



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION III  
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LISLE, IL 60532-4352

May 2, 2014

Mr. Michael J. Pacilio  
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President and CNO, Exelon Nuclear  
4300 Winfield Road  
Warrenville, IL 60555

SUBJECT: CLINTON POWER STATION – NRC INTEGRATED INSPECTION REPORT  
05000461/2014-002

Dear Mr. Pacilio:

On March 31, 2014, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Clinton Power Station. The enclosed report documents the results of this inspection, which were discussed on April 17, with Mr. K. Taber, 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, no findings of significance were identified. As we informed you in the most recent NRC integrated inspection report, cross-cutting aspects identified in the last six months of 2013 using the previous terminology were being converted in accordance with the cross-reference in Inspection Manual Chapter (IMC) 0310. Section 4OA5 of the enclosed report documents the conversion of these cross-cutting aspects which will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review. If you disagree with the cross cutting aspect assigned, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region III, and the NRC Resident Inspector at the Clinton Plant.

M. Pacilio

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

Sincerely,

**/RA/**

Christine A. Lipa, Chief  
Branch 1  
Division of Reactor Projects

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

Enclosure:  
Inspection Report 05000461/2014-002;  
w/Attachment: Supplemental Information

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-461

License No: NPF-62

Report No: 05000461/2014-002

Licensee: Exelon Generation Company, LLC

Facility: Clinton Power Station, Unit 1

Location: Clinton, IL

Dates: January 1 through March 31, 2014

Inspectors: W. Schaup, Senior Resident Inspector  
D. Lords, Resident Inspector  
S. Bell, Health Physicist  
K. Carrington, Acting Resident Inspector  
C. Moore, Operations Engineer  
D. Reeser, Operations Engineer  
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Management Agency

Approved by: Christine Lipa, Chief  
Branch 1  
Division of Reactor Projects

Enclosure

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## **SUMMARY OF FINDINGS**

IR 05000461/2014-002, Clinton Power Station, Unit 1, Integrated Inspection Report.

This report covers a three-month period of inspection by resident inspectors and announced baseline inspections by regional inspectors. No findings were identified during this assessment period. The significance of inspection findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using IMC 0609, "Significance Determination Process" dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Aspects within the Cross Cutting Areas" effective date January 1, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated July 9, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" Revision 5, dated February 2014.

### **A. NRC-Identified and Self-Revealed Findings**

No findings of significance were identified.

### **B. Licensee-Identified Violations**

No violations of significance were identified.

## **REPORT DETAILS**

### **Summary of Plant Status**

Clinton Power Station (CPS), Unit 1 was operated at or near full power during the inspection period with the following exceptions:

- On March 5, 2014, Control Room operators reduced power to 88.5 percent due to a request from the Transmission System Operator (TSO) for grid stability.
- On March 6, 2014, Control Room operators reduced power an additional 2.5 percent to 86 percent due to a request from the TSO for grid stability.
- On March 19, 2014, Control Room operators placed the unit into cold shutdown from 86 percent power to replace failed Electro-Hydraulic Control power supplies associated with the steam by-pass system and to perform other maintenance activities. The unit was restarted on March 24, 2014 and returned to 85 percent power on March 25, 2014 after completion of maintenance activities.
- On March 25, 2014, Control Room operators manually scrammed the reactor from 85 percent power due to a loss of the main turbine condenser vacuum. The unit was restarted on March 29, 2014 and returned to full power (97 percent) on March 30, 2014 after correcting the loss of condenser vacuum.

### **1. REACTOR SAFETY**

#### **Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity**

#### **1R01 Adverse Weather Protection (71111.01)**

##### **.1 Readiness for Impending Adverse Weather Condition – Heavy Snowfall Conditions**

##### **a. Inspection Scope**

On February 4, 2014, winter weather advisory was issued for expected snow squalls. The inspectors observed the licensee's preparations and planning for the significant winter weather potential. The inspectors reviewed licensee procedures and discussed potential compensatory measures with control room personnel. The inspectors focused on plant management's actions for implementing the station's procedures for ensuring adequate personnel for safe plant operation and emergency response would be available. The inspectors conducted a site walkdown including walkdowns of various plant structures and systems to check for maintenance or other apparent deficiencies that could affect system operations during the predicted significant weather. The inspectors also reviewed corrective action program items to verify that the licensee was identifying adverse weather issues at an appropriate threshold and entering them into their corrective action program in accordance with station corrective action procedures.

This inspection constituted one readiness for impending adverse weather condition sample as defined in IP 71111.01-06.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04Q)

.1 Quarterly Partial System Walkdowns

a. Inspection Scope

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

- High Pressure Core Spray, a single train risk significant system
- Division 3 Diesel Generator, a single train risk significant system
- Control Room Ventilation train B after extended maintenance on the associated chiller following forced outage C1F58

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.

These activities constituted three partial system walkdown samples as defined in IP 71111.04-01.

b. Findings

No findings were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

On March 3, 2014, the inspectors performed a complete system alignment inspection of the train A of Standby Gas Treatment System (VG) during a planned system outage window of the train B of Standby Gas Treatment System to verify the functional capability of the system. This system was selected because it was considered both safety significant and risk significant in the licensee's probabilistic risk assessment. The inspectors walked down the system to review mechanical and electrical equipment lineups; electrical power availability; system pressure and temperature indications, as appropriate; component labeling; component lubrication; component and equipment cooling; hangers and supports; operability of support systems; and to ensure that ancillary equipment or debris did not interfere with equipment operation.

In addition, the inspectors verified that equipment alignment problems were entered into the licensee's corrective action program with the appropriate characterization and significance.

This activity constituted one complete system walkdown sample as defined in IP 71111.04-05.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05)

.1 Routine Resident Inspector Tours (71111.05Q)

a. Inspection Scope

The inspectors conducted fire protection walkdowns which were focused on availability, accessibility, and the condition of firefighting equipment in the following risk-significant plant areas:

- Fire Zone D-7, Diesel Generator Building Division 3 Diesel Generator Ventilation Room – 762' Elevation
- Fire Zone D-8, Diesel Generator Building Division 1 Diesel Generator Ventilation Room – 762' Elevation
- Fire Zone D-9, Diesel Generator Building Division 2 Diesel Generator Ventilation Room – 762' Elevation
- Fire Zone CB-1i, 825' Control Building Control Room Air Handling Equipment Room – 825' Elevation
- Fire Zone CB-3, Control Building Auxiliary Electrical Equipment Room – 781' Elevation
- Fire Zone CB-5, Control Building Division 3 Switchgear Room – 781' Elevation

The inspectors reviewed areas to assess if the licensee had implemented a fire protection program that adequately controlled combustibles and ignition sources within the plant, effectively maintained fire detection and suppression capability, maintained passive fire protection features in good material condition, and implemented adequate compensatory measures for out-of-service, degraded or inoperable fire protection equipment, systems, or features in accordance with the licensee's fire plan. 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; and fire doors, dampers, and penetration seals appeared to be in satisfactory condition.

In addition, the inspectors verified that fire protection related problems identified during the inspection were entered into the licensee's corrective action program and selected action requests were reviewed to verify the corrective actions were appropriate and implemented.

These activities constituted six quarterly fire protection inspection samples as defined in IP 71111.05-05.

b. Findings

No findings were identified.

.2 Annual Fire Protection Drill Observation (71111.05A)

a. Inspection Scope

On January 29, 2014, the inspectors observed fire brigade activation in the Division 1 Cable Spreading Room. Based on this observation, the inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that the licensee staff identified deficiencies; openly discussed them in a self-critical manner at the drill debrief, and took appropriate corrective actions. Specific attributes evaluated were:

- proper wearing of turnout gear and self-contained breathing apparatus
- proper use and layout of fire hoses
- employment of appropriate firefighting techniques
- sufficient firefighting equipment brought to the scene
- effectiveness of fire brigade leader communications, command, and control
- search for victims and propagation of the fire into other plant areas
- smoke removal operations
- utilization of pre-planned strategies
- adherence to the pre-planned drill scenario and
- drill objectives

This activity constituted one annual fire protection inspection sample as defined in IP 71111.05-05.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11)

.1 Resident Inspector Quarterly Review of Licensed Operator Requalification (71111.11Q)

a. Inspection Scope

On March 26, 2014, the inspectors observed a crew of licensed operators in the plant's simulator during licensed operator just-in-time training for reactor start up that including control rod withdraw to achieve criticality, feed water and reactor recirculation pump operation to verify that operator performance was adequate, evaluators were identifying and documenting crew performance problems, and training was being conducted in accordance with licensee procedures. The inspectors evaluated the following areas:

- Licensed operator performance;
- Crew's clarity and formality of communications;
- Ability to take timely actions in the conservative direction;
- Prioritization, interpretation, and verification of annunciator alarms;
- Control board manipulations; and
- Oversight and direction from supervisors.

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 program simulator sample as defined in IP 71111.11

b. Findings

No findings were identified.

.2 Resident Inspector Quarterly Observation of Heightened Activity or Risk (71111.11Q)

a. Inspection Scope

On March 19 and 20, 2014, the inspectors observed Main Control Room operators while shutting down the unit and entering Mode 4 for a maintenance outage. This was an activity that required heightened awareness or was related to increased risk. The inspectors evaluated the following areas:

- Licensed operator performance;
- Crew's clarity and formality of communications;
- Ability to take timely actions in the conservative direction;
- Prioritization, interpretation, and verification of annunciator alarms;
- Correct use and implementation of procedures;
- Control board manipulations; and
- Oversight and direction from supervisors.

The performance in these areas was compared to pre-established operator action expectations, procedural compliance and task completion requirements.

This inspection constituted one quarterly licensed operator heightened activity/risk sample as defined in IP 71111.11.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

.1 Routine Quarterly Evaluations

a. Inspection Scope

The inspectors evaluated degraded performance issues involving the following risk-significant systems and issues:

- Digital Feedwater Control System
- AR 01623186: Maintenance rule unavailability guideline list missing two functions

The inspectors reviewed events such as where ineffective equipment maintenance had resulted in valid or invalid automatic actuations of engineered safeguards systems and

independently verified the licensee's actions to address system performance or condition problems in terms of the following:

- Implementing appropriate work practices;
- Identifying and addressing common cause failures;
- Scoping of systems in accordance with 10 CFR 50.65(b) of the maintenance rule;
- Characterizing system reliability issues for performance;
- Charging unavailability for performance;
- Trending key parameters for condition monitoring;
- Ensuring 10 CFR 50.65(a)(1) or (a)(2) classification or re-classification; and
- Verifying appropriate performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2), or appropriate and adequate goals and corrective actions for systems classified as (a)(1).

The inspectors assessed performance issues with respect to the reliability, availability, and condition monitoring of the system.

In addition, the inspectors verified maintenance effectiveness issues were entered into the corrective action program with the appropriate significance characterization.

These inspections constituted two quarterly maintenance effectiveness samples as defined in IP 71111.12-05.

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

.1 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the licensee's evaluation and management of plant risk for the maintenance and emergent work activities affecting risk-significant and safety-related equipment listed below to verify that the appropriate risk assessments were performed prior to removing equipment for work:

- Planned maintenance the week of January 13 – 17
- Planned maintenance the week of January 27 – 31
- Planned maintenance the week of February 24 – 28
- Planned maintenance the week of March 17 – 21
- Planned maintenance the week of March 24 – 28

These activities were selected based on their potential risk significance relative to the Reactor Safety Cornerstones. As applicable for each activity, the inspectors verified that risk assessments were performed as required by 10 CFR 50.65(a)(4) and were accurate and complete. When emergent work was performed, the inspectors verified that the plant risk was promptly reassessed and managed. The inspectors reviewed the scope of maintenance work, discussed the results of the assessment with the licensee's probabilistic risk analyst or shift technical advisor, and verified plant conditions were consistent with the risk assessment. The inspectors also reviewed TS requirements and

walked down portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

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.

These maintenance risk assessments for work control activities constituted five samples as defined in IP 71111.13-05.

b. Findings

No findings were identified.

1R15 Operability Determinations and Functional Assessments (71111.15)

.1 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the following issues:

- Wide range reactor pressure vessel Rosemount transmitter valve manifold missing hardware;
- Position indication for excess flow check valve failed during surveillance testing;
- Technical Support Center diesel generator low coolant level;
- Division 1 diesel generator crank jog delay as-found timing unsatisfactory; and
- Residual Heat Removal shutdown header over pressurization due to leakage past shutdown cooling isolation valves.

The inspectors selected these potential operability issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available such that no unrecognized increase in risk occurred. The inspectors compared the operability and design criteria in the appropriate sections of the TS and updated safety analysis report to the licensee's evaluations to determine whether the components or systems were operable. 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 evaluations. Additionally, the inspectors reviewed a sampling of corrective action documents to verify that the licensee was identifying and correcting any deficiencies associated with operability evaluations.

In addition, the inspectors verified that problems related to the operability or functionality of safety-related plant equipment was 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.

These operability inspections constituted five samples as defined in IP 71111.15-05.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)

.1 Post-Maintenance Testing

a. Inspection Scope

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

- Control rod drive pump A after pressure switch calibration;
- Electro-hydraulic control system for pump B after a compensator adjustment;
- Division 2 diesel generator operability test after maintenance; and
- Electro-hydraulic control system for pump B after compensator replacement.

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; that the equipment was returned to its operational status following testing; and, that the 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.

These inspections constituted four post-maintenance testing samples as defined in IP 71111.19-05.

b. Findings

No findings were identified.

1R20 Outage Activities (71111.20)

.1 Maintenance Outage C1M15 (71111.20)

a. Inspection Scope

The inspectors evaluated outage activities during Unit 1 maintenance outage C1M15, which began on March 19, 2014. Unit 1 was placed into cold shutdown from 86 percent power to replace failed Electro-Hydraulic Control power supplies associated with the steam by-pass system and to perform other maintenance activities. The unit was restarted on March 24, 2014 and returned to 85 percent power on March 25, 2014 after completion of maintenance activities.

The inspectors reviewed and evaluated the conduct of outage activities to ensure that the licensee considered risk in developing, planning, and implementing the forced outage schedule. The inspectors observed or reviewed plant equipment configuration and risk management, electrical lineups, startup activities, and identification and resolution of problems associated with the outage.

b. Findings

No findings were identified.

.2 Forced Outage C1F58 (71111.20)

a. Inspection Scope

The inspectors evaluated outage activities during Unit 1 forced outage C1F58, which began on March 25, 2014. On March 25, 2014, Unit 1 was manually scrammed from 85 percent power due to a loss of the main turbine condenser vacuum. The unit was restarted on March 29, 2014 and returned to full power (97 percent) on March 30, 2014 after correcting the loss of condenser vacuum.

The inspectors reviewed and evaluated the conduct of outage activities to ensure that the licensee considered risk in developing, planning, and implementing the forced outage schedule. The inspectors observed or reviewed plant equipment configuration and risk management, electrical lineups, startup activities, and identification and resolution of problems associated with the outage.

These inspections constituted two other outage samples as defined in IP 71111.20.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)

.1 Surveillance Testing

a. Inspection Scope

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

- CPS 9054.02, "RCIC Valve Operability Checks" (In-Service Test);
- CPS 9072.01, "Steam Bypass Valve Tests" (Routine Test);
- CPS 9080.03, "Diesel Generator 1C Operability – Manual and Quick Start Operability" (Routine Test);
- CPS 9032.48, "Off Gas Hydrogen Analyzer Channel Functional" (Routine Test).

The inspectors observed in-plant activities and reviewed procedures and associated records to determine the following:

- did preconditioning occur

- the effects of the testing were adequately addressed by control room personnel or engineers prior to the commencement of the testing
- acceptance criteria were clearly stated, demonstrated operational readiness, and were consistent with the system design basis
- plant equipment calibration was correct, accurate, and properly documented;
- as-left setpoints were within required ranges; and the calibration frequency was in accordance with TSs, the USAR, procedures, and applicable commitments;
- measuring and test equipment calibration was current
- test equipment was used within the required range and accuracy; applicable prerequisites described in the test procedures were satisfied
- test frequencies met TS requirements to demonstrate operability and reliability tests were performed in accordance with the test procedures and other applicable procedures; jumpers and lifted leads were controlled and restored where used
- test data and results were accurate, complete, within limits, and valid;
- test equipment was removed after testing
- where applicable for in-service testing activities, testing was performed in accordance with the applicable version of Section XI, American Society of Mechanical Engineers code, and reference values were consistent with the system design basis
- where applicable, test results not meeting acceptance criteria were addressed with an adequate operability evaluation or the system or component was declared inoperable
- where applicable for safety-related instrument control surveillance tests, reference setting data were accurately incorporated in the test procedure
- where applicable, actual conditions encountering high resistance electrical contacts were such that the intended safety function could still be accomplished
- prior procedure changes had not provided an opportunity to identify problems encountered during the performance of the surveillance or calibration test
- equipment was returned to a position or status required to support the performance of its safety functions
- all problems identified during the testing were appropriately documented and dispositioned in the corrective action program

In addition, the inspectors reviewed corrective action program documents associated with surveillance 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 three routine surveillance testing samples and one in-service testing samples, as defined in IP 71111.22, Sections -02 and -05.

b. Findings

No findings 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 routine licensee emergency drill on March 11, 2014, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the 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 drill critique to compare any inspector-observed weakness with those identified by the licensee staff in order to evaluate the critique and to verify whether the licensee staff was properly identifying weaknesses and entering them into the corrective action program. As part of the inspection, the inspectors reviewed the drill package and other documents listed in the Attachment to this report.

This emergency preparedness drill inspection constituted one sample as defined in IP 71114.06-05.

##### **b. Findings**

No findings were identified.

## **2. RADIATION SAFETY**

### **2RS3 In-Plant Airborne Radioactivity Control and Mitigation (71124.03)**

#### **.1 Inspection Planning (02.01)**

##### **a. Inspection Scope**

The inspectors reviewed the plant Final Safety Analysis Report (FSAR) to identify areas of the plant designed as potential airborne radiation areas and any associated ventilation systems or airborne monitoring instrumentation. Instrumentation review included continuous air monitors (continuous air monitors and particulate-iodine-noble-gas-type instruments) used to identify changing airborne radiological conditions such that actions to prevent an overexposure may be taken. The review included an overview of the Respiratory Protection Program and a description of the types of devices used. The inspectors reviewed FSAR, TSs, and emergency planning documents to identify location and quantity of respiratory protection devices stored for emergency use.

The inspectors reviewed the licensee's procedures for maintenance, inspection, and use of respiratory protection equipment including self-contained breathing apparatus as well as procedures for air quality maintenance.

The inspectors reviewed any reported performance indicators related to unintended dose resulting from intakes of radioactive material.

b. Findings

No findings were identified.

.2 Engineering Controls (02.02)

a. Inspection Scope

The inspectors reviewed the licensee's use of permanent and temporary ventilation to determine whether the licensee uses ventilation systems as part of its engineering controls (i.e., in lieu of respiratory protection devices) to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems, such as containment purge, spent fuel pool ventilation, and auxiliary building ventilation and assessed whether the systems are used, to the extent practicable, during high-risk activities (e.g., using containment purge during cavity flood up).

The inspectors selected installed ventilation systems used to mitigate the potential for airborne radioactivity and evaluated whether the ventilation airflow capacity, flow path (including the alignment of the suction and discharges), and filter/charcoal unit efficiencies, as appropriate, were consistent with maintaining concentrations of airborne radioactivity in work areas below the concentrations of an airborne area to the extent practicable.

The inspectors selected temporary ventilation system setups (high-efficiency particulate air/charcoal negative pressure units, down draft tables, tents, metal "Kelly buildings," and other enclosures) used to support work in contaminated areas. The inspectors assessed whether the use of these systems is consistent with the licensee's procedural guidance and ALARA concept.

The inspectors reviewed airborne monitoring protocols by selecting installed systems used to monitor and warn of changing airborne concentrations in the plant and evaluated whether the alarms and set points were sufficient to prompt licensee/worker action to ensure that doses are maintained within the limits of 10 CFR Part 20 and the ALARA concept.

The inspectors assessed whether the licensee established trigger points (e.g., the Electric Power Research Institute's "Alpha Monitoring Guidelines for Operating Nuclear Power Stations") for evaluating levels of airborne beta-emitting (e.g., plutonium-241) and alpha-emitting radionuclides.

b. Findings

No findings were identified.

.3 Use of Respiratory Protection Devices (02.03)

a. Inspection Scope

For those situations where it is impractical to employ engineering controls to minimize airborne radioactivity, the inspectors assessed whether the licensee provided respiratory protective devices such that occupational doses are ALARA. The inspectors selected work activities where respiratory protection devices were used to limit the intake of

radioactive materials and assessed whether the licensee performed an evaluation concluding that further engineering controls were not practical and that the use of respirators is ALARA. The inspectors also evaluated whether the licensee established means (such as routine bioassay) to determine if the level of protection (i.e., protection factor) provided by the respiratory protection devices during use was at least as good as that assumed in the licensee's work controls and dose assessment.

The inspectors assessed whether respiratory protection devices used to limit the intake of radioactive materials were certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration or have been approved by the NRC per 10 CFR 20.1703(b). The inspectors selected work activities where respiratory protection devices were used. The inspectors evaluated whether the devices were used consistent with their National Institute for Occupational Safety and Health/Mine Safety and Health Administration certification or any conditions of their NRC approval.

The inspectors reviewed records of air testing for supplied-air devices and self-contained breathing apparatus bottles to assess whether the air used in these devices meets or exceeds Grade D quality. The inspectors reviewed plant breathing air supply systems to determine whether they meet the minimum pressure and airflow requirements for the devices in use.

The inspectors selected several individuals qualified to use respiratory protection devices and assessed whether they have been deemed fit to use the devices by a physician.

The inspectors selected several individuals assigned to wear a respiratory protection device and observed them donning, doffing, and functionally checking the device as appropriate. Through interviews with these individuals, the inspectors evaluated whether they knew how to safely use the device and how to properly respond to any device malfunction or unusual occurrence (e.g., loss of power, loss of air, etc.).

The inspectors chose multiple respiratory protection devices staged and ready for use in the plant or stocked for issuance for use. The inspectors assessed the physical condition of the device components (mask or hood, harnesses, air lines, regulators, air bottles, etc.) and reviewed records of routine inspection for each. The inspectors selected several of the devices and reviewed records of maintenance on the vital components (e.g., pressure regulators, inhalation/exhalation valves, hose couplings). The inspectors reviewed the Respirator Vital Components Maintenance Program to ensure onsite personnel assigned to repair the vital components have received the appropriate manufacturer-approved training.

b. Findings

No findings were identified.

.4 Self-Contained Breathing Apparatus for Emergency Use (02.04)

a. Inspection Scope

Based on the FSAR, TSs, and emergency operating procedure requirements, the inspectors reviewed the status and surveillance records of self-contained breathing apparatuses staged in-plant for use during emergencies. The inspectors reviewed the

licensee's capability for refilling and transporting self-contained breathing apparatus air bottles to and from the control room and operations support center during emergency conditions.

The inspectors selected several individuals on control room shift crews and from designated departments currently assigned emergency duties (e.g., onsite search and rescue duties) to assess whether control room operators and other emergency response and radiation protection personnel (assigned in-plant search and rescue duties or as required by emergency operating procedures or the emergency plan) were trained and qualified in the use of self-contained breathing apparatuses (including personal bottle change out). The inspectors evaluated whether personnel assigned to refill bottles were trained and qualified for that task.

The inspectors determined whether appropriate mask sizes and types are available for use (i.e., in-field mask size and type match what was used in fit-testing). The inspectors determined whether on-shift operators had no facial hair that would interfere with the sealing of the mask to the face and whether vision correction (e.g., glasses inserts or corrected lenses) was available as appropriate.

The inspectors reviewed the past two years of maintenance records for select self-contained breathing apparatus units used to support operator activities during accident conditions and designated as "ready for service" to assess whether any maintenance or repairs on any self-contained breathing apparatus unit's vital components were performed by an individual, or individuals, certified by the manufacturer of the device to perform the work. The vital components typically are the pressure-demand air regulator and the low-pressure alarm. The inspectors reviewed the onsite maintenance procedures governing vital component work to determine any inconsistencies with the self-contained breathing apparatus manufacturer's recommended practices. For those self-contained breathing apparatuses designated as "ready for service," the inspectors determined whether the required, periodic air cylinder hydrostatic testing was documented and up-to-date, and the retest air cylinder markings required by the U.S. Department of Transportation were in place.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors evaluated whether problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by the licensee at an appropriate threshold and were properly addressed for resolution in the licensee's Corrective Action Program (CAP). The inspectors assessed whether the corrective actions were appropriate for a selected sample of problems involving airborne radioactivity and were appropriately documented by the licensee.

b. Findings

No findings were identified.

This inspection constituted one complete sample as defined in Inspection Procedure (IP) 71124.03-05.

2RS4 Occupational Dose Assessment (71124.04)

.1 Inspection Planning (02.01)

a. Inspection Scope

The inspectors reviewed the results of Radiation Protection Program audits related to internal and external dosimetry (e.g., licensee's quality assurance audits, self-assessments, or other independent audits) to gain insights into overall licensee performance in the area of dose assessment and focus the inspection activities consistent with the principle of "smart sampling."

The inspectors reviewed the most recent National Voluntary Laboratory Accreditation Program accreditation report on the vendor's most recent results to determine the status of the contractor's accreditation.

A review was conducted of the licensee's procedures associated with dosimetry operations, including issuance/use of external dosimetry (routine, multibadging, extremity, neutron, etc.), assessment of internal dose (operation of whole body counter, assignment of dose based on derived air concentration-hours, urinalysis, etc.), and evaluation of and dose assessment for radiological incidents (distributed contamination, hot particles, loss of dosimetry, etc.).

The inspectors evaluated whether the licensee had established procedural requirements for determining when external and internal dosimetry is required.

b. Findings

No findings were identified.

.2 External Dosimetry (02.02)

a. Inspection Scope

The inspectors evaluated whether the licensee's dosimetry vendor is National Voluntary Laboratory Accreditation Program accredited and if the approved irradiation test categories for each type of personnel dosimeter used are consistent with the types and energies of the radiation present and the way the dosimeter is being used (e.g., to measure deep dose equivalent, shallow dose equivalent, or lens dose equivalent).

The inspectors evaluated the onsite storage of dosimeters before their issuance, during use, and before processing/reading. The inspectors also reviewed the guidance provided to rad-workers with respect to care and storage of dosimeters.

The licensee does not use non-National Voluntary Laboratory Accreditation Program accredited passive dosimeters.

b. Findings

No findings were identified.

.3 Internal Dosimetry (02.03)

Routine Bioassay (In Vivo)

a. Inspection Scope

The inspectors reviewed procedures used to assess the dose from internally deposited nuclides using whole body counting equipment. The inspectors evaluated whether the procedures addressed methods for differentiating between internal and external contamination, the release of contaminated individuals, the route of intake, and the assignment of dose.

The inspectors reviewed the whole body count process to determine if the frequency of measurements was consistent with the biological half-life of the nuclides available for intake.

The inspectors reviewed the licensee's evaluation for use of its portal radiation monitors as a passive monitoring system to determine if instrument-minimum detectable activities were adequate to determine the potential for internally deposited radionuclides sufficient to prompt additional investigation.

The inspectors selected several whole body counts and evaluated whether the counting system used had sufficient counting time/low background to ensure appropriate sensitivity for the potential radionuclides of interest. The inspectors reviewed the radionuclide library used for the count system to determine its appropriateness. The inspectors evaluated whether any anomalous count peaks/nuclides indicated in each output spectra received appropriate disposition. The inspectors reviewed the licensee's 10 CFR Part 61 data analyses to determine whether the nuclide libraries included appropriate gamma-emitting nuclides. The inspectors evaluated how the licensee accounts for hard-to-detect nuclides in the dose assessment.

b. Findings

No findings were identified.

Special Bioassay (In Vitro)

a. Inspection Scope

The inspectors selected internal dose assessments obtained using in vitro monitoring. The inspectors reviewed and assessed the adequacy of the licensee's program for in vitro monitoring (i.e., urinalysis and fecal analysis) of radionuclides (e.g., tritium, fission products, and activation products), including collection and storage of samples.

The inspectors reviewed the vendor laboratory Quality Assurance Program and assessed whether the laboratory participated in an industry recognized cross-check program including whether out-of-tolerance results were resolved appropriately.

b. Findings

No findings were identified.

### Internal Dose Assessment – Airborne Monitoring

#### a. Inspection Scope

The inspectors reviewed the licensee's program for airborne radioactivity assessment and dose assessment, as applicable, based on airborne monitoring and calculations of derived air concentration. The inspectors determined whether flow rates and collection times for air sampling equipment were adequate to allow lower limits of detection to be obtained. The inspectors also reviewed the adequacy of procedural guidance to assess internal dose if respiratory protection was used. The licensee had not performed dose assessments using airborne/derived air concentration monitoring since the last inspection.

#### b. Findings

No findings were identified.

### Internal Dose Assessment – Whole Body Count Analyses

#### a. Inspection Scope

The inspectors reviewed several dose assessments performed by the licensee using the results of whole body count analyses. The inspectors determined whether affected personnel were properly monitored with calibrated equipment and that internal exposures were assessed consistent with the licensee's procedures.

#### b. Findings

No findings were identified.

### .4 Special Dosimetric Situations (02.04)

#### Declared Pregnant Workers

#### a. Inspection Scope

The inspectors assessed whether the licensee informs workers, as appropriate, of the risks of radiation exposure to the embryo/fetus, the regulatory aspects of declaring a pregnancy, and the specific process to be used for (voluntarily) declaring a pregnancy.

The inspectors evaluated whether the licensee's Radiological Monitoring Program (internal and external) for declared pregnant workers is technically adequate to assess the dose to the embryo/fetus. The inspectors reviewed monitoring controls employed by the licensee and with respect to the requirements of 10 CFR Part 20.

#### b. Findings

No findings were identified.

### Dosimeter Placement and Assessment of Effective Dose Equivalent for External Exposures

a. Inspection Scope

The inspectors reviewed the licensee's methodology for monitoring external dose in non-uniform radiation fields or where large dose gradients exist. The inspectors evaluated the licensee's criteria for determining when alternate monitoring, such as use of multi-badging, was to be implemented.

The inspectors reviewed dose assessments performed using multi-badging to evaluate whether the assessment was performed consistently with the licensee's procedures and dosimetric standards.

b. Findings

No findings were identified.

Shallow Dose Equivalent

a. Inspection Scope

The inspectors reviewed shallow dose equivalent dose assessments for adequacy. The inspectors evaluated the licensee's method (e.g., VARSKIN or similar code) for calculating shallow dose equivalent from distributed skin contamination or discrete radioactive particles.

b. Findings

No findings were identified.

Neutron Dose Assessment

a. Inspection Scope

The inspectors evaluated the licensee's Neutron Dosimetry Program, including dosimeter types and/or survey instrumentation.

The inspectors reviewed neutron exposure situations (e.g., independent spent fuel storage installation operations or at-power containment entries) and assessed whether: (a) dosimetry and/or instrumentation was appropriate for the expected neutron spectra; (b) there was sufficient sensitivity for low dose and/or dose rate measurement; and (c) neutron dosimetry was properly calibrated. The inspectors also assessed whether interference by gamma radiation had been accounted for in the calibration and whether time and motion evaluations were representative of actual neutron exposure events, as applicable.

b. Findings

No findings were identified.

Assigning Dose of Record

a. Inspection Scope

For the special dosimetric situations reviewed in this section, the inspectors assessed how the licensee assigns dose of record for total effective dose equivalent, shallow dose equivalent, and lens dose equivalent. This included an assessment of external and internal monitoring results, supplementary information on individual exposures (e.g., radiation incident investigation reports and skin contamination reports), and radiation surveys and/or air monitoring results when dosimetry was based on these techniques.

b. Findings

No findings were identified.

.5 Problem Identification and Resolution (02.05)

a. Inspection Scope

The inspectors assessed whether problems associated with occupational dose assessment are being identified by the licensee at an appropriate threshold and are properly addressed for resolution in the licensee's CAP. The inspectors assessed the appropriateness of the corrective actions for a selected sample of problems documented by the licensee involving occupational dose assessment.

b. Findings

No findings were identified.

This inspection constituted a partial sample as defined in IP 71124.04-05.

**4. OTHER ACTIVITIES**

**Cornerstones: Initiating Events, Mitigating Systems, Public Radiation Safety, and Occupational Radiation Safety**

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 Fourth Quarter 2013 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 Unplanned Scrams per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams per 7000 Critical Hours performance indicator (PI) for the period from the first quarter 2013 through the fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and Revision 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January 1, 2013 through December 31, 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified.

This inspection constituted one unplanned scrams per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.3 Unplanned Scrams with Complications

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Scrams with Complications performance indicator for the period from first quarter 2013 through the fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and Revision 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, event reports and NRC Integrated Inspection Reports for the period of January 1, 2013 through December 31, 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified.

This inspection constituted one unplanned scrams with complications sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.4 Unplanned Transients per 7000 Critical Hours

a. Inspection Scope

The inspectors sampled licensee submittals for the Unplanned Transients per 7000 Critical Hours performance indicator for the period from the first quarter 2013 through the fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and Revision 7, dated August 2013, were used. The inspectors reviewed the licensee's operator narrative logs, issue reports, maintenance rule records, event reports and NRC Integrated Inspection Reports for the period of January 1, 2013 through December 31, 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified.

This inspection constituted one unplanned transients per 7000 critical hours sample as defined in IP 71151-05.

b. Findings

No findings were identified.

.5 Safety System Functional Failures

a. Inspection Scope

The inspectors sampled licensee submittals for the Safety System Functional Failures performance indicator for the period from the first quarter 2013 through the fourth quarter 2013. To determine the accuracy of the PI data reported during those periods, PI definitions and guidance contained in the NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, dated October 2009, and Revision 7, dated August 2013, were used, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 50.73" definitions and guidance, were used. The inspectors reviewed the licensee's operator narrative logs, operability assessments, maintenance rule records, maintenance work orders, issue reports, event reports and NRC Integrated Inspection Reports for the period of January 1, 2013 through December 31, 2013 to validate the accuracy of the submittals. The inspectors also reviewed the licensee's issue report database to determine if any problems had been identified with the PI data collected or transmitted for this indicator and none were identified.

This inspection constituted one safety system functional failures sample as defined in IP 71151-05.

b. Findings

No findings were identified.

#### 4OA2 Identification and Resolution of Problems (71152)

##### **Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, Emergency Preparedness, Public Radiation Safety, Occupational Radiation Safety, and Physical Protection**

#### .1 Routine Review of Items Entered into the Corrective Action Program

##### a. Inspection Scope

As part of the various baseline inspection procedures discussed in previous sections of this report, the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify 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.

Attributes reviewed included: identification of the problem was complete and accurate; timeliness was commensurate with the safety significance; evaluation and disposition of performance issues, generic implications, common causes, contributing factors, root causes, extent-of-condition reviews, and previous occurrences reviews were proper and adequate; and that the classification, prioritization, focus, and timeliness of corrective actions were commensurate with safety and sufficient to prevent recurrence of the issue. Minor issues entered into the licensee's Corrective Action Program as a result of the inspectors' observations are included in the Attachment to this report.

These routine reviews for the identification and resolution of problems did not constitute any additional inspection samples. Instead, by procedure they were considered an integral part of the inspections performed during the quarter and documented in Section 1 of this report.

##### b. Findings

No findings were identified.

#### .2 Daily Corrective Action Program Reviews

##### a. Inspection Scope

In order to assist with the identification of repetitive equipment failures and specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's Corrective Action Program. This review was accomplished through inspection of the station's daily condition report packages.

These daily reviews were performed by procedure as part of the inspectors' daily plant status monitoring activities and, as such, did not constitute any separate inspection samples.

##### b. Findings

No findings were identified.

.3 Selected Issue Follow-Up Inspection: Hard Ground on Direct Current Motor Control Center 1F

a. Inspection Scope

During a review of items entered into the licensee's corrective action program, the inspectors identified action request 01617720 documenting a hard ground identified on direct current motor control center 1F that warranted further review.

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

- 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 review constituted one in-depth problem identification and resolution sample as defined in IP 71152-05.

b. Findings

No findings were identified.

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

.1 Loss of Main Condenser Vacuum

a. Inspection Scope

The inspectors reviewed the plant's response to a manual reactor scram following a Loss of Main Condenser Vacuum on March 25, 2014. The initiating event was a loss of steam flow through Steam Jet Air Ejector B.

This event follow-up review constituted one sample as defined in IP 71153-05.

b. Findings

No findings were identified.

.2 (Closed) Licensee Event Report (LER) 05000461/2013-002-00: Deficient Fuse Causes Main Generator Trip, Turbine Trip and Reactor SCRAM

a. Inspection Scope

This event, which occurred on March 7<sup>th</sup>, 2013, was caused by a slow burn of a fuse which was not sensed as a failure by a voltage balance relay. A failure analysis of the fuse identified that the cause of the fuse failure was a manufacturing defect in a solder connection in the fuse. The poor solder connection was caused by deficiencies in the manufacturing process. Corrective actions taken included replacing the fuse that failed with a fuse that was not manufactured at the affected facility and an extent of condition investigation performed to prevent reoccurrence of the failure. This LER is closed.

This event follow-up review constituted one sample as defined in IP 71153-05.

b. Findings

No findings were identified.

4OA5 Other Activities

- .1 The table below provides a cross-reference from the third and fourth quarter 2013 findings and associated cross-cutting aspects to the new cross-cutting aspects resulting from the common language initiative. These aspects and any others identified since January 2014 will be evaluated for cross-cutting themes and potential substantive cross-cutting issues in accordance with IMC 0305 starting with the 2014 mid-cycle assessment review.

Finding	Old Cross-Cutting Aspect	New Cross-Cutting Aspect
05000461/2013004-01 (NCV)	H.1(a)	H.13
05000461/2013005-02 (NCV)	H.2(b)	H.9
05000461/2013005-04 (FIN)	P.1(a)	P.1
05000461/2013005-05 (NCV)	H.4(a)	H.12
05000461/2013007-01 (NCV)	P.1(c)	P.2
05000461/2013009-01 (NCV)	H.4(c)	H.2
05000461/2013009-02 (NCV)	P.1(a)	P.1

.2 (Closed) Unresolved Item (URI) 05000461/2013005-01: Failure to Evaluate Failures of Individual Safe Shutdown Emergency Lighting Units for Maintenance Preventable Functional Failures and Repetitive Maintenance Preventable Functional Failures

On February 11, 2014, the inspectors documented an unresolved item (URI) for the licensee's failure to determine whether failures associated with the safe shutdown emergency lighting system were potential maintenance preventable and repetitive maintenance preventable functional failures. As requested, the licensee provided additional information to the inspectors regarding the licensee's maintenance rule program.

Based on all the information provided and reviewed, the inspectors have determined that the available guidance in NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," as well as the licensee's maintenance rule procedures do not preclude the licensee from using condition monitoring as the only maintenance effectiveness monitoring tool to track equipment failures that do not meet the threshold of a functional failure. The guidance also does not state that failures associated with condition monitoring are required to be evaluated in the same manner as reliability criteria for potential maintenance preventable and repetitive maintenance preventable functional failures.

Additionally during the reviews, the inspectors determined that there is no procedural expectation for plant operators to always carry flashlights; however, CPS 4003.01, "Remote Shutdown (RS)," does require remote area operators to carry portable safe shutdown emergency lights if the control room has to be evacuated. Therefore, even if installed emergency lighting fails, operators would still have light available to perform remote operations.

The inspectors identified no findings or violations of more than minor significance, and this unresolved item is closed.

#### 4OA6 Management Meetings

##### .1 Exit Meeting Summary

On April 17, 2014, the inspectors presented the inspection results to Mr. K. Taber, and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

##### .2 Interim Exit Meetings

An Interim exit was conducted for:

- The inspection results for the areas of in-plant airborne radioactivity control and mitigation; and occupational dose assessment with Mr. J. Stovall, Acting Plant Manager, on March 14, 2014.

The inspectors confirmed that none of the potential report input discussed was considered proprietary.

ATTACHMENT: SUPPLEMENTAL INFORMATION

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee

D. Anthony, Corporate NDE Services Manager  
M. Baig, Engineering Programs, ISI  
R. Bair, Chemistry Manager  
K. Baker, Regulatory Assurance Manager  
R. Bedford, Licensed Operator Requalification Lead  
J. Bond, Emergency Preparedness Manager  
B. Brooks, Security Manager  
R. Campbell, RP Technical Manager  
J. Cunningham, Acting Regulatory Assurance Manager  
A. Droppers, Health Physicist  
C. Dunn, Training Director  
R. Frantz, Regulatory Assurance  
M. Friedman, Radiation Protection Operations Manager  
N. Hightower, Radiation Protection Manager  
T. Krawcyk, Shift Operations Superintendent  
K. Leffel, Operations Support Manager  
D. Kemper, Operations Director  
S. Kowalski, Senior Manager Design Engineering  
M. Mayer, Acting Security Manager  
S. Mohundro, Engineering Programs Manager  
W. Padgett, Work Management  
C. Propst, Nuclear Oversight Manager  
D. Reoch, Radiation Protection General Supervisor  
F. Sarantakos, Engineering Programs  
R. Schenck, Work Management Director  
D. Shelton, Operations Services Manager  
D. Smith, Design Engineering  
J. Smith, Acting Site Engineering Director  
D. Snook, Operations Training Manager  
T. Stoner, Plant Manager  
J. Stovall, Maintenance Director  
B. Taber, Site Vice President  
R. Zacholski, Acting Nuclear Oversight Manager

#### NRC

W. Schaup, Clinton Senior Resident Inspector  
D. Lords, Clinton Resident Inspector

## LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

### Opened

None

### Closed

05000461/2013-002-00	LER	Deficient Fuse Causes Main Generator Trip, Turbine Trip and Reactor SCRAM
05000461/2013-005-01	URI	Failure to Evaluate Failures of Individual Safe Shutdown Lighting Units for Maintenance Preventable Functional Failures and Repetitive Maintenance Preventable Functional Failures

## LIST OF DOCUMENTS REVIEWED

The following is a partial list of documents reviewed during the inspection. Inclusion on this list does not imply that the NRC inspector reviewed the documents in their entirety, but rather that selected sections or 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

- OP-AA-108-111-1001, "Severe Weather and Natural Disaster Guidelines," Revision 12
- WC-AA-107, "Seasonal Readiness," Revision 13
- CPS 1860.01, "Cold Weather Operation," Revision 8a
- CPS 1860.01C005, "Blizzard/Severe Weather Preparation Checklist," Revision 0

### 1R04 Equipment Alignment

- CPS 3402.01, "Control Room Heating Ventilation Air Conditioning," Revision 27b
- CPS 3402.01V001, "Control Room Heating Ventilation Air Conditioning Valve Lineup," Revision 16e
- CPS 3402.01V002, "Control Room Heating Ventilation Air Conditioning Instrument Valve Lineup," Revision 6
- CPS 3402.01E001, "Control Room Heating Ventilation Air Conditioning Electrical Lineup," Revision 10b
- CPS 3506.01, "Diesel Generator and Support Systems (DG)," Revision 37a
- CPS 3506.01P003, "Division 3 Diesel Generator Operations," Revision 5
- CPS 3506.01E001, "Diesel Generator and Support Systems Electrical Lineup," Revision 18c
- 3506.01V001, "Diesel Generator and Support Systems Valve Lineup," Revision 13a
- 3506.01V002, "Diesel Generator and Support Systems Instrument Valve Lineup," Revision 11b
- AR 01639858, "NRC VC B Electrical Lineup Walkdown Questions"
- AR 01639902, "Missing/Damaged Insulation Caused Ice to Form"
- AR 01461301, "1PDIVG152 Indicator Shows Lo and Lost PV1 Input," January 11, 2013
- CPS 3310.01E001, "Standby Gas Treatment Electrical Lineup," Revision 11
- CPS 3319.01, "Standby Gas Treatment System," Revision 17
- CPS 3319.01V002, "Standby Gas Treatment System Valve Lineup," Revision 6
- CPS 3319.01V001, "Standby Gas Treatment Valve Lineup," Revision 8
- CPS/USAR Section 6.2, Revision 15
- CPS/USAR Section 6.5, Revision 12
- CR-1-96-12-016, "Unable to Maintain Secondary Containment Differential Pressure Due to Winds," December 4, 1996
- Plant IQ Equipment Matrix – Current Equipment Assessment Detail Report – Standby Gas Treatment HVAC, March 13, 2014
- P&ID, M05-1105, "Standby Gas Treatment System (VG)," Sheet 001
- TS 3.6 (Containment Systems); LCO 3.6.4.1 Secondary Containment, Amendment No. 187
- TS 3.6 (Containment Systems); LCO 3.6.4.3 Standby Gas Treatment (SGT) System
- TS Bases, Revision No. 11-4 and Revision 8-6 (Primary Containment B3.6.1.1)
- TS Bases, Revision No. 0 (B3.6 – Containment Systems B3.6.1.2.), "Primary Containment Air Locks"

### 1R05 Fire Protection

- Clinton Power Station Updated Final Safety Analysis Report, Appendix E, "Fire Protection Evaluation Report – Clinton Power Station Unit 1," Revision 15
- Clinton Power Station Updated Final Safety Analysis Report, Appendix F, "Fire Protection Safe Shutdown Analysis – Clinton Power Station Unit 1," Revision 15
- OP-AA-201-003, "Fire Drill Performance," Revision 12
- OP-AA-201-009, "Control of Transient Combustible Material," Revision 11
- CPS 1893.04M352, "Fire Zone CB-4; 781' Control: Division 1 Cable Spreading Room Pre-fire Plan," Revision 5a
- CPS 1893.04M354, "Fire Zone CB-5c; 781' Control: Division 1 and 2 Cable Risers Pre-fire Plan," Revision 5a
- CPS 1893.04M520, "762' Diesel Generator: Division 3 Diesel Generator Ventilation Room Pre-fire Plan"; Revision 5
- CPS 1893.04M521, "762' Diesel Generator: Division 1 Diesel Generator Ventilation Room Pre-fire Plan"; Revision 5
- CPS 1893.04M522, "762' Diesel Generator: Division 2 Diesel Generator Ventilation Room Pre-fire Plan"; Revision 5
- Clinton USAR, Appendix E, Fire Protection Evaluation Report (Sections: 3.5.7, Fire Area D-7; 3.5.8, Fire Area D-8; and 3.5.9, Fire Area D-9); Revision 11
- AR 01614426, "4.0 Critique for Crew C Fire Drill (Main Control Room Portion)"
- CPS 1893.04M370, "Control Room HVAC Pre-fire Plan" Revision 7a
- CPS 1893.04M351, "Auxiliary Electrical Equipment, Inverter and Battery Rooms Pre-fire Plan," Revision 7a
- CPS 1893.04M353, "Division 3 Switchgear and Battery Room Pre-fire Plan," Revision 6
- CPS 1019.05, "Transient Equipment/Materials," Revision 21
- IP-M-0177-CB, "Fire Loads in CPS Fire Zones Control Building," Revision 6

### 1R11 Licensed Operator Regualification Program

- SE-JIT-20,"Feedwater Training, June 4, 2014. Revision 004
- SE-OPS-04, "ILT Normal Operations Plant Startup," March 21, 2012, Revision 03

### 1R12 Maintenance Effectiveness

- Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2
- NUMARC 93-01, "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2
- ER-AA-310, "Implementation of Maintenance Rule," Revision 9
- ER-AA-310-1001, "Maintenance Rule Scoping," Revision 4
- ER-AA-310-1002, "Maintenance Rule Functions – Safety Significance Classification," Revision 3
- ER-AA-310-1003, "Maintenance Rule – Performance Criteria Selection," Revision 4
- ER-AA-310-1004, "Maintenance Rule – Performance Monitoring," Revision 11
- ER-AA-310-1005, "Maintenance Rule – Dispositioning Between (a)(1 and (a)(2)," Revision 6
- AR 01623186, "Maintenance Rule Unavailability Guideline List Missing Two Functions"
- AR 1581779, "Work From DFW Project Needs Completed On-line or in C1R15;" Dated November 6, 2013

- AR 1584678, "FW-STM Flow Trouble has Become a Nuisance Alarm on DFW;" Dated November 13, 2013
- AR 1585428, "Unexpected Annunciator 5002-2P (Reactor Water Level Control System Alarm) on 1H13-P60; Dated November 14, 2013
- AR 1587140, "Unexpected Annunciator 5002-2P (Reactor Water Level Control System Alarm) on 1H13-P60; Dated November 19, 2013
- AR1588992, "Numerous Recent DFW Troubles;" Dated November 22, 2013
- AR 1590833, "Received Unexpected Annunciator 5002-2P (Reactor Water Level Control System Alarm); Dated November 27, 2013
- AR 1592200, "Received Unexpected Annunciator 5002-2P (Reactor Water Level Control System Alarm); Dated December 3, 2013
- ECR 412380, "FW-STM Flow Trouble has Become a Nuisance Alarm on DFW;" Dated December 11, 2013
- AR 1594427, "DFW Observations Post SCRAM;" Dated December 9, 2013
- EC 396388, "Use of DFW Given Post SCRAM Response;" Revision 0
- AR 1595147, "DFW A TDRFP RLI (Redundant Loop Interface) Failover During SCRAM;" Dated December 10, 2013
- AR 1595907, "P680 Lower DFW Screen Trackball Not Responding;" Dated December 11, 2013
- AR 1596615, "DFW FW004 RLI Primary Found Disarmed;" Dated December 13, 2013
- AR 1596635, "Difficulty in Getting A TDRFP to Rolling Standby;" Dated December 13, 2013
- AR 1596987, "Manual SCRAM Due to Reactor Water Level Oscillations While Initiating the Digital Feedwater (DFW) "Bring Pump Online" Command;" Dated December 13, 2013
- AR 1596987-13, Root Cause Report – Manual SCRAM Due to Reactor Water Level Oscillations While Initiating the Digital Feedwater (DFW) "Bring Pump Online" Command;" Dated January 15, 2014
- AR 1597212, "Entered 4002.01 (Abnormal RPV Level/Loss of Feedwater) Due to No FW004 Response in Auto or Manual;" Dated December 15, 2013
- AR 1598428, "Suggested Feedwater Procedure Changes;" Dated December 18, 2013
- AR 1598437, "DFW LL Refuel to Forced Outage;" Dated December 18, 2013
- AR 1598891, "DFW Observations during MDRFP to TDRFP;" Dated December 19, 2013
- AR 1600778, "Digital Feedwater Trouble Alarm is Locked In;" Dated December 25, 2013
- AR 1603100, "1FW004 Controller Output Does Not Match Valve Position;" Dated January, 2, 2014
- AR 1608015, "Two Plant Level Events Require a Maintenance Rule A(1) Determination;" Dated January 14, 2014
- AR 1608245, "Reactor Water Level Control System Trouble (5002-3P); Dated January 15, 2014

#### 1R13 Maintenance Risk Assessments and Emergent Work Control

- ER-AA-600, "Risk Management," Revision 6
- ER-AA-600-1012, "Risk Management Documentation," Revision 9
- ER-AA-600-1014, "Risk Management Configuration Control," Revision 6
- ER-AA-600-1042, "On-Line Risk Management," Revision 7
- WC-AA-101, "On-Line Work Control Process," Revision 19
- WC-AA-104, "Integrated Risk Management," Revision 18
- CPS 4005.01, "Loss of Feedwater Heating," Revision 18a
- RM Documentation Number CL-A4-09, "Clinton Power Station Risk Analysis to Support Division 3 SX Header Unavailability with Reduced Online Risk Color," January 10, 2014

- RM Documentation Number CL-Mode-02, "Risk Evaluation for Entry into Mode 1 With Control Room Heating Ventilation and Air Conditioning Train B Inoperable," March 24, 2014
- AR 01609091, "Work Week 1411 Secondary Containment Activity"
- AR 01615348, "MISO Work Week 1405 Schedule Impacts"
- AR 01635912, "4005.01 Loss of Feed Heating Entered"
- AR 01637466, "EOID Out of Spec Round"
- AR 01638437, "Dilution Flow Pressure Switches Over Ranged During Scram"

#### 1R14 Drill Evaluations

- EP-AA-125-1002 "ERO Performance – Performance Indicators Guideline," Revision 9
- EP-AA-125-001 "Drill & Exercise Scheduling, Development and Conduct" Revision 19

#### 1R15 Operability Evaluations

- AR 1607882; "DG1C Crank Jog Delay Relay As-Found Timing Unsatisfactory"; Dated January 14, 2014
- AR 1608378; "1DG01KC: An Indication Found Between Impeller Blades; Dated January 15, 2014
- EC 396692; "Division 3 Diesel Generator Turbocharger Hub Indications"; Revision 0
- EN 49747, "Technical Support Center Emergency Diesel Generator Out of Service"
- EC 396935, "3 Valve Manifold Associated with 1B21N073G was Not Bolted to the Instrument Rack 1H22-P005," Revision 0
- AR 01602085, "Missing Hardware on 3 Valve Manifold for 1B21N073G"
- AR 01609869, "TSC Diesel Generator Low Coolant Level"
- AR 01634669, "1E22-F332 Position Indication Failed During 9864.01D001"
- CPS 9072.01, "Steam Bypass Valve Tests," Revision 32e
- AR 1618330, "Full Open Light Did Not Come On During Testing 9072.01"
- AR 1628592, "1UAY-TO502B Relay Failed"
- AR1629870, "NRC ID Pre-Fire Plan Incorrect Door Designation"
- AR 1629837, "NRC ID Electrical Boxes Without Covers"
- CPS 9032.48, "Off Gas Hydrogen Analyzer Channel Functional" Revision 29
- AR 1628977, "0FP01PB: Higher Than Expected Wear Products In Engine Oil"

#### 1R19 Post-Maintenance Testing

- MA-AA-716-012, "Post-Maintenance Testing," Revision 11
- CPS 9080.02, "Diesel Generator 1B Operability – Manual and Quick Start Operability," Revision 52
- CPS 9080.02D001, "Diesel Generator 1B Operability – Manual and Quick Start Operability Data Sheet," Revision 43
- WO 01579373-05, "OP Post Maintenance Testing Adjustment EHC Pump 'B' Compensator," February 27, 2014
- WO 01714611-03, "9080.22B22 OP 1DG01KB Diesel Generator 1B Operability – Monthly Test Division 2," March 12, 2014
- AR 01637044, "Main EHC Pump 'B' 1EH01PB Dropped Pressure"
- AR 01637098, "Auto Start Main EHC Pump A"
- AR 01637271, "Further Observations from 1EH01PB Drop of EHC Pressure"
- WO 1668293, "Leak Check Control Rod Hydraulic Control Units for Instrument Air Leaks"
- WO 1624253, "Control Rod Drive Pump A Shaft Driven Oil Pump Leak"

- WO H00115327, Control Rod Drive A Pump Motor Oil Change
- WO 1013339, Perform Post Maintenance Test and Control Rod Drive A Pump Switch Calibration
- CPS 3304.01, Control Rod Hydraulic & Control

#### 1R20 Refueling and Other Outage Activities

- OP-CL-108-101-1003, "Operations Department Standards and Expectations," Revision 30
- OU-AA-103, "Shutdown Safety Risk Management," Revision 12
- Forced Outage Plan C1F58, February 5, 2014
- Reactivity Maneuver Plan # C15-013, Valid 3/17/14 – 5/18/14
- Reactivity Maneuver Plan # C15-014, Valid 3/22/14 – 3/30/14
- Adverse Condition Monitoring Plan AC-SB-1403-0001, Revision 2, "SB&PR Power Supply PS21 Appears To Have No Output"
- Operational Decision Making Document 1631430, "SB&PR Power Supply PS21 Appears To Have No Output," March 11, 2014
- Prompt Investigation 1631430, "1H13P637-PS21 Appears To Have No Output," March 14, 2014
- CPS 3005.01, "Unit Power Changes," Revision 41C
- CPS 3006.01, "Unit Shutdown," Revision 43
- CPS 3006.01C001, "Mode 4 Checklist," Revision 12B
- CPS 3302.01, "Reactor Recirculation," Revision 35A
- CPS 4004.02, "Loss of Vacuum," Revision 5
- CPS 9000.02D001, "Unit Attendant Surveillance Log Data Sheet," Revision 37a
- CPS 9000.06, "Reactor Coolant and Vessel Metal/Pressure/Temperature Limit Logs," Revision 31c
- CPS 9000.06D001, "Heat-up/Cool-down, Inservice Leak and Hydrostatic Testing 30 Minute Temperature Log," Revision 30a
- Work Request 458451, "SB&PR Power Supply PS21 (+22 VDC) Appears To Have No Output"
- AR 01631430, "SB&PR Power Supply PS21 (+22 VDC) Appears To Have No Output"
- AR 01637305, "1H13P637 Power Supply 21 Sense Line Protection Anomaly"
- AR 01637320, "Drilled Hole per EC 397485 in Valve Body in Wrong Spot"
- AR 01637478, "1H13-P637 Power Supply Fault"
- AR 01637547, "Received 5063-1D RCIC Pump Suction Pressure High Alarm"
- AR 01640083, "PMC: Steam Bypass System Power Supply Observation"
- PORC Package for C1F58 – Unit Restart Review Checklist
- Startup Checklist C1F55

#### 1R22 Surveillance Testing

- CPS 3506.01D003, Diesel Generator 1C Operating Logs
- CPS 3506.01C003, Diesel Generator 1C Pre-Start Checklist
- CPS 3506.01C005, Diesel Generator Start Log
- CPS 9080.03, Diesel Generator 1C Operability – Manual and Quick Start Operability
- CPS 9080.14, Diesel Generator 1C 24 Hour Run and Hot Restart – Operability
- CPS 9080.14D001, Diesel Generator 1C 24 Hour Run and Hot Restart Data Sheet
- CPS 9080.01, Diesel Generator 1A Operability – Manual and Quick Start Operability
- Technical Specification 3.8.1, AC Sources – Operating
- Technical Specification B3.8.1, AC Sources – Operating
- AR 1609798, Out of Normal Reading on 1PI-DG 186

- AR 1620318, Division 3 Diesel Generator Air Box Pressure High Out of Normal Range
- CPS 9054.02, "Reactor Core Isolation Cooling Valve Operability Checks"; Revision 41a
- CPS 9054.02D001, "RCIC Valve Operability Data Sheet"; Revision 41
- CPS 9072.01, "Steam Bypass Valve Tests," Revision 32e
- IR 1618330, "Full Open Light Did Not Come On During Testing 9072.01"
- IR 1628592, "1UAY-TO502B Relay Failed"
- IR 1629870, "NRC ID Pre-Fire Plan Incorrect Door Designation"
- IR 1629837, "NRC ID Electrical Boxes Without Covers"
- CPS 9032.48, "Off Gas Hydrogen Analyzer Channel Functional"
- IR 1628977, "0FP01PB: Higher Than Expected Wear Products In Engine Oil"

### 2RS3 In-Plant Airborne Radioactivity Control and Mitigation

- 10 CFR 61 Dry Active Waste Analysis, January 23, 2013
- Alpha Area Level Assessment, October 10, 2013
- Airborne Radioactivity Calculation Sheets, Various Records
- Respiratory Protection Equipment Inventory/Inspection, January 2014
- Respiratory Protection Training Records, Various Records
- Service Air and Self Contained Breathing Apparatus Grade D Air Tests, 2013
- Letter from NRC to Exelon, Use of French Designed Respiratory Protection Equipment, January 31, 2005
- MSA SCBA Flow Test Records, Various Records
- RP-AA-300, "Radiological Survey Program," Revision 10
- RP-AA-301, "Radiological Air Sampling Program," Revision 7
- RP-AA-302, "Determination of Alpha Levels and Monitoring," Revision 6
- RP-AA-825-1011, "Inspection and Use of the Mururoa V4 Mth2 and V4F1 Air Supplied Suits," Revision 5
- RP-AA-825, "Maintenance, Care, and Inspection of Respiratory Protective Equipment," Revision 6
- RP-AA-870-1001, "Set-up and Operation of Portable Air Filtration Equipment," Revision 3
- RP-CL-825-101, "CPS Maintenance and Care of Respiratory Protective Equipment," Revision 20
- SCBA Monthly Inspection Records, January and February 2014
- Training Lesson Plan, "Mururoa Air Line User," Revision 3
- Training Records, MSA SCBA Maintenance, Various Records

### 2RS4 Occupational Dose Assessment

- Annual Review of the Bioassay Program – 2013, February 12, 2014
- AR 01558596, "Area DLR Placement Not Optimal," September 14, 2013
- AR 01570165, "Worker Received Dose Rate Alarm," October 10, 2013
- AR 01570977, "Dose Rate Alarm," October 11, 2013
- AR 01571348, "Drywell Dose Alarm," October 12, 2013
- AR 01571562, "Worker Received an Unexpected Dose Rate Alarm," October 13, 2013
- Canberra Passive Monitoring 1 Percent Annual Limit of Intake Capability Testing, December 31, 2012
- AR 1582822-04, "In-plant Airborne Radioactivity Control and Mitigation & Occupational Dose Assessment Self-Assessment," January 8, 2014
- AR 01612117, "Self-Assessment Deficiency Incorrect Half-Life," January 24, 2014

- AR 01605693, "Self-Assessment Deficiency Actions Closed with Inadequate Documentation," January 8, 2014
- AR 01605696, "Self-Assessment Deficiency Error on Attachment 1 of RP-AA-229," January 8, 2014
- Effective Dose Equivalent Records, Various Records
- Whole Body Counter Calibration, February 4, 2014
- Whole Body Count Records, Various Records
- Landauer Inc., National Voluntary Accreditation Program (NVLAP), 2013-2014
- Multiple Dosimetry Issue Logs, Various Records
- Intake Investigation Forms, Various Records
- RP-AA-210, "Dosimetry Issue, Usage, and Control," Revision 22
- RP-AA-220, "Bioassay Program," Revision 9
- RP-AA-221, "Review, Correction, and Analysis of Whole Body Count Data," Revision 2
- RP-AA-225, "Quality Control Operations for the Canberra Fastscan Whole Body Counter," Revision 3
- RP-AA-229, "Fast Scan Abacos Plus Whole Body (WBC) Counter Calibration," Revision 1
- RP-AA-230, "Operation of the Canberra Fastscan Whole Body Counter," Revision 1
- RP-AA-250, "External Dose Assessments from Contamination," Revision 5
- RP-AA-270, "Prenatal Radiation Exposure," Revision 6
- TLD/ED Bias Evaluation, First Six Months of 2009

#### 4OA1 Performance Indicator Verification

- Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6
- NRC Letter February 14, 2014, "Summary of the Reactor Oversight Process Working Group Public Meeting Held on January 15, 2014"
- AR 01579812, "NRC SSFF PI in Exelon Action Region"

#### 4OA2 Identification and Resolution of Problems

- AR 01592687' "1E21F006 – Low Pressure Core Spray Discharge Pressure Hi ANN 5063-3G Received"
- AR 01591811, "Unexpected Annunciator 5063-3G"
- CPS 5063.03, "Low Pressure Core Spray Pump Discharge Press Abnormal"
- CPS 3313.01, "Low Pressure Core Spray (LPCS)"
- M05 – 1075 Sh 1, "Residual Heat Removal (RH) P&ID"
- M05-1073 Sh 1, "Low Pressure Core Spray (LPCS) P&ID"
- EC 356820, "Contingent Modification to address RHR SDC HDR Pressurization," Revision 1
- Technical Specification Bases 3.4.6 RCS Pressure Isolation Valve (PIV) Leakage EC 356820, "C1R10 Contingent Mod to Address RHR SDC Header Pressurization," Revision 1
- CPS 3404.01, "Fuel Building HVAC (VF)," Revision 12e
- CPS 9843.01, "ISI Category A Valve Leak Rate Test," Revision 35f
- WO 01459048-01, "MC014-1 \*LLRT: SDC Suction Line (Test Set B Only)," October 18, 2013
- WO 01460587-01, "MC014 \*LLRT: SDC Suction Line (Test Set A Only)," October 18, 2013
- AR 01617720, "Hard Ground Identified on DC MCC 1F"
- AR 01618749, "Degraded Flex Conduits on CW 'B' Limit Switches"
- AR 01620607, "Unexpected Alarm 5064-8F, Shutdown Header Pressure High"

#### 4OA3 Follow-up of Events and Notices of Enforcement Discretion

- Licensee Event Report 2013-002-00, "Deficient Fuse Causes Main Generator Trip, Turbine Trip and Reactor SCRAM," May 2, 2013
- Apparent Cause Evaluation #1484624-08, "Main Generator Experienced a TRIP That Resulted in a Reactor SCRAM"
- Operational Decision Making Document 1484624-24, "Premature Failures of Potential Transformer (PT) Fuses Caused by Manufacturing Defects (Clinton, Byron, Braidwood)," April 19, 2013
- AR 01579812, "NRC SSFF PI in Exelon Action Region"

#### 4OA5 Other Activities

- AR 01622875, "NRC URI 2013005-01: Safe S/D Emerg Lighting Failure Evals"
- CPS 4003.01, "Remote Shutdown (RS)," Revision 17b

## LIST OF ACRONYMS USED

ADAMS	Agency wide Document Access Management System
ALARA	As-Low-As-Reasonably-Achievable
CAP	Corrective Action Program
CNO	Chief Nuclear Officer
CPS	Clinton Power Station
CS	Control System
DFW	Digital Feedwater
DG	Diesel Generator
FSAR	Final Safety Analysis Report
IP	Inspection Procedure
IST	Manual and Quick Start Operability
LER	Licensee Event Report
LPCS	Low Pressure Core Spray
NEI	Nuclear Energy Institute
NRC	U.S. Nuclear Regulatory Commission
PARS	Publicly Available Records System
PI	Performance Indicator
PIV	Pressure Isolation Valve
PM	Post Maintenance
PT	Potential Transformer
RH	Residual Heat Removal
SSC	Systems, Structures, and Components
TS	Technical Specification
TSO	Transmission System Operator
UFSAR	Updated Final Safety Analysis Report
VG	Standby Gas Treatment System
WBC	Whole Body Count
WO	Work Order

M. Pacilio

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Sincerely,

**/RA/**

Christine A. Lipa, Chief  
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