May 21, 2008

Mr. William Levis
President and Chief Nuclear Officer
PSEG Nuclear LLC
80 Park Plaza, T4B
Newark, NJ 07102

SUBJECT: HOPE CREEK GENERATING STATION – NRC EVALUATION OF CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT MODIFICATIONS TEAM INSPECTION REPORT 05000354/2008007

Dear Mr. Levis:

On April 18, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Hope Creek Generating Station. The enclosed inspection report documents the inspection results, which were discussed on April 18, 2008, with Mr. G. Barnes 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, calculations and records, observed activities, and interviewed station personnel.

Based on the results of this inspection, no findings of significance were identified.

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

Sincerely,

/RA/

Lawrence T. Doerflein, Chief
Engineering Branch 2
Division of Reactor Safety

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

Enclosure: Inspection Report 05000354/2008007
w/Attachment: Supplemental Information

May 21, 2008

Mr. William Levis
President and Chief Nuclear Officer
PSEG Nuclear LLC
80 Park Plaza, T4B
Newark, NJ 07102

SUBJECT: HOPE CREEK GENERATING STATION - NRC 50.59 AND PERMANENT MODIFICATIONS TEAM INSPECTION REPORT 05000354/2008007

Dear Mr. Levis:

On April 18, 2008, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Hope Creek Generating Station. The enclosed inspection report documents the inspection results, which were discussed on April 18, 2008, with Mr. Barnes and other members of your staff.

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DATE	05/13/08		05/16/08		05/21/08			

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* See Previous Concurrence Page

cc w/encl:
T. Joyce, Senior Vice President, Operations
G. Barnes, Site Vice President
K. Chambliss, Director, Nuclear Oversight
J. Spears, Acting Director of Finance
J. Perry, Hope Creek Plant Manager
J. Keenan, General Solicitor, PSEG
M. Wetterhahn, Esquire, Winston and Strawn, LLP
Consumer Advocate, Office of Consumer Advocate, Commonwealth of PA
L. Peterson, Chief of Police and Emergency Management Coordinator
P. Baldauf, Assistant Director, NJ Radiation Protection Programs
P. Mulligan, Chief, NJ Bureau of Nuclear Engineering
H. Otto, Ph.D., Administrator, DE Division of Water Resources
N. Cohen, Coordinator - Unplug Salem Campaign
E. Zobian, Coordinator - Jersey Shore Anti Nuclear Alliance

Distribution w/encl: **(via E-mail)**
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J. Shea, NRR, Backup
ROPreports Resources
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D. Roberts, DRS
L. Doerflein, DRS
J. Richmond, DRS

U. S. NUCLEAR REGULATORY COMMISSION

REGION I

Docket No:	50-354
License No:	NPF-57
Report No:	05000354/2008007
Licensee:	PSEG Nuclear LLC
Facility:	Hope Creek Generating Station
Location:	P.O. Box 236 Hancocks Bridge, NJ 08038
Dates:	March 31 to April 18, 2008
Inspectors:	J. Richmond, Senior Reactor Inspector (Team Leader) F. Arner, Senior Reactor Inspector A. Ziedonis, Reactor Inspector M. Balazik, Reactor Inspector (in-training) L. Casey, Reactor Inspector (in-training)
Approved by:	Lawrence T. Doerflein, Chief Engineering Branch 2 Division of Reactor Safety

Enclosure

SUMMARY OF FINDINGS

IR 05000354/2008007; 03/31/2008 - 04/18/2008; Hope Creek Generating Station; Engineering Specialist Plant Modifications Report.

The report covers a two week inspection of the evaluation of changes, tests, or experiments and permanent plant modifications. It was conducted by three region based engineering inspectors, and two inspectors in-training. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R17 Evaluation of Changes, Tests, or Experiments and Permanent Plant Modifications (IP 71111.17)

.1 Evaluations of Changes, Tests, or Experiments (18 samples)

a. Inspection Scope

The inspectors reviewed one safety evaluation to determine whether the change to the facility or procedures, as described in the Updated Final Safety Analysis Report (UFSAR), had been reviewed and documented in accordance with 10 CFR 50.59. In addition, the inspectors determined whether PSEG had been required to obtain NRC approval prior to implementing the change. The inspectors interviewed plant staff and reviewed supporting information, including calculations, analyses, design change documentation, procedures, the UFSAR, technical specifications, and plant drawings, to assess the adequacy of the safety evaluation. The inspectors compared the safety evaluation and supporting documents to the guidance and methods provided in Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Evaluations," as endorsed by NRC Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," to determine the adequacy of the safety evaluation.

The inspectors also reviewed a sample of seventeen 10 CFR 50.59 screenings and applicability determinations for which PSEG had concluded that no safety evaluation was required. These reviews were performed to assess whether PSEG's threshold for performing safety evaluations was consistent with 10 CFR 50.59. The sample of issues that were screened out included design changes, temporary alterations, procedure changes, and setpoint changes.

The reviewed safety evaluation was the only safety evaluation PSEG had performed during the time period covered by this inspection (i.e., since the last modifications inspection). The screenings and applicability determinations were selected based on the risk significance of the associated structures, systems, and components (SSCs).

In addition, the inspectors compared PSEG's administrative procedures, used to control the screening, preparation, review, and approval of safety evaluations, to the guidance in NEI 96-07 to determine whether those procedures adequately implemented the requirements of 10 CFR 50.59. The reviewed safety evaluation, screenings, and applicability determinations are listed in the attachment.

b. Findings

No findings of significance were identified.

.2 Permanent Plant Modifications (7 samples)

.2.1 480 Volt Alternating Current Load Center Circuit Breaker Modifications

a. Inspection Scope

The inspectors reviewed the modifications associated with the 480 Volt Alternating Current (VAC) load center circuit breaker replacements. The inspectors assessed whether the design and licensing bases, and performance capability of risk significant SSCs had been degraded by the modification. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors assessed selected attributes to determine whether they were consistent with the design and licensing bases. These attributes included component safety classification, time-current response characteristics, equipment coordination responses, and instantaneous fault protection against overload and short circuit conditions. Design assumptions were reviewed to evaluate whether they were technically appropriate and consistent with the UFSAR. The inspectors reviewed selected calculations, analysis, procedures, and the UFSAR to determine whether they were properly updated with revised design information and operating guidance. The inspectors evaluated the post-modification testing to determine whether the affected SSCs would function in accordance with the design assumptions. For the accessible components associated with the modification, the inspectors walked down the SSCs to detect possible abnormal installation conditions. The inspectors also discussed the breaker modification and design basis with design engineers and system engineers. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.2 Residual Heat Removal Pump Hydraulic Analyses

a. Inspection Scope

The inspectors reviewed calculation BC-0056, "Residual Heat Removal (RHR) System Hydraulic Analyses," to determine whether it was technically adequate. The analysis change revised the minimum differential pressure required for the RHR pump, at the design flow rate, and removed a margin for instrument uncertainty. The inspectors assessed whether the design and licensing bases, and performance capability of the RHR system had been degraded by the change to the analysis. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors assessed selected design inputs within the calculation to determine whether they were conservative with respect to ensuring the RHR pumps could provide the minimum flow rate used in the safety analysis

considering the elimination of the instrument uncertainty within the calculation. In addition, the inspectors evaluated the pressure and flow instruments used during surveillance testing to determine whether they were in calibration, and had accuracies consistent with industry standards. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.3 Reactor Core Isolation Cooling Pump Hydraulic Analysis

a. Inspection Scope

The inspectors reviewed calculation BD-0003, "Reactor Core Isolation Cooling (RCIC) System Hydraulic Analysis," to determine whether it was technically adequate. The analysis removed instrument uncertainty margins for RCIC pump suction and discharge pressure instruments and flow instruments, which are used during pump surveillance tests. The inspectors assessed whether the design and licensing bases, and performance capability of the RCIC system had been degraded by the change to the analysis. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors assessed design inputs to determine whether they were appropriate and valid, and to determine whether the minimum pump performance would remain adequate during transient events, such as a loss-of-feedwater event. In addition, the inspectors evaluated the system margin improvement of increasing the rated turbine speed capability to determine whether it was correctly translated into the pump capability analysis. Finally, the inspectors evaluated the pressure and flow instruments used during surveillance testing to determine whether their accuracy and calibration frequencies were consistent with analysis assumptions. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.4 Reactor Auxiliaries Cooling System Heat Exchanger Biofouling Analysis

a. Inspection Scope

The inspectors reviewed a new analysis, EA-0034, "Biofouling of Service Water Side of the Reactor Auxiliaries Cooling System (RACS) Heat Exchangers," to determine whether it was technically adequate. The new analysis provided less restrictive operating limits during periods of increased heat exchanger biofouling by establishing a minimum service water (SW) flow rate, based on the RACS heat exchanger differential pressure (due to biofouling) and the actual SW

temperature. The inspectors assessed the analysis to determine whether the analysis was technically adequate, and to assess whether the design and licensing bases, and performance capability of RACS had been degraded by the new analysis. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors evaluated the analysis to determine whether the assumptions were appropriate and valid, and to determine the accuracy and adequacy of the analysis. Specifically, design inputs, such as the heat exchanger fouling factor, service water temperature, and flow rate were reviewed to determine whether they were conservative and consistent with the design and licensing bases. In addition, the inspectors evaluated the analysis to determine whether it was consistent with design calculation ED-0012, "RACS Required Flows and Heat Loads." Finally, the inspectors reviewed the RACS operating procedure to determine whether it was properly updated with operating limits and guidance. For accessible RACS components associated with the analysis and the operating procedure, the inspectors walked down RACS to detect possible abnormal installation conditions. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.5 High Pressure Coolant Injection Pump Suction Strainer Pressure

a. Inspection Scope

The inspectors reviewed calculation BJ-001, "High Pressure Coolant Injection (HPCI) Booster Pump Net Positive Suction Head (NPSH)," to determine whether it was technically adequate. The inspectors assessed whether the design and licensing bases, and performance capability of the HPCI system had been degraded by the change to the analysis. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors evaluated the calculation to determine whether the assumptions were appropriate and valid, and to determine the accuracy and acceptability of the analysis. Specifically, design inputs such as maximum expected water temperature, containment pressure, suppression chamber level, and system frictional losses were reviewed to determine whether they were conservative and consistent with the design and licensing bases. In addition, the inspectors reviewed the UFSAR to determine whether the values for the HPCI booster pump required NPSH and available NPSH were adequately documented. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.6 RCIC Pump Low Suction Pressure Time Delay

a. Inspection Scope

The inspectors reviewed a modification that added a time delay to the RCIC pump low suction pressure trip, to eliminate inadvertent RCIC pump trips. The inspectors reviewed PSEG's apparent cause evaluation for a RCIC pump trip due to low suction pressure, and PSEG's subsequent corrective actions for an identified gas void in the RCIC piping system that contributed to the pump trip. The inspectors assessed whether the design and licensing bases, and performance capability of the RCIC system had been degraded by the modification. In addition, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors reviewed the pre-modification and post modification tests to determine whether the RCIC time delay would function in accordance with design assumptions. The inspectors reviewed the post modification test results to assess the adequacy of the added trip time delay. The inspectors evaluated the time delay relay setpoint value to determine whether it was consistent with the design and licensing bases. In addition, the inspectors assessed whether adequate measures were in place to prevent future voiding that could result in a pump trip. The inspectors also reviewed vendor information to determine whether the modification was consistent with the design and licensing bases. Finally, the inspectors reviewed drawings, analysis, procedures, and the UFSAR to determine whether they were properly updated with revised design information and operating guidance. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

.2.7 High Pressure Coolant Injection Discharge Valve Gear Modification

a. Inspection Scope

The inspectors reviewed a modification to 1B-JHV-8278, high pressure coolant injection (HPCI) discharge motor operated valve (MOV), to determine whether it was technically adequate. The modification changed the gear ratios within the valve's motor operator, to decrease the valve stroke time. The review was performed to determine whether the design bases, licensing bases, and performance capability of HPCI had been degraded by the modification. Additionally, the 10 CFR 50.59 screen associated with this modification was reviewed as described in section 1R17.1 of this report.

The inspectors assessed selected design inputs and attributes to determine whether they were consistent with the design and licensing bases. These attributes included component safety classification, stroke time requirements, required thrust, degraded voltage, and maximum differential pressure. The inspectors evaluated design assumptions in the supporting calculations and

analyses to determine whether they were technically appropriate and consistent with the UFSAR. The inspectors reviewed selected calculations, analysis, procedures, and the UFSAR to determine whether they were properly updated with any revised design information. The inspectors evaluated the post-modification tests to determine whether the HPCI system would function in accordance with design assumptions. In addition, the inspectors interviewed the responsible design engineers and the MOV program engineer. The documents reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems (IP 71152)

a. Inspection Scope

The inspectors reviewed a sample of notification reports associated with 10 CFR 50.59 issues and plant modification issues to determine whether PSEG was appropriately identifying, characterizing, and correcting problems associated with these areas and whether the planned or completed corrective actions were appropriate. The notifications reviewed are listed in the attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, including Exit

The inspectors presented the inspection results to Mr. G. Barnes, Site Vice President, and other members of PSEG's staff on April 18, 2008. The inspectors verified that this report does not contain proprietary information.

ATTACHMENT

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

J. Almonte, I&C Engineer supporting EPU
B. Binz, IST Program Engineer / MOV Program Engineer
A. Bhuta, I&C Senior Engineer
A. Boyea, Procedure Writer
D. Boyle, Operations Manager
V. Chandra, Mechanical Design Engineer
P. Davidson, Engineering Director
P. Duca, Regulatory Compliance Engineer
M. Fowler, Design Engineering Manager
C. Johnson, Design Engineering
M. Khan, Design Engineering
P. Kordziel, System Engineer
J. Materazo, Design Engineer
M. Richers, I&C Design Engineer
F. Safin, Fuels Engineer
D. Schiller, System Engineering
W. Schmidt, I&C Maintenance Supervisor
B. Swartley, Design Engineering

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

None.

LIST OF DOCUMENTS REVIEWED

10 CFR 50.59 Evaluations

HC-08-025, T-Mod to Remove Close Interlock on RCIC Injection Valve, Rev. 0

10 CFR 50.59 Screened-out Evaluations

HC-07-050, Extended Power Uprate Civil/Stress Updates, Rev. 0
HC-07-181, Revise RACS Pump Suction Temperature Low Alarm Setpoint, Rev. 0
HC-07-191, Revise OP-GP-ZZ-0009, Bypass Interlocks for Test Activities, Rev. 0
HC-07-198, Revise OP-IS-BD-0001, RCIC Pump OP203 Inservice Test, Rev. 0
HC-07-203, Revise OP-SO-BD-0001, RCIC System Operation, Rev. 0
HC-07-204, Revise OP-ST-BB-0001, Daily Recirculation Jet Pump Operability, Rev. 0
HC 07-217, Suppression Chamber to Drywell Vacuum Breaker Position Check, Rev. 3
HC-07-256, HPCI Discharge Valve Procedure Revision, Rev. 0

HC-07-278, Revise IC-GP-ZZ-0139, Electrical Back-seating of 1FCHV-F007, Rev. 0
HC-07-306, Alternate IST Test Method for SRV Vacuum Breakers, Rev. 0
HC-07-345, Review Recirculation Jet Pump 16 Wedge Damage, Rev. 0
HC-07-347, Review Recirculation Jet Pump 9 Setscrew Tack Weld Cracks, Rev. 0
HC-08-002, Change Valve Position to Open for AD-V267/V269/V271, 80094715, Rev. 0
HC-08-017, Revise OP-AB-ZZ-0155, Degraded ECCS / Loss of NPSH, Rev. 0
HC-08-018, Revise OP-AB-RPV-0009, RHR Shutdown Cooling, Rev. 0
HC-08-019, Revise OP-ST-BB-0001, Recirculation Jet Pump Operability, Rev. 0
HC-08-030, Revise OP-SO-ED-0001, RACS Operation, Rev. 0

Modification Packages

80078163, Replace 480 VAC AKR Breakers during RFO13, Rev. 5
80078171, Replace 480 VAC AKR Breakers while On-line, Rev. 1
80078355, AKR 125 VDC and 250 VDC Breaker Replacement, Rev. 0
80091864, Revise Calculation BC-0056, RHR Hydraulic Analyses, Rev. 5a
80092157, Revise Calculation BD-0003, RCIC Hydraulic Analysis, Rev. 6
80092551, Revise Calculation EA-0034, Biofouling of SW Tube Side RACS HX, Rev. 0
80092888, Revise Calculation BJ-0001 to Correct HPCI Strainer Pressure Loss, Rev. 0
80093410, RCIC Pump Low Suction Pressure Trip Time Delay, Rev. 0
80093568, Replace HPCI FW Injection Valve HV-8278 MOV Gearing, Rev. 0
80094730, Disable RCIC F013 Auto-close to address Thermal Binding Issue, Rev. 0

Calculations & Analysis

AB-0068, SRV Vacuum Breaker Test Acceptance Criterion, Rev. 0
BC-0056, RHR Hydraulic Analyses, Rev. 4
BC-0056, RHR Hydraulic Analyses, Rev. 5a
BJ-0001, NPSH for HPCI System Pump (Suction from Suppression Chamber), Rev. 6
EA-0003, SW Hydraulic Analysis, Rev. 9
EA-0034, Biofouling of Service Water Tube Side of RACS Heat Exchanger, Rev. 0
ED-0012, RACS Required Flows and Heat Loads, Rev. 5
ED-0013, RACS Hydraulic Model Using Pipe-Flo TM Version 4.06, Rev. 1
E-4.1, 125 & 250 VDC Systems Short Circuit and Voltage Drop Studies, Rev. 15
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 3
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 4
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 4A
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 5
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 6
E-7.4, Class 1E 4.16 kV System Protective Relay Settings, Rev. 7
H-1-BJ-MDC-2004, HPCI Pump Assembly Hydraulic Model, Rev. 1
H-1-BC-MEE-1835, LPCI Flow with RHR Pump Minimum Flow Valve Open, Rev. 0
NFS 0252, Nuclear Fuel Safety Analysis Report, dated October 31, 2005, Rev. 0
SC-BD-0039, Loop Tolerance Calculation for RCIC Flow Controller, Rev. 3
SC-ED-0507, RACS Pump Suction High/Low Temperature Alarm, Rev. 2

Notification Reports (* denotes NRC identified during this inspection)

20239965	20273572	20306536	20314060	20316793	20326871
20327362	20333570	20336631	20336866	20341381	20342107
20342506	20343036	20345344	20345661	20345795	20349339
20350423	20354494	20354574	20357802	20363939*	20363985*
20364043*	20364593*	20365767*	20365795*	20365942*	20366008*
20366105*	20366107*	20366111*	20366158*	20366201*	20366239*
20366262*	70029248	70065167	70075564		

Drawings

10855-P302 300, 6" Flex Wedge Gate Valve with SMB-0-25 Limitorque Actuator, Rev. D
10855-P302 439, 8" Flex Wedge Gate Valve with SMB-0-25 Limitorque Actuator, Rev. A
169C9488, Sht. 1-4, Purchase Part Relay, Time Delay, Rev. 10
169C9489, Sht. 1-4, Purchase Part Relay, Time Delay, Rev. 10
E-6433-0, Sht. 1, ECCS Jockey Pump 1BP228, Rev.4
DS-C-60901, Vacuum Relief Valve
J-50-0, Sht. 2, RCIC Turbine Supervisory Alarms/ECCS Jockey Pump BP228, Rev. 11
J-50-0, Sht. 9, RCIC Functional Logic Diagram, Rev. 4
M-13-0, RACS, Rev. 13
M-13-1, RACS, Rev. 15
M-52-1, HCGS Core Spray, Rev. 30
PJ200Q-1093, Sht. 1, ECCS Jockey Pump BP228, Rev. 9
PNO-E51-4010-0009, RCIC Design Specification Data Sheet, Rev. 15
PNO-E11-4010-0362-13, RHR Design Specification Data Sheet, Rev. 12
PN1-E51-1030-0061, Sht. 3, RCIC Elementary Diagram, Rev. 6
PN1-E51-1030-0061, Sht. 4, RCIC Elementary Diagram, Rev. 7
PN1-E51-1040-0059, Sht. 3, RCIC Elementary Diagram, Rev. 27
PN1-E51-1040-0059, Sht. 6, RCIC Elementary Diagram, Rev. 24
PN1-E51-1040-0059, Sht. 9, RCIC Elementary Diagram, Rev. 19
PN1-E51-1040-0059, Sht. 15, RCIC Elementary Diagram, Rev. 18
PN1-H11-P621-0083, Sht. 1, RCIC Relay VB, Rev. 21
W8221559, Flow Coefficient (Cv) vs. Percent Open, Size 8, Flex Wedge Gate Valve

Surveillance and Modifications Acceptance Tests

Calibration 10615351, Temporary RHR Flow Transmitter, performed 07/12/07
Calibration C200800428, Temporary RHR Suction Press. Gauge, performed 01/28/08
Calibration C200800433, Temporary RHR Discharge Press. Gauge, performed 01/28/08
ER-AA-302-1004, MOV 1BJ-HV-8278 Test, performed 04/21/06
ER-AA-302-1004, MOV 1BJ-HV-8278 Test, performed 10/23/07
HC.IC-FT.BD-0001, RCIC Div. 2 Pump Suction Pressure, performed 05/30/07
HC.MD-PM.ZZ-0006, Maintenance for Distribution Panels, MCCs, Unit Substations, and Switchgear, performed 01/02/07
HC.MD-ST.ZZ-0012, Masterpact Low Voltage and Circuit Breaker Inspection and Preventive Maintenance, performed on 01/02/07
HC.OP-IS.BJ-0101, HPCI System Valves Inservice Test, performed 12/14-17/99
HC.OP-IS.BJ-0101, HPCI System Valves Inservice Test, performed 01/30-31/08

Procedures

CC-AA-103-2001, Setpoint Change Control, Rev. 4
CC-AA-204, Control of Vendor Technical Documents, Rev. 8
CC-AA-204-1001, Nuclear Vendor Information Program, Rev. 0
ER-AA-302-1007, MOV Actuator Capability Determination Methodology, Rev. 4
ER-AA-321, Administrative Requirements for Inservice Testing, Rev. 8
HC.IC-CC.FC-0012, RCIC Div 2 Channel E51-N653 Pump Suction Pressure, Rev. 9
HC.IC-CC.FC-0012, RCIC Div 2 Channel E51-N653 Pump Suction Pressure, Rev. 10
HC.IC-FT.BD-0001, RCIC Div 2 Channel E51-N653 Pump Suction Pressure, Rev. 7A
HC.IC-FT.BD-0001, RCIC Div 2 Channel E51-N653 Pump Suction Pressure, Rev. 8
HC.DE-AP.ZZ-0060, Functional Classification Methodology for Component Data Module Functional Locations SAP/R3 for Hope Creek Generating Station, Rev. 0
HC.MD-ST.AB-0003, Safety Relief Valve Piping Vacuum Breaker Setpoint Test
HC.OP-AB.RPV-0001, Reactor Power, Rev. 7
HC.OP-AB.RPV-0001, Reactor Power, Rev. 9
HC.OP-AB.ZZ-0001, Attachment 6, HPCI Abnormal Operation Hard-Cards, Rev. 12
HC.OP-AB.ZZ-0135, SBO-LOOP Diesel Generator Malfunction, Rev. 27
HC.OP-AB.ZZ-0155, Degraded ECCS Performance/Loss of NPSH, Rev. 5
HC.OP-AR.ED-0001, RACS Local Panel 10C202, Rev. 10
HC.OP-AR.ZZ-0006, Overhead Annunciator Window Box B1, Rev. 21
HC.OP-IO.ZZ-0002, Preparation for Plant Startup, Rev. 49
HC.OP-IO.ZZ-0003, Startup from Cold Shutdown to Rated Power, Rev. 78
HC.OP-IO.ZZ-0010, Scram Recovery, Rev. 8
HC.OP-IS.BC-0001, AP202, A RHR Pump In-Service Test, Rev. 35
HC.OP-IS.BD-0001, RCIC Pump-OP203-IST, Rev. 42
HC.OP-IS.BJ-0001, HPCI Main and Booster Pump Inservice Test, Rev. 48
HC.OP-IS.BJ-0101, HPCI System Valves Inservice Test, Rev. 53
HC.OP-FT.EA-0002, Validating SSWS Flow Through RACS HXs, Rev. 2
HC.OP-FT.EA-0002, Validating SSWS Flow Through RACS HXs, Rev. 3
HC.OP-SO.BD-0001, RCIC System Operation, Rev. 31
HC.OP-SO.BD-0001, RCIC System Operation, Rev. 34
HC.OP-SO.BJ-0001, HPCI System Operation, Rev. 34
HC.OP-SO.ED-0001, RACS Operation, Rev. 21
HC.OP-SO.ED-0001, RACS Operation, Rev. 22
HC.OP-ST.BB-0001, Recirculation Jet Pump Operability Daily, Rev. 40
HC.OP-ST.BJ-0002, HPCI System Functional & Response Time Test, Rev. 34
HC.OP-ST.ZZ-0007, Suppression Chamber to Drywell Vacuum Breaker Position Check, Rev. 2
LS-AA-104-1000, Exelon 50.59 Resource Manual, Rev. 3
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LIST OF ACRONYMS

ASME	American Society of Mechanical Engineers
CFR	Code of Federal Regulations
ECCS	Emergency Core Cooling System
FW	Feedwater
HPCI	High Pressure Coolant Injection
HX	Heat Exchanger
IST	[ASME] Inservice Test
kV	killovolt
LPCI	[RHR] Low Pressure Core Injection
MOV	Motor Operated Valve
NEI	Nuclear Energy Institute
NRC	Nuclear Regulatory Commission
NPSH	Net Positive Suction Head
RACS	Reactor Auxiliaries Cooling System
RCIC	Reactor Core Isolation Cooling
RHR	Residual Heat Removal
SRV	Safety Relief Valve
SSC	Structures, Systems and Components
SW	Service Water
UFSAR	Updated Final Safety Analysis
VAC	Volt Alternating Current
VDC	Volt Direct Current