UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
2100 RENAISSANCE BOULEVARD, SUITE 100
KING OF PRUSSIA, PENNSYLVANIA 19406-2713

May 1, 2013

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 UNIT 1 – NRC INTEGRATED INSPECTION REPORT 05000354/2013002

Dear Mr. Joyce:

On March 31, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Hope Creek Generating Station (HCGS). The enclosed inspection report documents the inspection results, which were discussed on April 18, 2013, with Mr. E. Carr, Hope Creek Plant Manager, 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.

This report documents one self-revealing non-cited violation (NCV) of very low safety significance (Green). This finding was determined to involve a violation of NRC requirements. However, because of the very low safety significance, and because it was entered into your corrective action program, the NRC is treating these findings as NCVs, consistent with Section 2.3.2 of the NRC Enforcement Policy. If you contest the NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region I; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at HCGS. In addition, if you disagree with the cross-cutting aspect assigned to any finding in this report, 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 I, and the NRC Resident Inspector at HCGS.

In accordance with 10 CFR 2.390 of the NRCs “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’s Public Document Room or from the Publicly Available Records component of the NRC’s Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.htmL (the Public Electronic Reading Room).

Sincerely,

/RA/

Glenn T. Dentel, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 05000354/2013002
w/Attachment: Supplementary Information

cc w/encl: Distribution via ListServ

In accordance with 10 CFR 2.390 of the NRCs "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's Public Document Room or from the Publicly Available Records component of the NRC's Agencywide Documents Access Management System (ADAMS). ADAMS is accessible from the NRC website at http://www.nrc.gov/reading-rm/adams.htmL (the Public Electronic Reading Room).

Sincerely,

/RA/

Glenn T. Dentel, Chief
Reactor Projects Branch 3
Division of Reactor Projects

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

Enclosure: Inspection Report 05000354/2013002
w/Attachment: Supplementary Information

Distribution w/encl:
W. Dean, RA
D. Lew, DRA
D. Roberts, DRP
M. Layton, DRP
C. Miller, DRS
J. Clifford, DRS
G. Dentel, DRP
R. Barkley, DRP
M. Draxton,DRP
R. Montgomery, DRP
F. Bower, DRP, SRI
S. Ibarrola, DRP
K. McKenzie, DRP, AA
D. Huyck, RI OEDO
RidsNrrPMHopeCreek Resource
RidsNrrDorlLpl1-2 Resource
ROPreports Resource

DOCUMENT NAME: G:\DRP\BRANCH3\Inspection\Reports\Issued\2013 (ROP 14)\HC1302.docx
ADAMS Accession No.: ML13121A520

☑ SUNSI Review		☑ Non-Sensitive ☐ Sensitive		☑ Publicly Available ☐ Non-Publicly Available	
OFFICE	RI/DRP	RI/DRP	RI/DRP		
NAME	FBower/ LC for	RBarkley / LC for	GDentel/ GTD		
DATE	05/01 /13	05/01 /13	05/01 /13		

OFFICIAL RECORD COPY

U.S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No.:	50-354
License No.:	NPF-57
Report No.:	05000354/2013002
Licensee:	PSEG Nuclear LLC (PSEG)
Facility:	Hope Creek Generating Station (HCGS)
Location:	P.O. Box 236 Hancocks Bridge, NJ 08038
Dates:	January 1, 2013 through March 31, 2013
Inspectors:	F. Bower, Senior Resident Inspector S. Ibarrola, Resident Inspector B. Scrabeck, Project Engineer J. Laughlin, Emergency Preparedness Inspector E. Burket, Emergency Preparedness Specialist S. Barr; Senior Emergency Preparedness Specialist
Approved By:	Glenn T. Dentel, Chief Reactor Projects Branch 3 Division of Reactor Projects

TABLE OF CONTENTS

SUMMARY

IR 05000354/2013002; 01/01/2013 - 03/31/2013; Hope Creek Generating Station; Follow-Up of Events and Notices of Enforcement Discretion.

This report covered a three-month period of inspection by resident inspectors and announced inspections performed by emergency preparedness specialists. There was one self-revealing finding of very low safety significance (Green), which was a non-cited violation (NCV). The significance of most findings is indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP), dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within Cross-Cutting Areas," dated October 28, 2011. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated January 28, 2013. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4.

Cornerstone: Mitigating Systems

Green. A self-revealing NCV of very low safety significance of technical specification (TS) 6.8.1 and TS 3.3.7.4 resulted because PSEG did not properly perform the monthly TS surveillance requirement (SR) 4.3.7.4.1 which demonstrates operability of the remote shutdown system instrumentation and controls. Specifically, operators that performed the monthly surveillance did not identify that the reactor core isolation cooling (RCIC) turbine bearing oil pressure low indication was inoperable and, as a result, PSEG did not take the action required within the TS allowed outage time. PSEG's immediate corrective actions included entering the issue into their corrective action program as notifications 20567832 and 20567743, replacing the failed relay and initiating an apparent cause evaluation (ACE).

This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, when tested, the RCIC turbine bearing oil pressure low indication on the remote shutdown panel (RSP) was inoperable, and this condition went undetected for approximately one month. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its TS allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The NRC determined the finding had a cross cutting aspect in the human performance area associated with work practices – procedural compliance, because PSEG did not ensure that personnel work practices support human performance, in that, a licensed reactor operator (RO) incorrectly documented HC.OP·ST.SV·0001 as satisfactory. Additionally, the senior reactor operator (SRO) that reviewed the test did not identify the procedure performance error [H.4(b)]. (Section 4OA3.1)

REPORT DETAILS

Summary of Plant Status

The Hope Creek Generating Station began the inspection period at or near full rated thermal power (RTP) where it generally remained until the end of the inspection period with the following exception. On March 2, power was reduced to approximately 76 percent RTP to support planned turbine valve testing and a control rod sequence exchange. Additional planned and contingency corrective maintenance activities were performed and the unit was returned to full power on March 3, 2013.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01 – 1 sample)

.1 Readiness for Impending Adverse Weather Conditions

a. Inspection Scope

The inspectors reviewed PSEG's preparation activities for river grass intrusion conditions that may impact the station service water system. The inspectors assessed implementation of PSEG's grassing readiness plan through service water system reviews, corrective action program reviews, and discussions with cognizant plant personnel. Documents reviewed for each section of this inspection report are listed in the Attachment.

b. Findings

No findings were identified.

1R04 Equipment Alignment

.1 Partial System Walkdowns (71111.04 – 4 samples)

a. Inspection Scope

The inspectors performed partial walkdowns of the following systems:

- A, B, and D safety auxiliary cooling systems (SACS) pumps with the C SACS pump and 1EG-HV-2522C valve out-of-service on January 7, 2013
- A, B, and D emergency diesel generators (EDGs) with the C EDG out-of-service for emergent maintenance on February 6, 2013
- B, C, and D main steam line (MSL) pressure transmitters, and other primary containment isolation system instruments with the A MSL pressure transmitter sensing line out-of-service for emergent maintenance on February 27, 2013
- A, B, and D EDGs with the C EDG out-of-service for planned maintenance on March 8, 2013

The inspectors selected these systems based on their risk-significance for the current plant configuration or following realignment. The inspectors reviewed applicable procedures, system diagrams, the Updated Final Safety Analysis Report (UFSAR), TSs, work orders, notifications, and the impact of ongoing work activities on redundant trains of equipment in order to identify conditions that could have impacted system performance of their intended safety functions. The inspectors also performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and were operable.

b. Findings

No findings were identified.

.2 Full System Walkdown (71111.04S – 1 sample)

a. Inspection Scope

On January 14 - 17, 2013, the inspectors performed a complete system walkdown of accessible portions of the A and C residual heat removal (RHR) systems to verify the equipment lineup was correct. The inspectors reviewed operating procedures, surveillance tests, drawings, equipment lineup procedures, and the UFSAR to verify the system was aligned to perform its required safety functions. The inspectors also reviewed electrical power availability, component lubrication and equipment cooling, hangar and support functionality, and operability of support systems. The inspectors performed field walkdowns of accessible portions of the systems to verify system components and support equipment were aligned correctly and operable. The inspectors examined the material condition of the components and observed operating parameters of equipment to verify that there were no deficiencies. The inspectors also reviewed whether PSEG staff had properly identified equipment issues and entered them into the corrective action program for resolution with the appropriate significance characterization. Additionally, the inspectors reviewed a sample of related notifications and work orders to ensure PSEG appropriately evaluated and resolved any deficiencies.

b. Findings

No findings were identified.

1R05 Fire Protection

.1 Resident Inspector Quarterly Walkdowns (71111.05Q – 5 samples)

a. Inspection Scope

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 PSEG controlled combustible materials and ignition sources were in accordance with administrative procedures. The inspectors verified that fire protection and suppression equipment was available for use as specified in the area pre-fire plan, and passive fire barriers were maintained in good material condition. The inspectors also verified that station personnel implemented compensatory measures for out of service, degraded, or inoperable fire protection equipment, as applicable, in accordance with procedures.

- FRH-II-414, A and C core spray rooms, elevation 54' on January 15, 2013
- FRH-II-411, B and D core spray rooms, elevation 54' on January 15, 2013
- FRH-II-413, A RHR heat exchanger room, elevation 54' on January 17, 2013
- FRH-II-552, electrical access area, elevation 137' on February 5, 2013
- FRH-II-541, class 1E switchgear rooms, elevation 130' on March 28, 2013

b. Findings

No findings were identified.

.2 Fire Protection – Drill Observation (71111.05A – 1 sample)

a. Inspection Scope

The inspectors observed an unannounced fire brigade drill scenario conducted on February 7, 2013, that involved a fire in the Hope Creek service water intake structure, Room 201. The inspectors evaluated the readiness of the plant fire brigade to fight fires. The inspectors verified that PSEG personnel identified deficiencies; openly discussed them in a self-critical manner at the post-drill debrief; and took appropriate corrective actions as required. The inspectors evaluated specific attributes as follows:

- Proper wearing of turnout gear and self-contained breathing apparatus
- Proper use and layout of fire hoses
- Employment of appropriate fire-fighting techniques
- Sufficient fire-fighting equipment brought to the scene
- Effectiveness of 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
- Drill objectives met

The inspectors also evaluated the fire brigade's actions to determine whether these actions were in accordance with PSEG's fire-fighting strategies.

b. Findings

No findings were identified.

1R06 Flood Protection Measures (71111.06 – 1 sample)

1. Internal Flooding Review

a. Inspection Scope

The inspectors reviewed the UFSAR, the site flooding analysis, and plant procedures to assess susceptibilities involving internal flooding. The inspectors also reviewed the corrective action program to determine if PSEG identified and corrected flooding problems and whether operator actions for coping with flooding were adequate. The

inspectors also focused on high pressure coolant injection (HPCI) and RCIC batteries and electrical equipment room areas (5104, 5128, 5129, 5130) and the EDG fuel oil transfer pumps and storage tanks room areas (5107, 5108, 5109, 5110) to verify the adequacy of common drain lines and sumps, sump pumps, level alarms, and control circuits.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program (71111.11Q – 3 samples)

.1 Quarterly Review of Licensed Operator Requalification Testing and Training

a. Inspection Scope

The inspectors observed the first licensed operator simulator training session on January 22, 2013, that included a fire, a grid transient, a loss of coolant accident (LOCA), and a loss of offsite power (LOOP) coincident with the loss of one EDG. On February 5, 2013, the inspectors observed a second licensed operator simulator training session that included a fire, a grid transient, a LOCA and a LOOP coincident with the loss of one EDG. The inspectors evaluated operator performance during the simulated event and verified completion of risk significant operator actions, including the use of abnormal and emergency operating procedures. The inspectors assessed the clarity and effectiveness of communications, implementation of actions in response to alarms and degrading plant conditions, and the oversight and direction provided by the control room supervisor. The inspectors verified the accuracy and timeliness of the emergency classification made by the shift manager and the technical specification action statements entered by the shift technical advisor. Additionally, the inspectors assessed the ability of the crew and training staff to identify and document crew performance problems.

b. Findings

No findings were identified.

.2 Quarterly Review of Licensed Operator Performance in the Main Control Room

a. Inspection Scope

The inspectors observed and reviewed a planned downpower and main steam valve and turbine valve testing conducted on March 2, 2013. The inspectors observed reactivity control briefings to verify that the briefings met the criteria specified in OP-AA-101-111-1004, “Operations Standards,” Revision 4, and HU-AA-1211, “Pre-Job Briefings,” Revision 10. Additionally, the inspectors observed test performance to verify that procedure use, crew communications, and coordination of activities between work groups similarly met established expectations and standards.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12Q – 2 samples)

a. Inspection Scope

The inspectors reviewed the samples listed below to assess the effectiveness of maintenance activities on structure, system, and component (SSC) performance and reliability. The inspectors reviewed corrective action program documents (notifications), maintenance work orders (orders), and maintenance rule basis documents to ensure that PSEG was identifying and properly evaluating performance problems within the scope of the maintenance rule. For each sample selected, the inspectors verified that the SSC was properly scoped into the maintenance rule in accordance with 10 CFR 50.65 and verified that the (a)(2) performance criteria established by PSEG staff was reasonable. As applicable, for SSCs classified as (a)(1), the inspectors assessed the adequacy of goals and corrective actions to return these SSCs to (a)(2). Additionally, the inspectors ensured that PSEG staff was identifying and addressing common cause failures that occurred within and across maintenance rule system boundaries.

- Reactor water cleanup (RWCU) isolation differential flow transmitter found out of acceptable value (Notification 20596152)
- C EDG over speed knob will not reset following post maintenance testing (Notification 20598212)

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed station evaluation and management of plant risk for the maintenance and emergent work activities listed below to verify that PSEG performed the appropriate risk assessments prior to removing equipment for work. The inspectors selected these activities based on potential risk significance relative to the reactor safety cornerstones. As applicable for each activity, the inspectors verified that PSEG personnel performed risk assessments as required by 10 CFR 50.65(a)(4) and that the assessments were accurate and complete. When PSEG performed emergent work, the inspectors verified that operations personnel promptly assessed and managed plant risk. The inspectors reviewed the scope of maintenance work and discussed the results of the assessment with the station's probabilistic risk analyst to verify plant conditions were consistent with the risk assessment. The inspectors also reviewed the TS requirements and inspected portions of redundant safety systems, when applicable, to verify risk analysis assumptions were valid and applicable requirements were met.

- Planned maintenance and inoperability of the A EDG during January 29–31, 2013 (Order 30203217)
- Emergent inoperability, troubleshooting, and corrective maintenance for the C EDG during February 4–6, 2013 (Order 60108706)

- Emergent inoperability, troubleshooting, and corrective maintenance for the A MSL pressure transmitter sensing line on February 26–27, 2013 (Order 60109132)
- Planned maintenance and inoperability of the C EDG during March 4–9, 2013 (Order 30210543)
- Emergent inoperability, troubleshooting, and corrective maintenance for the A loop of RHR suppression pool spray isolation valve, BC-HV-F027A, during March 12–13, 2013 (Order 60109275)

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15 – 6 samples)

a. Inspection Scope

The inspectors reviewed operability determinations for the following degraded or non-conforming conditions:

- Slight drop in B reactor recirculation pump 2nd stage seal pressure on December 30, 2013 (Notification 20589009)
- Evaluation of D traveling water screen non-drive jib key weld broken on January 21, 2013 (Order 70148402)
- Safety relief valve F013R high tailpipe temperature alarm on January 29, 2013 (Notification 20593312)
- C EDG frequency oscillation on February 4, 2013 (Order 80108609)
- Evaluation of reactor recirculation loop sample line inboard containment isolation valve, 1BBSV-4310, local position indication test failure on February 10, 2013 (Order 80108731)
- Evaluation of B traveling water screen headshaft shifted on February 10, 2013 (Order 70149442)

The inspectors selected these issues based on the risk significance of the associated components and systems. The inspectors evaluated the technical adequacy of the operability determinations to assess whether 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 technical specifications and UFSAR to PSEG'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 by PSEG. The inspectors determined, where appropriate, compliance with bounding limitations associated with the evaluations.

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18 – 3 samples)

.1 Permanent Modifications

a. Inspection Scope

The inspectors evaluated a modification to the RWCU system implemented by design change package 80102453, "Replace Reactor Water Cleanup Recirculation Pump 1A-A-221." The existing centrifugal horizontal pump was replaced with a vertical, wet stator seal-less pump design to address longstanding mechanical seal leakage issues associated with the existing pump. The inspectors verified that the design bases, licensing bases, and performance capability of the affected systems were not degraded by the modification. In addition, the inspectors reviewed modification documents associated with the upgrade and design change, including original pump and support structure removal and installation of new seismic support structure from overhead structural steel, replacement of the RWCU pump isolation valves, and modification of reactor auxiliaries cooling system supply and return lines. The inspectors also reviewed revisions to the control room alarm response procedure and interviewed engineering and operations personnel to ensure the procedure could be reasonably performed.

b. Findings

No findings were identified.

.2 Temporary Modifications

a. Inspection Scope

The inspectors reviewed the temporary modifications listed below to determine whether the modifications affected the safety functions of systems that are important to safety. The inspectors reviewed 10 CFR 50.59 documentation, post-modification testing results, and conducted field walkdowns of the modifications to verify that the temporary modifications did not degrade the design bases, licensing bases, and performance capability of the affected systems.

- Temporary Configuration Change Package Number 4HT-13-001, Revision 0 – Install Temporary Submersible Pumps in Manholes 15MM0D06, 15MM0D08, and 15MM0D08B
- Temporary Configuration Change Package Number 4HT-13-002, Revision 0 - Jumper C EDG Jacket Water Keepwarm Heater H1KJ-1C-E-407

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors reviewed the post-maintenance tests for the maintenance activities listed below to verify that procedures and test activities ensured system operability and

functional capability. The inspectors reviewed the test procedure to verify that the procedure adequately tested the safety functions that may have been affected by the maintenance activity, that the acceptance criteria in the procedure was consistent with the information in the applicable licensing basis and/or design basis documents, and that the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed test data to verify that the test results adequately demonstrated restoration of the affected safety functions.

- D RHR loop minimum flow valve planned maintenance on January 23, 2013 (Order 30106244)
- A EDG planned maintenance on January 30, 2013 (Order 60099516)
- A EDG repair of an emergent jacket water piping joint leak on January 31, 2013 (Notification 20593491 and Order 60108553)
- A RWCU recirculation pump replacement on February 14, 2013 (Order 60098001)
- A loop torus spray isolation valve, BC-HV-027A, emergent breaker and thermal overload maintenance on March 13, 2013 (Order 60109275)
- B core spray loop planned preventive maintenance and motor control center design changes on March 21, 2013 (Order 30107170)

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22 – 7 samples)

a. Inspection Scope

The inspectors observed performance of surveillance tests and/or reviewed test data of selected risk-significant SSCs to assess whether test results satisfied TSs, the UFSAR, and PSEG procedure requirements. The inspectors verified that test acceptance criteria were clear, tests demonstrated operational readiness and were consistent with design documentation, test instrumentation had current calibrations and the range and accuracy for the application, tests were performed as written, and applicable test prerequisites were satisfied. Upon test completion, the inspectors considered whether the test results supported that equipment was capable of performing the required safety functions. The inspectors reviewed the following surveillance tests:

- HC.OP-IS.BC-0001, A RHR pump (AP202) in-service test on January 4, 2013
- HC.OP-IS.BE-0101, Core spray subsystem A valves test on January 10, 2013
- HC.OP-IS.BE-0001, A & C core spray pumps test (AP206 and CP206) on January 10, 2013
- HC.OP-IS.BJ-0002, HPCI jockey pump AP228 in-service test - quarterly, on January 12, 2013
- HC.OP-IS.BJ-0101, HPCI valves in-service test - quarterly, on January 12, 2013
- HC.OP-IS.BC-0003, B RHR pump (BP202) in-service test on January 16, 2013
- HC.OP-DL.ZZ-0026, Drywell floor drain leakage monitoring on February 4, 2013

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

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

a. Inspection Scope

An onsite review was conducted to assess the maintenance and testing of the Alert and Notification System (ANS). During this inspection, the inspectors conducted a review of the ANS testing and maintenance programs. The inspectors reviewed the associated ANS procedures and the Federal Emergency Management Agency approved ANS Design Report to ensure compliance with design report commitments for system maintenance and testing. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 2. 10 CFR 50.47(b)(5) and the related requirements of 10 CFR Part 50, Appendix E, were used as reference criteria.

b. Findings

No findings were identified.

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

a. Inspection Scope

The inspectors conducted a review of the Hope Creek Emergency Response Organization (ERO) augmentation staffing requirements and the process for notifying and augmenting the ERO. The review was performed to verify the readiness of key PSEG staff to respond to an emergency event and to verify PSEG's ability to activate their emergency response facilities (ERFs) in a timely manner. The inspectors reviewed PSEG's Emergency Plan for ERF activation and ERO staffing requirements, the ERO duty roster, applicable station procedures, augmentation test reports, the most recent drive-in drill report, and corrective action reports (notifications) related to this inspection area. The inspectors also reviewed a sample of ERO responder training records to verify training and qualifications were up to date. The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 3. 10 CFR 50.47(b)(2) and related requirements of 10 CFR Part 50, Appendix E, were used as reference criteria.

b. Findings

No findings were identified.

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

a. Inspection Scope

NRC staff from the Office of Nuclear Security and Incident Response performed an in-office review of the latest revisions of various Emergency Plan Implementing Procedures and the Emergency Plan located under ADAMS accession number ML123250117 and ML12348A140.

PSEG determined that in accordance with 10 CFR 50.54(q), the changes made in the revisions resulted in no reduction in the effectiveness of the Emergency Plan, and that the revised Emergency Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR Part 50. The NRC review was not documented in a safety evaluation report and did not constitute approval of PSEG-generated changes; therefore, this revision is subject to future inspection.

b. Findings

No findings were identified.

1EP5 Maintaining Emergency Preparedness (71114.05 - 1 sample)

a. Inspection Scope

The inspectors reviewed a number of activities to evaluate the efficacy of PSEG's efforts to maintain the Hope Creek emergency preparedness (EP) program. The inspectors reviewed: Memorandums of Understanding with offsite agencies; the 10 CFR 50.54(q) Emergency Plan change process and practice; PSEG maintenance of equipment important to EP; records of evacuation time estimate population evaluation; and provisions for, and implementation of, primary, backup, and alternate ERF maintenance. The inspectors also verified PSEG's compliance at Hope Creek with new NRC EP regulations regarding: emergency action levels for hostile action events; protective actions for onsite personnel during events; emergency declaration timeliness; ERO augmentation and alternate facility capability; evacuation time estimate updates; on-shift ERO staffing analysis; and ANS back-up means.

The inspectors further evaluated PSEG's ability to maintain their EP programs through their identification and correction of EP weaknesses, by reviewing a sample of drill reports, actual event reports, self-assessments, 10 CFR 50.54(t) audits, and EP-related notifications. The inspectors reviewed a sample of EP-related notifications initiated at Hope Creek from March 2011 through March 2013. The inspection was conducted in accordance with NRC Inspection Procedure 71114.05. 10 CFR 50.47(b) and the related requirements of 10 CFR Part 50, Appendix E, were used as reference criteria.

b. Findings

No findings were identified.

1EP6 Drill Evaluation (71114.06 – 2 samples)

.1 Emergency Preparedness Drill Observation

a. Inspection Scope

The inspectors evaluated the conduct of a routine Hope Creek emergency drill on February 5, 2013, to identify any weaknesses and deficiencies in the classification, notification, and protective action recommendation development activities. The inspectors observed emergency response operations in the simulator and technical support center (TSC) to determine whether the event classification, notifications, and

protective action recommendations were performed in accordance with procedures. The inspectors also attended the TSC and simulator facilities drill critiques to compare inspector observations with those identified by PSEG staff in order to evaluate Hope Creek's critique and to verify whether the PSEG staff was properly identifying weaknesses and entering them into the corrective action program.

b. Findings

No findings were identified.

.2 Training Observations

a. Inspection Scope

The inspectors observed a simulator training evolution for licensed operators on January 22, 2013, which required emergency plan implementation by an operations crew. PSEG planned for this evolution to be evaluated and included in performance indicator data regarding drill and exercise performance. The inspectors observed event classification activities performed by the crew. The inspectors also attended the post-evolution critique for the scenario. The focus of the inspectors' activities was to note any weaknesses and deficiencies in the crew's performance and ensure that PSEG evaluators noted the same issues and entered them into the corrective action program.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

.1 Unplanned Scrams, Unplanned Power Changes, and Unplanned Scrams with Complications (3 samples)

a. Inspection Scope

The inspectors reviewed PSEG's submittal of the following Hope Creek Initiating Events Cornerstone performance indicators for the period of January 1, 2012, through December 31, 2012.

- Unplanned (automatic and manual) Scrams per 7,000 critical hours
- Unplanned Power Changes per 7,000 critical hours
- Unplanned Scrams with Complications

To determine the accuracy of the performance indicator data reported during those periods, the inspectors used definitions and guidance contained in Nuclear Energy Institute (NEI) Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6. The inspectors reviewed Hope Creek's monthly operating reports and NRC integrated inspection reports to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.2 Safety System Functional Failures (1 sample)

a. Inspection Scope

The inspectors sampled PSEG's submittals for the Safety System Functional Failures performance indicator for Hope Creek for the period of January 1, 2012, through December 31, 2012. To determine the accuracy of the performance indicator data reported during those periods, inspectors used definitions and guidance contained in NEI Document 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 6, and NUREG-1022, "Event Reporting Guidelines 10 CFR 50.72 and 10 CFR 50.73." The inspectors reviewed PSEG's licensee event reports (LERs) to validate the accuracy of the submittals.

b. Findings

No findings were identified.

.3 Emergency Preparedness (3 samples)

a. Inspection Scope

The inspectors reviewed data for the following EP performance indicators:

- Drill and Exercise Performance
- ERO Drill Participation
- ANS Reliability

The last NRC EP inspection at Hope Creek was conducted in the second calendar quarter of 2012. Therefore, the inspectors reviewed supporting documentation from EP drills and equipment tests from the second calendar quarter of 2012 through the fourth calendar quarter of 2012 to verify the accuracy of the reported performance indicator data. The review of the performance indicators was conducted in accordance with NRC Inspection Procedure 71151. The acceptance criteria documented in NEI 99-02, "Regulatory Assessment Performance Indicator Guidelines," Revision 6, was used as reference criteria.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution (71152 – 1 sample)

.1 Routine Review of Problem Identification and Resolution Activities

a. Inspection Scope

As required by Inspection Procedure 71152, “Problem Identification and Resolution,” the inspectors routinely reviewed issues during baseline inspection activities and plant status reviews to verify that PSEG entered issues into the corrective action program at an appropriate threshold, gave adequate attention to timely corrective actions, and identified and addressed adverse trends. 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 corrective action program.

b. Findings

No findings were identified.

.2 Annual Sample: Review of the Operator Workaround Program

a. Inspection Scope

The inspectors reviewed the cumulative effects of the existing operator workarounds, operator burdens, existing operator aids and disabled alarms, and open main control room deficiencies to identify any effect on emergency operating procedure operator actions, and any impact on possible initiating events and mitigating systems. The inspectors evaluated whether station personnel had identified, assessed, and reviewed operator workarounds as specified in PSEG procedures:

- OP-AA-102-103, Operator Work-Around Program
- OP-AA-102-103-1001, Operator Burdens Program
- OP-AA-102-103, Operator Burden Assessment

The inspectors reviewed PSEG’s process to identify, prioritize and resolve main control room distractions to minimize operator burdens. The inspectors reviewed the system used to track these operator workarounds and recent PSEG assessment of operator burdens. The inspectors also toured the control room and discussed the current operator workarounds with the operators to ensure the items were being addressed on a schedule consistent with their relative safety significance.

b. Findings and Observations

No findings were identified.

The inspectors determined that the issues reviewed did not adversely affect the capability of the operators to implement abnormal or emergency operating procedures. The inspectors also verified that PSEG entered operator workarounds and burdens into the corrective action program at an appropriate threshold and planned or implemented corrective actions commensurate with their safety significance.

4OA3 Follow-Up of Events and Notices of Enforcement Discretion (71153 – 2 samples)

.1 (Closed) LER 05000354/2012-005-00: RCIC Bearing Low Oil Pressure Indication on Remote Shutdown Panel Inoperable

a. Inspection Scope

On July 15, 2012, the performance of monthly surveillance identified that the remote indication for the RCIC bearing oil low pressure alarm was inoperable. The Shift Manager entered the action statement for TS 3.3.7.4. Preliminary investigation showed that normally energized relay E51-K58 had malfunctioned. The relay was replaced and operability restored on July 16, 2012. During the investigation into the cause of the failed indication, PSEG personnel reviewed the previous surveillance test that was performed on June 16, 2012, and determined that the alarm indication was extinguished and incorrectly documented in the test as satisfactory. Therefore, the RCIC bearing oil low pressure alarm indication on the remote shutdown panel was inoperable between June 16, 2012, and July 16, 2012. TS 3.3.7.4.a requires restoration of this inoperable channel within seven days or be in at least Hot Shutdown within the next 24 hours. This issue was reported under 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by TSs.

b. Findings

Introduction. A Green self-revealing NCV of TS 3.3.7.4 and TS 6.8.1 resulted because PSEG did not properly perform the monthly TS SR 4.3.7.4.1 which demonstrates operability of the remote shutdown system instrumentation and controls. Specifically, operators that performed PSEG procedure HC.OP-ST.SV-0001 did not identify that the RCIC turbine bearing oil pressure low indication was inoperable and, as a result, PSEG did not take the action required within the TS allowed outage time.

Description. On July 15, 2012, during the performance of a TS-required surveillance test, HC.OP-ST.SV-0001, "Remote Shutdown Monitoring Instrumentation Channel Check - Monthly," identified that the remote indication for the RCIC bearing oil low pressure alarm was inoperable. The alarm annunciator was extinguished when it should have been illuminated because the RCIC pump was not running. The loss of the RSP indication was caused by a failed relay in the indication circuit. The relay was subsequently replaced and retested (Notification 20567832, Order 60104604) on July 16, 2012. PSEG's ACE determined that the normally energized relay failed due to age-related wear. A review of service history determined the relay was beyond its service life. Planned corrective actions for the relay failure include changing the relay's preventive maintenance (PM) frequency and reviewing the PM frequency for other normally energized relays in the RSP.

PSEG's review of the previous month's surveillance performed on June 16, 2012, identified that at that time, the alarm annunciator, which should have been illuminated, was extinguished; but the licensed RO who performed the surveillance had incorrectly documented the test as satisfactory. In addition, the licensed SRO who reviewed and approved the completed surveillance also missed the error. The condition went undetected until the next performance of HC.OP-ST.SV-0001 on July 15, 2012. This single channel RSP indication was inoperable for longer than the allowed outage time in TS 3.3.7.4.a. PSEG's ACE concluded that the apparent cause for this violation occurred because surveillance procedure HC.OP-ST.SV-0001 was not performed correctly on

June 16, 2012. The inspectors determined that this issue was self-revealing because PSEG's previous performance of the same surveillance on June 16, 2012, should have identified the inoperable indication but did not because operators did not perform the procedure correctly and it required minimal analysis to detect the past inoperability.

Contributing causes were that the SRO that reviewed the test did not identify the procedure performance error and that HC.OP-ST.SV-0001, as written, could lead a performer to misinterpret the acceptance criteria. PSEG's corrective actions for the human performance issues that led to the TS violation included delimiting the qualifications of both operators and requiring remedial training to be completed prior to resuming licensed operator duties and enhancing the procedure to clarify the acceptance criteria (Notification 20567743, Order 70141127).

PSEG's ACE also observed that this condition existed for at least a month even though the RSP area is toured on a "shiftly" basis by non-licensed equipment operators (EOs) who perform general area checks in accordance with OP-AA-111-101-1001, "Use and Development of Operating Logs." Additionally, the auxiliary building logs required that once per week, on Monday night, the EOs were to perform RSP lamp checks and verify that the RSP indications were consistent with plant conditions. PSEG's ACE noted that EOs were not trained or qualified to operate the controls at the RSP, perform none of the operations testing at the RSP, and as such do not possess the RO level knowledge to verify the proper status and indications of the RSP. Corrective actions included reassigning these responsibilities to control room ROs (Notification 20567743, Order 70141127).

Analysis. The inspectors determined that PSEG's failure to correctly implement HC.OP-ST.SV-0001 for SR 4.3.7.4.1 on June 16, 2012, to demonstrate the operability of the RCIC turbine bearing oil pressure low indication on the RSP was a performance deficiency that was within PSEG's ability to foresee and correct, and should have been prevented. As a result of the inadequate implementation, the failed RSP instrument went undetected and PSEG did not take the action required to restore operability of the instrument within the TS allowed outage time. This finding is more than minor because it is associated with the equipment performance attribute of the Mitigating Systems cornerstone and affected the cornerstone objective to ensure the availability and reliability of systems that respond to initiating events to prevent undesirable consequences. Specifically, when tested, the RCIC turbine bearing oil pressure low indication on the RSP was inoperable, and this condition went undetected for approximately one month. In accordance with IMC 0609.04, "Initial Characterization of Findings," and Exhibit 2 of IMC 0609, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, the inspectors determined that this finding is of very low safety significance (Green) because the performance deficiency was not a design or qualification deficiency, did not involve an actual loss of safety function, did not represent actual loss of a safety function of a single train for greater than its TS allowed outage time, and did not screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event.

The NRC determined the finding had a cross-cutting aspect in the human performance area associated with work practices-procedural compliance, because PSEG did not ensure that personnel work practices support human performance, in that, a licensed RO incorrectly documented HC.OP-ST.SV-0001 as satisfactory. Additionally, the SRO that reviewed the test did not identify the procedure performance error. (H.4(b))

Enforcement. TS 3.3.7.4, "Remote Shutdown System Instrumentation and Controls," requires one operable channel of RCIC turbine bearing oil pressure low indication in Operational Conditions 1 and 2. With the RCIC RSP instrumentation inoperable, the associated Limiting Condition for Operation, TS 3.3.7.4.a, requires restoration of this inoperable channel within seven days or be in at least Hot Shutdown within the next 24 hours.

TS 6.8.1 requires, in part, that written procedures shall be established, implemented, and maintained covering the activities in Appendix A of Regulatory Guide 1.33, Revision 2, February 1978. Section 8.b(2)(I) of Appendix A of Regulatory Guide 1.33 states, in part, that specific implementing procedures are required for each surveillance test or calibration listed in the TSs. TS SR 4.3.7.4.1 specifies that each of the required remote shutdown monitoring instrumentation channels shall be demonstrated operable by performance of a channel check. PSEG procedure HC.OP-ST.SV-0001, "Remote Shutdown Monitoring Instrumentation Channel Check - Monthly," Revision 25, requires documenting whether specified acceptance criteria to demonstrate operability were met, including whether the status of the RCIC turbine bearing oil low pressure indication light was "SAT" or "UNSAT" for the current RCIC system status (i.e., illuminated if out of service, not illuminated if in service).

Contrary to the above, on June 16, 2012, PSEG failed to properly implement HC.OP-ST.SV-0001, to demonstrate operability of the remote shutdown system instrumentation and controls in that all acceptance criteria were marked "SAT" (and the system was considered to be operable) even though the RCIC turbine bearing oil low pressure indication light was not illuminated and the RCIC system was out of service. As a result, between June 16, 2012, and July 16, 2012, the RCIC turbine bearing oil low pressure indication on the RSP remained inoperable for a time in excess of that allowed by TS 3.3.7.4.a, and PSEG did not restore this single channel of instrumentation within seven days and was not in Hot Shutdown within the next 12 hours. PSEG's immediate corrective actions included entering this issue into their corrective action program as notifications 20567832 and 20567743, replacing the failed relay, and initiating an ACE. Because this violation was of very low safety significance (Green), and PSEG entered this issue into their corrective action program (notifications 20567832 and 20567743), this violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy. **(NCV 05000354/2013002-01, A Technical Specification Surveillance Procedure for Remote Shutdown Panel Instrumentation was Inadequately Implemented)**

.2 (Closed) LER 05000354/2012-006-00: High Pressure Coolant Injection System Inoperable

On September 4, 2012, PSEG was running the HPCI system for its quarterly in-service test, HC.OP-IS.BJ-0001, "HPCI Main and Booster Pump Set - 0P204 and 0P217 - In Service Test." In parallel and in accordance with the procedure, the operator started the HPCI auxiliary oil pump and opened the HPCI steam admission valve, 1FD-HV-F001, but the HPCI steam admission valve did not stroke open as indicated by observation of control room position indication, zero turbine speed indicated on the HPCI speed controller, and local position. Operators aborted the test and the Shift Manager declared the HPCI system inoperable.

PSEG determined through troubleshooting that there was no continuity through a normally closed contact on the motor-operator limit switch contact (LS-11). With the F001 valve in a less than fully open position, the LS-11 contact should be closed to provide power to the valve opening control circuit. Power to the opening circuit remains sealed in until the F001 reaches its full open limit switch. The F001 will not open without continuity through the LS-11 contacts. Visual inspection of the compartment did not find any component out of position and did not identify grease or debris that could have prevented LS-11 from making contact. PSEG cleaned and adjusted the contacts. A subsequent continuity check was satisfactory. The HPCI F001 valve retested satisfactorily. PSEG placed the issue into the corrective action program as notification 20574697.

PSEG determined through its root cause evaluation that station procedures did not provide enhanced limit switch inspection guidance to prevent high resistance conditions. The inspectors determined this was not a performance deficiency because it was not within PSEG's ability to foresee and prevent this condition. Specifically, this contact was last cleaned and inspected for its 10-year environmental qualification preventive maintenance in November 2007. The valve was also successfully stroked numerous times following the last maintenance performed during RF17. PSEG's corrective actions included procedure revisions to provide adequate limit switch inspection guidance and installing a design change that will verify continuity across the 1FD-HV-F001 valve opening circuit. The inspectors did not identify any new issues during the review of this LER. This LER is closed.

4OA6 Meetings, Including Exit

On April 18, 2013, the inspectors presented the inspection results to Mr. E. Carr, Hope Creek Plant Manager, and other members of the Hope Creek staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Perry, Site Vice President
E. Carr, Plant Manager
C. Banner, Emergency Preparedness Manager
B. Boesch, Hope Creek Training Manager
P. Bonnett, Regulatory Assurance
B. Burgio, PRA Engineer
D. Bush, System Engineer
E. Casuli, Plant Engineering Manager
S. Connelly, System Engineering
T. Fowler, Operations Training Manager
J. Kandasamy, Work Management Director
K. Knaide, Engineering Director
W. Kopchick, Operations Director
V. McPherson, Maintenance Superintendent
J. Molner, Emergency Preparedness Station Manager
F. Mooney, Maintenance Director
T. Morin, Regulatory Assurance
S. Simpson, Regulatory Assurance Manager
H. Trimble, Radiation Protection Manager

LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED

Opened/Closed

05000354/2013002-01	NCV	A Technical Specification Surveillance Procedure for Remote Shutdown Panel Instrumentation was Inadequately Implemented (Section 4OA3.1)

Closed

05000354/2012-005-00	LER	RCIC Bearing Low Oil Pressure Indication on Remote Shutdown Panel Inoperable (Section 4OA3.1)
05000354/2012-006-00	LER	High Pressure Coolant Injection System Inoperable (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Procedures
WC-AA-107, Seasonal Readiness, Revision 12

Notifications
20592141, TWS Non-Drive Jib Key to Head Shaft Weld Broken
20596449, SSW Grassing Readiness Challenges

Maintenance Orders/Work Orders
60108398, TWS Non-Drive Jib Key to Head Shaft Weld Broken

Other Documents
Memo HCSVP 2013-001 from John F. Perry to Thomas P. Joyce regarding 2013 Hope Creek Grassing Seasonal Readiness Affirmation, dated 1/1/2013
System Health Report for Service Water System, 4th Quarter, 2012, dated 12/17/2012

Section 1R04: Equipment Alignment

Procedures
HC.OP-SO.EG-0001, Safety and Turbine Auxiliaries Cooling Water System Operation, Revision 51
OP-AA-108-116, Protected Equipment Program, Revision 7
HC.OP-SO.BC-0001, Residual Heat Removal System Operation, Revision 52
HC.OP-ST.BC-0001, RHR System Piping and Flow Path Verification - Monthly, Revision 22
HC.OP-SO.KJ-0001, Emergency Diesel Generator Operation, Revision 65

Notifications (*NRC-identified)
20568370, R17 F004D Failed to Auto Open
20569113, 1BCFR-R608A-E11 “A” RHR Flow Ind F/I
20575585, RHR S/D CLG Suction Hdr Press Hi
20577201, BC-HV-F007A Missing Bolt on Cover
20578271, RHR SDC Header High Pressure Alarm
20585510, Voltage Check Failure
20589892*, NRC Question on Temperature of SACS Rooms
20590993*, NRC Identified Housekeeping Issues

Maintenance Orders/Work Orders
40019383, 10Y EQ 1BCHV-F007A - Limitorque PM/EQ

Drawings
M-11-1, P&ID Safety Auxiliaries Cooling Reactor Building, Revision 31
M-51-1, Residual Heat Removal, Sheet 1, Revision 42
M-51-1, Residual Heat Removal, Sheet 2, Revision 40

Other Documents
HC.OP-IS.BC-0001, AP202, A Residual Heat Removal Pump In-Service Test, Revision 46, completed on 10/31/2012
HC.OP-IS.BC-0002, CP202, C Residual Heat Removal Pump In-Service Test, Revision 41, completed on 9/26/2012
HC.OP-IS.BC-0101, Residual Heat Removal Subsystem A Valves - In-Service Test, Revision 32, completed on 12/2/2012
HC.OP-IS.BC-0103, AP202, Residual Heat Removal Subsystem C Valves - In-Service Test, Revision 28, completed on 12/2/2012
HC.OP-ST.BC-0001, RHR System Piping and Flow Path Verification - Monthly, Revision 22, completed on 11/30/2012
RHR System Health Report, Q3 - 2012
HC-PRA-005.0023, Hope Creek Generating Station Probabilistic Risk Assessment, Primary Containment Isolation System (PCIS) Notebook, Revision 3
Protected Equipment Log for A MSL Low Pressure NS4 INOP, dated 2/26/2013

Section 1R05: Fire Protection

Procedures
FRH-II-414, Core Spray Pump Rooms, CRW-DRW Pumps and Sumps Room, Elevation 54', Revision 3
FRH-II-411, Torus Water Cleanup Pump Room, Core Spray Pump Rooms, and CRW/DRW Pumps and Sumps Room, Elevation 54', Revision 3
FRH-II-413, HPCI Pump & Turbine Room, RHR Pump & Heat Exchanger Rooms, Elevation 54', Revision 3
FRH-II-552, Control Room & Electrical Access Area, Elevation 137', Revision 7
FRH-II-541, Class 1E Switchgear Rooms, Elevation: 130'-0", Revision 7
HC.FP-SV.ZZ-0058, Inspection of Class 1 Fire Doors and Safety Related Areas for Transient Combustibles, Revision 1
FP-AA-002, Fire Protection Impairment Program, Revision 2
FP-AA-015, Compensatory Measure Firewatch Program, Revision 3
FP-HC-004, Actions for Inoperable Fire Protection - Hope Creek Station, Revision 1

Notifications (*denotes NRC-identified)
20600844*, NRC Identified Issue - ELU 0312
20600845*, NRC Identified Issue - ELU 0313
20600846*, NRC Identified Issue - ELU 0314
20601560*, Procedure Revision Required FP-AA-015

Maintenance Orders/Work Orders
60105073, Fire Door 5410 Out of Alignment

Drawings
M-5001, Hope Creek Generating Station Fire Protection and Detection Plan - EL. 54'-0", Revision 18
M-5005, Hope Creek Generating Station Fire Protection and Detection Plan - EL. 137'-0" & 145'-0", Revision 27
M-5004, Fire Protection and Detection Plan EL. 120' and EL. 132'

Other Documents
Hope Creek Fire Impairment Logbook
Form 4, Fire Drill Scenario UADS3020713 (SAP#53223889), Hope Creek Service Water Intake Structure, Room 201, drill date 2/7/2013
HC.FP-SV-ZZ-0058, Inspection of Class 1 Fire Doors and Safety Related Areas for Transient Combustibles, completed 3/11/2013 - 3/17/2013
HC.FP-SV-ZZ-0058, Inspection of Class 1 Fire Doors and Safety Related Areas for Transient Combustibles, completed 3/18/2013 - 3/24/2013
HC.FP-SV-ZZ-0058, Inspection of Class 1 Fire Doors and Safety Related Areas for Transient Combustibles, completed 3/25/2013 - 3/31/2013
Impairment #10787, Fire Protection Impairment Permit

Section 1R06: Flood Protection Measures

Procedures
HC.OP-SO.LE-0002, Oily Waste Sump Pump 0AP-368 and 0BP-368 Operation, Revision 1

Notifications (*NRC-identified)
20599602*, G FOST Floor And Grounding Strap Issues

Drawings
A-0201-0, General Plant Floor Plan, Level 1 - Elevation 54'-0", Revision 11
M-5001, Fire Protection and Detection Plan - EL. 54'-0", Revision 18
M-97-0, Bldg. & Equip. Drains - Aux. Bldg. Control & Diesel Areas Oily, Normal, & Chemical Waste Systems, Sheet 2
P-8261-1, Plumbing and Drainage Auxiliary Building - Control Area Plan at EL. 54'-0" Area 26, Revision 8
FSK-P-0-LE-604, Small Piping/Diesel Bldg. Oily Waste Sump 0AP-368 & 0BP-368 Discharge to Large Bore Header, Revision 1
J-L5000, OOT 368* Sump Pump, Sump Basin Oily Waste, Sheet 55, Revision 1
0-P-LE-01, System Isometric/Aux. Bldg. Oily Sump Pump Disch., Sheet 1, Revision 2

Calculations
19-0018, Maximum Flood Levels in Control/Diesel Generator Areas, Revision 7

Other Documents
HC-PRA-012, Internal Flood Evaluation Summary and Notebook, Revision 2
HC-PRA-017, Internal Flood Walkdown Notebook, Revision 0

Section 1R11: Licensed Operator Requalification Program

Procedures
HC.OP-IS.AB-0101, Main Steam System Valves - Inservice Test, Revision 18
HC.OP-SO.BB-0002, Reactor Recirculation System Operation, Revision 94
HC.OP-SO.SF-0001, Reactor Manual Control System Operation, Revision 31
HC.OP-FT.AC-0005, Turbine Overspeed Protection System Operability Test - Quarterly, Revision 49
HC.OP-ST.AC-0002, Turbine Valve Testing - Quarterly, Revision 49

HU-AA-104-101, Procedure Use and Adherence, Revision 5
HU-AA-1081-F-05, Functional Area and Cross-Functional Fundamentals, Operations Fundamentals, Revision 8
HU-AA-1211, Pre-Job Briefings, Revision 10
OP-AA-101-111-1004, Operations Standards, Revision 4
OP-AA-20, Conduct of Operations Process Description, Revision 0
OP-AA-300, Reactivity Management, Revision 6
OP AB 300 1001, BWR Control Rod Movement Requirements, Revision 6
OP-HC-111-101-1001, Control Room Narrative Logs, Revision 0

Other Documents
Scenario Guide (SG)-694, SSW Fire/Electrical Transient/LOCA/LOP, dated 1/10/2013
REMA 2013-0010, March 2013 Deep Shallow TVT 'C' FWH Maintenance Reactivity Maneuver Plan, Revision 0

Notifications
20594741, HC LOR Crew Failed Evaluated Scenario (EP)
20594441, Scheduling the SOS for LORT OBE
20596876, No SCRAM Signal For Control Rod 10-23

Section 1R12: Maintenance Effectiveness

Procedures
ER-AA-310-1004, Maintenance Rule - Performance Monitoring, Revision 9
ER-HC-310-1009, Maintenance Rule System Function and Risk Significant Guide, Revision 9
HC.IC-SC.BG-0007, RWCU Division 1 Channel H1BG-1BGFT-11479A CAVS Discharge Flow to RWCU, Revision 9
HC.IC-SC.BG-0008, RWCU Division 4 Channel H1BG-1BGFT-11479D CAVS Discharge Flow to RWCU, Revision 8
HC-MRULE-001, Hope Creek Maintenance Rule Risk Significance Categorization, Revision 2

Notifications (*NRC-identified)
20295823, Place the Equalization Valve in the Open
20470900, Abandoned FT Results in Tech Spec Entry
20596152, Transmitter Found out of Acceptable Value
20596153, Incomplete Abandonment of Transmitter
20597937, Engineering PIIM Gap - MRule Program
20598848*, MRule SK System Unavail Hours Not Found
20593994, C EDG Speed Fluctuations
20594493, C EDG Speed Fluctuations
20594734, C EDG Testing
20595706, Contingency Order for C EDG
20596621, 1C-G-400 Investigate Frequency Oscillations
20597552, C EDG Troubleshooting Results
20598212, C Diesel Overspeed Knob Will Not Reset
20598216, C EDG Fuel Oil Filter High Differential Pressure Alarm
20598215, Equipment Problem Delays EDG Restoration
20598374, Training on Dynamic Overspeed Trip
20599853, Inspect A EDG Governor Linkage Arm

20599854, Inspect B EDG Governor Linkage Arm
20599855, Inspect D EDG Governor Linkage Arm

Maintenance Orders/Work Orders
50146384, ST 440D RWCU 1BGFT-11479D Div 4 Ch D STP
70149238, C EDG Speed Fluctuations

Drawings
J-25-0, Logic Diagram, Plant Leak Detection, Sheet 9, Revision 0
M-101-1, Crack Monitoring System, Sheet 3, Revision 5
M-23-1, Process Sampling, Sheet 2, Revision 29
M-44-1, Reactor Water Clean-up, Sheet 1, Revision 33

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Procedures
OP-AA-101-1121002, On-Line Risk Assessment, Revision 6
WC-AA-101, On-Line Work Management Process, Revision 19
WC-AA-105, Work Activity Risk Management, Revision 1

Notifications
20573701, Obtain Resistance Readings for HS-F001
20573697, Perform Technical Evaluation for Burnishing Contacts
20574438, Revise HPCI STs for F001 Testing
20574505, Extent of Condition Review of HPCI MOV
20593994, C EDG Speed Fluctuations
20596943, N676A MSL Press Drifting Low
20597039, Unexpected 1/2 N4S During Troubleshooter
20597553, Update Predetermined Protected Equipment Schemes
20594552, E EDG Troubleshooting Results
20598581, BC-HV-F027A Overload/Power Failure
20599199, Tech Spec 3.8.4.2

Drawings
FSK-JD-0504-1-003-2, PT-N076A, Sheet 2, Revision 6

Maintenance Orders/Work Orders
60109132, N676A MSL Press Drifting Low
30210543, 24 Month Diesel Generator Engine PM
60109275-0010, BC-HV-F027A: Investigate/Repair/Replace As Required

Other Documents
HCGS PRA Risk Evaluation Form for Work Week #1305, Revision 0, dated 1/27/2013
HCGS PRA Risk Evaluation Form for Work Week #1306, Revision 1, dated 2/4/2013
HC-PRA-005.0023, Hope Creek Generating Station Probabilistic Risk Assessment, Primary Containment Isolation System (PCIS) Notebook, Revision 3
HCGS PRA Risk Evaluation Form for Work Week #1309, Revision 2, dated 2/27/2013
HCGS PRA Risk Evaluation Form for Work Week #1310, Revision 0, dated 3/3/2013

Section 1R15: Operability Determinations and Functionality Assessments

Procedures
HC.OP-DL.ZZ-0003, Log 3 Control Console Log Condition 1, 2, and 3, Revision 84
HC.OP-AB.RPV-0003, Recirculation System/Power Oscillations, Revision 26
OP-AA-108-111, Adverse Condition Monitoring and Contingency Planning, Revision 7
OP-HC-108-115-1001, Operability Assessment and Equipment Control Program, Revision 15
HC.OP-AR.ZZ-0008, Overhead Annunciator Window Box C1, Revision 44
HC.OP-AB.RPV-0006, Safety/Relief Valve, Revision 3
HC.OP-LR.BB-0001, Containment Isolation Valve Type C Leak Rate Test CIVS 1BBSV-4310 and 1BBSV-4311 Penetration P-17: Reactor Recirc Sample
HC.OP-SO.EP-0001, Service Water Traveling Water Screens System Operation, Revision 18
HC.MD-CM.EP-0003, Service Water Traveling Water Screen Overhaul and Repair, Revision 21

Notifications
20589009, Slight Drop in B #2 Recirc Seal Pressure
20593994, C EDG Speed Fluctuations
20596621, Investigate frequency oscillation
20594734, C EDG Testing
20597995, Service Water Aggregate Impact
20597979, SRV F013R High Tailpipe Temperature Alarm
20593312, SRV F013R High Tailpipe Temperature Alarm
20597733, R SRV High Tailpipe Temperature Alarm
20564830, R SRV Tailpipe Temperature >200 Degrees F
20563863, R SRV Tailpipe Temperature Elevated >200 Degrees F
20558918, R SRV Tailpipe >200 Degrees F at NOP/NOT
20558027, SRV F013R NCLSD CRIDS Alarm
20597898, H SRV Tailpipe Temperature
20597897, J SRV Tailpipe Temperature Monitor OTDM
20513730, BB-SV-4310 Momentarily Ind Dual
20557372, 1BBSV-4310 Failed LLRT
20558264, 1BBSV-4310 Failed LLRT
20595428, 1BBSV-4310 Failed IST
20595821, BBSV-4310 Open Indication Flickers MCR
20596276, Enhancement to IST Program
20596875, 1BBSV-4310 Failed IST
20595231, Screen Headshaft Has Shifted North
20592133, D Traveling Water Screen
20600387*, ER-AA-310-1004 Revision Request

Maintenance Orders/Work Orders
80099244, Reactor Recirculation Pump Seal Condition Monitoring Template
60108706, C EDG Speed Fluctuations
80108609, C EDG Frequency Oscillation Evaluation
50122420, 5Y ST LLRT 1BBSV-4310
50154230, ST 3M OP-IS.BB-0101 RX Recirc Vlvs Test
80106290, Technical Evaluation of As-Found leakage for penetration P17 (1BBSV-4310) exceeding Administrative Limit

80108731, Evaluation of 1BBSV-4310 Local Position Indication Test Failure
70149442, Screen Headshaft Has Shifted North
30247254, 1M 1B-S-501 PM: Screen Inspection
70148402, D Traveling Water Screen
70105021, Drive Side Key is Coming Out
60108974, IN/RP-B TWS Headshaft
60108398, Non Drive Jib Key to Head Shaft Weld Brk

Drawings
M-43-1, Reactor Recirculation System, Sheet 1, Revision 33

Other Documents
OTDM SER #12-015, Revision 2, H1AB-1ABPSV-F013R, Main Steam Line A Safety Relief Valve - 1120 psi
PM020Q-0056, Instructions for Installation, Operation, and Maintenance for Q Class Traveling Water Screens
PM020Q-0076, Head Shaft Assy w/Overhead Suspension Sys

Section 1R18: Plant Modifications

Procedures
HC.OP-AR.ZZ-0008, Overhead Annunciator Window Box C1, Revision 43 and 44
HC.OP-AR.ZZ-0022, CRIDS Computer Points Book 3, D2880 thru D3257, Revision 15 and 16
CC-AA-112, Temporary Configuration Changes, Revision 12
CC-AA-112-1001, Temporary Configuration Change Implementation T&RM, Revision 1
LS-AA-104, 50.59 Review Process, Revision 6
LS-AA-104-1000, 50.59 Resource Manual, Revision 7
LS-AA-104-1002, 50.59 Applicability Review Form, Revision 2
MA-AA-724-113, Meggering of Electrical Equipment (Non-Rotating), Revision 7

Notifications (*NRC-identified)
20595389, MCC bucket missing jumper
20595570, Pump trip on initial start
20595611, Field Wiring Discrepancy For BGXIS-AC653
20595612, Field Wiring Discrepancy For BGXIS-BC653
20595982, Pump trip on initial start
20597993, 15 kV Cable Supply to BX502 OTDM
20590643, Install Sump Pumps for AX501 and BX501
20588385*, Potential Green Finding for Submerged Cables
20598854*, Sump Pump Not Working
20599165, Sump Pump Not Working
20553973, C EDG Jkt Wtr Htr Trip
20566951, C EDG Jacket Water Htr Excessively Hot
20597816, C EDG Jacket Heater Megged Low
20598579, Evaluate Purchase Options for Kw Heaters
20598930*, CRIDS A7088 Reading High When O/S
20599432, Procedure for EDG JW Htr Maint
20599629, No operation created for troubleshooting

Maintenance Orders/Work Orders
60098001, A RWCU Pump: Install/Tie-In New Pump
80102453, Replace Reactor Water Cleanup Recirculation Pump 1A-P-221
70147542, Operation 0010, Work Group Evaluation: Potential NRC Green Finding for Submerged AX501/BX501 Cables
60108105, Install Sump Pumps for AX501 and BX501
30239871, 72M C EDG Jacket Water Keepwarm Heater Clean/Inspect
80102995, B EDG Lube Oil Keepwarm Heater AE406 Low
80108853, TCCP Jumper C EDG Jacket Water Keepwarm

Drawings
J-44-0, Reactor Water Cleanup Logic Diagram, Sheet 4, Revision 7
M-44-1, Reactor Water Cleanup, Sheet 1, Revision 33
E-0019-1, 480 Volt MCC Tabulation, Class 1E - Aux Bldg - D/G Area, 10B411, 10B421, 10B431, 10B441, Sheet 2, Revision 13
M-30-1, Diesel Engine Auxiliary Systems Intercooler and Injector Cooling, Jacket Water, Crankcase Vacuum Air Intake, Exhaust, and Vibration Monitoring Systems, Sheet 2, Revision 20
PM018Q-0366, Electrical Schematic Engine Control, Sheet 25, Revision 10

Other Documents
Temporary Log Number 13-034, Manhole Checks, Once per Shift

Section 1R19: Post-Maintenance Testing

Procedures
MA-AA-716-012, Post Maintenance Testing, Revision 18
OU-AA-335-004, Manual Ultrasonic Measurement of Material Thickness and Interfering Conditions, Revision 2
SH.MD-GP.ZZ-0240, System Pressure Test at Normal Operating Pressure and Temperature, Revision 10
SH.MD-IT.ZZ-3907, General Mechanical Equipment Inspection and Functional Testing, Revision 1
HC.MD-ST.ZZ-0009, Motor Operated Valve Thermal Overload Protection Surveillance, Revision 20
ER-HC-1051, Leakage Reduction Program, Revision 2
HC.OP-IS.BE-0002, B & D Core Spray Pumps - BP206 and DP206 - In-Service Test, Revision 50
HC.OP-IS.BE-0102, Core Spray Subsystem B Valves - In-Service Test, Revision 26

Notifications
20593491, Jacket Water Leak
20593219, A EDG Jacket Water Leak Lower Header at 3 & 5 Cylinders
20593535, 5 DPM Intermittent Leak from Pump Seal Telltale
20592410, RHR Pipe Wall Reading Below Tmin
20595570, Pump Trip on Initial Start
20595611, Field Wiring Discrepancy For BGXIS-AC653
20595612, Field Wiring Discrepancy For BGXIS-BC653

20595925, Operator Aid Request for RWCU
20598581, BC-HV-F027A Overload/Power Failure
20599079, Technical Pre-Job Brief HU-AA-1212 Not Performed
20599762, Overload Bypass Test Failed for F004B
20600130, Unexpected Core Spray OHA
20600159*, B core spray seal purge leak at cap

Maintenance Orders/Work Orders
60099516, Replace A EDG Fuel Oil Drain Tank Level Switch (80104858)
60108553, A EDG Jacket Water Leak on Lower Header
30106244, 10Y PM 1BCHV-F007D Diagnostic Test MOV
80108395, Minimum Allowable Wall Thickness Evaluation of 4"0' RHR Piping
60098001, A RWCU Pump: Inst/Tie-In New Pump
60100014, A RWCU Gallery: Replace RWCU Piping
70149539, New A RWCU Pump Tripped immediately after starting
80102453, Replace RWCU Recirculation Pump 1A-P-221
60109275-0020, PMT BC-HV-F027A: Operation/Indication SAT
60109275-0030, RT - BC-HV-F027A In-Service Test
30098202, 22Y 1KY-40405-2-0644 Relay Replace
30107170, PM 10YR - 1BEHV-F031B - Diagnostic Test
30168505, 8Y 1BEV-015 B CS Dsch Chkvlv Open/Inspt
30192138, 36M PM/1B-P-206-MTR Core Spray Motor
30241346, 54M PM 1BEHV-F005B MOV Stem Lubrication
40022362, 10Y EQ 1BEHV-F005B-Limitorque PM/EQ MOV
40022363, 10Y EQ 1BEHV-F031B-Limitorque PM/EQ
40025080, 10Y EQ 1BEHV-F015B Limitorque EQ/PM MOV
50104715, ST 72M MOV Thermal Ovrld/1BEHV-F001D
50143854, ST 18M MOV Thermal Ovrld/1BEHV-F004B
50143855, ST 18M MOV Thermal Ovrld/1BEHV-F031B
50154647, ST 3M OP-IS.BE-0002 B/D Core Spray Pumps
50154651, ST 3M IC-FT.SP-025 On RMS DIV-N-CH-N

Drawings
M-52-1, Core Spray, Revision 31

Other Documents
LCO 13-027, A Emergency Diesel Generator A-G-400
HC.OP-ST.KJ-0001, Emergency Diesel Generator 1AG400 Operability Test - Monthly, record copy dated 1/30/2013
HC.OP-SO.KJ-0001, Emergency Diesel Generators Operation, record copy dated 1/31/2013
HC.OP-IS.BC-0104, Residual Heat Removal Subsystem D Valves - Inservice Test, record copy dated 1/23/2013
A Reactor Water Cleanup Recirculation Pump Commissioning Test Report, dated 2/14/2013
NC.DE-TS.ZZ-3072, Criteria for Installation, Modification and Temporary Removal of Pipe Supports at the Salem and Hope Creek Generating Stations
Action Statement Log Number 13-069, BC-HV-027A
HC.OP-IS.BC-0101, Residual Heat Removal Subsystem A Valves - Inservice Test, record copy dated 3/13/2013

Action Statement Log Number 13-077, B Core Spray Loop
HC.OP-IS.BE-0002, B & D Core Spray Pumps - BP206 and DP206 - In-Service Test, record copy dated 3/21/2013
HC.OP-IS.BE-0102, Core Spray Subsystem B Valves - In-Service Test, record copy dated 3/21/2013

Section 1R22: Surveillance Testing

Procedures
HC.OP-DL.ZZ-0026, Surveillance Log, Revision 135
HC.OP-ST.SK-0001, Alternate RCS Leakage Determination, Revision 9
HC.OP-GP.ZZ-0005, Drywell Leakage Source Detection, Revision 9
HC.OP-IS.BJ-0002, HPCI Jockey Pump - AP228 - Inservice Test, Revision 33
HC.OP-IS.BJ-0101, High Pressure Coolant Injection Valves - Inservice Test, Revision 65
HC.OP-IS.BC-0003, BP202 Residual Heat Removal Pump In-Service Test, Revision 47
ER-AA-321, Administrative Requirements for Inservice Testing, Revision 11
IST-HC-INT3-Program Plan, Hope Creek Inservice Testing Plan, Revision 0

Notifications
20563652, DWFD Flow Slowly Rising - 0.11 gpm
20559476, Rising Trend in Drywell Floor Drain Flow
20561360, Drywell Flr Drn Flow Rate of Rise Alarm
20573735, Drywell Floor Drain Flow Alarm
20573097, DWFD Flow and Control Rod Testing
20594574, Drywell Equipment Drain Sump Hi/Lo Level Alarm
20598131, Drywell Floor Drain OTDM

Maintenance Orders/Work Orders
50153271, ST 3M HC.OP-IS.BJ-0101 HPCI Valves IST
50153461, ST 92D OP-IS.BJ-0002 HPCI Jockey Pump IST
70143841, DWFD Flow and Control Rod Testing

Other Documents
HC.OP-IS.BJ-0002, HPCI Jockey Pump - AP228 - Inservice Test, Revision 33, completed 1/12/2013
HC.OP-IS.BJ-0101, High Pressure Coolant Injection Valves - Inservice Test - Revision 65, completed 1/12/2013
HC.OP-IS.BJ-0002, HPCI Jockey Pump - AP228 - Inservice Test, Revision 32, completed 10/12/2012
HC.OP-IS.BJ-0101, High Pressure Coolant Injection Valves - Inservice Test, Revision 65, completed 10/9/2012
HCGS-WW-1246, HCGS PRA Risk Evaluation Form, Revision 0, dated 1/6/2013

Section 1EP2: Alert and Notification System Evaluation

Procedures
EP-AA-121-1002, PSEG Alert Notification System (ANS) Program, Revision 0
EP-AA-121-1004, PSEG ANS Corrective Maintenance, Revision 1

EP-AA-121-1005, PSEG ANS Preventive Maintenance, Revision 2
EP-AA-121-1006, PSEG ANS Siren Monitoring, Troubleshooting, and Testing, Revision 1

Other Documents
ANS maintenance records, January 2012 – December 2012
ANS test records, April 2011 – February 2013
Final REP-10 Design Review Report, PSEG Salem and Hope Creek Generating Stations, dated 1/6/2006
Letter from FEMA Region II to NJ OEM, REP Unit, Status of Provisions for Back-up Alert and Notification for the Salem Hope Creek Nuclear Power Station Emergency Planning Zone, dated 12/6/2012
Letter from FEMA Region III to Delaware Emergency Management Agency, Status of Provisions for Back-up Alert and Notification for the Salem Hope Creek Nuclear Power Station Emergency Planning Zone, dated 11/28/2012
Letter from PSEG Nuclear LLC to NJ RERP &Technical Unit Emergency Response, Incorporation of Back-up Means of ANS Into Siren Design Report, dated 10/5/2012

Section 1EP3: Emergency Response Organization Staffing and Augmentation System

Procedures
EP-AA-120-1007, Maintenance of Emergency Response Organization, Revision 4
EP-AA-120-1010, Emergency Preparedness Training Administration, Revision 0
EP-AA-121-1001, Automated Call-Out System Maintenance, Revision 0
HC.EP-EP.ZZ-0204, Emergency Response Callout/Personnel Recall, Revision 2
SC.EP-EP.Z-0204, Emergency Response Callout/Personnel Recall, Revision 2

Other Documents
ERO roster dated 3/21/2013
Hope Creek Generating Station and Salem Generating Station, On-Shift Staffing Analysis Report, Revision 0
Monthly pager test results March 2011-February 2013
Practice Exercise Critique Report (H12-01), dated 4/24/2012
Unannounced drill critique report (H11-U1), dated 9/26/2011
Unannounced drill critique report (S12-U1) dated 10/2/2012

Section 1EP4: Emergency Action Level and Emergency Plan Changes

Other Documents
EP-HC-111-121, Hope Creek ECG Barrier Table, Revision 1
EP-HC-111-131, Hope Creek ECG Wall Chart, Revision 1
EP-HC-111-221, Hope Creek Fuel Clad Barrier Bases, Revision 1
EP-HC-111-223, Hope Creek Containment Barrier Bases, Revision 1
EP-HC-111-F1, Hope Creek ECG Attachment 1, Unusual Event, Revision 1
EP-HC-111-F2, Hope Creek ECG Attachment 2, Alert, Revision 1
EP-HC-111-F3, Hope Creek ECG Attachment 3, Site Area Emergency, Revision 2
EP-HC-111-F4, Hope Creek ECG Attachment 4, General Emergency, Revision 1
Emergency Plan Section 1, Introduction, Revision 16
Emergency Plan Section 3, Emergency Organization, Revision 28

Section 1EP5: Correction of Emergency Preparedness Weaknesses

Procedures
EP-AA-120-1001, 10 CFR 50.54(q) Change Evaluation, Revision 2
EP-AA-125, Emergency Preparedness Self Evaluation Process, Revision 0
LS-AA-104, 50.59 Review Process, Revision 6
WC-AA-106, Work Week Screening and Processing, Revision 12

Other Documents
Audit NOSA-HPC-12-02, Emergency Preparedness Audit Report, dated 4/12/2012
Audit NOSA-HPC-13-02, Emergency Plan, Procedures, Facilities, and Interfaces Audit Report, dated 3/28/2013
Check-In Self-Assessment (70145124) for 2013 NRC EP Program Inspection

Event Report Common Unusual Event August 23, 2011
Event Report Salem Unusual Event April 30, 2012
Event Report Salem Unusual Event July 14, 2011
Memoranda of Understanding between Department of Commerce – National Weather Service and PSEG Nuclear, LLC, dated 2/23/2012
Memoranda of Understanding Cumberland County Office of Emergency Management and PSEG Nuclear, LLC, dated 6/28/2012
Memoranda of Understanding Delaware Department of Safety and Homeland Security, Delaware Emergency Management Agency and PSEG Nuclear, LLC, dated 3/2/2012
Memoranda of Understanding Kent County Department of Public Safety Kent County EOC and PSEG Nuclear, LLC, dated 4/6/2012
Memoranda of Understanding Maryland Emergency Management and Civil Defense Agency/NJ State Police, dated 9/19/2012
Memoranda of Understanding Memorial Hospital of Salem County and PSEG Nuclear, LLC, dated 2/27/2012
Memoranda of Understanding New Castle County Delaware, Delaware Emergency Management Agency and PSEG Nuclear, LLC, dated 7/9/2012
Memoranda of Understanding NJ State Police/NJ Department of Environmental Protection/PSEG, dated 10/2/2012
Memoranda of Understanding Pennsylvania Emergency Management Agency/NJ State Police, dated 2/6/2012
Memoranda of Understanding Salem County Department of Emergency Services and PSEG Nuclear, LLC, dated 6/19/2012
Memoranda of Understanding Township of Lower Alloways Creek and PSEG Nuclear, LLC, dated 3/23/2012
NOH-12-028, Nuclear Oversight 3C12 Mid-Cycle Assessment Report, dated 2/13/2013
NOSPA-HC-11-1C, Nuclear Oversight Assessment Report, January through April 2011
NOSPA-HC-11-2C, Nuclear Oversight Assessment Report, May through August 2011
NOSPA-HC-11-3C, Nuclear Oversight Assessment Report, September through December 2011
NOSPA-HC-12-1C, Nuclear Oversight Assessment Report, January through April 2012
NOSPA-HC-12-2C, Nuclear Oversight Assessment Report, May through August 2012
NOSPA-HC-12-3C, Nuclear Oversight Assessment Report, September through December 2012
PSEG Nuclear LLC Emergency Plan, Revision 71

Salem-Hope Creek Nuclear Generating Station Development of Evacuation Time Estimates, Revision 0
S12-01, Emergency Preparedness Onsite Drill Critique Report, dated 2/9/2012
S12-02, Emergency Preparedness Onsite Drill Critique Report, dated 6/13/2012
S12-03, Emergency Preparedness Onsite Drill Critique Report, dated 12/6/2012
H12-01, Emergency Preparedness Onsite Drill Critique Report, dated 4/3/2012
H12-02, Emergency Preparedness Onsite Drill Critique Report, dated 5/22/2012
H12-03, Emergency Preparedness Onsite Drill Critique Report, dated 9/13/2012
H13-01, Emergency Preparedness Onsite Drill Critique Report, dated 2/5/2013

Notifications

20518624	20554333	20581143
20525597	20556990	20586753
20527223	20562713	20588407
20542063	20573906	20588423
20543771	20577851	20591163
20545017	20578469	20593374
20551678	20580256	
20553567	20580271	

Section 1EP6: Drill Evaluation

Procedures
HC.OP-AR.ZZ-0008, Overhead Annunciator Window Box C1, Revision 44
HC.OP-AR.ZZ-0014, Overhead Annunciator Window Box D3, Revision 35

Notifications
20594644, Inaccurate Notification Made During EP Drill
20594741, HC LOR Crew Failed Evaluated Scenario (EP)
20599234, Drill Report Errors in Details
20599239, H13-01 EP Drill Report Inaccuracies

Other Documents
Scenario Guide (SG)-694, SSW Fire/Electrical Transient/LOCA/LOP, dated 1/10/2013
DEP Observation Checklist, EP-AA-125-1002-F01, Revision 3, completed in simulated main control room for Scenario Guide Reference Number SG-694, on 1/22/2013
Hope Creek - Training Drill H13-01 (02/05/13) Scenario Synopsis
Emergency Preparedness Training Drill Critique Report H13-01, Drill Date February 5, 2013
DEP Observation Checklist, EP-AA-125-1002-F01, completed in simulated main control room for Drill Number 13-01, on 2/5/2013
DEP Observation Checklist, EP-AA-125-1002-F01, completed in Hope Creek Technical Support Center for Drill Number 13-01, on 2/5/2013
DEP Observation Checklist, EP-AA-125-1002-F01, completed in PSEG Emergency Operations Facility for Drill Number 13-01, on 2/5/2013
EP-HC-111-F2, Initial Contact Message Form completed in the simulated main control room for an Alert at 0918 hours on February 5, 2013
EP-HC-111-F3, Initial Contact Message Form completed in the Hope Creek Technical Support Center for a Site Area Emergency at 1105 hours on February 5, 2013

EP-HC-111-F4, Initial Contact Message Form completed in the PSEG Emergency Operations Facility for a General Emergency at 1229 hours on February 5, 2013
EP-HC-111-F4, Initial Contact Message Form completed in the PSEG Emergency Operations Facility for a Protective Action Recommendation Upgrade at 1329 hours on February 5, 2013
EP-HC-111-F6, ECG Attachment 6 – Communications Log for 0926 hours on February 5, 2013
EP-HC-111-F6, ECG Attachment 6 – Communications Log for 1111 hours on February 5, 2013
EP-HC-111-F6, ECG Attachment 6 – Communications Log for 1242 hours on February 5, 2013
EP-HC-111-F6, ECG Attachment 6 – Communications Log for 1340 hours on February 5, 2013

Section 4OA1: Performance Indicator Verification

Procedures
LS-AA-2080, Monthly Data Elements for NRC SSFFs, Revision 5
LS-AA-2001, Collecting and Reporting of NRC Performance Indicator Data, Revision 11
LS-AA-2003, Use of the INPO Consolidated Data Entry Database for NRC and WANO Data Entry, Revision 6
LS-AA-2010, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, Revision 6
LS-AA-2030, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, Revision 6
LS-AA-2190, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), Revision 3
EP-AA-125-1001, EP Performance Indicator Guidance, Revision 0
EP-AA-125-1002, ERO Performance – Performance Indictor Guidance, Revision 0
EP-AA-125-1003, ERO Readiness – Performance Indicator Guidance, Revision 0

Other Documents
LER 05000354/2012-001-00, Average Power Range Monitor Flow Unit Summer Out of Tech Spec Tolerance, event date 3/6/2012
LER 05000354/2012-002-00, High Pressure Injection System Inoperable, event date 3/14/2012
LER 05000354/2012-003-00, Operation with the Potential to Drain the Reactor Vessel, event date 4/22/2012
LER 05000354/2012-004-00, As Found Values for Safety Relief Valve Lift Setpoints Exceed Technical Specification Allowable, event date 5/10/2012
LER 05000354/2012-004-01, As Found Values for Safety Relief Valve Lift Setpoints Exceed Technical Specification Allowable, event date 5/10/2012
LER 05000354/2012-005-00, RCIC Bearing Oil Pressure Indication on Remote Shutdown Panel Inoperable, event date 7/15/2012
LER 05000354/2012-006-00, High Pressure Injection System Inoperable, event date 9/4/2012
PSEG Letter LR-N12-0249, regarding Retraction of Hope Creek LER 05000354/2012-002-00, dated 8/23/2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Jan 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Feb 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Mar 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Apr 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, May 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Jun 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Jul 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Aug 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Sep 2012

CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Oct 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Nov 2012
CDE Audit Log, Safety System Functional Failures, Hope Creek Unit 1, Dec 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for January 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for February 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for March 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for April 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for May 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for June 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for July 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for August 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for September 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for October 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for November 2012
LS-AA-2190, Attachment 1, Monthly Data Elements for NRC/INPO Consolidated Data Entry - Monthly Operating Report (MOR), for December 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for January 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for February 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for March 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for April 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for May 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for June 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for July 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for August 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for September 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for October 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for November 2012
LS-AA-2010, Attachment 1, Monthly Data Elements for NRC/WANO Unit/Reactor Shutdown Occurrences, for December 2012

LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for January 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for February 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for March 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for April 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for May 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for June 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for July 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for August 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for September 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for October 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for November 2012
LS-AA-2030, Attachment 1, Monthly Data Elements for NRC Unplanned Power Changes per 7000 Critical Hours, for December 2012

Section 4OA2: Problem Identification and Resolution

Procedures
OP-AA-102-103, Operator Work-Around Program, Revision 2
OP-AA-102-103-1001, Operator Burdens Program, Revision 0
OP-AA-102-103, Operator Burden Assessment, Revision 0

Notifications
20595514, Operator Challenge Metric Discrepancy

Other Documents
Hope Creek Performance Indicator OO.2, Main Control Room Distractions, dated February 2013
Hope Creek Performance Indicator OO.2, Main Control Room Distractions, dated January 2013
Hope Creek Performance Indicator OO.3, Operator Work-Arounds, dated January 2013
Operator Challenges List, dated 2/26/2013
Operator Challenges List, dated 2/4/2013
Hope Creek Plan of the Day, dated 2/26/2013
Quarterly Operator Burden Assessment, dated 2012 - 4th Quarter
Temporary Configuration Change Package Tracking Log, dated 2/26/2013
Alarm Bypass Log, dated 2/26/2013
Adverse Condition Monitoring Plans Log, dated 2/26/2013
OTDM Log, dated 2/26/2013

Section 4OA3: Follow-up of Events and Notices of Enforcement Discretion

Procedures
MA-AA-723-300, Diagnostic Testing and Inspection of Motor Operated Valves, Revision 7
MA-AA-723-301, Diagnostic Testing and Inspection of Motor Operated Valves, Revision 4 and Revision 8
OP-AA-111-101-1001, Use and Development of Operating Logs, Revision 4
HC.OP-DL.ZZ-0014, Monday Shift Routine Log, Revision 33
HC.OP-DL.ZZ-0016, Wednesday Shift Routine Log, Revision 22
HC.OP-DL.ZZ-0019, Saturday Shift Routine Log, Revision 34
HC.OP-DL.ZZ-0006, Log 6 Auxiliary Building Log, Revision 54
HC.OP-ST.SV-0001, Remote Shutdown Monitoring Instrumentation Channel Check - Monthly, Revision 25 and Revision 26

Notifications
20573697, Perform tech eval for burnishing contact
20574697, HPCI Failure of the HV-001
20588171, BC-F008 Limit Switch Unexpected Voltage
20595966, Untimely LER Supplement Submittal
20567743, Unsat Reading - ST HC.OP-ST.SV-0001
20567832, RCIC Lube Oil Relay Failed

Maintenance Orders/Work Orders
30243122, 1M PM MOV Voltage Check Group 2
30243123, 1M PM MOV Voltage Check Group 3
30244475, 1M PM MOV Voltage Check Group 1
30244815, 1M PM MOV Voltage Check Group 2
30245457, 1M PM MOV Voltage Check Group 1
30246365, 1M PM MOV Voltage Check Group 3
60099151, RP-1FDHVF001/V003 - Internal Vlv Repair
60104604, RCIC Lube Oil Relay Failed
70141127, Unsat Reading - ST HC.OP-ST.SV-0001

Drawings
E-6075-0, Electrical Schematic Diagram, High Pressure Coolant Injection, Turbine Steam Supply Valve F001, Sheet 9, Revision 5
J-55-0, HPCI Valves HV-F001, HV-F004, HV-F006, Sheet 4, Revision E
PN1-E41-1040-0062, Elementary Diagram HPCI System, Sheet 5, Revision 29
PN1-E41-1040-0062, Elementary Diagram HPCI System, Sheet 11, Revision 21

Other Documents
ST HC.OP-ST.SV-0001, Remote Shutdown Monitoring Instrumentation Channel Check - Monthly, record copy dated 6/16/2012 (Order 50149878)
HC.OP-DL.ZZ-0006-F1, Form - Log 6 Auxiliary Building Log, record copy dated 6/18/2012
HC.OP-DL.ZZ-0006-F1, Form - Log 6 Auxiliary Building Log, record copy dated 6/25/2012
HC.OP-DL.ZZ-0006-F1, Form - Log 6 Auxiliary Building Log, record copy dated 7/2/2012
HC.OP-DL.ZZ-0006-F1, Form - Log 6 Auxiliary Building Log, record copy dated 7/9/2012

LIST OF ACRONYMS

ACE	apparent cause evaluation
ADAMS	Agencywide Documents Access and Management System
ANS	Alert and Notification System
CFR	Code of Federal Regulations
EDG	emergency diesel generator
EO	equipment operator
EP	Emergency Preparedness
ERF	emergency response facility
ERO	emergency response organization
HPCI	high pressure coolant injection
IMC	Inspection Manual Chapter
LER	licensee event report
LOCA	loss of coolant accident
LOOP	loss of offsite power
MSL	main steam line
NCV	non-cited violation
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
PM	preventive maintenance
PSEG	Public Service Enterprise Group Nuclear LLC
RCIC	reactor core isolation cooling
RHR	residual heat removal
RO	reactor operator
RSP	remote shutdown panel
RTP	rated thermal power
RWCU	reactor water cleanup
SACS	safety auxiliary cooling system
SDP	Significance Determination Process
SR	surveillance requirement
SRO	senior reactor operator
SSC	structure, system, or component
TS	technical specification
TSC	technical support center
UFSAR	Updated Final Safety Analysis Report