May 1, 2001

Mr. Harold W. Keiser Chief Nuclear Officer and President PSEG Nuclear LLC - X04 P.O. Box 236 Hancocks Bridge, NJ 08038

# SUBJECT: SALEM GENERATING STATION UNITS 1 AND 2 - NRC INSPECTION REPORT 050000272/2001-004; 050000311/2001-004 AND HOPE CREEK GENERATING STATION - NRC INSPECTION REPORT 050000354/2001-005

Dear Mr. Keiser:

On March 23, 2001, the NRC completed the annual baseline problem identification and resolution inspection at the Salem Generating Station Unit 1 and Unit 2 and at the Hope Creek Generating Station facilities. The enclosed reports document the results of these inspections, which were discussed on March 23, 2001, with you and Mr. D. Garchow and other members of his staff.

The inspections were examinations of activities conducted under your licenses as related to the identification and resolution of problems, and your compliance with the Commission's rules and regulations, and the conditions of your licenses. Within these areas, the inspections involved examinations of selected procedures and records, observation of activities, and interviews with personnel.

On the basis of the selected sample of items reviewed, the team identified no findings of significance at either the Salem or Hope Creek facilities. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution program. The team did note, however, that the Salem Unit 1 and 2 service water system continues to be a challenge relative to equipment reliability and performance.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection at the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Wayne D. Lanning, Director Division of Reactor Safety

Mr. Harold W. Keiser

Docket Nos.: 05000272, 05000311, 05000354 License Nos.: DPR-70, DPR-75, NPF-57

Enclosures: Inspection Reports 05000272/2001-04, 05000311/2001-04, 05000354/2001-05

cc w/encl:

E. Simpson, Senior Vice President and Chief Administrative Officer
M. Bezilla, Vice President - Technical Support
D. Garchow, Vice President - Operations
G. Salamon, Manager, Licensing
R. Kankus, Joint Owner Affairs
J. J. Keenan, Esquire
Consumer Advocate, Office of Consumer Advocate
F. Pompper, Chief of Police and Emergency Management Coordinator
M. Wetterhahn, Esquire
State of New Jersey
State of Delaware

Mr. Harold W. Keiser

Distribution w/encl: Region I Docket Room (with concurrences) J. Schoppy, NRC Resident Inspector R. Lorson, DRP, NRC Resident Inspector H. Miller, RA J. Wiggins, DRA G. Meyer, DRP R. Barkley, DRP T. Haverkamp, DRP W. Schmidt, DRS J. Shea, OEDO

- E. Adensam, NRR
- R. Fretz, NRR
- J. Clifford, NRR

### DOCUMENT NAME: C:\SALHCPIR.wpd

After declaring this document "An Official Agency Record" it <u>will</u> be released to the Public. To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	RI/DRS	RI/DRS	RI/DRP	RI/DRS	
NAME	WSchmidt	DLew	GMeyer	WLanning	
DATE	04/25/01	04/25/01	04/27/01	04/30/01	

OFFICIAL RECORD COPY

# U. S. NUCLEAR REGULATORY COMMISSION

# **REGION I**

Docket Nos.:	05000272, 05000311
License Nos.:	DPR-70, DPR-75
Report Numbers:	05000272/2001-04, 05000311/2001-04
Licensee:	PSEG Nuclear LLC
Facility:	Salem Generating Station, Units 1 and 2
Location:	P.O. Box 236 Hancocks Bridge, NJ 08038
Dates:	March 12 - 23, 2001
Inspector:	Wayne L. Schmidt, Senior Reactor Inspector Michael C. Modes, Senior Reactor Inspector F. Jeff Laughlin, Resident Inspector Joseph E. Carrasco, Reactor Engineer
Approved By:	David C. Lew, Chief Performance Evaluation Branch Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000272/2001-04, 05000311/2001-04 on 03/12 - 03/23/2001, PSEG Nuclear LLC, Salem Generating Station Units 1 and 2, Annual Baseline Problem Identification and Resolution, IP 71152; no findings were identified.

Three region-based inspectors and one resident inspector conducted this problem identification and resolution inspection in accordance with NRC inspection procedure 71152.

### Identification and Resolution of Problems

The licensee staff used the notification system appropriately to identify issues needing review for corrective actions. Daily issue review and prioritization meetings focused on safety and minimization of plant risk. Operators reviewed the risk worth of planned work activities. Operability determinations appeared adequate for the reviewed issues. Identified issues were being reviewed for apparent and root causes. Root cause evaluations were conducted to an appropriate depth and provided associated corrective actions. Corrective actions for identified issues were effective, commensurate with the safety significance of the issues, and sensitive to the necessity for reliable equipment performance. The extent of condition and generic applicability for significant conditions adverse to quality were properly considered. The size of the corrective action backlog and timeliness of corrective action completion, with respect to safety significance, was formally tracked and managed. The licensee had taken actions commensurate with the importance of service water system issues; however, detritus and silt continued to challenge the operators and plant equipment. Self-assessments and audits were self-critical and provided appropriate feedback, including notifications and recommendations.

# Report Details

# 4. OTHER ACTIVITIES (OA)

# 4OA2 Problem Identification and Resolution (IP 71152)

- a. Effectiveness of Problem Identification
- (1) <u>Inspection Scope</u>

The team reviewed discrepancy items selected from various processes and activities to determine if the licensee was properly characterizing and entering problems into the corrective action program (in the form of notifications and associated orders) for evaluation and resolution.

The team examined: control room logs; control room deficiencies; operability and reportability determinations; engineering supporting analyses; temporary modifications; and service water system health reports to identify safety issues and review the licensee's performance in accurately and completely identifying problems in a timely manner. Plant walkdowns of the service water systems were performed to determine and assess unidentified equipment material deficiencies.

The team reviewed the notifications and associated orders generated during the onsite inspection and attended screening and management meetings concerning the prioritization and classification of corrective maintenance and corrective action items to assess the interface between the corrective action program and the work control process.

The team reviewed a sample of audits and self-assessments conducted by the licensee since the last problem identification and resolution (PI&R) inspection conducted in April 2000. The team also reviewed selected corrective action effectiveness reviews which were performed periodically in accordance with the licensee's self-assessment process. The team evaluated whether identified problems were entered into the corrective action program when appropriate and compared the licensee's assessment results with the results of the team's reviews.

## (2) Issues and Findings

There were no findings of significance in this area identified during the inspection.

The licensee staff used the notification system appropriately to identify issues needing review for corrective actions. Daily issue review and prioritization meetings were conducted well and focused on safety and minimization of plant risk. Risk worth of planned work activities was appropriately reviewed by Operations personnel during shift turnover briefings.

The licensee audits and self-assessments were self-critical; however, many of the selfassessments were focused on areas of previously identified weaknesses rather than evaluating new areas for improvement. Notifications and recommendations were initiated when appropriate.

### b. <u>Prioritization and Evaluation of Issues</u>

### (1) Inspection Scope

Initially the team selected a sample of approximately 200 notifications and the associated orders generated since the last NRC PI&R inspection. Of these 200, approximately 90 (listed under the Documents Reviewed) were selected for detailed review. The team's sample selection included items from all seven cornerstones, based on plant risk insights derived from the individual plant evaluation and system maintenance rule significance. The issues reviewed included NRC non-cited violations, Licensee Event Reports, operating experience issues, and service water system issues.

The team reviewed these notifications to assess the prioritization of the issue, evaluation of the causes, appropriateness of the resolution, and identification of corrective actions. Specifically, the team determined whether identified issues were prioritized and evaluated commensurate with the safety significance of the issue. The team assessed the depth and scope of the root cause analysis or apparent cause evaluation, including extent of condition and common cause reviews, associated engineering supporting analyses, and operability determinations. The team also determined whether pertinent corrective and preventive actions were identified.

## (2) <u>Issues and Findings</u>

There were no findings of significance in this area identified during the inspection.

The team determined that identified issues were being reviewed for apparent and root causes, as specified in the corrective action program procedures. The extent of condition and generic applicability for significant conditions adverse to quality were properly considered. Where root cause analyses were conducted, they were at an appropriate depth and provided associated corrective actions. Operability determinations for each issue reviewed appeared adequate.

# c. Effectiveness of Corrective Actions

## (1) <u>Inspection Scope</u>

The team reviewed corrective actions associated with the closed notifications within the 90 selected to determine that the actions were appropriate and implemented in a timely manner commensurate with the significance of the problem. The team also reviewed the backlog of corrective actions to determine if there were items that individually or collectively could present an adverse effect on plant risk significance or an adverse trend in the implementation of the corrective action program.

The team focused on the service water (SW) system at both units. These systems had

been in the enhanced monitoring (a(1)) category of 10CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," due to reliability issues. The team assessed PSEG's ability to identify and resolve technical issues, as well as to improve the reliability of the systems. In particular, the team assessed the licensee's response to technical issues related to strainer, valve, and heat exchanger problems caused by detritus (marsh grass) and silt from the Delaware River. The team reviewed the root cause assessments and recommendations prescribed in the Level 1 condition reports (CR 980301138 and CR 980408057) and walked down the intake structure to verify that SW traveling screens were modified as prescribed in the corrective actions to improve their reliability. The team also reviewed the actions taken for system equipment problems documented in notifications. The team reviewed the actions taken following two instances where service water strainers became clogged with debris during the inspection.

## (2) Issues and Findings

There were no findings of significance in this area identified during the inspection.

Corrective actions for identified issues were commensurate with the safety significance of the issues and were sensitive to the necessity for reliable equipment performance. The size of the corrective action backlog and timeliness of corrective action completion, with respect to safety significance, was formally tracked and managed. Corrective actions appeared effective in preventing the recurrence of problems.

Relative to the service water system, the team determined that PSEG had taken actions commensurate with the importance of the system. The team noted that detritus and silt intrusions continued to challenge the operators and operation of plant equipment. The biofouling abnormal procedure appeared appropriate, giving good direction on preventive actions and monitoring to be conducted as river conditions dictated. However, the team noted that while each was not specifically significant, equipment problems continued to occur (i.e., the repeated failure of a valve in the supply to the control room chillers and strainer clogging and bypassing).

### d. Assessment of Safety Conscious Work Environment

(1) Inspection Scope

During inspection interviews, the team probed the licensee's staff for reluctance to report safety problems. The team interviewed several plant personnel, and reviewed concerns raised to determine if conditions existed that would challenge the establishment of a safety conscious work environment at Salem Station.

### (2) <u>Issues and Findings</u>

There were no findings identified in this area during the inspection.

4OA6 Meetings

.1 Exit Meeting Summary

The team presented the inspection results to Mr. David Garchow and other members of the Public Service Electric and Gas Company staff during an exit meeting on March 23, 2001. The licensee acknowledged the results presented. No information examined or reviewed during the inspection was considered to be proprietary.

### NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
<ul> <li>Initiating Events</li> <li>Mitigating Systems</li> </ul>	•Occupational •Public	<ul> <li>Physical Protection</li> </ul>
•Barrier Integrity		
<ul> <li>Emergency Preparedness</li> </ul>		

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance.

The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <u>http://www.nrc.gov/NRR/OVERSIGHT/index.html.</u>

# LIST OF DOCUMENTS REVIEWED

## Procedures

Notification Process, NC.WM-AP.ZZ-0000(Q), Rev. 3 Regular Maintenance Process, NC.WM-AP.ZZ-0003(Q), Rev. 0 Self Assessment Process, NC.NA-AP.ZZ-0077(Z), Rev. 3 Work Management Program, NC.NA-AP.ZZ-0009(Q), Rev. 16 Performance Improvement Process, NC.WM-AP.ZZ-002(Q), Rev. 2 Component Biofouling SC.OP-AB-ZZ-003(Q), Rev. 5 Employee Concerns Program NC.NA-AP.ZZ-0078 (Z), Rev. 2

### Salem and Common Notifications and Orders

20000230	20024702	20045121
20008491	20025016	20045548
20011275	20025154	20046081
20011785	20026481	20046392
20012158	20027018	20046394
20012204	20027378	20046668
20012988	20029490	20046748
20013082	20030074	20047189
20013095	20030719	20047633
20013469	20030804	20048498
20013648	20031445	20048918
20014623	20031763	20049735
20015264	20032242	20049774
20015464	20033556	20050446
20015960	20033783	20050555
20016165	20036064	20051824
20017395	20036897	20052052
20017977	20037132	20052345
20019258	20037381	20052650
20020409	20038165	20053505
20020775	20038307	20056264
20020829	20039256	20057919
20021008	20039422	20058055
20021789	20039859	20059229
20022019	20040715	20059360
20022033	20042059	80011078
20022269	20042531	CR970902190
20022611	20042579	CR970902190
20022811	20043410	CR981221206
20023390	20044355	
20023400	20044775	

### Self- Assessments

Temporary Modification CR980826176 Evaluation of Design Processes CR 980826176 Human Performance 80021025 Effectiveness Review Operating Experience Grass Season Self Assessment 990628178 Effectiveness of Commitment Management Steam Generator Self Assessment Notification 20016043 Order 80006160 Flow Accelerated Corrosion Program RF09 Implementation Self Assessment Notification 20033420 Performance Improvement Report - 4<sup>th</sup> Quarter 2000, NCA-01-1002 Corrective Action Program Overview for Managers, dated 3/13/01 Salem 1 and 2 SW System Health Reports 9/15 - 12/31/00 Service Water System Level 1 / 2 Action Plan Containment Fan Cooler Unit Issues Action Plan

### QA Audits/Assessments

QA Assessment Follow-up on Service Water Reliability Assessment Notification 20000119 QA Assessment Rotating Equipment Team Activities Associated with Removal of #11 Service water pump. QA 20000247 QA Assessment Improvement of Corrective Action Program Performance. QA 20000034

# SUPPLEMENTAL INFORMATION

# **KEY POINT OF CONTACT**

# Licensee (in alphabetical order)

J. DeFebo, Self Assessment Coordinator

- C. Fricker, Quality Assessment Manager
- D. Garchow, Vice President, Operations
- R. Henriksen, Corrective Action Supervisor
- H. Keiser, Chief Nuclear Officer and President
- B. Knieriem, Licensing Engineer
- G. Salamon, Licensing/PSA Manager
- B. Simpson, Senior Vice President, Chief Administrative Officer
- P. Steinhauer, Reliability Support Manager
- A. C. Taylor, Corrective Action Group

# LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Open and Closed

None

# U.S. NUCLEAR REGULATORY COMMISSION REGION I

Docket No:	05000354
License No:	NPF-57
Report No:	05000354/2001-005
Licensee:	Public Service Electric and Gas Company
Facility:	Hope Creek Generating Station
Location:	Hancocks Bridge, New Jersey
Dates:	March 12 - 23, 2001
Inspector:	Wayne L. Schmidt, Senior Reactor Inspector Tracy E. Walker, Senior Reactor Inspector James D. Noggle, Senior Reactor Inspector Christopher G. Cahill, Resident Inspector
Approved By:	David C. Lew, Chief Performance Evaluation Branch Division of Reactor Safety

## SUMMARY OF FINDINGS

IR 05000354/2001-005 on 03/12 - 03/23/2001, PSEG Nuclear LLC, Hope Creek Generating Station, Annual Baseline Problem Identification and Resolution, IP 71152. No findings were identified.

Three region-based inspectors and one resident inspector conducted this problem identification and resolution inspection in accordance with NRC inspection procedure 71152.

## Identification and Resolution of Problems

The licensee staff used the notification system appropriately to identify issues needing review for corrective actions. Daily issue review and prioritization meetings focused on safety and minimization of plant risk. Operators reviewed the risk worth of planned work activities. Operability determinations appeared adequate for the reviewed issues. Identified issues were being reviewed for apparent and root causes. Root cause evaluations were conducted to an appropriate depth and provided associated corrective actions. Corrective actions for identified issues were effective, commensurate with the safety significance of the issues, and sensitive to the necessity for reliable equipment performance. The extent of condition and generic applicability for significant conditions adverse to quality were properly considered and implemented. The size of the corrective action backlog and timeliness of corrective action completion, with respect to safety significance, was formally tracked and managed. Relative to the high pressure coolant injection system, the licensee had taken actions to address the reliability issues based on the safety significance of the system. Self-assessments and audits were self-critical and provided appropriate feedback, including notifications and recommendations. A professional and open demeanor existed, with no observed instances of licensee staff reluctance to bring forward safety issues or indication of dissatisfaction with the resolution of plant problems.

# Report Details

# 4. OTHER ACTIVITIES (OA)

# 4OA2 Problem Identification and Resolution (IP 71152)

- a. Effectiveness of Problem Identification
- (1) <u>Inspection Scope</u>

The team reviewed discrepancy items selected from various processes and activities to determine if the licensee was properly characterizing and entering problems into the corrective action program (in the form of notifications and associated orders) for evaluation and resolution.

The team examined: control room logs; control room deficiencies; operability and reportability determinations; engineering supporting analyses; temporary modifications; and high pressure coolant injection system health reports to identify safety issues and review the licensee's performance in accurately and completely identifying problems in a timely manner. Plant walkdowns of the high pressure coolant injection system were performed to determine and assess unidentified equipment material deficiencies.

The team reviewed the notifications and associated orders generated during the onsite inspection and attended screening and management meetings concerning the prioritization and classification of corrective maintenance and corrective action items to assess the interface between the corrective action program and the work control process.

The team reviewed a sample of audits and self-assessments conducted by the licensee since the last problem identification and resolution (PI&R) inspection conducted in October 1999. The team also reviewed selected corrective action effectiveness reviews which were performed periodically in accordance with the licensees self-assessment process. The team evaluated whether problems were entered into the corrective action program when appropriate and compared the licensee's assessment results with the results of the team's reviews.

## (2) Issues and Findings

There were no findings of significance in this area identified during the inspection.

The licensee staff used the notification system appropriately to identify issues needing review for corrective actions. Daily issue review and prioritization meetings were conducted well and focused on safety and minimization of plant risk. Risk worth of planned work activities was appropriately reviewed by Operations personnel during shift turnover briefings and at daily plant morning meetings.

The licensee audits and self-assessments were self-critical; however, many of the selfassessments were focused on areas of previously identified weaknesses rather than evaluating new areas for improvement. Notifications and recommendations were initiated when appropriate.

### b. <u>Prioritization and Evaluation of Issues</u>

### (1) <u>Inspection Scope</u>

The team selected a sample of approximately 200 notifications and the associated orders generated since the last NRC PI&R inspection. The team's sample selection included items from all seven cornerstones, based on plant risk insights derived from the individual plant evaluation and system maintenance rule significance. The issues reviewed included NRC non-cited violations, Licensee Event Reports, operating experience issues, and high pressure coolant injection system issues.

The team reviewed approximately 100 of these notifications to evaluate the prioritization of the issue, evaluation of the causes, appropriateness of the resolution, and identification of corrective actions. Specifically, the team determined whether identified issues were prioritized and evaluated commensurate with the safety significance of the issue. The team assessed the depth and scope of the root cause analysis or apparent cause evaluation, including extent of condition and common cause reviews, associated engineering analyses, and operability determinations. The team also determined whether pertinent corrective and preventive actions were identified.

### (2) Issues and Findings

There were no findings of significance in this area identified during this inspection.

The team determined that identified issues were being reviewed for apparent and root causes, as specified in the corrective action program procedures. Where root cause analyses were conducted, they were at an appropriate depth and provided associated corrective actions. The extent of condition and generic applicability for significant conditions adverse to quality were properly considered. Operability determination appeared adequate for the reviewed issues.

## c. <u>Effectiveness of Corrective Actions</u>

## (1) Inspection Scope

The team reviewed corrective actions associated with the closed notifications within the sample selected to determine that they were appropriate and implemented in a timely manner commensurate with the significance of the problem. The team also reviewed the backlog of corrective actions to determine if there were items that individually or collectively could present an adverse effect on plant risk significance or an adverse trend in the implementation of the corrective action program.

The team focused on the high pressure coolant injection system, which had been in the enhanced monitoring category (a(1)) of 10CFR 50.65, "Requirements for monitoring the

effectiveness of maintenance at nuclear power," due to reliability issues. The team assessed PSEG's ability to identify and resolve technical issues, as well as to improve the reliability of the system.

(2) Issues and Findings

There were no findings of significance in this area identified during the inspection.

Corrective actions for identified safety issues were commensurate with the safety significance of the issues and were sensitive to the necessity for reliable equipment performance. The size of the corrective action backlog and timeliness of corrective action completion, with respect to safety significance, was formally tracked and managed. Corrective actions were generally effective in preventing recurrence of problems.

- d. Assessment of Safety Conscious Work Environment
- (1) Inspection Scope

During inspection interviews, the team probed the licensee's staff for reluctance to report safety problems. The team interviewed several plant personnel, and reviewed concerns raised to determine if conditions existed that would challenge the establishment of a safety conscious work environment at Hope Creek Station.

(2) Issues and Findings

There were no findings identified in this area during the inspection.

## 4OA6 Management Meetings

.1 Exit Meeting Summary

The team presented the inspection results to Mr. David Garchow and other members of the Public Service Electric and Gas Company staff during an exit meeting on March 23, 2001. The licensee acknowledged the results presented. No information examined or reviewed during the inspection was considered to be proprietary.

### NRC'S REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
<ul> <li>Initiating Events</li> <li>Mitigating Systems</li> <li>Barrier Integrity</li> <li>Emergency Preparedness</li> </ul>	•Occupational •Public	<ul> <li>Physical Protection</li> </ul>

To monitor these seven cornerstones of safety, the NRC used two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, or RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance.

The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: <u>http://www.nrc.gov/NRR/OVERSIGHT/index.html.</u>

# LIST OF DOCUMENTS REVIEWED

## Procedures

Notification Process, NC.WM-AP.ZZ-0000(Q), Rev. 3 Regular Maintenance Process, NC.WM-AP.ZZ-0003(Q), Rev. 0 Self Assessment Process, NC.NA-AP.ZZ-0077(Z), Rev. 3 Work Management Program, NC.NA-AP.ZZ-0009(Q), Rev. 16 Employee Concerns Program NC.NA-AP.ZZ-0078 (Z), Rev. 2

# Hope Creek and Common Notifications and Orders

20005376	20020849	20041895
20007462	20021563	20042099
20007734	20021714	20042210
20008799	20021717	20042569
20009043	20022019	20042596
20009989	20022384	20042593
20010457	20023093	20042684
20011710	20023201	20043442
20011852	20023202	20044392
20012313	20024923	20044395
20013662	20025329	20044841
20014623	20027516	20047880
20015538	20028576	20048741
20015547	20028749	20048796
20016014	20028994	20049021
20016221	20029534	20050693
20016724	20029618	20050757
20016921	20030547	20051081
20017395	20030562	20051232
20017611	20031275	20052350
20017614	20032174	20052644
20017775	20032242	20053887
20018047	20032442	20054335
20018213	20034075	20054470
20018356	20034883	20054959
20018900	20034885	20056210
20019427	20034976	70005336
20019497	20036573	70005442
20019621	20036653	70006813
20019832	20038076	70007484
20020092	20038165	70009689
20020217	20038555	70010284
20020367	20038611	70010460
20020674	20040444	70014393
20020787	20040761	
20020814		

### Self-assessments

Operations Corrective Action Program Self-assessment dated 6/12/2000 PM Program/Life Cycle Maintenance Program Self-assessment, dated 3/15/2001 QA Replacement of A Diesel Generator Intercooler Water Pump Seal Assessment 2000-0175 Nuclear Operations Operability Determination Self-assessment Performance Improvement Report - 4<sup>th</sup> Quarter 2000, NCA-01-1002 Corrective Action Program Overview for Managers, dated 3/13/01

## QA Audits and Assessments

QA Salem and Hope Creek Cold Weather Protection Assessment 2000-0509 QA 2A Diesel Generator Testing Assessment 2000-0439 Corrective Action Program Implementation 2000-0428 QA Work Management Process Implementation Assessment 2000-0378 QA Hope Creek Human Performance Assessment 2000-0090 QA Control Room Activities Monitoring Assessment 2000-0094 and 2000-0095 QA Maintenance Corrective Actions Assessment 2000-0501 Quality Assessment/Onsite Independent Review and Corrective Action Program Quarterly Report, Last quarter 2000. Assessment of WIN Team Activities at Salem and Hope Creek NOD-PA-00-037 Six Month Work Clearance Assessment NOD-PA-00-010 QA Preventive Maintenance Program Action Plan Implementation Assessment 2000-0279

# SUPPLEMENTAL INFORMATION

# **KEY POINT OF CONTACT**

# Licensee (in alphabetical order)

- T. Anderson, Superintendent, SWIN/ID/Scoping
- C. Buckley, Scheduling Supervisor
- N. Conicella, Supervisor, Hope Creek Operations Training
- J. DeFebo, Self Assessment Coordinator
- C. Fricker, Quality Assessment Manager
- D. Garchow, Vice President, Operations
- R. Henriksen, Corrective Action Supervisor
- H. Keiser, Chief Nuclear Officer and President
- P. Kordziel, Hope Creek Operations Corrective Action Coordinator
- C. McClain, Manager, Performance Improvement
- G. Salamon, Licensing/PSA Manager
- B. Simpson, Senior Vice President, Chief Administrative Officer
- P. Steinhauer, Reliability Support Manager
- A. C. Taylor, Corrective Action Group

# LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Open and Closed

None