UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
475 ALLENDALE ROAD
KING OF PRUSSIA, PENNSYLVANIA 19406-1415

May 12, 2011

Mr. Thomas P. Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC - N09
P.O. Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - NRC INTEGRATED INSPECTION REPORT 05000354/2011002

Dear Mr. Joyce:

On March 31, 2011, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Hope Creek Generating Station. The enclosed inspection report documents the inspection results discussed on April 7, 2011, with Mr. Perry and other members of your staff.

The 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 were identified. However, one licensee-identified violation that was determined to be of very low safety significance is listed in this report. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the NRC Enforcement Policy because of the very low safety significance of the violation and because it is entered into your corrective action program (CAP). If you contest this NCV, 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 copies to the Regional Administrator, Region I; the Director, Office of Enforcement, U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Hope Creek Generating Station.

In accordance with Title 10 of the Code of Federal Regulations (CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the

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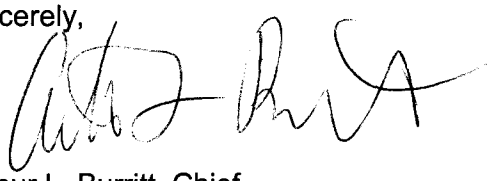
Sincerely,



Arthur L. Burritt, Chief
Projects Branch 3
Division of Reactor Projects

Docket No: 50-354
License No: NPF-57

Enclosure: Inspection Report 05000354/2011002
w/Attachment: Supplemental Information

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Sincerely,
/**RA**/
Arthur L. Burritt, Chief
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U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-354
License No:	NPF-57
Report No:	05000354/2011002
Licensee:	PSEG Nuclear LLC (PSEG)
Facility:	Hope Creek Generating Station
Location:	P.O. Box 236 Hancocks Bridge, NJ 08038
Dates:	January 1, 2011 through March 31, 2011
Inspectors:	B. Welling, Senior Resident Inspector B. Smith, Acting Senior Resident Inspector A. Patel, Resident Inspector J. Hawkins, Acting Resident Inspector J. Furia, Senior Health Physicist S. Barr, Senior Emergency Preparedness Inspector C. Crisden, Emergency Preparedness Specialist S. Ibarrola, Project Engineer L. Kern, Project Engineer A. Turilin, Project Engineer
Approved By:	Arthur L. Burritt, Chief Projects Branch 3 Division of Reactor Projects

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SUMMARY OF FINDINGS

IR 05000354/2011002; 01/01/2011 - 03/31/2011; Hope Creek Generating Station; Routine Integrated Inspection Report.

This report covers a three-month period of inspection by resident inspectors, and announced inspections by a regional radiation specialist, an emergency preparedness inspector, and project engineers. 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.

Findings

No findings were identified.

Other Findings

One violation of very low safety significance, which was identified by PSEG, has been reviewed by the inspectors. Corrective actions taken or planned by PSEG have been entered into PSEG's CAP. This violation and its corrective action tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

The Hope Creek Generating Station operated at or near full power for the duration of the inspection period with the following exception. On March 18, operators shutdown the plant to conduct a planned maintenance outage. Operators commenced plant start-up on March 20 after completion of planned maintenance and full power was restored on March 22.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity, and Emergency Preparedness

1R01 Adverse Weather Protection (71111.01 - 1 sample)

Evaluate Readiness for Impending Adverse Weather Conditions

a. The inspectors completed one adverse weather protection sample. The inspectors reviewed PSEG's preparation activities for river grass intrusion conditions that may impact the station service water system. Inspectors assessed implementation of PSEG's grassing readiness plan through service water system walkdowns, corrective action program (CAP) reviews, and discussions with cognizant managers and engineers. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04 - 4 samples)

.1 Partial Walkdown

a. Inspection Scope

The inspectors completed three partial walkdown inspection samples. The inspectors performed partial system walkdowns for the systems listed below to verify each system's operability when redundant or diverse trains and components were inoperable. The inspectors completed walkdowns to determine whether there were discrepancies in the system's alignment that could impact the function of the system, and therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, walked down system components, and verified that selected breakers, valves, and support equipment were in the correct position to support system operation. The inspectors also verified that PSEG had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the CAP. The documents reviewed are listed in the Attachment.

- B, C, and D emergency diesel generators (EDGs) while the A EDG was out-of-service on January 3
- High pressure coolant injection (HPCI) system while reactor core isolation cooling (RCIC) system was out-of-service on February 22
- Portions of the 500 kV system while 5015 offsite power line and control room indication and display system out-of-service on March 17

b. Findings

No findings were identified.

.2 Complete Walkdown

a. Inspection Scope

The inspectors performed one complete walkdown inspection of accessible portions of the B safety auxiliary cooling system (SACS). The inspectors used PSEG procedures and other documents to verify proper system alignment and functional capability. The inspectors independently verified the alignment and status of the B SACS valves, labeling, hangers and supports, and associated support systems. The walkdown also included checks that oil reservoir levels were normal, pump rooms and pipe chases were adequately ventilated, system parameters were within established ranges, and equipment deficiencies were appropriately identified. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05Q - 6 samples)

Fire Protection - Tours

a. Inspection Scope

The inspectors completed six quarterly fire protection inspection samples. The inspectors conducted tours of the areas listed below to assess the material condition and operational status of fire protection features. The inspectors verified that combustibles and ignition sources were controlled in accordance with PSEG's administrative procedures; fire detection and suppression equipment was available for use; that passive fire barriers were maintained in good material condition; and that compensatory measures for out of service, degraded, or inoperable fire protection equipment were implemented in accordance with PSEG's fire plan. The areas toured are listed below with their associated pre-fire plan designator. The documents reviewed are listed in the Attachment.

- FRH-11-533, Electrical Access Area
- FRH-11-511, Diesel Fuel Oil Storage Tanks Area (A and C)
- FRH-11-541, Class 1E Switchgear Rooms
- FRH-11-423, Reactor Auxiliary Cooling System (RACS) Pumps & Heat Exchanger Area

- FRH-11- 511, Diesel Fuel Oil Storage Tanks Area (B and D)
- FRH-11-461, Standby Liquid Control (SLC) Room

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 - 1 sample)

a. Inspection Scope

The inspectors completed one flood protection measures inspection sample. The inspectors reviewed selected risk-important plant design features and PSEG procedures intended to protect the plant and its safety-related equipment from internal flooding events. Specifically, the inspectors focused on internal flood mitigation features for the 54' elevation of the reactor building, which contains significant portions of the core spray (CS), residual heat removal (RHR), HPCI, RCIC, and reactor building sump systems, and the 77' elevation of the reactor building, which contains significant portions of the RHR, RACS and control rod drive systems. The inspectors reviewed flood analysis and design documents, including the updated final safety analysis report (UFSAR), engineering calculations, and abnormal operating procedures. The inspectors observed the condition of wall penetrations, watertight doors, flood alarm switches, and drains to assess their readiness to contain flow from an internal flood in accordance with the design basis. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q - 1 sample)

a. Inspection Scope

The inspectors completed one quarterly licensed operator requalification program inspection sample. The inspectors observed a licensed operator annual requalification simulator scenario (SG-672) on January 31, 2011, to assess operator performance and training effectiveness. The scenario involved high vibrations on a reactor recirculation pump, a failed reactor protection system component, a steam leak on the RCIC system, and a reactor scram. The inspectors assessed simulator fidelity and observed the simulator instructors' critique of operator performance. The inspectors also observed control room activities with emphasis on simulator identified areas for improvement. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q - 2 samples)

a. Inspection Scope

The inspectors completed two maintenance effectiveness inspection samples. For the equipment performance issues listed below, the inspectors evaluated items such as:

appropriate work practices; identifying and addressing common cause failures; scoping in accordance with 10 CFR 50.65(b) of the Maintenance Rule; characterizing reliability issues for performance; trending key parameters for condition monitoring; charging unavailability for performance; classification and reclassification in accordance with 10 CFR 50.65(a)(1) or (a)(2); and appropriateness of performance criteria for structures, systems, and components (SSCs)/functions classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified as (a)(1). The documents reviewed are listed in the Attachment.

- Drywell sump pump check valve
- B EDG bailey card failure

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13 - 5 samples)

a. Inspection Scope

The inspectors completed five maintenance risk assessment and emergent work control inspection samples. The inspectors reviewed on-line risk management evaluations through direct observation and document reviews for the following five plant configurations:

- A EDG out-of-service for emergent maintenance during week of January 3
- C EDG and SACS valve 2496C planned maintenance during week of January 10
- B CS room cooler and B control room emergency filtration (CREF) planned maintenance during week of January 24
- B EDG and D circulating water pump out-of-service during week of February 14
- RCIC and 5023 offsite power line out-of-service during week of February 22

The inspectors reviewed the applicable risk evaluations, work schedules, and control room logs for these configurations to verify that concurrent planned and emergent maintenance and test activities did not adversely affect the plant risk already incurred with these configurations. PSEG's risk management actions were reviewed during shift turnover meetings, control room tours, and plant walkdowns. The inspectors also used PSEG's on-line risk monitor (Equipment Out of Service workstation) to gain insights into the risk associated with these plant configurations. Finally, the inspectors reviewed notifications documenting problems associated with risk assessments and emergent work evaluations. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R15 Operability Evaluations (71111.15 - 5 samples)

a. Inspection Scope

The inspectors completed five operability evaluation inspection samples. The inspectors reviewed the operability determinations for the degraded or non-conforming conditions associated with the following systems:

- A EDG failed motor operated potentiometer
- D EDG loose crankcase cover
- R safety relief valve elevated tailpipe temperature
- B EDG lube oil cooler leak
- North plant vent bypass flow splitter calibration failure

The inspectors reviewed the technical adequacy of the operability determinations to ensure the conclusions were justified. The inspectors also walked down accessible equipment to verify the adequacy of PSEG's operability determinations. Additionally, the inspectors reviewed other PSEG identified safety-related equipment deficiencies during this report period and assessed the adequacy of their operability screenings. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 - 2 samples)

.1 Temporary Modification

a. Inspection Scope

The inspectors completed a review of one temporary plant modification package for the drywell sump (DCP # 4HM-0024). The modification installed, and then removed closure springs in the sump check valves. The inspectors verified that the design bases, licensing bases, and performance capability of the drywell sump were not degraded by this temporary modification. The inspectors verified the post-modification testing was adequate to ensure the SSCs would function properly. The 10 CFR 50.59 evaluation associated with this temporary modification was also reviewed. The documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

.2 Permanent Modification

a. Inspection Scope

The inspectors completed a review of one permanent plant modification package for the North Plant Vent (DCP # 80096594). This review verified that the design bases, licensing bases, and performance capability of the system were not degraded by the modification. The inspectors verified the new configuration was accurately reflected in the design documentation, and that the post-modification testing was adequate to ensure affected SSCs would function properly. The 10 CFR 50.59 evaluation was reviewed. The inspectors also interviewed plant staff and reviewed issues entered into the CAP to assess PSEG's effectiveness in identifying and resolving problems associated with plant modifications. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19 - 6 samples)

a. Inspection Scope

The inspectors completed six post-maintenance testing inspection samples. The inspectors reviewed the post-maintenance tests for the maintenance items listed below to verify that procedures and test activities ensured system operability and functional capability following completion of maintenance. The inspectors reviewed applicable test procedures to verify that they tested all safety functions potentially affected by the associated maintenance activities. The inspectors verified that for each potentially affected safety function the acceptance criteria stated in the procedure was consistent with the UFSAR and other design documentation. The inspectors witnessed completion of the testing or reviewed the completed test results to confirm acceptance criteria were met and verified satisfactory restoration of all safety functions affected by the maintenance activities. The documents reviewed are listed in the Attachment.

- A EDG planned maintenance on February 2
- A CREF system planned maintenance on February 10
- B EDG planned maintenance on February 17
- RCIC pump planned maintenance on February 24
- B EDG Bailey card planned maintenance on March 24
- C RHR suction valve thermal overload bypass planned maintenance on March 25

b. Findings

No findings were identified.

1R20 Refueling and Outage Activities (71111.20 - 1 sample)

a. Inspection Scope

PSEG conducted a planned maintenance outage from March 18 through March 21 to replace three safety relief valve pilot valves, troubleshoot and repair a problem with a drywell sump pump, and perform other planned maintenance activities. The inspectors monitored or observed the activities listed below to assess the adequacy of PSEG's outage controls:

- Portions of the shutdown and cooldown processes
- Initial and final closeout walkdowns of selected areas of the drywell to check for unidentified leakage or other discrepant conditions
- Outage risk management
- Configuration management, including maintenance of defense-in-depth, commensurate with the outage plan for the key safety functions and compliance with the technical specifications (TS) when removing equipment from service;
- Decay heat removal operations
- Reactor water inventory controls, including flow paths, configurations, alternative means for inventory additions, and controls to prevent inventory loss
- Status and configuration of electrical systems to ensure compliance with TS
- Activities that could affect reactivity
- Reactor start-up, including reactor criticality
- Personnel fatigue management controls

Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 - 6 samples)

a. Inspection Scope

The inspectors completed six surveillance testing (ST) inspection samples. The inspectors witnessed performance of and/or reviewed test data for the risk-significant STs listed below to verify that the SSCs tested satisfied TSs, UFSAR, and procedure requirements. The inspectors verified that test acceptance criteria were clear, demonstrated operational readiness, and were consistent with design documentation; that test instrumentation had current calibrations and the correct range and accuracy for the application; and that tests were performed as written with applicable prerequisites satisfied. Upon ST completion, the inspectors confirmed that equipment was returned to the status specified to perform its safety function. The documents reviewed are listed in the Attachment.

- A RHR pump inservice test on January 4
- HPCI quarterly surveillance test on February 8
- Reactor water cleanup isolation on SLC initiation test on February 16
- RCIC inservice test on February 24

- B CS pump surveillance test on March 14
- B SLC pump inservice test on March 27

b. Findings

No findings were identified.

1EP2 Alert and Notification System (ANS) Evaluation (71114.02 - 1 sample)

a. Inspection Scope

An onsite review of the Salem and Hope Creek ANS was conducted to assess current maintenance and testing practices. During the inspection, the inspectors reviewed ANS maintenance and testing procedures, maintenance and test records, and the updated Salem and Hope Creek ANS design report to ensure PSEG's compliance with design report commitments for system maintenance and testing. A sample of condition reports (CRs) pertaining to the ANS was reviewed for causes, trends, and corrective actions. The inspectors interviewed the ANS System Manager to discuss system performance and upgrades. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 2. Planning Standard, 10 CFR 50.47(b)(5), and the related requirements of 10 CFR 50, Appendix E, were used as reference criteria.

b. Findings

No findings were identified.

1EP3 Emergency Response Organization (ERO) Staffing and Augmentation System (71114.03 - 1 sample)

a. Inspection Scope

The inspectors conducted a review of Salem and Hope Creek's augmentation staffing requirements and the process for notifying and augmenting the ERO. This was performed to ensure the readiness of key PSEG staff to respond to an emergency event and ensure PSEG's ability to activate their emergency facilities in a timely manner. The inspectors reviewed the Salem and Hope Creek Emergency Plan, duty rosters, and augmentation reports. The inspectors also reviewed a sampling of ERO responders training records to ensure training and qualifications were up to date. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 3. Planning Standard, 10 CFR 50.47(b)(2), and related requirements of 10 CFR 50, Appendix E, were used as reference material.

b. Findings

No findings were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changes (71114.04 - 1 sample)

a. Inspection Scope

Since the last NRC inspection of this program area, PSEG implemented various changes to the Salem and Hope Creek Emergency Plan and implementing procedures. PSEG had determined that, in accordance with 10 CFR 50.54(q), any change made to the Emergency Plan, and its lower-tier implementing procedures, had not resulted in any decrease in effectiveness of the Emergency Plan, and that the Emergency Plan continued to meet the standards in 10 CFR 50.47(b) and the requirements of 10 CFR 50, Appendix E. The inspectors reviewed all EAL changes. A sample of Emergency Plan changes, including the changes to lower-tier implementing procedures, was evaluated for any potential decreases in effectiveness of the Salem/Hope Creek Emergency Plan. However, this review by the inspectors was not documented in an NRC Safety Evaluation Report and does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 4. The requirements in 10 CFR 50.54(q) were used as reference criteria.

b. Findings

No findings were identified.

1EP5 Correction of Emergency Preparedness Weaknesses (71114.05 - 1 sample)

a. Inspection Scope

The inspectors reviewed a sampling of self-assessment procedures and reports to assess PSEG's ability to evaluate their emergency preparedness performance and program. The inspectors reviewed a sampling of CRs from April 2009 through March 2011 initiated by PSEG at Salem and Hope Creek from drills, self-assessments, and audits. The inspectors also reviewed 10 CFR 50.54(t) audit reports and nuclear oversight audits. This inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 5. Planning Standard, 10 CFR 50.47(b)(14), and the related requirements of 10 CFR 50, Appendix E, were used as reference criteria.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06 - 1 sample)

a. Inspection Scope

The inspectors completed one drill evaluation inspection sample. The inspectors observed emergency plan response actions at the simulated control room and the technical support center during an emergency preparedness drill on March 2, 2011. The inspectors verified that emergency classification declarations and notifications were completed in accordance with 10 CFR 50.72, 10 CFR 50, Appendix E, and the Hope

Creek emergency plan implementing procedures. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

2. RADIATION SAFETY

Cornerstone: Radiation Safety - Public and Occupational

2RS1 Radiological Hazard Assessment and Exposure Controls (71124.01)

a. Inspection Scope

Radiological Hazard Assessment
The inspectors determined that, since the last inspection, there have been no changes to plant operations that may result in a significant new radiological hazard for onsite workers or members of the public.

The inspectors reviewed the last two radiological surveys from selected plant areas. The inspectors verified that the thoroughness and frequency of the surveys was appropriate for the given radiological hazard.

The inspectors conducted walkdowns of the facility, including radioactive waste processing, storage, and handling areas, to evaluate material and potential radiological conditions.

The inspectors selected radiologically risk-significant work activities that involved exposure to radiation. The inspectors verified that appropriate pre-work surveys were performed to identify and quantify the radiological hazard and to establish adequate protective measures. The inspectors evaluated the radiological survey program to determine if hazards were properly identified, including the following:

- Identification of hot particles
- The presence of alpha emitters
- The potential for airborne radioactive materials, including the potential for the presence of transuranics and/or other hard-to-detect radioactive materials;
- The hazards associated with work activities that could suddenly and severely increase radiological conditions
- Severe radiation field dose gradients that can result in non-uniform exposures of the body

The inspectors selected air sample survey records and verified that samples were collected and counted in accordance with PSEG procedures. The inspectors observed work in potential airborne areas and verified that air samples were representative of the breathing air zone. The inspectors verified that PSEG had a program for monitoring levels of loose surface contamination in areas of the plant with the potential for the contamination to become airborne.

The inspectors reviewed radiation work permits (RWPs) used to access high radiation areas and identified what work control instructions or control barriers had been specified.

Instructions to Workers
The inspectors selected containers holding non-exempt licensed radioactive materials that may cause unplanned or inadvertent exposure of workers and verified that they were labeled and controlled. The inspectors verified that allowable stay times or permissible dose for radiologically significant work under each RWP was clearly identified. The inspectors verified that electronic personal dosimeter (EPD) alarm setpoints were in conformance with survey indications and plant policy.

The inspectors selected occurrences where a worker's EPD noticeably malfunctioned or alarmed. The inspectors verified that workers responded appropriately to the off-normal condition. The inspectors verified that the issue was included in the CAP and dose evaluations were conducted as appropriate.

Problem Identification and Resolution
The inspectors verified that problems associated with radiation monitoring and exposure control were identified by PSEG at an appropriate threshold and were properly addressed for resolution in their CAP. In addition, the inspectors verified the appropriateness of the corrective actions for a selected sample of problems that involved radiation monitoring and exposure controls. The inspectors also verified that PSEG was assessing the applicability of operating experience to their plants.

b. Findings

No findings were identified.

2RS2 Occupational As Low As Reasonably Achievable (ALARA) Planning & Controls (71124.02)

a. Inspection Scope

Verification of Dose Estimates and Exposure Tracking Systems
The inspectors selected ALARA work packages and reviewed the assumptions and basis for the Fall 2010 refueling outage (RFO16) collective exposure estimate for reasonable accuracy. The inspectors reviewed the applicable procedures to determine the methodology for estimating exposures from specific work activities and the intended dose outcome. The inspectors selected the following work packages for review:

- Drywell nozzle exams
- Reactor disassembly
- Reactor reassembly
- B RHR heat exchanger repairs
- Scaffold activities

The inspectors verified that for the selected work activities PSEG had established measures to track, trend, and if necessary, reduce occupational doses for ongoing work activities. The inspectors verified that trigger points or criteria were established to prompt additional reviews and/or additional ALARA planning and controls.

The inspectors also evaluated PSEG's method of adjusting exposure estimates, or re-planning work when unexpected changes in scope or emergent work were encountered to confirm that adjustments to exposure estimates were based on sound radiation protection and ALARA principles.

b. Findings

No findings were identified.

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

a. Inspection Scope

Inspection Planning
The inspectors reviewed the plant's final safety analysis report (FSAR) to identify areas of the plant designed as potential airborne radiation areas including the associated ventilation and/or airborne monitoring instrumentation. The inspectors reviewed the FSAR, TSs, and emergency planning documents for an overview of the respiratory protection program and to identify the location and quantity of respiratory protection devices stored for emergency use. The inspectors reviewed the reported PIs to identify any related to unintended dose resulting from intakes of radioactive materials.

Engineering Controls: Permanent and Temporary Ventilation
The inspectors verified that PSEG used ventilation systems, in lieu of respiratory protection devices, to control airborne radioactivity. The inspectors reviewed procedural guidance for use of installed plant systems and verified that the systems were used, to the extent practicable, during high-risk activities. The inspectors selected installed ventilation systems, used to mitigate the potential for airborne radioactivity, and verified that ventilation airflow capacity, flow path, and filter/charcoal unit efficiencies 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) used to support work in contaminated areas and verified that the use of these systems was consistent with PSEG procedural guidance and ALARA.

Engineering Controls: Airborne Monitoring Protocols
The inspectors selected installed systems to monitor and warn of changing airborne concentrations in the plant. The inspectors verified that alarm and setpoints were sufficient to prompt PSEG/worker action to ensure that doses were maintained within the limits of 10 CFR Part 20 and ALARA. The inspectors verified that PSEG had established trigger points for evaluating levels of airborne beta-emitting and alpha-emitting radionuclides.

Problem Identification and Resolution
The inspectors verified that problems associated with the control and mitigation of in-plant airborne radioactivity were being identified by PSEG at an appropriate threshold and were properly addressed for resolution in their CAP.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification (71151 - 6 samples)

a. Inspection Scope

The inspectors reviewed PSEG's program for gathering, evaluating and reporting information for the PIs listed below. The inspectors used the definitions and guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, to assess the accuracy of PSEG's collection and reporting of PI data.

Cornerstone: Initiating Events
- Unplanned scrams per 7000 critical hours
- Unplanned scrams with complications
- Unplanned power changes per 7000 critical hours

The inspectors reviewed the data reported for these PIs for the period January 1 through December 31, 2010. The records reviewed included PI data summary reports, licensee event reports, monthly operating reports, and operator narrative logs. The inspectors verified the accuracy of the PIs and discussed the results with the system engineers responsible for data collection and evaluation.

Cornerstone: Emergency Preparedness
- Drill and Exercise Performance
- ERO Drill Participation
- ANS Reliability

For the PIs listed above, to verify the accuracy of the reported data, the inspectors reviewed the PI data, supporting documentation, and the information PSEG reported, from the second quarter through the fourth quarter of 2010.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 - 1 annual sample)

.1 Routine Review of Items Entered into the CAP

a. Inspection Scope

As required by IP 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of all items entered into PSEG's CAP. This was accomplished by reviewing the description of each new notification and attending management review committee meetings.

b. Findings

No findings were identified.

.2 Annual Sample: EDG Equipment Reliability Issues

a. Inspection Scope

The inspectors performed an in-depth review of PSEG's corrective actions for recent and long-standing EDG equipment reliability issues associated with the EDG preventative maintenance (PM) program. PSEG initiated an apparent cause evaluation (ACE)(Order # 70111708) to review the impact of the EDG PM program on EDG system performance. Recent equipment issues that PSEG determined to be related to the PM program included jacket water leaks, lube oil keep warm heaters, Bailey card control failures, voltage regulator issues and breaker trips. Documents reviewed are listed in the Attachment.

b. Findings and Observations

No findings were identified.

PSEG performed an evaluation and identified gaps in PM strategy and scope, the application of the PCM template, and inadequate work planning. PSEG initiated corrective actions to address each gap. The inspectors reviewed the evaluation and PSEG's completed and proposed corrective actions and determined that PSEG adequately evaluated and was addressing the identified causes of the EDG equipment reliability issues through PM program improvements.

4OA3 Event Follow-up (71153 - 1 sample)

(Closed) Licensee Event Report (LER) 05000354/2010-003-00, RHR Shutdown Cooling Suction Relief Valve Missed Surveillance

In December 2009, a PSEG self assessment discovered a missed surveillance test for 1BCPSV-4425, the RHR shutdown cooling common suction relief valve. 1BCPSV-4425 is an American Society of Mechanical Engineers (ASME) Class 1 valve, but had been improperly grouped with Class 2 and 3 valves. The valve was last tested on October 25, 2007, and is required to be tested every 24 months. As such, this discovery constituted a missed surveillance. PSEG performed a risk assessment in accordance with TS 4.0.3 to justify delaying the surveillance test until the following refueling outage, and concluded there was no significant increase in risk as a result of the delay.

On November 1, 2010, PSEG completed the test and determined that the as-found lift setpoint for 1BCPSV-4425 was unsatisfactory. The valve did not open within the required actuation pressure setpoint tolerance of +/- 3 percent. 1BCPSV-4425 opened above the required pressure band. PSEG determined that the apparent cause for the 1BCPSV-4425 test failure was corrosion bonding/bridging of the pilot disc. The failed relief valve was replaced with a fully tested spare. The enforcement aspects of this finding are discussed in Section 4OA7. This LER is closed.

4OA6 Meetings, including Exit

On April 7, 2011, the inspectors presented inspection results to Mr. J. Perry and other members of his staff. The inspectors asked PSEG whether any materials examined during the inspection were proprietary. No proprietary information was identified.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by PSEG and is a violation of NRC requirements that meets the criteria of Section 2.3.2 of the NRC Enforcement Policy for being dispositioned as a NCV:

Hope Creek TS 6.8.4.i, "Inservice Testing Program," requires the inservice testing of ASME Code Class 1, 2, and 3 components in accordance with the ASME Boiler and Pressure Vessel Code. ASME Code requires that 1BCPSV-4425, the RHR shutdown cooling common suction relief valve, a Class 1 valve, be tested every 24 months and that it open within a lift setpoint of +/- 3% of the specified code safety valve lift setting. Contrary to this requirement, on November 1, 2010, PSEG identified that 1BCPSV-4425 opened above the +/- 3% acceptable range. Since the valve was last tested on October 25, 2007, this constituted a failed late surveillance test. PSEG entered this issue into their CAP as notification 20484572. This licensee-identified NCV is of very low safety significance based on a Phase 1 SDP screening, because the relief valve lifted below the maximum rating of the piping. Thus, the condition resulted in the inoperability of the valve, but did not result in a loss of system safety function.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Perry, Hope Creek Site Vice President
L. Wagner, Hope Creek Plant Manager
E. Carr, Operations Director
E. Casulli, Shift Operations Superintendent
K. Chambliss, Work Management Director
P. Duca, Senior Engineer, Regulatory Assurance
D. Bush, System Engineer
L. Davis, System Engineer
M. Gaffney, Regulatory Assurance Manager
L. Gorecki, System Engineer
C. Johnson, Senior Engineer
F. Jones, System Engineer
K. Knaide, Engineering Director
W. Kopchick, Plant Engineering Manager
G. Lichty Technical Specialist
F. Mooney, Maintenance Director
S. Peterkin, Radiation Protection Support Superintendent
A. Shabazian, Maintenance Rule Coordinator
G. Siefert, Design Engineer
H. Trimble, Radiation Protection Manager
A. Whatley, System Engineer
D. Burgin, Corporate Emergency Preparedness Manager

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Closed

05000354/2010-003-00	LER	RHR Shutdown Cooling Suction Relief Valve Missed Surveillance (Section 4OA3.1)

LIST OF DOCUMENTS REVIEWED

In addition to the documents identified in the body of this report, the inspectors reviewed the following documents and records:

Hope Creek Generating Station UFSAR
Technical Specification Action Statement Log
HCGS Operations Narrative Logs

Section 1R01: Adverse Weather Protection

Procedures
WC-AA-107, Seasonal Readiness, Revision 10
HC.OP-AB.COOL-0001, Station Service Water, Revision 17

Other Documents
2010 Hope Creek Winter/Grassing Seasonal Readiness Affirmation Memo
Grassing Readiness Tracking Sheets

Notifications
20495462

Section 1R04: Equipment Alignment

Procedures
HC.OP-SO.EG-0001, Safety and Turbine Auxiliaries Cooling Water System Operation, Revision 44
HC.FP-SV.ZZ-0026, Flood and Fire Barrier Penetration Seal Inspection, Revision 6
HC.OP-FT.MH-0001, Pilot Wire (500kV 5037), and Carrier (500kV 5015 and 5023) Weekly Functional Test, Revision 13

Notifications (*NRC-identified)

20491415	20493099	20483612	20489618	20489113	20489949
20495525*	20500959	20500973	20500962	20501044	20494750*

Orders
60094470 80098838

Drawings
E-0001-0, Single-line Diagram Station Electrical, Revision 24
E-0003-0, Single-line Motor and Relay Diagram Generator-Main Transformer, Revision 24
E-1502-0, Sh. 1, Electrical Facilities Site – Southeast, Revision 16
E-1502-0, Sh. 2, Electrical Facilities Site Duct Bank Sections, Revision 14
E-1940-1, Raceway Sections and Details – Turbine Building, Revision 8
M-11-1, Safety Auxiliaries Cooling Reactor Building, Revision 17
M-12-1, Safety Auxiliaries Cooling Auxiliary Building, Revision 13

Other Documents
System Health Report for Safety Auxiliaries Cooling System, 4th Qtr 2010
HC Updated Final Safety Analysis Report, 9.2.2.2 Safety and Turbine Auxiliaries Cooling System, Revision 0

Section 1R05: Fire Protection Measures

Procedures
FRH-II-533, Electrical Access Area, Revision 6
FRH-II-511, Diesel Fuel Oil Storage Tanks Area, Revision 6
FRH-II-541, Class 1E Switchgear Rooms, Revision 7
FRH-II-423, Reactor Auxiliary Cooling System Pumps & Heat Exchanger Area, Revision 4
FRH-II-461, Standby Liquid Control (SLC) Room, Revision 3

Notifications (*NRC-identified)
20481025* 20488889* 20490436* 20490212* 20495570*

Section 1R06: Flood Protection Measures

Procedures
HC-1-ZZ-FEE-1803, Separation Barrier Control Aid for Hope Creek, Revision 0
OP-HC-103-102-1005, High Energy and Internal Flooding Barrier Control Program, Revision 1
OP-AA-101-112-1002, On-Line Risk Assessment, Revision 5

Notification
20093028

Drawings
11-92, Reactor Building Flooding, Elev. 54' and 77', Revision 5
A-4641-1, Reactor Building Unit 1 Floor Plan of EL. 54'-0", Revision 5
A-4642-1, Reactor Building Unit 1 Floor Plan of EL. 77'-0", Revision 5

Calculations
DITS D7.5, Hope Creek Environmental Design Criteria, Revision 19

Other Documents
ND.DE-PS.ZZ-0010(Q), Flooding Analysis Methodology, Appendix 5 and 7
ND.DE-PS.ZZ-0010, Internal Hazards Program, Revision 1

Section 1R11: Licensed Operator Requalification Program

Procedures
HC.OP-AB.RPV-0003, Recirculation System/Power Oscillations, Revision 20
HC.OP-AB.RPV-0001, Reactor Power, Revision 12

Other Documents
Scenario Guide SG-672, Licensed Operator Annual Requalification Simulator Scenario, 1/31/2011

Section 1R12: Maintenance Effectiveness

Procedures
ER-AA-310-1001, Maintenance Rule Scoping, Revision 4
ER-AA-310-1002, Maintenance Rule – SSC Risk Significance Determination, Revision 4
ER-AA-310-1003, Maintenance Rule – Performance Criteria Selection, Revision 4
ER-AA-310-1004, Maintenance Rule – Performance Monitoring, Revision 8

ER-AA-1102-F7, Maintenance Rule Program – Specific Performance Indicators, Revision
ER-HC-310-1009, Maintenance Rule System Function and Risk Significance Guide, Revision 6
HC.MD-GP.ZZ-0112(Q), General Instructions for Disassembly, Inspection and Reassembly of Check Valves, Revision 5
HC.MD-PM.KJ-0004, EDG Lubrication System PM, Revision 9
HC.OP-AR.ZZ-0014, Overhead Annunciator Window Box D3, Revision 30
HC.OP-SO.KJ-0001, Emergency Diesel Generators Operation, Revision 57
HC.OP-SO.PB-0001, 4.16KV System Operation, Revision 27
MA-AA-716-004, Complex Troubleshooting, Att. 2, Revision 10
MA-AA-716-012, Post Maintenance Testing, Revision 16
OP-AA-101-112-1002, On-Line Risk Assessment, Revision 4
SH.MD-GP.ZZ-0205, Vibration Data Collection, Revision 4

Notifications
20434540 20486591 20488150

Orders
60088818 60093792

Drawings
1-P-HB-204, Sh. 1, Drywell Building Liquid Radwaste Pumps Discharge to Vlv, Revision 4
M-30-1, Diesel Engine Auxiliary System Intercooler, Revision 3
M-61-1, Sh. 1, P&ID Liquid Radwaste Collection, Revision 24

Other Documents
MDCP-4-HM-0024, Install a Spring Inside Hancock Check Valves, Revision 2
VTD PJ200Q-2377, 862 Cabinet Layout BC652-1, Revision 12
VTD PP328-0064, Quality Control Plan and Controlled Component Parts Listing, Revision 5

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
OP-AA-101-112-1002, On-Line Risk Assessment, Revision 5
WC-AA-101, On-Line Work Management Process, Revision 18

Orders
70118872

Notifications (*NRC-identified)
20494173*

Other Documents
HCGS PRA Risk Evaluation for Work Week 1101
HCGS PRA Risk Evaluation for Work Week 1102
HCGS PRA Risk Evaluation for Work Week 1104
HCGS PRA Risk Evaluation for Work Week 1107
HCGS PRA Risk Evaluation for Work Week 1108

Section 1R15: Operability Evaluations

Procedures
ER-HC-310-1009, Hope Creek Generating Station System Function Level Maintenance Rule Scoping, Revision 6
HC.IC-CC.SP-0015(Q), Process Radiation Monitoring – North Plant Vent (WRGM), Revision 31
HC.IC-SC.SP-0007(Q), Process Radiation Monitoring – NPV Sample Flow System, Revision 14
HC.OP-ST.KJ-0002, Emergency Diesel Generator 1BG400 Operability Test, Revision 73
HC.OP-ST.SH-0001(Q), Accident Monitoring Instrumentation Channel Check Monthly, Revision 31
HC.OP-SO-SP-0001(Q), Operability Determination Information for NPV, SPV and FRVS Radiation Monitors, Attachment 9, Revision 13
HC.OP-DL.ZZ-0003, Log 3 Control Console Log Condition 1, 2 and 3, Revision 71
HC.OP-AR.ZZ-0008, Overhead Annunciator Window Box C1, Revision 38

Notifications (*NRC-identified)

20450707	20451628	20494329	20500596	20498749	20494198*
20487342	20498676				

Orders

30197602	70119853	60092116	70120149	80103453

Drawings
M-26-1 SH. 1 - 2, Radiological Monitoring Systems, Revision 9
1-P-AB-08, System Isometric/Reactor Bldg. Main Steam In Drywell, Revision 12

Calculations
SP-0142, NPV, SPV and FRVS Iso-kinetic and Calibration Calculation Values, Revision 0
SC-SP-0504, NPV-RMS Set-point Analysis, Revision 7
H-1-AB-MDC-2024, Main Steam SRV Tailpipe Temperature Monitoring Criteria, Revision 0

Other Documents
ACM 11- 007 B EDG Lube Oil Level
ANSI N13.1-1969, Guide to Sampling Airborne Radioactive Materials in Nuclear Facilities
On-The-Spot-Change (OTSC) 57A, HC.OP-SO.KJ-0001, EDG Operation, Revision 57A
Operating Experience Smart Sample (OpESS) FY 2008-01, Negative Trend and Recurring Events Involving Emergency Diesel Generators
Releases of Radioactive Materials in Liquid and Gaseous Effluents from Light-Water-Cooled Nuclear Power Plants, Revision 1
SER HC-2011-03, SRV-R Target Rock OTDM, 2/22/2011
325477, Main Steam/Auto Depress, Revision 1

Section 1R18: Plant Modifications

Procedures
MA-AA-733-1001, Guidance for Check Valve General Visual Inspection, Revision 8

Design Change Package
DCP 80096594, Hope Creek North and South Vent PIG Deletion and Bypass Skid Upgrade, Revision 2
MDCP-4-HM-0024, Install a Spring Inside Hancock Check Valves, Revision 2

Orders

20492365	20499445	20501782	20500803	20500010
60095827	70117075	50134803	60081149	

Other Documents

M-97-1, Sh. 2, Building and Equipment Drain Reactor Building, Revision 16
P-0042-1, Reactor Building Plan Elevation 77', Revision 21
VTD PP328-0151, 600 LB Forged Steel Globe Valves and Check Valves for Nuclear, Revision 3
North Plant Vent Flow Data (PI Notebook), March 2009 – March 2011
PJ373-0167, Velocity Probe Array Installation NPV
PJ373Q-0322-Q3, Supplement to Wide-Range Gas Monitor for Hope Creek Generating Station Unit 1, Vendor Technical Manual Equipment Manual, April 1986

Section 1R19: Post-Maintenance Testing

Completed Surveillances

HC.OP-ST.GK-0001, A Control Room Emergency Filtration System Functional Test – Monthly, Revision 13, 2/11/2011
HC.OP-ST.KJ-0001, EDG 1AG400 Operability Test – Monthly, 2/2/2011
HC.OP-ST.KJ-0002, EDG 1BG400 Operability Test, Revision 73
HC.MD-ST.ZZ-0009, Motor Operated Valve Thermal Overload Protection Surveillance, Revision 18
HC.MD-ST.ZZ-0011, Low Voltage Molded Case Circuit Breaker Overcurrent Trip Testing, Revision 20
HC.OP-IS.BC-0002, CP202, C Residual Heat Removal Pump In-Service Test, Revision 36
HC.OP-IS.BC-0103, Residual Heat Removal Subsystem C Valves – Inservice Test, Revision 27
HC.OP-IS.BD-0001, Reactor Core Isolation Cooling System Pump – OP203 – Inservice Test, Revision 51

Procedures

HC.MD-PM.KJ-0004, EDG Lubrication System PM, Revision 4
HC.OP-SO.BC-0001, RHR System Operation, Revision 48
HC.OP-SO.KJ-0001, Emergency Diesel Generators Operation, Revision 57
HC.OP-SO.PB-0001, 4.16KV System Operation, Revision 27

Notifications

20451421	20468413	20468779	20498547	20498970	20501782
20502730	20486253	20486106	20488005		

Orders

30172157	50137946	60084238	60090845	60092230	60092268
60095827	70107263	50137750	60072001	60093684	

Drawings

M-52-1, Core Spray, Revision 31
E-0021-1, Sh. 4, 480 Volt MCC Tabulation Class 1E MCC Reactor Area 10B212, 10B222, 10B232 and 10B242, Revision 20
E-6231-0, Sh. 8, Electrical Schematic Diagram Residual Heat Removal System Pump Suction Valves, Revision 8

Calculations
D3.39, Residual Heat Removal, Revision 2

Other Documents
VTD PJ200Q-2377, 862 Cabinet Layout BC652-1, Revision 12

Section 1R20: Refueling and Outage Activities

Procedures
HC.OP-EO.ZZ-0318, Containment Venting, Revision 6
HC.OP-GP.ZZ-0002, Primary Containment Closeout, Revision 12
HC.OP-IO.ZZ-0002, Preparation for Plant Startup, Revision 57
HC.OP-IO.ZZ-0003, Startup from Cold Shutdown to Rated Power, Revision 92
HC.OP-IO.ZZ-0004, Shutdown from Rated Power to Cold Shutdown, Revision 86
HC.OP-IO.ZZ-0006, Power Changes During Operation, Revision 50
HC.OP-IS.GS-0101, Containment Atmosphere Control System Valves – IST, Revision 43
HC.OP-SO.BC-0002, Decay Heat Removal Operation, Revision 26
HC.OP-SO.GS-0001, Containment Atmosphere Control System Operation, Revision 30
HC.RA-IS.ZZ-0010, Containment Isolation Valve Type C Leak Rate Test, Revision 15

Notifications

20330706	20341661	20486763	20494255	20500733	20500813
20500886	20500914	20501113	20501160	20501175	20501176
20501252	20501685				

Orders

60077844	60094006	60094008	60094019	60094086	80103453

Drawings
1-P-AB-08, System Isometric/ Reactor Bldg. Main Steam in Drywell Relief Valve – Disch. From Line 'A', Revision 12
M-57-1, Sh. 1, Containment Atmosphere Control, Revision 42

Calculations
H-1-AB-MDC-2024, Main Steam SRV Tailpipe Temperature Monitoring Criteria, Revision 0

Other Documents
DCP 4EC-3121 – Hardened Torus vents, Revision 0
VTD 400006, Holtec International Final Safety Analysis Report for the HI-STORM 100 Cask System, Revision 7

Section 1R22: Surveillance Testing

Procedures
HC.OP-IS.BC-0001, A RHR Pump – Inservice Test, Revision 40
HC.OP-IS.BJ-0001, HPCI Main and Booster Pump Set – Inservice Test, Revision 53
ER-AA-321, Inservice Testing Program, Revision 11
HC.OP-IS.BH-0002, Standby Liquid Control Pump BP208 – Inservice Test, Revision 44
HC.OP-IS.BH-0004, Standby Liquid Control Pump BP208 – Inservice Test, Revision 9
HC.IC-GP.ZZ-0140, Panametrics Flow Instrument Data Procedure, Revision 3
HC.OP-IS.BE-0002, B and D Core Spray Pumps – Inservice Test, Revision 47

HC.OP-SO.BE-0001, Core Spray System Operation, Revision 13
HC.OP-ST.BE-0004, B Core Spray Loop Piping and Flow Path Verification, Revision 4
HC.OP-IS.BD-0101, Reactor Core Isolation Cooling System Valves–Inservice Test, Revision 56

Notifications (*NRC-identified)
20360574 20431586 20500419 20486253 20486106 20488005
20495891*

Orders
30184206 50137441 50137729 50137834 70081905 60093684

Drawings
M-48-1, P&ID Standby Liquid Control, Revision 15

Calculations
BE-0016, Core Spray System Hydraulic Analysis, Revision 02
BH-0005, Standby Liquid Control System Unavailability Calculation, Revision 0
BH-0003, Standby Liquid Control System Discharge Piping Pressure Drop and Transport Time, Revision 3

Other Documents
VTD PJ200Q-2963, 7000 Schematic Standby Liquid Control System B, Revision 4
VTD PN1-C41-1040-0041, Standby Liquid Control System, Sh. 2A, Revision 7

Section 1EP2: Alert and Notification System (ANS) Evaluation

Procedures
EP-AA-121-1002, PSEG Alert Notification System (ANS) Program, Revision 0
EP-AA-121-1004, PSEG ANS Corrective Maintenance, Revision 0
EP-AA-121-1005, PSEG ANS Preventive Maintenance Program, Revision 1
EP-AA-121-1006, PSEG ANS Siren Monitoring, Troubleshooting, and Testing, Revision 0

Other Documents
Final REP-10 Design Review Report, PSEG Salem and Hope Creek Stations
Contract No. 2008-PSEG-001, ANS Services, LLC, Alert Notification System Monitoring and Maintenance for PSEG Nuclear, LLC, dated 2/1/2008
Monthly Siren System Status Reports, January 2010 - February 2011

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Procedures
EP-AA-120-1007, Maintenance of Emergency Response Organization (ERO), Revision 2
EP-AA-120-1010, Emergency Preparedness Training Administration, Revision 0
EP-AA-122, Drill and Exercise

Other Documents
PSEG Nuclear LLC, Emergency Plan, Revision 67
Emergency Preparedness Unannounced Drill Critique Report (H09-U1), 11-16-09
Emergency Preparedness Unannounced Drill Critique Report (S10-U1), 11-29-10
Monthly Pager Test, dated 1/25/2010, 2/18/2010, 3/22/2010, 4/27/2010, 5/12/2010, 6/15/2010, 7/20/2010, 8/10/2010, 9/20/2010, 10/11/2010, 11/22/2010, and 12/14/2010

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Procedures
EP-AA-120-1001, 10 CFR 50.54(q) Change Evaluation, Revision 1
LS-AA-104, 50.59 Review Process, Revision 6

Screenings/Evaluations

2010-03	2010-05	2010-06	2010-07	2010-07	2010-08
2010-09	2010-10	2010-11	2010-12	2010-13	2010-14
2010-15	2010-17	2010-22	2010-23	2010-24	2010-25
2010-26	2010-28	2010-29	2010-30	2010-31	2010-32
2010-33	2010-34	2010-35	2010-36	2010-37	2010-38
2010-39	2010-40	2010-41	2010-42	2010-43	2010-44
2010-45					

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Focused Self-Assessment Reports
SAP Order 70106832, NRC Inspection Preparedness, dated 3/10/2010
SAP Order 70105785, Salem 2010 Graded Exercise Offsite Readiness, dated 6/28/2010
SAP Order 70106113, Non-accredited Training Programs/EP, dated 5/7/2010
SAP Order 70100792, Regulatory Affairs Knowledge Transfer and Retention Determination, dated 9/29/2010
SAP Order 70111235, Emergency Preparedness Rulemaking Readiness, dated 9/29/2010
SAP Order 70117239, NRC Emergency Preparedness Program Inspection, dated 12/14/2010

Nuclear Oversight Performance Assessment Reports
NOSPA-HC-09-2C NOSPA-HC-09-3C NOSPA-HC-10-1C NOSPA-HC-10-2C
NOSPA-HC-10-3C

Other Documents
Emergency Preparedness Training Drill Critique Reports: S09-01, S10-01, H10-02, S10-04, and S11-01
Emergency Preparedness Exercise Critique Report, H09-03
Emergency Preparedness Unannounced Drill Critique Reports, H09-U1 and S10-U1
Emergency Preparedness Focused Area Drill Critique Report, H10-01
Emergency Preparedness Practice Exercise Critique Report, S10-02
Emergency Preparedness Graded Exercise Critique Report, S10-03
Emergency Preparedness Notifications, January 2010 - February 2011
Emergency Preparedness Audit Report, Audit NOSPA-HPC-10-02 (10 CFR 50.54(t) Report)

Section 1EP6: Drill Evaluation

Procedures
HC.OP-EO.ZZ-0101(Q), FC Reactor/Pressure Vessel (RPV) Control, Revision 8

Other Documents
3/2/11 Drill Scenario Synopsis
Hope Creek EAL Technical Basis
Hope Creek Event Classification Guide (ECG)

Section 2RS1: Radiological Hazard Assessment and Exposure Control

Other Documents
Radiation Work Permits: 1/4109, 1/4701; 1/4704, 1/6013, and 7/4245

Section 2RS2: Occupational ALARA Planning and Controls

Other Documents
ALARA Post-Job Reviews: 204, 100, 103, 110, and 92

Section 4OA1: Performance Indicator Verification

Procedures
EP-AA-125-1001, EP Performance Indicator Guidance, Revision 0
EP-AA-125-1002, ERO Performance - Performance Indicators Guidance, Revision 2
EP-AA-125-1003, ERO Readiness - Performance Indicator Guidance, Revision 0

Section 4OA2: Problem Identification and Resolution

Procedures
ER-AA-1300, Equipment Reliability Index, Revision 2
HC.MD-ST.KJ-0001, EDG Maintenance Procedure, Revision 40
HC.OP-AR.KJ-0002, Diesel Generator Remote Engine Control Panel 1BC423
HC.OP-ST.KJ-0004, Emergency Diesel Generator 1DG400 Operability Test, Revision 73
LS-AA-125-1003, Apparent Cause Evaluation, Revision 11
MA-AA-716-210, Performance Centered Maintenance, Revision 7

Notifications

20416966	20446532	20448277	20453343	20455885	20456174
20465477	20468516	20480473	20480630	20490746	20490629
20491757	20493687	20495163	20496470		

Orders

70111708	70117799	70117601	70105471	30179494	30179495
30197481	30177280				

Other Documents
Hope Creek EDG Maintenance Program Gap Analysis, September 2010
System Performance Team Update - Emergency Diesel Generators Improvement Plan Strategy
Hope Creek Mitigating Systems Performance Index Data Sheet

Section 4OA3: Event Followup
Notification
20484572

Order
70105332

Other Documents
LER 05000354/2010-003-00, RHR Shutdown Cooling Suction Relief Valve Missed Surveillance, 12/21/10

LIST OF ACRONYMS

ACE	Apparent Cause Evaluation
ADAMS	Agency-wide Documents Access and Management System
ALARA	As Low As Reasonably Achievable
ANS	Alert and Notification System
ASME	American Society of Mechanical Engineers
CAP	Corrective Action Program
CFR	Code of Federal Regulations
CR	Condition Report
CREF	Control Room Emergency Filtration
CS	Core Spray
EAL	Emergency Action Level
EDG	Emergency Diesel Generator
EP	Emergency Preparedness
EPD	Electronic Personal Dosimeter
ERO	Emergency Response Organization
FEMA	Federal Emergency Management Agency
FSAR	Final Safety Analysis Report
HPCI	High Pressure Coolant Injection
LER	Licensee Event Report
NCV	Non-cited Violation
NRC	Nuclear Regulatory Commission
PCM	Performance Centered Maintenance
PI	Performance Indicator
PM	Preventative Maintenance
PSEG	Public Service Enterprise Group Nuclear LLC
RACS	Reactor Auxiliary Cooling System
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
RWP	Radiation Work Permit
SACS	Safety Auxiliary Cooling System
SLC	Standby Liquid Control
SSC	Structures, Systems, and Components
ST	Surveillance Testing
TS	Technical Specification
UFSAR	Updated Final Safety Analysis Report
URI	Unresolved Item