinklers were unobstructed; that transient material loading was within the analyzed limits; that the licensee's fire plan was in alignment with actual conditions; and that fire doors, dampers, and penetration seals appeared to be in satisfactory condition.

In addition, the inspectors verified that fire protection related problems were entered into the licensee's corrective action program with the appropriate characterization and significance. Selected action requests were reviewed to verify that corrective actions were appropriate and implemented as scheduled.

This inspection constituted four quarterly fire protection inspection samples as defined in IP 71111.05AQ.

b. Findings

(1) Failure to Control Transient Combustible Materials in Accordance with Fire Protection Program

Introduction

The inspectors identified a finding of very low safety significance (Green) with an associated NCV of the Clinton Power Station Unit 1 Operating License (NPF-62, Section 2.F). The licensee failed to implement the Fire Protection Program in accordance with program requirements by failing to follow approved Fire Protection Program procedures for the control of transient combustible materials.

Discussion

On November 25, 2008, with Unit 1 operating in Mode 1, the inspectors identified unattended transient combustible items (a 25' coiled rubber drain hose with a paper tag and a 4' x 6' x 1" roll of foam insulation) on top of ventilation filter units on the Control Building 751' elevation. The area in which these transient combustible items were found contained highly visible red stripes on the floor and markings indicating the area to be a "Combustible Free Zone" as described in the Clinton Power Station Fire Protection Evaluation Report (Updated Final Safety Analysis Report (UFSAR), Appendix E) or; alternatively, a "Transient Combustible Free Zone" as described in OP-AA-201-009, "Control of Transient Combustible Material," Attachment 5, "Clinton – Station Specific Information." As stipulated in OP-AA-201-009, the placement of transient combustible materials in these areas without prior approval in the form of a Transient Combustible Permit and Plant Barrier Impairment and additional compensatory measures is prohibited in Modes 1, 2, and 3. Neither a Transient Combustible Permit nor a Plant Barrier Impairment was approved for these transient combustible items and no compensatory measures had been established. The procedure further stated that the Transient Combustible Free Zones at Clinton Power Station are provided for the purpose of separating redundant safe shutdown equipment. According to the Fire Protection Evaluation Report, redundant safe shutdown equipment of concern for the Control Building 751' elevation included Division 1 and Division 2 electrical cable trays and emergency diesel generator motor control centers. The procedure defines a Transient Combustible Free Zone as "[a]n area in the plant in which transient combustible material is strictly controlled. Therefore, authorization in the form of a Transient Combustible Permit is required prior to staging or storing any transient combustibles in the area."

Upon discovery, the inspectors promptly notified the licensee and the items were removed. The items discovered were determined to be Class A materials as defined in OP-AA-201-009. It is unknown when these items were placed on top of the ventilation filter units.

The inspectors reviewed the licensee's condition evaluation of this issue. The licensee completed a Quick Human Performance Investigation and concluded that the items had likely been on top of the ventilation filter units for several years based on the layer of dust covering them and that the cause was attributed to inadequate walk downs of the plant's Transient Combustible Free Zones following previously identified issues. The inspectors previously documented findings during the fourth quarter of 2007 and first quarter of 2008 involving the licensee's failure to follow approved Fire Protection Program procedures for the control of transient combustible materials. Those findings were attributed to poor worker behaviors with storing or staging work materials in Transient Combustible Free Zones while work was ongoing. Although the cause for this current issue could also be attributed to poor worker behaviors, the placement of the unattended items found on the ventilation filter units may have predated the aforementioned findings. The licensee noted that corrective actions for these findings did not include an extensive "top to bottom search" inside all of the plant's Transient Combustion Free Zones looking for "legacy material that may have been unintentionally left in normally inaccessible areas." The inspectors noted that while the tops of the ventilation filter units were not normally accessible; the unattended transient combustible items were readily visible from a normally accessible floor area between them. The licensee's immediate corrective action for this issue was to remove the combustible items from the Transient Combustible Free Zone and to perform a detailed walk down of the plant's Transient Combustible Free Zones to identify and remove any additional transient combustible materials. The licensee planned a second, independent walk down at the end of this inspection period.

Analysis

The inspectors determined that this failure to follow the procedural requirements of Clinton Power Station's Fire Protection Program was a licensee performance deficiency warranting a significance evaluation. The inspectors assessed this finding using the SDP. The inspectors reviewed the examples of minor issues in IMC 0612, "Power Reactor Inspection Reports," Appendix E, "Examples of Minor Issues," and found one example related to this issue. Example 4k described a situation where a licensee had not followed requirements of its fire protection plan with respect to the control of transient combustible materials. In this example, the issue would be considered to be of more than minor significance if the identified transient combustibles were in a combustible free zone required for separation of redundant trains. In addition, consistent with the guidance in IMC 0612, Appendix B, "Issue Screening," the inspectors determined that this failure to follow Fire Protection Program procedural requirements could be reasonably viewed as a precursor to a significant event (i.e., a fire affecting more than one train of safe shutdown equipment). Specifically, the presence of transient combustible materials in a combustible free zone could reasonably result in degradation of the fire protection defense-in-depth elements in place to prevent fires from starting and mitigate the consequences of fires.

The inspectors performed a Phase 1 SDP review of this finding using the guidance provided in IMC 0609, Appendix F, "Fire Protection SDP." In Step 1.1, the inspectors

determined that this issue involved the finding category of "Fire Prevention and Administrative Controls." In Step 1.2, the inspectors referenced IMC 0609, Appendix F, Attachment 2, "Degradation Rating Guidance Specific to Various Fire Protection Program Elements," and assigned a "low degradation" rating to this finding involving the licensee's combustible controls program. The inspectors' conclusion was based on the fact that the items found in the Transient Combustible Free Zone would not be considered transient combustibles of significance. The attachment defines transient combustibles of significance as low flash point liquids (below 200ºF) and self-igniting combustibles (oily rags). In Step 1.3, the inspectors determined that this finding was a licensee performance deficiency of very low safety significance (Green) because the issue was assigned a "low degradation" rating.

Cross-Cutting Aspects

The inspectors concluded that the primary cause of this finding was related to the cross-cutting area of problem identification and resolution. Specifically, the licensee did not self-identify and correct this issue through its corrective action program prior to the inspectors' identification of these unattended transient combustible items in the plant. The inspectors concluded that the licensee missed an opportunity to identify and remove the transient combustible materials while implementing corrective actions for the previously inspector identified findings. Previous corrective actions did not include detailed walk downs of the plant's Transient Combustible Free Zones to locate and remove all transient combustible materials. (IMC 0305 P.1(a))

Enforcement

The Clinton Power Station Unit 1 Operating License (NPF-62), Section 2.F requires, in part, that the licensee implement and maintain in effect all provisions of the approved Fire Protection Program as described in the Final Safety Analysis Report as amended, and as approved in the Safety Evaluation Report (NUREG-0853), dated February 1982, and Supplement Numbers 1 through 8.

Clinton Power Station UFSAR, Appendix E, "Fire Protection Evaluation Report," Section 4.0, "Compliance with BTP [Branch Technical Position] APCSB 9.5-1, Appendix A, Plants Under Construction and Operating Plants," contains the overall program requirements of the licensee's Fire Protection Program. Paragraph C.2, "Instructions, Procedures, and Drawings" states, in part, that administrative controls that govern the Fire Protection Program should be prescribed by documented instructions, procedures, or drawings and should be accomplished in accordance with these documents. OP-AA-201-009, "Control of Transient Combustible Material," Revision 8 prescribes the licensee's administrative controls governing the control of transient combustible materials at Clinton Power Station. Step 4.2.1.7 of OP-AA-201-009 requires, in part, authorization from the Fire Marshall or designee in the form of a Transient Combustible Permit prior to staging or storing exposed Class A combustibles in a Transient Combustible Free Zone when the plant is in Mode 1, 2, or 3.

Contrary to the above, the licensee failed to follow OP-AA-201-009, Step 4.2.1.7, by not having an authorized Transient Combustible Permit for unattended Class A combustible items (a coiled rubber drain hose with a paper tag and a roll of foam insulation) that were found by the inspectors on top of ventilation filter units on the Control Building 751' elevation on November 25, 2008. Because of the very low safety significance, this

violation is being treated as a NCV consistent with Section VI.A, of the NRC Enforcement Policy **(NCV 05000461/2008005-01)**. The licensee entered this violation into its corrective action program as AR 00849731.

1R06 Flooding Protection Measures (71111.06)

.1 Internal Flooding

a. Inspection Scope

The inspectors reviewed selected risk important plant design features and licensee procedures intended to protect the plant and its safety-related equipment from internal flooding events. The inspectors reviewed flood analyses and design documents, including the UFSAR, engineering calculations, and abnormal operating procedures to identify licensee commitments. In addition, the inspectors reviewed licensee drawings to identify areas and equipment that may be affected by internal flooding caused by the failure or misalignment of nearby sources of water, such as the fire suppression or the circulating water systems. The inspectors also reviewed the licensee's corrective action documents with respect to past flood-related items identified in the corrective action program to verify the adequacy of the corrective actions. The inspectors performed a walkdown of the following plant areas to assess the adequacy of watertight doors and verify drains and sumps were clear of debris and were operable, and that the licensee complied with its commitments:

- Circulating Water Screen House
- Emergency Core Cooling System (ECCS) Pump Rooms

This inspection constituted one internal flooding inspection sample as defined in IP 71111.06.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review (71111.11Q)

a. Inspection Scope

The inspectors observed licensed operators during an annual simulator evaluation on October 6, 2008. The inspectors assessed the operators' response to the simulated events focusing on alarm response, command and control of crew activities, communication practices, procedural adherence, and implementation of Emergency Plan requirements. The inspectors also observed the post-training critique to assess the ability of licensee evaluators and operating crews to self-identify performance deficiencies. The crew's performance in these areas was compared to pre-established operator action expectations and successful critical task completion requirements.

This inspection constituted one quarterly licensed operator requalification inspection sample as defined in IP 71111.11.

b. Findings

No findings of significance were identified.

.2 Annual Operating Test Results (71111.11B)

a. Inspection Scope

The inspectors reviewed the overall pass/fail results of the individual Job Performance Measure operating tests and the simulator operating tests (required to be given per 10 CFR 55.59(a)(2)) administered by the licensee from November 2008 through December 2008 as part of the licensee's operator licensing requalification cycle. These results were compared to the thresholds established in IMC 0609, Appendix I, "Licensed Operator Requalification SDP." The evaluations were also performed to determine if the licensee effectively implemented operator requalification guidelines established in NUREG 1021, "Operator Licensing Examination Standards for Power Reactors," and IP 71111.11, "Licensed Operator Requalification Program." The documents reviewed during this inspection are listed in the Attachment.

This inspection constituted one biennial licensed operator requalification inspection sample as defined in IP 71111.11.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Maintenance Effectiveness Inspection

a. Inspection Scope

The inspectors evaluated the licensee's handling of selected degraded performance issues involving the following risk-significant structures, systems, and components (SSCs):

- Radiation Monitoring System
- Main Turbine Electro-hydraulic Control System
- Reactor Water Clean-up System

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the SSCs. Specifically, the inspectors independently verified the licensee's handling of SSC performance or condition problems in terms of:

- Appropriate work practices;
- Identifying and addressing common cause failures;
- Scoping of SSCs in accordance with 10 CFR 50.65(b);
- Characterizing SSC reliability issues;
- Tracking SSC unavailability;
- Trending key parameters (condition monitoring);
- 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification; and

- Appropriateness of performance criteria for SSC functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSC functions classified (a)(1).

In addition, the inspectors verified that problems associated with the effectiveness of plant maintenance were entered into the licensee's corrective action program with the appropriate characterization and significance. Selected action requests were reviewed to verify that corrective actions were appropriate and implemented as scheduled.

This inspection constituted three maintenance effectiveness inspection samples as defined in IP 71111.12.

b. Findings

(1) Maintenance Rule Scoping of Liquid Effluent Process Radiation Monitors

The inspectors reviewed equipment performance issues associated with radiation monitoring system instrumentation and found that Maintenance Rule evaluations were not being performed for liquid effluent process radiation monitor failures. The inspectors noted that liquid effluent process radiation monitors had not been included within the scope of the licensee's Maintenance Rule Monitoring Program and sufficient information or justification was not provided in the licensee's scoping determination documents to support the conclusion that was reached.

The inspectors noted that in accordance with 10 CFR 50.65(b)(2)(i), non-safety-related SSCs that are used in plant Emergency Operating Procedures (EOPs) are required to be included in the scope of the licensee's Maintenance Rule Monitoring Program. The inspectors reviewed the plant's EOPs and discovered that the entry condition for EOP-9, "Radioactivity Release Control," was any offsite liquid or gaseous release rate above the licensee's Emergency Plan Radiological Effluent "Alert" level. The inspectors reviewed EP-AA-1003, "Exelon Nuclear Radiological Emergency Plan Annex for Clinton Station," Revision 13, and found that one of the three Emergency Action Level threshold values under the Emergency Plan Radiological Effluent "Alert" level was a "valid reading on any effluent monitor > 200 times the high alarm setpoint established by a current radioactivity discharge permit for ≥ 15 minutes." The inspectors discussed this criterion with two licensed senior reactor operators at the plant (the Shift Operations Superintendent and a Shift Manager) to understand which liquid effluent monitors would be used by operators to evaluate this criterion since no specific monitors were listed in the Emergency Action Level Matrix. The following liquid effluent radiation monitors were identified:

- 0RIX-PR040 – Liquid Radwaste Discharge Process Radiation Monitor (currently not an active discharge pathway)
- 1RIX-PR036 – Plant Service Water Effluent Process Radiation Monitor
- 1RIX-PR037 – Component Cooling Water Process Radiation Monitor
- 1RIX-PR038 – Division 1 Shutdown Service Water Effluent Process Radiation Monitor
- 1RIX-PR039 – Division 2 Shutdown Service Water Effluent Process Radiation Monitor
- 1RIX-PR004 – Train A Fuel Pool Heat Exchanger Service Water Radiation Monitor

- 1RIX-PR005 – Train B Fuel Pool Heat Exchanger Service Water Radiation Monitor

The licensee wrote AR 00854497 to address questions raised by the inspectors regarding scoping of these liquid effluent process radiation monitors within its Maintenance Rule Monitoring Program. This issue is considered to be an Unresolved Item **(URI 05000461/2008005-02)** pending additional review.

No findings of significance were identified.

1R15 Operability Evaluations (71111.15)

.1 Routine Review of Operability Issues

a. Inspection Scope

The inspectors reviewed the following issues:

- AR 00734457, "Reactor Scram Resulting from Single Reactor Recirculation Loop" (Non-conforming Condition with UFSAR Chapter 15 Analysis)
- AR 00823308, "1SX001C Pump Discharge Check Valve Back Leakage Prevents Freeze Seal"
- AR 00845209, “Reactor Core Isolation Cooling Discharge Pipe Hanger in Contact with Make-up Condensate Header”
- AR 00836579, “Shutdown Service Water Pump Emergency Diesel Generator Load Sequence Time Delay Relay”
- AR 00834357, “Fuel Pool Cooling Pump IST [In-service Testing] Test Data Below Design Specification”

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors verified that the conditions did not render the associated equipment inoperable or result in an unrecognized increase in plant risk. When applicable, the inspectors verified that the licensee appropriately applied TS limitations, appropriately returned the affected equipment to an operable status, and reviewed the licensee’s evaluation of the issues with respect to the regulatory reporting requirements. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluation.

In addition, the inspectors verified that problems related to the operability of safety-related plant equipment were entered into the licensee’s corrective action program with the appropriate characterization and significance. Selected action requests were reviewed to verify that corrective actions were appropriate and implemented as scheduled.

This inspection constituted five operability evaluation inspection samples as defined in IP 71111.15.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications (71111.18)

.1 Temporary Modifications

a. Inspection Scope

The inspectors reviewed the following temporary plant modification:

- EC 371218, "Install Gag Device on 0VC12YB Damper in the Full Cold Position to Support Hydramotor Replacement"

The inspectors reviewed the temporary modification and the associated 10 CFR 50.59 screening/evaluation against applicable system design basis documents, including the UFSAR and the TS to verify whether applicable design basis requirements were satisfied. The inspectors reviewed the operator logs and interviewed engineering and operations department personnel to understand the impact that implementation of the temporary modification had on operability and availability of the affected plant equipment.

The inspectors also reviewed a sample of action requests relating to temporary modifications to verify that problems were entered into the licensee's corrective action program with the appropriate significance characterization and that corrective actions were appropriate.

This inspection constituted one temporary modification inspection sample as defined in IP 71111.18.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Routine Post-Maintenance Testing Inspection

a. Inspection Scope

The inspectors reviewed post-maintenance testing for the following activities to verify that procedures and test activities were adequate to ensure system operability and functional capability:

- Preventive maintenance on Train B ECCS Room Ventilation System Suction Damper 1VG06YB;
- Preventive maintenance on the 741’ Elevation Containment Personnel Airlock;
- Planned maintenance on the Division 1A Emergency Diesel Generator Sync-Check Relay 225-DG1KA;

- Replacement of compensator 1EH01S for Main Turbine Electro-Hydraulic Control Pump B;
- Planned maintenance on the Turbine Building Closed Cooling Water System Heat Exchanger 1WT01AA;
- Replacement of Main Turbine Electro-Hydraulic Control Pump B Relief Valve 1EH1S;
- Repair of Main Turbine Control Valve #1 electro-hydraulic control fluid leak;
- Replacement of Division 2 Emergency Diesel Generator Heat Exchanger expansion bellows with straight pipe; and
- Installation of Shutdown Service Water Vacuum Breaker Valves 1SX346A and 1SX348A.

The inspectors reviewed the scope of the work performed and evaluated the adequacy of the specified post-maintenance testing. The inspectors verified that the post-maintenance testing was performed in accordance with approved procedures; that the procedures contained clear acceptance criteria, which demonstrated operational readiness and that the acceptance criteria was met; that appropriate test instrumentation was used; the equipment was returned to its operational status following testing, and test documentation was properly evaluated.

In addition, the inspectors reviewed corrective action program documents associated with post-maintenance testing to verify that identified problems were entered into the licensee's corrective action program with the appropriate characterization. Selected action requests were reviewed to verify that the corrective actions were appropriate and implemented as scheduled.

This inspection constituted nine post-maintenance testing inspection samples as defined in IP 71111.19.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing (71111.22)

.1 Routine Surveillance Testing Inspection

a. Inspection Scope

The inspectors reviewed the test results for the following surveillance testing activities to determine whether risk significant systems and equipment were capable of performing their intended safety function and to verify that the testing was conducted in accordance with applicable procedural and TS requirements:

- CPS 9000.01D001, “Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet,” Section 8.9, "Reactor Coolant System [RCS] - Operational Leakage" (RCS Leakrate)
- CPS 9170.02, “Control Room HVAC Chill Water Valve Operability Test” (IST)

The inspectors observed selected portions of the test activities to verify that the testing was accomplished in accordance with plant procedures. The inspectors reviewed the

test methodology and documentation to verify that equipment performance was consistent with safety analysis and design basis assumptions, and that testing acceptance criteria were satisfied.

In addition, the inspectors verified that surveillance testing problems were entered into the licensee's corrective action program with the appropriate characterization and significance. Selected action requests were reviewed to verify that corrective actions were appropriate and implemented as scheduled.

This inspection constituted one IST and one RCS leakrate surveillance test for a total of two inspection samples as defined in IP 71111.22.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a full scale emergency preparedness drill on October 17, 2008, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. This drill was planned to be evaluated and was included in performance indicator data regarding drill and exercise performance. The inspectors observed emergency response operations in the Operations Simulator and Technical Support Center to determine whether the event classification, notifications, and protective action recommendations were performed in accordance with procedures. The inspectors also attended the licensee's drill critique to compare any inspector-observed weaknesses with those identified by the licensee's staff in order to evaluate the critique and to verify whether the licensee's staff was properly identifying weaknesses and entering them into the corrective action program.

This inspection constituted one emergency preparedness simulator-based training evolution inspection sample as defined in IP 71114.06.

b. Findings

No findings of significance were identified.

2. RADIATION PROTECTION

Cornerstone: Occupational Radiation Safety

2OS3 Radiation Monitoring Instrumentation and Protective Equipment 71121.03

.1 Inspection Planning and Identification of Instrumentation

a. Inspection Scope

The inspectors reviewed the licensee's UFSAR to identify applicable radiation monitors associated with measuring transient high and very high radiation areas, including those intended for remote emergency assessment. The inspectors identified the types of portable radiation detection instrumentation that were used for job coverage of high radiation area work, including instruments for underwater surveys, portable and fixed area radiation monitors that were used to provide radiological information in various plant areas, and continuous air monitors that were used to assess airborne radiological conditions and work areas with the potential for workers to receive a 50 millirem or greater committed effective dose equivalent (CEDE). Whole body counters that were used to monitor for internal exposure and those radiation detection instruments that were used to conduct surveys for the release of personnel and equipment from the radiologically controlled area (RCA), including contamination monitors and portal monitors, were also identified.

This inspection constituted two samples as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.2 Calibration and Testing of Radiation Monitoring Instrumentation

a. Inspection Scope

The inspectors reviewed radiological instrumentation to determine if it had been calibrated as required by the licensee's procedures, consistent with industry and regulatory standards. The inspectors also reviewed alarm set-points for selected instruments to determine whether they were established consistent with the UFSAR or TSs, as applicable, and with industry practices and regulatory guidance. Specifically, the inspectors reviewed calibration procedures and the most recent calibration records for the following radiation monitoring instrumentation and calibration equipment:

- Gamma 60/40
- Eberline PCM-1
- Eberline RO-2A
- RM-20 Lapel Air Sampler
- Eberline Fastscan Wholebody Counter

The inspectors determined what actions were taken when, during calibration or source checks, an instrument was found significantly out of calibration or exceeded as-found acceptance criteria. Should that occur, the inspectors determined whether the licensee's

actions would include a determination of the instruments' previous uses and the possible consequences of that use since the prior successful calibration. The inspectors also reviewed the results of the licensee's most recent 10 CFR Part 61 source term (radionuclide mix) evaluations to determine if the radiation sources that were used for instrument calibration and for instrument checks were representative of the plant source term.

The inspectors observed the licensee's use of the portable survey instrument calibration units, discussed calibrator output validation methods, and compared calibrator exposed readings with calculated/expected values. The inspectors evaluated compliance with licensee procedures while radiation protection (RP) personnel demonstrated the methods for performing source checks of portable survey instruments and source checks of personnel contamination and portal monitors.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.3 Problem Identification and Resolution

a. Inspection Scope

The inspectors reviewed licensee corrective action program documents and any Licensee Event Reports (LERs) or special reports that involved personnel contamination monitor alarms due to personnel internal exposures to determine whether identified problems were entered into the corrective action program for resolution.

While no internal exposure with a CEDE greater than 50 millirem occurred since the last inspection in this area, the inspectors reviewed the licensee's methods for internal dose assessment to determine if affected personnel would be properly monitored using calibrated equipment and if the data would be analyzed and exposures properly assessed.

The inspectors reviewed corrective action program reports related to exposure significant radiological incidents that involved radiation monitoring instrument deficiencies since the last inspection in this area, as applicable. Members of the RP staff were interviewed and corrective action documents were reviewed to determine whether follow-up activities were being conducted in an effective and timely manner commensurate with their importance to safety and risk based on the following:

- Initial problem identification, characterization, and tracking;
- Disposition of operability/reportability issues;
- Evaluation of safety significance/risk and priority for resolution;
- Identification of repetitive problems;
- Identification of contributing causes;
- Resolution of NCVs tracked in the corrective action system; and
- Identification and implementation of effective corrective actions.

The inspectors determined if the licensee's self-assessment and audit activities completed for the approximate 2-year period that preceded the inspection were identifying and addressing repetitive deficiencies or significant individual deficiencies in problem identification and resolution, as applicable.

This inspection constituted three samples as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.4 Radiation Protection Technician Instrument Use

a. Inspection Scope

The inspectors verified that calibrations for those survey instruments used to perform job coverage surveys and for those currently designated for use had not lapsed. The inspectors determined if response checks of portable survey instruments and checks of instruments used for unconditional release of materials and workers from the RCA were completed prior to instrument use, as required by the licensee's procedure. The inspectors also discussed instrument calibration methods and source response check practices with RP staff and observed staff demonstrate instrument source checks.

This inspection constituted one sample as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

.5 Self-Contained Breathing Apparatus Maintenance/Inspection and Emergency Response Staff Qualifications

a. Inspection Scope

The inspectors reviewed the status and surveillance records of self-contained breathing apparatus (SCBAs) that were staged in the plant and ready-for-use and evaluated the licensee's capabilities for refilling and transporting SCBA air bottles to-and-from the control room and operations support center during emergency conditions. The inspectors determined if control room staff and other emergency response and RP personnel were trained, respirator fit tested, and medically certified to use SCBAs, including personal bottle change-out. Additionally, the inspectors determined if personnel assigned to refill bottles were trained and qualified for that task.

The inspectors reviewed the qualification documentation for at least 50 percent of the onsite personnel who performed maintenance on manufacturer designated vital SCBA components. The inspectors also reviewed vital component maintenance records for three SCBA units that were designated as ready-for-use. The inspectors also evaluated, through record review and observations, if the required air cylinder hydrostatic testing was documented and current and if the Department of Transportation required retest air cylinder markings were in place for three randomly selected SCBA units and spare air bottles. The inspectors reviewed the onsite maintenance procedures governing vital

component work, as applicable, including those for the low-pressure alarm and pressure-demand air regulator. The inspectors reviewed the licensee's maintenance procedures and the SCBA manufacturer's recommended practices to determine if there were any inconsistencies between them. Additionally, the inspectors reviewed SCBA qualification records for numerous members of the licensee's radiological emergency teams to determine if a sufficient number of staff were qualified to fulfill emergency response positions, consistent with the licensee's emergency plan and the requirements of 10 CFR 50.47.

This inspection constituted two samples as defined in IP 71121.03-5.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Review of Submitted Quarterly Data

a. Inspection Scope

The inspectors performed a review of the data submitted by the licensee for the Third Quarter 2008 Performance Indicators for any obvious inconsistencies prior to its public release in accordance with IMC 0608, "Performance Indicator Program."

This inspection was not considered to be an inspection sample as defined in IP 71151.

b. Findings

No findings of significance were identified.

.2 Reactor Coolant System Leakage

a. Inspection Scope

The inspectors sampled licensee submittals for the RCS Leakage performance indicator from the fourth quarter of 2007 through the third quarter of 2008. To determine the accuracy of the performance indicator data reported during those periods, guidance contained in Nuclear Energy Institute Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, was used. The inspectors reviewed the licensee's RCS leakage tracking surveillance test data, TS requirements, and event reports for the period of October 2007 through September 2008, to validate the accuracy of the submittals. The inspectors also reviewed the licensee's corrective action program database to determine if any problems had been identified with the performance indicator data collected or transmitted for this indicator and none were identified.

This inspection constituted one RCS Leakage performance indicator verification inspection sample as defined in IP 71151.

b. Findings

No findings of significance were identified.

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 program at an appropriate threshold, that adequate attention was being given to timely corrective actions, and that adverse trends were identified and addressed. Some minor issues were entered into the licensee's corrective action program as a result of the inspectors' observations; however, they are not discussed in this report.

This inspection was not considered to be an inspection sample as defined in IP 71152.

b. Findings

No findings of significance were identified.

.2 Annual In-Depth Review Sample

a. Inspection Scope

The inspectors selected the following action request for in-depth review:

- Apparent Cause Evaluation Report, "Negative Trend in Department Clock Resets" (AR 00796676)

The inspectors verified the following attributes during their review of the licensee's corrective actions for the above action request and other related action requests:

- Complete and accurate identification of the problem in a timely manner commensurate with its safety significance and ease of discovery;
- Consideration of the extent of condition, generic implications, common cause and previous occurrences;
- Evaluation and disposition of operability/reportability issues;
- Classification and prioritization of the resolution of the problem, commensurate with safety significance;
- Identification of the root and contributing causes of the problem; and
- Identification of corrective actions, which were appropriately focused to correct the problem.

The inspectors discussed the corrective actions and associated action request evaluations with licensee personnel.

This inspection constituted one annual in-depth review sample as defined in IP 71152.

b. Findings and Observations

No findings of significance were identified.

.3 Semi-Annual Trend Review

a. Inspection Scope

The inspectors reviewed repetitive or closely related issues documented in the licensee's corrective action program to look for trends not previously identified. The inspectors also reviewed action requests regarding licensee-identified potential trends to verify that corrective actions were effective in addressing the trends and implemented in a timely manner commensurate with the significance.

This inspection constituted one semi-annual trend review inspection sample as defined in IP 71152.

b. Assessment and Observations

(1) Overall Effectiveness of Trending Program

The inspectors determined that the licensee's trending program was generally effective at identifying, monitoring, and correcting adverse performance trends. The inspectors did not identify any adverse trends that were not already identified by the licensee and entered into the licensee's corrective action program. Therefore, no findings of significance were identified.

The licensee recently implemented several improvements to its quarterly corrective action program trend coding and analysis reports to address previously identified weaknesses with the trending program. For a discussion of previously identified trending program weaknesses refer to Section 4OA2.2 of NRC Inspection Report 05000461/2008003.

Fundamental corrective action program trending data is evaluated on a site level basis in addition to a department level basis. This allows for the identification of potential adverse trends across various departments at the site. In addition, the licensee now reviews trending data from six months when analyzing potential trends instead of only three months. Additional data over a longer period of time may highlight trends that might otherwise go undetected. Most notably, the trend coding and analysis reports have been improved by documenting analysis of the trending data with justifications provided for conclusions made based on the analysis of the trending data. The inspectors noted that with a few exceptions, additional detail in the analysis would further improve the trend coding and analysis reports. The inspectors also questioned the lack of a quarterly trend coding and analysis report for the Security Department. Apparently, the Security Department has been exempted from trending corrective action program data to identify and implement corrective actions for adverse performance trends.

The inspectors reviewed several common cause evaluations performed by the licensee to evaluate potential adverse performance trends. In general, these common cause evaluations were performed well and identified appropriate corrective actions to address adverse trends that were identified. By exception, the inspectors found one common

cause evaluation with some noteworthy weaknesses that were not identified and addressed during licensee management review of the evaluation.

(2) Review of AR 00792139, "Adverse Trend Identified in Operations Documents"

The inspectors reviewed a common cause evaluation for an adverse trend identified in operations process documents that was performed by the Operations Department Corrective Action Program Coordinator (CAPCO). The licensee identified 301 issues from action requests during the 18-month period from January 1, 2007 through June 30, 2008 that were trend coded under the category of "operations process documents." Of these, 123 action requests were coded as "document preparation" issues and 174 were coded as "document quality" issues. The 174 document quality issues were selected by the CAPCO for evaluation as a potential adverse trend. The 123 document preparation issues were not evaluated to determine whether an adverse trend existed and no justification was documented in the common cause evaluation. In response to the inspectors' questions, the CAPCO stated that the 123 document preparation issues were too minor to evaluate for a trend.

There were four cause categories identified for the 174 document quality issues reviewed. The largest number was attributed to factual inaccuracies, including equipment identification number errors, noun name errors, operation of components in the wrong sequence, and failures to change procedures when completing plant system modifications. The CAPCO concluded that the 32 issues attributed to factual inaccuracies during the 18-month period "did not indicate a large problem with procedure quality," but no justification for this conclusion was provided in the common cause evaluation. In response to the inspectors' questions, the CAPCO stated that there were not very many issues and they were considered to be minor errors. However, he could not provide any basis for his conclusion that the issues were minor errors because no qualitative or quantitative criteria had been established and a detailed review of the 32 issues was not performed to assess their impact on plant operations.

The category with the next largest number of issues was primarily attributed to incomplete procedures due to missing steps. The CAPCO determined that most of these were instances where operator knowledge was previously used to compensate for incomplete procedures prior to higher standards for procedure adherence being implemented at the plant. The CAPCO concluded that no corrective action was necessary to address this cause, "...as each deficiency was fixed by the individual issue report, and this type of issue can only be found during use in the field." The inspectors noted that while it is positive that plant operators are identifying missing steps and implementing temporary procedure changes before continuing with the procedures, this approach does not proactively identify procedure quality issues before unnecessarily challenging operators while they are using the procedures in the field. This approach creates an increased potential for errors as well as impacts the timely execution of field work, potentially leading to longer equipment unavailability times. The inspectors challenged the licensee to consider improving existing methods (e.g., procedure walk downs during the work planning process) to identify and correct these procedure quality issues prior to operators actually using the procedures.

The next largest number was attributed to typographical errors, primarily equipment noun names and identification numbers. It was unclear how the licensee distinguished between equipment identification number errors that were categorized as "factual

inaccuracies" and those that were categorized as "typographical errors" because there was no discussion. In response to the inspectors' questions, the Operations Support Manager stated that in accordance with HU-AA-104-101, "Procedure Use and Adherence," equipment identification number errors could not be considered typographical errors. The inspectors therefore questioned the validity of the licensee's review of procedure errors categorized as "factual inaccuracies," since many equipment identification number errors may have been incorrectly categorized as "typographical errors."

The final number was attributed to procedure sequence issues, where the sequence of procedure steps as written was inappropriate or needed to be changed due to existing plant conditions. The CAPCO noted that over the past two years, the expectation has been that if the procedure cannot be performed as written, the job is stopped, an issue report is written, and a temporary change to the procedure is processed and approved before the job is continued. The CAPCO concluded that since there were only 14 of these procedure sequence issues over the 18-month period, this was not considered to be an adverse trend. However, he could not provide any basis for his conclusion because no qualitative or quantitative criteria had been established and a detailed review of the 14 issues was not performed to assess their impact on plant operations. The inspectors noted that each time a job is stopped pending a temporary procedure change, plant equipment may become unavailable for an extended period of time impacting plant risk or creating other challenges for plant operators.

4OA3 Follow-up of Events and Notices of Enforcement Discretion (71153)

.1 (Closed) LER 05000461/2007-001-00, "Inadequate Consideration of Vortexing in Design Calculations"

(Closed) LER 05000461/2007-001-01, "Inadequate Consideration of Vortexing in Design Calculations," Supplement 1

(Closed) Violation (VIO) 05000461/2006011-01, "High Pressure Core Spray System Operability Questioned Due to Vortexing"

On February 7, 2007, the NRC issued a Notice of Violation associated with a White inspection finding for the licensee's failure to use an appropriate method for calculating the minimum elevation of water in the reactor core isolation cooling (RCIC) water storage tank above the high pressure core spray (HPCS) pump suction line to preclude vortex formation and air entrainment in the pump's suction. The inspectors identified that this condition could have resulted in significant air entrainment in the suction of the HPCS pump upon suction transfer from the RCIC storage tank to the suppression pool with the subsequent loss of the pump's safety function. The licensee reported this event as a condition that could have prevented fulfillment of the HPCS system safety function in accordance with 10 CFR 50.73(a)(2)(v)(D). The licensee submitted Supplement 1 to the original LER to update completed corrective actions for the event. The performance issue related to this event was discussed in NRC Inspection Reports 05000461/2006011 and 05000461/2007006. The inspectors documented the results of a supplemental inspection to review the licensee's cause evaluation and corrective actions taken to address the White inspection finding in NRC Inspection Report 05000461/2007009. The inspectors determined that the information provided in LER 05000461/2007-001-00 and LER 05000461/2007-001-01 did not change the conclusions of the previous reviews.

LER 05000461/2007-001-00 and LER 05000461/2007-001-01 are closed. VIO 05000461/2006011-01 is also closed.

This inspection constituted one event follow-up inspection sample as defined in IP 71153.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted the following observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours:

- Multiple tours of operations within the security alarm stations,
- Tours of selected security officer response posts,
- Direct observation of personnel entry screening operations within the plant's Main Access Facility, and
- Security force shift turnover activities.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

.2 Implementation of Temporary Instruction (TI) 2515/176, "Emergency Diesel Generator Technical Specification Surveillance Requirements Regarding Endurance and Margin Testing"

a. Inspection Scope

The objective of TI 2515/176 was to gather information to assess the adequacy of nuclear power plant emergency diesel generator endurance and margin testing as prescribed in plant specific TS. The inspectors reviewed the licensee's TS, procedures, and calculations and interviewed licensee personnel to complete the TI. The information gathered for this TI was forwarded to the Office of Nuclear Reactor Regulation for further review and evaluation on December 17, 2008. This TI is complete at Clinton Power Station; however, this TI 2515/176 will not expire until August 31, 2009. Additional information may be required after review by the Office of Nuclear Reactor Regulation. Therefore, TI 2515/176 remains open.

b. Findings

No findings of significance were identified.

4OA6 Management Meetings

.1 Resident Inspectors' Exit Meeting

The inspectors presented the inspection results to Mr. F. Kearney and other members of the licensee's staff at the conclusion of the inspection on January 15, 2009. The licensee acknowledged the findings presented. Proprietary information was examined during this inspection, but is not specifically discussed in this report.

.2 Interim Exit Meetings

Interim exit meetings were conducted for:

- Radiation Monitoring Instrumentation and Protective Equipment Program Inspection with Mr. F. Kearney and other members of the licensee's staff on October 24, 2008. The inspector confirmed that none of the potential report input discussed was considered proprietary.

- Temporary Instruction 2515/176, "Emergency Diesel Generator Technical Specification Surveillance Requirements Regarding Endurance and Margin Testing," with Mr. D Kemper and other members of the licensee's staff by telephone on November 25, 2008. The inspector confirmed that none of the potential report input discussed was considered proprietary.

- Licensed Operator Requalification Training Program Annual Inspection Results with Mr. R. Bedford by telephone on December 19, 2008. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Bedford, Operations Training Requalification Supervisor
T. Bostwick, Corrective Action Program Administrator
T. Chalmers, Shift Operations Superintendent
T. Conner, Operations Director
A. Darelius, Emergency Planning Manager
S. Deal, Fire Marshall
J. Domitrovich, Maintenance Director
R. Frantz, Regulatory Assurance
J. Gackstetter, Training Director
T. Husted, System Engineering
J. Icard, Maintenance Rule Program Engineer
M. Kanavos, Plant Manager
F. Kearney, Site Vice President
D. Kemper, Regulatory Assurance Manager
K. Leffel, Operations Support Manager
J. Stovall, Radiation Protection Manager
P. Telthorst, Electrical Engineering Systems Supervisor
C. VanDenburgh, Nuclear Oversight Manager
R. Weber, Engineering Director
C. Williamson, Security Manager

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened

05000461/2008005-01	NCV	Failure to Control Transient Combustible Materials in Accordance with Fire Protection Program (Section 1R05.1)
05000461/2008005-02	URI	Maintenance Rule Scoping Question for Liquid Effluent Process Radiation Monitors (Section 1R12.1)

Closed

05000461/2008005-01	NCV	Failure to Control Transient Combustible Materials in Accordance with Fire Protection Program (Section 1R05.1)
05000461/2007-001-00	LER	Inadequate Consideration of Vortexing in Design Calculations (Section 4OA3.1)
05000461/2007-001-01	LER	Inadequate Consideration of Vortexing in Design Calculations, Supplement 1 (Section 4OA3.1)
05000461/2006011-01	VIO	High Pressure Core Spray System Operability Questioned Due to Vortexing (Section 4OA3.1)

Discussed

2515/176	TI	Emergency Diesel Generator Technical Specification Surveillance Requirements Regarding Endurance and Margin Testing (Section 4OA5.2)

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 Protection

- CPS 1860.01, "Cold Weather Operation," Revision 7,
- CPS 1860.01C001, "Operations Department Cold Weather Preparations Checklist," Revision 6
- CPS 1860.01C003, "Cold Weather Heater and Heat Trace Operability Checklist," Revision 0e,
- WC-AA-107, "Seasonal Readiness Re-Write," Revision 5
- Work Order 01083883-01, "Clean and Check Panel and Megger Heaters," August 25, 2008
- Work Order 01029466-01, "Initiate Cold Weather Restorations IAW 1860.01," March 25, 2008
- AR 00830314, "Site Winter Readiness Actions"
- AR 00845249, "Discrepancy in CPS 1860.01 Cold Weather"

1R04 Equipment Alignment

- CPS UFSAR, "Figure 6.2-143, LPCS P&ID with Outside of Containment Boundary," Jan 2001
- CPS UFSAR, "Figure 6.2-143, LPCS P&ID with Outside of Containment Boundary," Oct 2002
- CPS3312.01V001, "Residual Heat Removal Valve Lineup," Revision 16b
- CPS3313.01V001, "LPCS Valve Lineup," Revision 13a
- IR838472, "Correctness of LP Sys Locked Closed Valves in CLOC," Oct 31, 2008
- M05-1073, Sheet 1, "P&ID LPCS (LP)," Revision AG
- OP-AA-108-103, "Locked Equipment Program," Revision 2
- OP-AA-108-103, "Locked Equipment Program," Revision 2
- USAR Figure 6.2-143, "Low-Pressure Core Spray P&ID with Outside of Containment Boundary,"
- CPS 3506.01V001, "Diesel Generator and Support Systems Valve Line Up," Revision 13A
- CPS 3506.01P003, "Division 3 Diesel Generator Operations," Revision 2
- Drawing M05-1035 Sheets 1-8, "Diesel Aux System Starting Air Exhaust and Combustion System," Revision AE
- CPS 3402.01, "Control Room HVAC VC," Revision 25
- CPS 3402.01V001, "Control Room HVAC Valve Lineup," Revision16E
- CPS 3402.01V002, "Control Room HVAC Instrumentation Valve Lineup," Revision 6
- CPS 3402.01P001, "Control Room HVAC Train Shifting," Revision 0
- AR 810290, "Enhancement to CPS 3402.01 Main Control Room Ventilation"
- Drawing M05-1102 Sheet 001 Rev. U, "Main Control Room Ventilation"
- CPS 3506.01, "Diesel Generator and Support Systems," Revision 33,
- CPS 3506.01V001, "Diesel Generator and Support Systems Valve Line Up," Revision 13A
- CPS 3506.01P003, "Division 3 Diesel Generator Operations," Revision 2
- Drawing M05-1035 Sheets 1-8, "Diesel Aux System Starting Air Exhaust and Combustion System," Revision AE

1R05 Fire Protection

- CPS FP Report - (M01-1105, Sheet 5 of 7), "Figure 2 – Cable Tray General Arrangement Aux Fuel Bldg & Containment Basement Floor Plan – EL.707'-0" & EL.712'-0"," Revision 8

- CPS FP Report, “Figure FP-2a – Fire Zone Boundaries Aux Fuel Bldg & Containment Basement Floor Plan – EL.707’-0” & EL.712’-0”,” Revision 10
- CPS UFSAR, Appendix E, “FP Evaluation Report – CPS Unit 1,” Revision 11
- E26-1000-01A-FP, “Fire Det Sys Aux Bldg Basement Floor Plan EL.707’-6” Area 1,” Revision B
- E26-1000-02A-FP, “Fire Det Sys Aux Bldg Basement Floor Plan EL.707’-6” Area 2,” Revision A
- E26-1000-03A-FP, “Fire Det Sys Aux Bldg Basement Floor Plan EL.707’-6” Area 3,” Revision A
- E28-1000-01A-FP, “Fire Det Sys Fuel Bldg Basement Floor Plan EL.712’-0” Area 1,” Revision A
- E28-1000-03A-FP, “Fire Det Sys Fuel Bldg Basement Floor Plan EL.712’-0” Area 3,” Revision A
- ECN No. 30681, “FP Sys - Install Five New Smoke Detectors In Fire Zone A-1a,” Oct 5, 1998
- NFPA 72, Section 5-3.4.1.2, “Location & Spacing – General,” 1996 Edition
- Vendor Drawing 32-1490, “Auto Sprinkler FP Sys Aux Bldg - Wet Sys #33,” Revision 44
- Vendor Drawing 32-1505, “Auto Sprinkler FP Sys Aux Bldg - Wet Sys #33,” Revision 0
- Vendor Manual NE6217/PO706770, “Cerberus Pyrotronics Base Models DB-3S/X3RS”
- WO868123 01, “OP 9601.10C001VI Insp Spray/Sprinkler Sys,” Aug 23, 2007
- Clinton Power Station Updated Final Safety Analysis Report, Appendix E, “Fire Protection Evaluation Report – Clinton Power Station Unit 1,” Revision 11
- OP-AA-201-009, “Control of Transient Combustible Material,” Revision 8
- Drawing M26-1001-05A-BC Rev. E; “Auxiliary Building EL. 737’-0” Area 5 Walls & Floors – Barrier Classification”
- Drawing M01-1106 Sheet 5 Rev. 8; “Figure FP-3a Fire Zone Boundaries Auxiliary Fuel Building and Containment Grade Floor Plan-EL. 737’-0” ”
- CPS 1893.04M103, “707 Auxiliary: RCIC Pump Room Prefire Plan,” Revision 4
- Clinton Power Station Updated Final Safety Analysis Report, Appendix E, “Fire Protection Evaluation Report – Clinton Power Station Unit 1,” Revision 11
- OP-AA-201-009, “Control of Transient Combustible Material,” Revision 8
- AR 00849731, “NRC Identified Issues During Plant Walk Down”
- AR 00855768, “Legacy Material Found on Intrusive Walk Down”
- Quick Human Performance Investigation (AR 00849731), “NRC Identified Material Located in a Transient Combustible Free Zone (TCFZ) During Plant Walkdown”

1R06 Flood Protection Measures

- CPS 4304.01, “Flooding,” Revision 4e
- CPS 3113.01, “Circulating Water System,” Revision 34c
- EP-AA-1003, “CPS Emergency Plan Annex,” Revision 13

1R11 Licensed Operator Requalification Program

- HU-AA-1211, “Briefs,” Revision 3
- HU-AA-1081-F-05, “Functional Area and Cross-Functional Fundamentals,” Revision 2
- TQ-AA-150-F06, “Simulator Evaluation Form ,” Revision 1
- TQ-JA-150-08, “Simulator Examination Briefing,” Revision 0
- CPS 4402.01 Sheet 1, “EOP-6 Primary Containment Control,” Revision 28
- EP-AA-1003, “Exelon Nuclear Radiological Emergency Plan Annex for Clinton Station,” Revision 13
- Requalification examination results/Calendar Year 2008

1R12 Maintenance Effectiveness

- CPS 3105.02, “Main EHC Hydraulic Power Unit,” Revision 018F
- Work Order 00947816, “Main EH Pump 1EH01PB Inspection/Replacement/Overhaul,” September 2, 2008
- Work Order 01157072, “1EH01PB: Unexpected MCR Annunciator 501763B trouble EHC fluid,” October 22, 2008
- AR 00808900, “IR For System Manager to Evaluate Main EHC Level Decrease”
- AR 00812938, “1C85D002PB Bypass EHC Pump – B Pressure Cycling Periodically”
- AR 00814506, “Main EHC #5 Accumulator Piston is Leaking By”
- AR 00814513, “Main EHC Pump ‘B’ Repair”
- AR 00819159, “Approx 15 GAL of EHC Fluid Drained from TB TF Oil Separator”
- AR 00826895, “1EH02P Attempt to Make Up to Main EHC Reservoir Unsuccessful”
- AR 00831152, “Compensator Issued From Stores Not Refurbished”
- ER-AA-310-1001, “Maintenance Rule – Scoping,” Revision 3
- Maintenance Rule Expert Panel Meeting Minutes, December 11, 2008
- Maintenance Rule Scoping Document, "Area Radiation Monitoring and Process Radiation Monitoring Systems," October 20, 2008
- Maintenance Rule Reliability Data for Area Radiation Monitoring and Process Radiation Monitoring Systems, October 20, 2008
- AR 00854497, “NRC Question on AR/PR and Maintenance Rule”
- CPS 4406.01, “Emergency Operating Procedure EOP-9 - Radioactivity Release Control,” Revision 28
- EP-AA-1003, “Exelon Nuclear Radiological Emergency Plan Annex for Clinton Station,” Revision 13

1R15 Operability Evaluations

- RM Documentation NO. CL-SURV-02, “Risk Analysis for Missed Surveillance,” July 16, 2008
- AR 00797055, “FC Components Incorrectly Removed from IST Program”
- AR 00805277, “1FC01AB FC Heat Exchanger Inspection Per PCM Template”
- AR 00834357, “FC Pump IST Test Data Below Design Specification”
- AR 00737322, “CC Leakage Increase After Aligning CC to ‘B’ FC HX”
- Design Analysis No. 01FC25, “FC HX Performance,” Revision 2C
- AR 00836579, “1AP07ED-2-SX1PA Time Delay Relay As-Found Testing Unsat”
- AR 00847882, “IR 836579 1AP07ED-2-SX1PA Time Delay Relay As-Found Testing”
- Work Order 01019662-04, “Test Protective Relays 1AP07ED/1SX01PA,” October 29, 2008
- AR 00845209, “NRC Identified Pipe Hangar Contacting MC Pipe:
- Drawing M09-1001 Sheet 001 Rev. 6, “Component Support Installation Tolerances”
- Drawing M09-1001N Sheet 013 Rev. R, “Component Support Installation Tolerances”
- Drawing M-1RI08013R Sheet 1 Rev. B, “Loads & Components Total Weight Changed”
- Drawing M-1MC05011R Sheet 1 Rev. B, “Loads Changed and Added Reference Drawings”
- Drawing M06-1079 Sheet 2 Rev. AD, “Reactor Core Isolation Cooling Piping”
- Drawing M06-1042 Sheet 8 Rev. R, “Make-Up Condensate Storage Piping”
- AR 00736326, “NCV 2007008-04: RHR Pipe Support Calculation Deficiencies”
- Operations Technical Decision Maker (AR 00807670), “No Evaluation for February 2008 Scram from One Reactor Recirculation Pump Not Per UFSAR,” October 21, 2008
- Clinton Power Station Updated Final Safety Analysis Report, Chapter 15, “Accident Analyses,” Revision 11
- AR 00823308, “1SX001C Pump Discharge Check Valve Back Leakage Prevents Freeze Seal”

1R18 Plant Modifications

- AR654350, "0TICVC133 Controller for Misc Rooms Not Controlling Temp," Jul 27, 2007
- AR756912, "0TICVC139 Received MCR Annun 5052-8J High Humidity Cntl," Mar 31, 2008
- AR811397, "Hydramotor Not Shipped in Time to Support Scheduled Work," Aug 27, 2008
- B 3.7.4, "Control Room Air Conditioning Sys," Revision 0
- CC-AA-112, "Temporary Configuration Changes," Revision 12
- EC366984, "Evaluate T-Mod to Secure the 0VC18YB & 0VC17YB Modulating Dampers in the Closed Position," Revision 0
- EC371218, "Secure the 0VC12YB Damper in the Closed Position (Full Cold Deck Air Flow) WO1051957," Revision 0
- M05-1102, Sheet 3, "P&ID Control Room HVAC (VC)," Revision M
- M05-1102, Sheet 4, "P&ID Control Room HVAC (VC)," Revision M
- M05-1105, Sheet 1, "P&ID Control Room HVAC (VC)," Revision U
- M05-1105, Sheet 2, "P&ID Control Room HVAC (VC)," Revision J
- Op Eval # 170564, "Failed Damper 0VC15YA Hydramotor 0TZVC036;" Revision 0
- T.S. 3.7.4, "Control Room Air Conditioning Sys," Amendment No. 95 & 169
- WR246112, "0TICVC133 Controller for Misc Rooms Not Controlling Temp," Jul 31, 2007
- WO1051957 02, "0TICVC133: Controller for Misc Rooms Not Controlling Temp," Oct 17, 2008
- WO1051957 05, "EM - 0TZVC133 Not Controlling Temp In Misc Rooms," Apr 17, 2008
- WO1051957 06, "EM PMT - 0TZVC133," Apr 18, 2008
- WO1051957 07, "IM Tune Misc Rooms Temperature Control Loop," Oct 24, 2008
- WO1051957 08, "OP Verify 800' Misc Office Space Temp Is Acceptable," Oct 24, 2008
- WO1051957 09, "EM Remove Actuator 0TZ-VC133 For Offsite Refurbishment," Oct 9, 2008
- WO1051957 11, "MM Install Gagging Device to Support Operation 0VC12YB," Jul 18, 2008
- WO1051957 14, "EM Bench Test Replacement Hydramotor from Stores 0TZVC133," Oct 9, 2008
- WO1051957 15, "MM Remove Gagging Device to Support Operation 0VC12YB," Oct 14, 2008
- WO1051957 16, "EM Install Rebuilt Hydramotor 0TZVC133/0VC12YB," Oct 14, 2008
- WO1051957 17, "EM Stroke 0TZVC133 for Calibration & PMT," Oct 14, 2008

1R19 Post-Maintenance Testing

- Work Order 00968830, "PMT, Stroke Hydramotor 1FZVG108F Damper 1VG06YB," August 29, 2008
- Work Order 01025774-02, "PMT, Stroke Hydramotor 1FZVG108F Damper 1VG06YB," November 12, 2008
- MA-AA-725-561, "Hydramotor Actuator – Model AH95, NH95, and NH96 Preventative Maintenance," Revision 5
- AR 00844142, "0VG01SB: Ink Pen Found,"
- AR 00844301, "0FZVG103B Travel Limit Switch Not Actuated"
- CPS 3506.01P001, "Division 1 Diesel Generator Operations," Revision 2
- Work Order 0101947803, "OP PMT Sync Division 1 EDG to Verify Sync-Check Relay," October 3, 2008
- AR 00766294, "Scheduled Work Not Performed: 1EH01PB Pump Replacement"
- Work Order 01157072, "1EH01PB: Unexpected MCR ANN. 501763B Trouble EHC Fluid," October 17, 2008
- AR 00831509, "Unable to Set Lift Pressure on Main EHC B Pump Relief Valve"
- Work Order 01176899, "Unable to Set Lift Pressure on Main EHC B Pump Relief Valve," October 17, 2008
- CPS 3204.01, "Turbine Building Closed Cooling Water," Revision 11

- ER-AA-340-2000, “Balance-Of-Plant Heat Exchanger Inspection, Testing, and Maintenance Guide,” Revision 3
- Work Order 00846028, “Inspect/Clean Heat Exchanger, Hydrolance – TCCCW HX 1A,” November 6, 2008
- Work Order 01170197-02, “1TGCV1: Leaking FAS Flex Hose Connection,” December 6, 2008
- AR 00814838, “EHC Fluid Sheen on Floor Inside TB Bioshield”
- AR 00820902, “EHC Fluid Leak Identified on 1TGCV1 FAS Fitting”
- AR 00853219, “Dose Estimate Exceeded on CV1 Repairs”
- CPS 3105.02P001, “Removal/Restoration of MSV, CV, and CIV’s,” Revision 2a
- EC 358900 Rev. 4, “Installation of Vacuum Breakers 1SX346A and 1SX348A,” September 13, 2008
- Work Order 01149362-03, “OP PMT for 1SX346A/348A Vacuum Breakers,” October 1, 2008
- Work Order 01140139-02, “Lubricate & Inspect Personnel Airlock 741’ Elevation,” November 19, 2008
- CPS 9861.03D002, “Containment Airlock Seal and Shaft Seal Leak Rate Test Data Sheet, “Revision 25b
- Work Order 01172498, “Replacement of Division 2 Expansion Joints 1SX01MB, 1SX02MB, 1SX03MB, and 1SX04MB with Carbon Steel Pipe”
- Engineering Change 364758, “Replacement of Division 2 Expansion Joints 1SX01MB, 1SX02MB, 1SX03MB, and 1SX04MB with Carbon Steel Pipe,” Revision 1
- AR 00857694, “Division 2 Diesel Generator Cooling Water Flow Discrepancy Post Bellows Modification”

1R22 Surveillance Testing

- CPS 9170.02, “Control Room HVAC Chilled Water Valve Operability Test,” Revision 31c
- CPS 9170.02D001, “VC Chilled Water Valve Operability Data Sheet,” Revision 29c
- AR 00834897, ”0VC022B Hesitates While Stroking Open”
- AR 00835021, “Enhancement to CPS 9170.02D001”
- Clinton Power Station Technical Specifications
- CPS 9000.01D001, “Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet,” Revision 52a

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

- ACE 814578, ”AR016 Alarmed While Loading Cask with Radioactive Material,” dated September 5, 2008
- AR 569198, “P1H-3 Instrumentation,” dated September 28, 2007
- AR 826329, “Sea Van Container Discovered With Water Inside,” dated October 3, 2008
- AR 832604, “Missing Portable Survey Instrument,” dated October 10, 2008
- AT 510525, “Check-in Self-Assessment Report-Radiation Monitoring Instrumentation Power Labs Implementation,” dated July 21, 2006
- CPS 7410.73, “Operation of the Technical Support Center Continuous Air Monitor,” Revision 4
- CPS 7410.75, “Local Operation of AR/PR Monitors,” Revision 23f
- CPS 7910.75, “Quarterly Source Checks/Channel Checks of Non-Technical Specification Continuous Air Monitor,” Revision 5c
- CPS 7910.90, “Calibration of Fastscan Whole Body Counter,” Revision 4b
- CPS 7910.90F001, “Annual Fastscan Body Counter Calibration,” dated September 24, 2008
- CPS 7911.03, “Calibration and Operation of Model 149 Neutron Source,” Revision 7
- CPS 7911.04, “Calibration of In-Air Gamma Sources,” dated March 23, 1992
- CPS 7911.06, “Calibration of Eberline FH-60 G-L and 612 Probe,” Revision 0a
- CPS 7911.08, “Calibration of Tennelec LB5100,” Revision 4a

- CPS 7911.09, “Calibration of the Model 81 Beam Calibrator,” Revision 1a
- CPS 7911.12, “Calibration of the MS-2/MS-3,” Revision 2
- CPS 7911.13, “Calibration of RO-2, RO-2A and RO-2O,” Revision 9
- CPS 7911.13D001, “RO-2A Calibration Data Sheet Serial Number 1838,” dated November 19, 2008
- CPS 7911.14, “Calibration of RO-7,” Revision 2a
- CPS 7911.17, “Calibration of Eberline E-520,” Revision 6
- CPS 7911.18, “Calibration of Teletector,” Revision 7
- CPS 7911.21, “Calibration of RM-14 and RM-20 Count-Rate Meters,” Revision 6
- CPS 7911.34, “Calibration of Lapel Air Sampler,” Revision 2b
- CPS 7911.34D001, “Lapel Air Sampler Calibration Serial Number 512,” dated June 30, 2008
- CPS 7911.34D001, “Lapel Air Sampler Calibration Serial Number 749,” dated June 30, 2008
- CPS 7911.34D001, “Lapel Air Sampler Calibration Serial Number 761,” dated June 30, 2008
- CPS 7911.34D001, “Lapel Air Sampler Calibration Serial Number 799,” dated June 30, 2008
- CPS 7911.53, “Calibration of PCM-2,” Revision 0a
- CPS 2911.48, “Calibration of the Gamma-60/40 Portal Monitor,” Revision 2a
- CPS 7911.52, “Calibration of PCM-1,” Revision 0a
- CPS 7911.53, “Calibration of PCM-2,” Revision 0a
- CPS 9432.62, “Containment Building Fuel Transfer Pool Ventilation Plenum Radiation 1RIX-PR008A (B,C,D) “Channel Calibration,” Revision 41
- CPS 9437.65, “Containment/Drywell High Range Gamma Monitor Channel Calibration,” Revision 33c
- CPS 9437.67, “Area Radiation Monitors Channel Calibration,” Revision 33c
- IR 808649, “Broken Doors on Bristol Air Compressor,” dated August 15, 2008
- IR 835067, “NRC Observation on Use of Manufacturers Manual,” dated October 23, 2008
- LS-AA-126-1001, “Focused Area Self Assessment-Radiation Monitoring Instrumentation and Protective Equipment,” dated August 19, 2008
- RP-CL-751, “Calibration of the Radeco H-809, Hd-29, and Eberline RAS-1,” Revision 0
- RP-CL-825-101, “Clinton Power Station Maintenance and Care of Respiratory Protective Equipment,” Revision 10
- WO 730685,“Replace Geiger-Mueller Tube and Verify Power Supply Voltages,” dated November 14, 2007
- WO 812188, “Replace Geiger-Mueller Tube and Verify Power Supply Voltages,” dated November 2, 2007
- WO 838738, “Containment/Drywell High Range Gamma Monitor Source Check,” dated January 3, 2008
- WO 866653, “Containment/Drywell High Range Gamma Monitor Source Interlock Test,” dated August 7, 2008
- WO 869405, “Spike on TIP Drive Mechanisms Area Monitor,” dated February 6, 2007
- WO 910595, “Instrument Maintenance CPS 9437.65 Operational Check,” dated January 17, 2008
- WO 1088576, “Out of Tolerance As-Found Data,” dated December 13, 2007
- Certificate of Calibration 10473411, “Eberline RO-2 Serial Number 2376,” dated November 9, 2007
- Certificate of Calibration 10473411, “Eberline RO-2 Serial Number 1401,” dated November 20, 2007
- NUPIC Audit of Exelon Powerlabs-Coatsville, dated September 28, 2006

4OA1 Performance Indicator Verification

- Nuclear Energy Institute Document 99-02, “Regulatory Assessment Performance Indicator Guideline,” Revision 5
- CPS 9000.01D001, “Control Room Surveillance Log – Mode 1, 2, 3 Data Sheet,” Revision 52a

4OA3 Followup of Events and Notices of Enforcement Discretion

- Licensee Event Report 05000461/2007-001-00, “Inadequate Consideration of Vortexing in Design Calculations,” April 6, 2007
- Licensee Event Report 05000461/2007-001-01, “Inadequate Consideration of Vortexing in Design Calculations,” Supplement 1, August 16, 2007

4OA2 Identification and Resolution of Problems

- LS-AA-125-1005, “Coding and Analysis Manual,” Revision 5
- LS-AA-125, “Corrective Action Program (CAP) Procedure,” Revision 11
- HU-AA-104-101, “Procedure Use and Adherence,” Revision 3
- Common Cause Evaluation (AR 00804303), “2008 On-line Personnel Contamination Events,” September 10, 2008
- Clinton Power Station Human Performance Report Data for September 2008
- Clinton Power Station Human Performance Report Data for June 2008
- Common Cause Evaluation (AR 00822229), “Drywell Closeout Housekeeping Inspections,” October 24, 2008
- Common Cause Evaluation (00792139), “Adverse Trend Identified in Operations Documents,” August 13, 2008
- Common Cause Evaluation (00798450), “Potential Trend in Maintenance Planning,” August 1, 2008
- Common Cause Evaluation (00796676), “Negative Trend in Department Clock Resets,” September 8, 2008
- AR 00792128, “Potential Degrading Trend in Human Performance”
- Clinton Power Station Human Performance Initiatives, September 17, 2008

4OA5 Other Activities

-CPS 9080.13, “Diesel Generator 1A (1B) 24 Hour Run and Hot Restart Operability,” Revision 38b
-CPS 9080.14, “Diesel Generator 1C 24 Hour Run and Hot Restart Operability,” Revision 35f
-Calculation No. 19-AK-13, “Diesel Generator Loads Calculation,” Revision 2

LIST OF ACRONYMS USED

ADAMS	Agency-wide Documents and Management System
BTP	Branch Technical Position
CAPCO	Corrective Action Program Coordinator
CEDE	Committed Effective Dose Equivalent
CPS	Clinton Power Station
ECCS	Emergency Core Cooling System
EOP	Emergency Operating Procedures
HPCS	High Pressure Core Spray
IMC	Inspection Manual Chapter
IP	Inspection Procedure
IST	In-service Testing
LER	Licensee Event Report
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
PARS	Publicly Available Records
RCA	Radiologically Controlled Area
RCIC	Reactor Core Isolation Cooling
RCS	Reactor Coolant System
RP	Radiation Protection
SCBA	Self-Contained Breathing Apparatus
SDP	Significance Determination Process
SSCs	Structures, Systems and Components
TI	Temporary Instruction
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item
VIO	Violation