



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**
REGION II
245 PEACHTREE CENTER AVENUE NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

June 26, 2013

Mr. George Hamrick
Vice President
Carolina Power and Light Company
Brunswick Steam Electric Plant
P.O. Box 10429
Southport, NC 28461

**SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT – NRC PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000325/2013009 AND
05000324/2013009**

Dear Mr. Hamrick:

On May 16, 2013, the U.S. Nuclear Regulatory Commission (NRC) completed a Problem Identification and Resolution biennial inspection at your Brunswick Steam Electric Plant Units 1 and 2. The enclosed report documents the inspection findings, which were discussed on May 16, 2013, with Mr. Annacone 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.

Based on the inspection sample, the inspection team concluded that the implementation of the corrective action program and overall performance related to identifying, evaluating, and resolving problems at Brunswick Steam Electric Plant Units 1 and 2 was adequate. Licensee identified problems were entered into the corrective action program at a low threshold. Problems were generally prioritized and evaluated commensurate with the safety significance of the problems and corrective actions were generally implemented in a timely manner. Corrective actions were generally implemented in a timely manner commensurate with their importance to safety and addressed the identified causes of problems. Lessons learned from industry operating experience (OE) were generally reviewed and applied when appropriate. Audits and self-assessments were generally used to identify problems and appropriate actions.

No findings were identified during this inspection.

G. Hamrick

2

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 NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Eddie Morris, Acting Chief
Reactor Projects Branch 7
Division of Reactor Projects

Docket Nos.: 50-325, 50-324
License Nos.: DPR-71, DPR-62

Enclosure: Inspection Report 05000325/2013009 and 05000324/2013009
w/Attachment: Supplemental Information

cc w/encl. (see page 3)

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*FOR PREVIOUS CONCURRENCE SEE ATTACHED SHEET

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(cc:w/encl continued next page)

M. Annacone

4

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M. Annacone

5

Letter to George Hamrick from Eddie Morris dated June 26, 2013.

SUBJECT: BRUNSWICK STEAM ELECTRIC PLANT – NRC PROBLEM IDENTIFICATION
AND RESOLUTION INSPECTION REPORT 05000325/2013009 AND
05000324/2013009

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-325, 50-324

License Nos.: DPR-71, DPR-62

Report No.: 05000325/2013009, 05000324/2013009

Licensee: Carolina Power and Light Company

Facility: Brunswick Steam Electric Plant, Units 1 & 2

Location: 8470 River Road, SE
Southport, NC 28461

Dates: April 29 – May 3, 2013
May 13 - 17, 2013

Inspectors: J. Nadel, resident inspector, team leader
L. Cain, senior resident inspector, Vogtle
R. Rodriguez, senior project engineer
S. Ninh, senior project engineer
J. Quinones-Navarro, project engineer

Approved by: Eddie Morris, Acting Chief
Reactor Projects Branch 7
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000325/2013009, 05000324/2013009; April 29 – May 17, 2013; Brunswick Steam Electric Plant, Units 1 and 2; Biennial Inspection of the Problem Identification and Resolution Program.

The inspection was conducted by a resident inspector, a senior resident inspector, two senior project engineers, and a project engineer. No findings were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Identification and Resolution of Problems

The team identified that the licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution. However, the inspectors identified several issues that the licensee had not previously identified. The licensee effectively used risk in prioritizing the extent to which individual problems would be evaluated and in establishing schedules for implementing corrective actions. Corrective actions, when specified, were generally implemented in a timely manner. 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, inspectors identified a quick cause evaluation without an adequate extent of condition review. Licensee audits and assessments were found to be effective.

Operating experience usage was also found to be effective. Self assessment results adequately identified problems. On the basis of interviews conducted during this inspection, in general, workers at the site felt free to input safety findings into the corrective action program.

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 nuclear condition reports (NCRs) and work requests (WRs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed NCRs and WRs that had been issued between April 2011 and March 2013, including a detailed review of selected NCRs associated with the following risk-significant systems: residual heat removal, service water, high pressure coolant injection, and safety relief valves. 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, the inspectors selected a representative number of NCRs that were identified and assigned to the major plant departments, including operations, maintenance, engineering, health physics, chemistry, and security. These NCRs 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 NCRs, verified corrective actions were implemented, and attended meetings where NCRs 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 NCRs, maintenance history, completed work orders 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 two-year 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 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 inspectors conducted a detailed review of selected NCRs to assess the adequacy of the root-cause and apparent-cause evaluations of the problems identified. The

Enclosure

inspectors reviewed these evaluations against the descriptions of the problem described in the NCRs and the guidance in licensee procedure CAP-NGGC-0205, "Condition Evaluation and Corrective Action Process", Rev. 17. 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 inspectors reviewed corrective actions associated with the greater than green inspection finding documented in IR 05000324, 325/2011014 which were not completed by the time of the associated supplemental inspection, which ended on June 21, 2012.

The inspectors reviewed selected industry OE 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 inspectors 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 NCR screening meetings, Performance Improvement Oversight Committee meetings, and Work Ownership Committee meetings.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The inspectors determined that the licensee was generally effective in identifying problems and entering them into the CAP for resolution via NCRs or WRs. This conclusion was based on a review of the requirements for initiating NCRs as described in licensee procedures CAP-NGGC-0200, "Condition Identification and Screening Process," Rev. 36, WCP-NGGC-0300, "Work Request Initiation, Screening, Prioritization and Classification," Rev. 4, and management's expectation that employees were encouraged to initiate NCRs for any reason. Based on reviews and walkdowns of accessible portions of the selected systems, the inspectors determined that system deficiencies, in general, were being identified and placed in the CAP. However, inspectors identified a relatively high number of minor issues during system walkdowns related to housekeeping, transient combustibles, and equipment condition; which had not been previously identified by the licensee. The inspectors also determined that trending was generally effective in monitoring equipment performance, and site management was actively involved in the CAP and focused appropriate attention on significant plant issues.

Enclosure

Prioritization and Evaluation of Issues

Based on the review of NCRs sampled by the inspection team during the onsite period, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in the NCR severity level determination guidance CAP-NGGC-0200, "Condition Identification and Screening Process," Rev. 36. The inspectors observed that each NCR/WR was assigned a severity level at the Work Ownership Committee meeting, and adequate consideration was given to system or component operability and associated plant risk. The inspectors determined that station personnel 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.

The inspectors identified four performance deficiencies associated with the licensee's prioritization and evaluation of issues. These issues were screened in accordance with Manual Chapter 0612, "Issue Screening," and were determined to be of minor significance and did not constitute violations of NRC regulatory requirements.

- Inspectors identified a performance deficiency for the closure of a corrective action to prevent recurrence (CAPR), without prior Performance Improvement Oversight Committee approval as required by CAP-NGGC-0205. NCR 490292, assignment 58, a CAPR, was written to develop an engineering program in accordance with procedure EGR-NGGC-008, "Engineering Programs." The closure notes documented that the action could not be supported, but the CAPR was closed without Performance Improvement Oversight Committee approval, which is required for closing a CAPR by CAP-NGGC-0205, "Condition Evaluation and Corrective Action Process" step 9.4.2.2. This issue was determined to be minor because the CAPR was subsequently closed without additional actions being necessary. The licensee has documented this issue as NCR 603502.
- Inspectors identified a performance deficiency for the closure of a corrective action without adequate traceability as required by CAP-NGGC-0205. Corrective action assignment 59 for NCR 490292 was inappropriately closed because the documented completion notes were not detailed enough to provide traceability of the actions taken, which is required by CAP-NGGC-0205 step 9.4.2.2. This issue was determined to be minor because it was an administrative error and inspectors verified that the proper corrective actions were taken. The licensee has documented this issue as NCR 604365
- Inspectors identified a performance deficiency for failure to provide an adequate extent of condition for NCR 551553 as required by CAP-NGGC-0200. The NCR documented the failure to close of valve 1-E11-PDV-F068A due to electrical termination issues and failed to document acceptability of other valves that were re-

Enclosure

terminated by the same crew. This issue was determined to be minor because all of these valves passed their quarterly surveillance and no corrective maintenance had been performed on them since they were re-terminated. The licensee has documented this issue as NCR 598722.

- Inspectors identified a performance deficiency for cancelling a WR without providing an explanation for the cancellation as required by WCP-NGGC-0300. WR 534808 was opened for a 1D residual heat removal service water booster pump high vibration in the alert range and was subsequently cancelled without documenting the reason for cancellation. This issue was determined to be minor because WR 534810 was created shortly after WR 534808 was cancelled addressing the same issue and a work order was generated to resolve the issue. The licensee has documented this issue as NCR 606845.

Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors 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, NCRs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for CAPRs were sufficient to ensure corrective actions were properly implemented and were effective. However, the team has made an observation regarding procedural guidance in CAP-NGGC-200 related to designating cause evaluations based on the significance of the undesired condition. Specifically, the current procedural guidance allows wide leeway for management in selecting whether undesired conditions of varying significance receive a root cause, an apparent cause, or a quick cause. Inspectors noted that NCR 553929 assignment 24 is currently open to address this issue.

(3) Findings

(a) Unresolved Item (URI) for Extent of Condition Review for NCR 490292

Introduction: A URI was identified by the inspectors involving the extent of condition review performed for NCR 490292, which was documented for an NRC identified flooding concern associated with the four day emergency diesel generator fuel oil tank enclosure.

Description: In May of 2011 inspectors identified holes, gaps, and other degradations in the four day emergency diesel generator fuel oil tank enclosure. The issue was dispositioned as a white finding in inspection report 05000324, 325/2011014. A root cause was later performed under NCR 490292. The root cause evaluation resulted in NCR 492979 being documented to perform flood protection vulnerability walkdowns as

an extent of condition for the fuel oil day tank enclosure degradation. The walkdowns were performed in October of 2011 and documented in NCR 492979 assignment 2. Inspectors noted the following regarding these walkdowns:

- Engineers identified 23 deficiencies in the Unit 1 Reactor Building and 22 flooding deficiencies in the Unit 2 Reactor Building in their walkdown reports. These deficiencies included corroded and leaking pipe and conduit link seals, water stains and evidence of past leakage below penetrations, cracks in the concrete wall, and an active leak coming from a crack in the wall.
- Engineers identified 26 deficiencies in the common Service Water Building in their walkdown report. These deficiencies included minor leakage from penetration seals, stains on the wall from past leakage, and rust/scaling on the walls.
- Engineers identified 14 deficiencies in the common Emergency Diesel Generator Building in their walkdown report. These deficiencies included stains and evidence of past leakage from junction boxes, links seals, and conduit seals. Several corroded link seals were also identified.

NCR 490292 assignment 53 was created to correct the deficiencies documented in the walkdown reports. However, inspectors were not able to verify that all of the documented deficiencies were entered into the CAP in the form of an NCR or WR. Some WRs that documented some of the deficiencies were found, but for example, only 10 of the 26 deficiencies documented for the Service Water Building could be found in the CAP. During the course of this inspection the licensee was unable to provide the inspectors with documentation which would enable the inspectors to verify that all issues identified during the October 2011 and the August 2012 walkdowns had been entered into the CAP.

Inspectors need to perform additional inspection, including (1) verify deficiencies identified in the walkdown reports were identified in NCR 490292 assignment 53; (2) verification that adequate corrective action was taken for issues from NCR 490292 assignment 53 that were appropriately documented in the CAP, if any; and (3) review of the results of (1) and (2) above to determine if a performance deficiency exists and if it is more than minor. This issue is identified as URI 05000324, 325/2013009-01, Extent of Condition Review for NCR 490292.

(b) Unresolved Item (URI) for Failure to Correct a Leaking Service Water Building Pipe Penetration Seal

Introduction: A URI was identified by the inspectors for a performance deficiency and a violation involving the failure to correct a condition adverse to quality for over 9 years.

Enclosure

Specifically, a degraded and leaking pipe seal in the Service Water Building was identified in 2003 but not corrected until 2012.

Description: WR 00091804 was written on April 8, 2003 for water leaking past a link seal on 30” service water pipe 1-SW-100-30-157 in the Service Water Building. The WR directed repair or replacement of the faulty link seal. The associated work order was not worked until the penetration was injected with a temporary sealant under work order 02034121-19 on May 1, 2012. The work order was then left open to completely replace the degraded link seal, which is currently planned for 2014. The licensee did not have a justification for the timeliness of the associated corrective actions to address the identified concern. The inspectors determined that the leaking seal was a condition adverse to quality and that the failure to correct this condition for 9 years was a performance deficiency and a violation of 10 CFR 50, Appendix B, Criterion XVI which requires conditions adverse to quality to be promptly identified and corrected. In accordance with the part 9900 technical guidance on degraded and nonconforming conditions: “If the licensee does not resolve the degraded or nonconforming condition at the first available opportunity or does not appropriately justify a longer completion schedule, the staff would conclude that corrective action has not been timely and would consider taking enforcement action.”

Pending completion of additional inspection and review of information to determine if the performance deficiency is more than minor, this is identified as URI 05000324, 325/2013009-02, Failure to Correct a Leaking Service Water Building Pipe Penetration Seal.

b. Assessment of the Use of Operating Experience

(1) Inspection Scope

The inspectors examined licensee programs for reviewing industry OE, interviewed personnel, and reviewed licensee procedure CAP-NGGC-0202, “Operating Experience and Construction Experience Program,” Rev. 22. In addition, the inspectors selected OE documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal OE items, etc.), which had been issued since April 2011 to verify whether the licensee had appropriately evaluated each notification for applicability to the Brunswick plant, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on a review of documentation related to the review of OE issues, the inspectors determined that the licensee was generally effective in screening OE for applicability to the plant. Industry OE was evaluated by plant OE Coordinators and relevant information

Enclosure

was then forwarded to the applicable department for further action or informational purposes. Operating experience issues requiring action were entered into the CAP for tracking and closure. In addition, OE was included in all root cause evaluations in accordance with licensee procedure CAP-NGGC-0205.

(3) Findings

No findings were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors 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 CAP-NGGC-0201, "Self Assessment/Benchmark Programs," Rev. 19.

(2) Assessment

The inspectors determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspector's independent review. The inspectors verified that NCRs were created to document all areas for improvement and findings resulting from the self-assessments, and verified that actions had been completed consistent with those recommendations. 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, as evidenced by the NCRs reviewed that were initiated as a result of adverse trends.

(3) Findings

No findings were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed on-site workers regarding their knowledge of the corrective action program at Brunswick and their willingness to write NCRs 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

Enclosure

interviewed the ECP manager. Additionally, the inspectors reviewed a sample of ECP issues 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 NCRs reviewed, the inspectors 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, in general, employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. However, some examples were seen where people indicated a general lack of trust in the CAP and its effectiveness regarding the correction of conditions. Some non-specific examples were also given regarding a tendency to correct issues outside of the CAP due to this effectiveness concern. The licensee has written NCRs 477994, 454806, and 603738 to address these concerns.

The inspectors identified the following performance deficiencies. These issues were screened in accordance with Manual Chapter 0612, "Issue Screening," and were determined to be of minor significance and not subject to enforcement action in accordance with the NRC's Enforcement Policy.

- During a review of the employee concerns program, inspectors identified a performance deficiency which had not been entered into the CAP as an undesired condition as required by CAP-NGGC-200. During Brunswick refueling outage B119R1 in March 2012, two workers were found working in a contaminated area without wearing all of the protective clothing required by the radiation work permit. The issue was determined to be minor because the workers exited the contaminated area upon notification and were found not to be contaminated. This issue has now been entered into the CAP as CR 606541.
- During a review of the employee concerns program, inspectors identified a minor performance deficiency which had not been entered into the CAP as an undesired condition as required by CAP-NGGC-200. During emergency diesel generator (EDG) No. 1 surveillance testing on December 30, 2012, the engine load temporarily rose to 3877 KW. This value is above the 3500KW continuous load rating and the 2000 hr 3850KW load rating. The issue was determined to be minor because the condition was evaluated and confirmed not have impacted either the successful completion of the surveillance test or the reliability, availability, and capability of EDG No. 1. This issue has now been entered into the CAP as NCR 606565.
- During the review of the engineering evaluation (EC 90074) created for the December 30, 2012 EDG No. 1 loading event, inspectors identified a performance deficiency due to the fact that calculation BNP-E-7.010, "Emergency Diesel

Enclosure

Generator Static and Dynamic Load Study” Rev. 7 had statements about the EDG emergency load rating which had no technical basis. The conclusion of the evaluation was based, in part, on the emergency load rating from the calculation. The extent of condition for this issue has also identified similar examples within the same calculation. The issue was determined to be minor because the licensee was able to support the conclusion of the evaluation through other means that did not rely on the EDG emergency load rating. This issue has been entered into the CAP as NCR 606714

(3) Findings

No findings were identified.

4OA6 Meetings, Including Exit

On May 16, 2013, the inspectors presented the inspection results to Mr. Annacone and other members of the site staff. The inspectors confirmed that all proprietary information examined during the inspection had been returned to the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

Enclosure

KEY POINTS OF CONTACT

Licensee personnel:

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A. Pope, Organizational Effectiveness Manager
D. Barker, NOS Manager
D. Petrusic, Engineering Supervisor
G. Kilpatrick, Training Manager
J. Price, Engineering Director
K. Allen, Engineering Manager
L. Grzeck, Licensing Supervisor
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R. Wiemann, Engineering Manager
T. Sherrill, Licensing

NRC personnel:

M. Catts, Senior Resident Inspector
M. Schweig, Resident Inspector
C. Rapp, Chief (acting), Branch 7, Division of Reactor Projects

LIST OF REPORT ITEMS

Opened

05000324, 325/2013009-01	URI	Extent of Condition Review for NCR 490292 (Section 4OA2.a.(3)(a))
05000324, 325/2013009-02	URI	Failure to Correct a Leaking Service Water Building Pipe Penetration Seal (Section 4OA2.a.(3)(b))

Opened and Closed

None

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Procedures

OAP-100, External Events Protection Features Equipment Inspection, Rev. 0
 OBNP-TR-019, External Event Protection Features, Rev. 0
 ADM-NGGC-0119, Nuclear Safety Culture Program, Rev. 2
 CAP-NGGC-0200, Condition Identification and Screening Process, Rev. 36
 CAP-NGGC-0201, Self-Assessment/Benchmark Programs, Rev. 19
 CAP-NGGC-0202, Operating Experience and Construction Experience Program, Rev. 22
 CAP-NGGC-0205, Condition Evaluation and Corrective Action Process, Rev. 17
 CAP-NGGC-0206, Performance Assessment and Trending, Rev. 6
 EGR-NGGC-0008, Engineering Programs, Rev. 13
 NOS-NGGC-0400, Employee Concerns Program, Rev. 1
 NOS-NGGC-1000, Nuclear Oversight Conduct of Operations, Rev. 17
 OPS-NGGC-1305, Operability Determinations, Rev. 8
 WCP-NGGC-0300, Work Requests Initiation, Screening, Prioritization and Classification, Rev. 4
 OSMP-RPV501, Reactor Vessel Disassembly, Rev. 22
 OSMP-RPV502, Reactor Vessel Reassembly, Rev. 16 & 26
 OPS-NGGC-1316, Aggregate Risk Impact Assessment Program, Rev. 001
 PRO-NGGC-0200, Procedure and Work Instruction Use and Adherence, Rev. 16

Nuclear Condition Reports (NCRs)

604365	560330	521539
603867	559737	519524
603502	554018	519193
602908	553929	518755
600850	552984	510874
600035	551553	508642
598722	551048	508604
596261	551043	507685
595714	549330	504382
595698	547359	502501
595475	547081	502214
595135	547078	501771
593083	546087	501687
588643	545903	501605
586384	545726	501452
579941	540253	501183
578363	534364	501120
576640	534364	501113
576159	534162	501100
575876	533485	501004
570445	533485	500986
567016	532666	500920
566505	532603	500919
565884	531352	500869
562188	529330	500690
562160	524824	500593

500541	490064	476888
500540	489386	472937
500538	488601	472226
500519	488174	471728
500470	485970	470636
500011	485099	468283
499146	485069	466253
497514	483679	462873
497002	483679	460965
496536	483473	459459
492979	482707	457424
491421	480903	456338
491420	480063	414277
491178	477943	401557
491176	477863	267744
490292	477340	205528

Engineering Changes

EC-90074, EDG1 Load Temporarily Rose to 3877KW

Root Cause Evaluations

519193
500035
491848
490292
479378

Self Assessments

SA 378547
SA 504615
SA 506268
QHSA 450471
QHSA 472591
QHSA 501597
QHSA 551950

Work Orders:

2146702	2047395-03
2145564	2047395-04
2145563	2047395-05
2134129	2047395-09
2133771	2047395-10
2133771	2047395-15
2133765	2047395-16
2104399	2047395-17
2101559	2044046
2077555	2044042
2047395-02	2034173

2028184	1987025-01
2028022	1984574
2028013	1984574-39
2018888	1972750
2018887	1972415
2007399	1966852
2001556	1949242
1993264	1917725
1989614	1813632
1987028-01	1779330
1987027-01	1479533
1987026-01	
1987027-02	

Work Requests:

893695	541111
580163	540731
577566	540726
571265	540726
569567	531913
564446	531597
564445	530352
564443	524471
564439	511663
560271	506671
547275	504224
544298	494162
543622	494053
541278	490420

Drawings:

D-02525, Reactor Building Residual Heat Removal System Piping Diagram, Sh. 1A, Rev. 51
D-02525, Reactor Building Residual Heat Removal System Piping Diagram, Sh. 1B, Rev. 69
D-02526, Reactor Building Residual Heat Removal System Piping Diagram, Sh. 2A, Rev. 53
D-02525, Reactor Building Residual Heat Removal System Piping Diagram, Sh. 2B, Rev. 80
BN-17.0.01, Residual Heat Removal System, Rev. 2
BN-17.0.02, Residual Heat Removal System, Rev. 0
BN-17.0.03, Residual Heat Removal System, Rev. 1

Other Documents:

2095 – Unit 1 and Unit 2 High Pressure Coolant Injection System Health Report (Oct – Dec 2012)
GL 2008-01, Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems
IN 2010-11, Potential for Steam Voiding Causing Heat Removal System Inoperability
NOS-2012-032, Nuclear Safety Culture Assessment, August 2012
1005/2055 – Unit 1 and Unit 2 Safety Relief Valve/Automatic Depressurization System Health Report (Oct – Dec 2012)