



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
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61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

March 5, 2009

Mr. David A. Christian
President and Chief Nuclear Officer
Virginia Electric and Power Company
Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, VA 23060

SUBJECT: NORTH ANNA POWER STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000338/2009006 AND
05000339/2009006

Dear Mr. Christian:

On February 6, 2009, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your North Anna Power Station Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on February 6, 2009, with Mr. Daniel Stoddard and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

On the basis of the samples selected for review, there were no findings of significance identified during this inspection. The team concluded that problems were properly identified, evaluated, and resolved within the problem identification and resolution (PI&R) program. However, during the inspection, some examples of minor problems were identified, including ineffective utilization of operating experience, and a lack of basis documentation for reassignment of some significance levels for condition reports.

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/

Steven J. Vias, Chief
Reactor Projects Branch 7
Division of Reactor Projects

Docket Nos. 50-338, 50-339
License Nos. NPF-4, NPF-7

Enclosure: Inspection Report 05000338/2009006 and 05000339/2009006
w/Attachment: Supplemental Information

cc w/encl. (See next page)

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| NAME | DMerzke | JRivera | WLoo | ESamm | RClagg | | | GMcCoy |
| DATE | 02/26/2009 | 02/26/2009 | 03/02/2009 | 03/02/2009 | 03/02/2009 | | | 03/03/2009 |
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| NAME | SVias | | | | | | | |
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cc w/encl:

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Letter to David A. Christian from Steven J. Vias dated March 5, 2009.

SUBJECT: NORTH ANNA POWER STATION – NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000338/2009006 AND
05000339/2009006

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-338, 50-339

License Nos: NPF-4, NPF-7

Report No: 05000338/2009006 and 05000339/2009006

Licensee: Virginia Electric and Power Company (VEPCO)

Facility: North Anna Power Station, Units 1 and 2

Location: 1022 Haley Drive
Mineral, Virginia 23117

Dates: January 12 – 16, 2009
February 2 – 6, 2009

Inspectors: D. Merzke, Senior Project Engineer, Team Leader
J. Rivera-Ortiz, Senior Project Inspector
W. Loo, Senior Health Physicist
E. Stamm, Project Engineer
R. Clagg, Resident Inspector, North Anna

Approved by: Steven J. Vias, Chief
Reactor Projects Branch 7
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000338/2009006, 05000339/2009006; 01/12/2009 – 02/06/2009; North Anna Power Station, Units 1 and 2; biennial inspection of the identification and resolution of problems.

The inspection was conducted by a senior project engineer, senior project inspector, senior health physicist, project engineer, and resident inspector. 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.

Identification and Resolution of Problems

The team concluded that, in general, problems were identified, evaluated, prioritized, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution, as evidenced by the relatively few deficiencies identified by external organizations (including the NRC) that had not been previously identified by the licensee, during the review period. Generally, prioritization and evaluation of issues were adequate, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. However, the team identified examples where the priority of condition reports was lowered without a documented basis. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

The team determined that overall, audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, and plant operations. However, the team found examples where operating experience was not adequately utilized to prevent problems.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

A. NRC Identified and Self-Revealing Findings

None

B. Licensee Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of condition reports (CRs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed CRs that had been issued between September 2007 and December 2008, including a detailed review of selected CRs associated with two risk-significant systems, Auxiliary Feedwater, and Chemical and Volume Control. Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed selected common causes and generic concerns associated with root cause evaluations to determine if they had been appropriately addressed. To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the team selected a representative number of CRs that were identified and assigned to the major plant departments, including operations, maintenance, engineering, health physics, chemistry, and security. These CRs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions. The inspectors reviewed selected CRs, verified corrective actions were implemented, and attended meetings where CRs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors conducted plant walkdowns of equipment associated with the selected systems and other plant areas to assess the material condition and to look for any deficiencies that had not been previously entered into the CAP. The inspectors reviewed CRs, maintenance history, completed work orders (WOs) for the systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a 16-month period of time; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-dependent issues.

Control Room walkdowns were also performed to assess the main control room (MCR) deficiency list and to ascertain if deficiencies were entered into the CAP. Operator Workarounds and Operator Burden screenings were reviewed, and the inspectors verified compensatory measures for deficient equipment which were being implemented in the field.

The team conducted a detailed review of selected CRs to assess the adequacy of the root-cause and apparent-cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the CRs and the guidance in licensee procedure PI-AA-300, "Cause Evaluation." The inspectors assessed if the licensee had adequately determined the cause(s) of identified problems, and had adequately addressed operability, reportability, common cause, generic concerns, extent-of-condition, and extent-of-cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

The team reviewed selected industry operating experience items, including NRC generic communications, to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The team reviewed site trend reports, to determine if the licensee effectively trended identified issues and initiated appropriate corrective actions when adverse trends were identified.

The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included Condition Report Review Team (CRT) meetings, Corrective Action Review Board (CARB) meetings, and Corrective Action Assignment Review Team (CAART) meetings.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The team determined that the licensee was generally effective in identifying problems and entering them into the CAP and there was a low threshold for entering issues into the CAP. This conclusion was based on a review of the requirements for initiating CRs as described in licensee procedure PI-AA-200, "Corrective Action," management expectation that employees were encouraged to initiate CRs for any reason, a review of system health reports, and the fact that inspectors did not identify any deficiencies during plant walkdowns not already entered into the CAP. Trending was generally effective in monitoring equipment performance. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues.

Prioritization and Evaluation of Issues

Based on the review of audits conducted by the licensee and the assessment conducted by the inspection team during the onsite period, the team concluded that problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in the CR significance determination guidance in PI-AA-200, "Corrective Action." Each CR written was assigned a priority level at the CR Review Team meeting. Management reviews of CRs conducted by the CARB were thorough, and adequate consideration was given to system or component operability and associated plant risk. However, the team had the following observation:

- The significance of some CRs was lowered with no basis documented. The team identified three CRs which met the criteria for significance level one, but were lowered to significance level two for various unidentified or undocumented reasons: CR90778, Unit 2 Reactor trip from Mode 3 due to Rod Control Urgent Failure; CR112785, NRC identified substantive cross-cutting issue; and CR114725, Technical Specification (TS) 3.0.3 entered due to both trains of high head safety injection inoperable. The team determined this to be a minor observation because in accordance with licensee procedure PI-AA-200, "Corrective Action," a lower significance may be assigned if the cause of the event is understood, previously approved corrective actions have not been completed, or is approved by the Director Nuclear Station Safety and Licensing; however, the basis for the change should be documented in the CR. Based on a review of these CRs, the team concluded that the licensee met the conditions for lowering the significance, but did not document the basis for their decision. The licensee initiated CR322476 to address this issue.

The team determined that the station had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures, and assigned cause determinations were appropriate considering the significance of the issues being evaluated. A variety of causal-analysis techniques were used depending on the type and complexity of the issue consistent with licensee procedure PI-AA-300, "Cause Evaluation."

The team determined that generally, the licensee had performed evaluations that were technically accurate and of sufficient depth. The team further determined that operability, reportability, and degraded or non-conforming condition determinations had been completed consistent with the guidance contained in PI-AA-200, "Corrective Action;" and OP-AA-102, "Operability Determination."

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the team determined that overall, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected and non-recurring. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence in that a review of performance indicators, all CRs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

(3) Findings

No findings of significance were identified.

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The team examined licensee programs for reviewing industry operating experience, reviewed licensee procedure PI-AA-100-1007, "Operating Experience Program," reviewed the licensee's operating experience database, and interviewed the OE Coordinator, to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the team selected operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since September 1, 2007, to verify whether the licensee had appropriately evaluated each notification for applicability to the North Anna plant, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on interviews with the OE coordinator and a review of documentation related to the review of operating experience issues, the team determined that the licensee was generally effective in screening operating experience for applicability to the plant. Industry OE was evaluated at either the corporate or plant level depending on the source and type of document. Relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in all apparent cause and root cause evaluations in accordance with licensee procedure PI-AA-300, "Cause Evaluations." During the review of apparent cause and root cause evaluations, the team noted three examples in which the licensee had identified that they had not appropriately applied OE information:

- CR27749, Unit 2 turbine-driven auxiliary feedwater (TDAFW) pump experienced an overspeed trip on demand. The root cause report indicated a review of operating experience from a similar event at St. Lucie in 2003 could have been beneficial.
- CR21041, system pressure testing documentation less than adequate for buried piping, discovered during an ISI inspection. The apparent cause evaluation listed two events from external operating experience that were applicable and could have allowed North Anna Power Station (NAPS) personnel to identify that there was an industry weakness with buried piping system pressure testing.
- CR95656, resin water transfer pump sprayed out. The apparent cause evaluation determined that a similar event occurred at Prairie Island 18 months earlier.

The licensee identified each of these issues in common cause analysis, CCA 000050, initiated as a result of CR96021 which identified three significant events that were tied to detail in plant procedures. The analysis provided a list of issues or events associated with missed opportunities to utilize operating experience. The failure to appropriately apply OE is not consistent with the guidance outlined in licensee procedure PI-AA-100-1007, "Operating Experience Program," states it is an expectation to "seek out sources of OE information proactively that apply to tasks being planned or performed," and to consider OE in pre-job briefings, evolutions that

are infrequently conducted or complex in nature, and work order preparation. The team determined that this observation was of minor significance in that none of the events identified resulted in a loss of safety function. The licensee initiated corrective actions to address the missed opportunities in order to reduce the number and consequence of events, specifically, issuing a Station Alert emphasizing identification of relevant OE during Task Previews, and using self-assessments to correct problems associated with procedure quality and existing error traps.

(3) Findings

No findings of significance were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure PI-AA-100-1004, "Formal Self-Assessments," and PI-AA-100-1005, "Informal Self-Assessments."

(2) Assessment

The team determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the team's independent review. CRs were created to document a summary of the results and associated recommendations from the final reports. Subsequent corrective actions were tracked by the Self-Assessment Coordinator in a Self-Assessment Action (SAA) database tracking system. The team verified that all recommendations from self-assessments reviewed had been entered into the tracking system, and verified that actions had been completed consistent with those recommendations. The team also determined that the licensee had adequately prioritized issues entered into the SAA tracking system. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends. The team concluded that the self-assessments and audits were an effective tool to identify adverse trends.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team randomly interviewed 27 on-site workers regarding their knowledge of the corrective action program at North Anna and their willingness to write CRs or raise safety concerns. During technical discussions with members of the plant staff, the

inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were also conducted to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's Employee Concerns Program (ECP) and interviewed the ECP coordinator. Additionally, the inspectors reviewed a sample of completed ECP reports to verify that concerns were being properly reviewed and identified deficiencies were being resolved and entered into the CAP when appropriate.

(2) Assessment

Based on the interviews conducted and the CRs reviewed, the team determined that licensee management emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. These methods were readily accessible to all employees. Based on discussions conducted with a sample of plant employees from various departments, the inspectors determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns.

(3) Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On February 6, 2009, the inspectors presented the inspection results to Mr. Daniel Stoddard and other members of the site staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

K. Avery, Charging/SI System Engineer
R. Blanchard, System Pressure Test Engineer
W. Corbin, Director, Nuclear Engineering
K. Dowdy, Self-Assessment Coordinator
R. Evans, Manager, Radiological Protection and Chemistry
J. George, Operating Experience Coordinator
S. Hamill, IST Engineer
P. Harper, Corrective Action Coordinator
E. Hendrixson, Director, Nuclear Safety and Licensing
T. Huber, Director, Nuclear Engineering
S. Hughes, Manager, Nuclear Operations
P. Kemp, Supervisor, Station Licensing
M. King, Employee Concerns Program Coordinator
R. Klearman, Supervisor, Station Nuclear Safety
L. Lane, Plant Manager
M. Lane, Supervisor, Operations
G. Lear, Manager, Organizational Effectiveness
J. Leberstien, Station Licensing
T. Maddy, Manager, Nuclear Protection Services
G. Marshall, Manager, Nuclear Outage and Planning
C. McClain, Manager, Nuclear Training
F. Mladen, Manager, Nuclear Site Services
S. Morris, Supervisor of IST/Material ISI
B. Morrison, Supervisor Nuclear Engineering
C. Reynolds, MOV Engineer
R. Roper, IST Engineer
D. Stoddard, Site Vice President

NRC

J. Reece, Senior Resident Inspector
S. Vias, Branch Chief, Reactor Projects Branch 7

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Procedures

C-HP-1071.030, Receiving Radioactive Materials, Revision 0
CH-99.500, Primary Chemistry Program, Revision 1
CH-99-600, Secondary Chemistry Program, Revision 0
DNAP-0110, Identifying and Addressing Nuclear Safety and Quality Concerns, Revision 1
DNAP-1604, Cause Evaluation Program, Revision 7
ER-AA-MRL-100, Implementing Maintenance Rule, Revision 0
ER-AA-SYS-1001, System Health Report, Revision 2
ER-AA-SYS-1002, System Engineering Walkdowns, Revision 1
ER-AA-SYS-1003 System Performance Monitoring, Revision 1
ER-AA-SYS-1004 System Engineer Handbook, Revision 1
HP-1020.013, RP Action Plan in Response to Unusual Radiological Occurrences, Revision 2
MA-AA-103, Conduct of Troubleshooting, Revision 1
OP-AA-102, Operability Determination, Revision 3
OP-AA-102-1001, Development of Technical Basis to Support Operability Determinations, Revision 1
OP-AA-1700, Operations Aggregate Impact, Revision 1
PI-AA-100, Performance Monitoring, Revision 0
PI-AA-200, Corrective Action, Revision 4
PI-AA-300, Cause Evaluation, Revision 2
PI-AA-100-1002, Focus on Four, Revision 7
PI-AA-100-1003, Self-Evaluation, Revision 1
PI-AA-100-1004, Formal Self-Assessments, Revision 1
PI-AA-100-1005, Informal Self-Assessments, Revision 1
PI-AA-100-1007, Operating Experience Program, Revision 2
PI-AA-200-2001, Trending, Revision 1
PI-AA-200-2002, Effectiveness Reviews, Revision 3
PI-AA-300-3003, Common Cause Evaluation, Revision 0
RP-AP-100, Source Term Reduction and Control, Revision 2
VPAP-0811, Service Water System Inspection and Maintenance Program, Revision 6
VPAP-1501, Deviations, Revision 18
VPAP-1601, Corrective Action, Revision 23
VPAP-2101, Radiation Protection Program, Revision 3

Condition Reports

| | | | |
|----------|----------|----------|----------|
| CR003526 | CR004418 | CR007971 | CR010141 |
| CR012464 | CR014277 | CR014824 | CR014987 |
| CR015096 | CR015764 | CR017737 | CR017835 |
| CR017888 | CR018923 | CR018990 | CR019133 |
| CR019157 | CR019308 | CR019889 | CR020192 |
| CR020225 | CR020272 | CR020302 | CR020304 |
| CR020340 | CR020771 | CR020893 | CR020932 |
| CR021041 | CR021271 | CR021373 | CR021555 |
| CR022092 | CR022264 | CR024526 | CR024688 |
| CR026675 | CR026739 | CR026932 | CR027304 |
| CR027339 | CR027435 | CR027748 | CR027749 |
| CR027860 | CR028373 | CR028378 | CR028672 |
| CR029347 | CR073864 | CR074221 | CR075057 |
| CR075213 | CR075416 | CR076531 | CR076742 |

| | | | |
|----------|----------|-------------|-------------|
| CR077766 | CR081053 | CR081731 | CR082181 |
| CR084536 | CR086267 | CR088470 | CR088473 |
| CR089885 | CR089924 | CR090083 | CR090412 |
| CR090558 | CR090727 | CR090738 | CR090778 |
| CR090797 | CR090850 | CR090898 | CR091316 |
| CR091439 | CR091813 | CR092889 | CR092943 |
| CR093083 | CR093903 | CR094425 | CR094681 |
| CR094728 | CR094838 | CR095068 | CR095084 |
| CR096021 | CR096129 | CR097107 | CR097308 |
| CR097969 | CR098072 | CR098146 | CR098504 |
| CR100074 | CR100202 | CR100672 | CR100724 |
| CR100914 | CR101174 | CR101543 | CR101591 |
| CR101655 | CR101714 | CR101717 | CR101796 |
| CR102199 | CR102273 | CR103531 | CR102514 |
| CR102647 | CR102774 | CR102870 | CR102943 |
| CR103242 | CR104509 | CR105083 | CR105085 |
| CR105086 | CR105495 | CR106676 | CR106830 |
| CR107164 | CR107396 | CR107543 | CR107667 |
| CR107764 | CR108328 | CR108515 | CR108814 |
| CR109155 | CR109559 | CR109693 | CR109696 |
| CR109927 | CR109982 | CR110217 | CR110283 |
| CR110897 | CR111022 | CR111369 | CR111404 |
| CR111511 | CR111663 | CR111814 | CR111897 |
| CR112785 | CR112797 | CR113093 | CR113133 |
| CR113627 | CR114224 | CR114380 | CR114725 |
| CR114873 | CR114916 | CR115540 | CR115920 |
| CR116405 | CR116919 | CR117596 | CR119403 |
| CR119406 | CR119548 | CR120305 | CR316430 |
| CR317005 | CR318598 | N-2005-0609 | N-2006-3515 |

Work Orders

WO 000-00750275-01
 WO 000-00750286-01
 WO 000-00750287-01
 WO 000-00750288-01
 WO 000-00783936-07
 WO 000-00783943-20
 WO 000-00783964-14
 WO 000-00784021-29
 WO 00480213
 WO 00725374
 WO 00767749
 WO 00802942-01
 WO 00803826
 WO 59079189201
 WO 59079454701
 WO 59079556601
 WO 59080572101
 WO 59101600720
 WO 59101600745
 WO 59101716602

WO 59101717009
WO 59101718295
WO 59101731360
WO 59101741906
WO 59101758098
WO 59101770912
WO 59101801495
WO 59101814237

Maintenance Rule Evaluations

MRE000867
MRE000869
MRE000884
MRE000895
MRE000897
MRE001033
MRE001041
MRE006417
MRE006423
MRE006888
MRE006893
MRE007073
MRE007102
MRE010207
MRE010208

Self-Assessments

Audit 07-05, Corrective Action Program and Independent Review, August 24, 2007
ITC-SA-04-23, Operating Experience Program Self-Assessment, January 31, 2005
SAR000127, Personnel Radiation Exposure Management, August 1, 2007
SAR000138, ALARA Program Assessment, November 1, 2007
SAR000151, NAPS Circuit Breaker Maintenance, December 3, 2007
SAR000233, Heat Exchanger Program, October 8, 2008
SAR000286 - NAPS RP Self-Assessment of Supplemental RP Technicians, September 18, 2007
SAR000359 - Primary Chemistry Program, including S/U & S/D Chemistry, May 6, 2008
SAR000367, Operations Procedure Use and Adherence / Communications Informal Focused Self-Assessment, August 29, 2008
SAR000369, North Anna Power Station Mid-Cycle Assessment, July 2008
SAR000370 - RP Portable Radiation Detection Instrumentation, July 1, 2008
SAR000415, North Anna Maintenance Rule Program Periodic Assessment, June 4, 2008
SAR000456, Maintenance Rework Program, June 4, 2008
SAR000509 - Informal SA on fleet Collective Radiation Exposure planning, July 31, 2008

Other Documents

OPEX000742
OPEX000843
OPEX000989
OPEX001274
OPEX001275
OPEX001276

OPEX001389

0-MPM-0701-02, 6-Year Preventive Maintenance of Emergency Diesel Generators, Revision 10

0-MPM-0701-01, 24-Month Preventive Maintenance of Emergency Diesel Generators, Revision 53

0-MPM-0701-20, Repair of Emergency Diesel Generator 10 GPM Standby Lube Oil Pumps, Revision 6

0-PT-75.15, Generic Letter 89-13 Service Water System Testing Requirements Coordination, Revision 6

1-E-0, Reactor Trip or Safety Injection, Revision 39

1-EPM-I-1803-06, In-Service Protective Relay Maintenance for Breaker 15H8, Station Service Transformers 1H and 1H1, Revision 4

1-EPM-R-1806-11, Protective Relay Maintenance for Breaker 15J1, Alternate Supply to Bus 1J, Revision 10

1-PT-138.3A, Combined Charging Pump "1A" Head Curve Verification and HHSI Branch Flow Verification Using Smart Transformers, Revision 9

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