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

July 29, 2005

Carolina Power & Light Company
ATTN: Mr. James Scarola
Vice President - Harris Plant
Shearon Harris Nuclear Power Plant
P. O. Box 165, Mail Code: Zone 1
New Hill, NC 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000400/2005006

Dear Mr. Scarola:

On July 1, 2005, the Nuclear Regulatory Commission (NRC) completed an inspection at the Shearon Harris Nuclear Power Plant. The enclosed report documents the inspection results, which were discussed on July 1, 2005, with Mr. R. Duncan 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 selected examination of procedures and representative records, observations of activities, and interviews with personnel.

Based on the results of this inspection, the inspectors identified one issue of very low safety significance (Green). This issue was determined to involve a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation (NCV) in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you contest this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington DC 20555-0001; and the Resident Inspector at the Shearon Harris facility.

The inspectors concluded that problems were properly identified, evaluated and resolved within the problem identification and resolution programs. Corrective actions were generally timely and effective. A safety conscious work environment was evident.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) components of 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/

Paul E. Fredrickson, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-400
License No.: NPF-63

Enclosure: NRC Inspection Report No. 05000400/2005006
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

cc w/encl:
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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	50-400
License No:	NPF-63
Report No:	05000400/2005006
Licensee:	Carolina Power & Light Company (CP&L)
Facility:	Shearon Harris Nuclear Power Plant, Unit 1
Location:	5413 Shearon Harris Road New Hill, NC 27562
Dates:	June 13 - 17 and June 27 - July 1, 2005
Inspectors:	G. MacDonald, Senior Project Engineer, Division of Reactor Projects (DRP) , Region II (RII), (Lead Inspector) S. Vias, Senior Reactor Inspector, Division of Reactor Safety, RII S. Rudisail, Project Engineer, DRP, RII
Approved by:	P. Fredrickson, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF ISSUES

IR 05000400/2005-006; 06/13-07/01/2005; Shearon Harris Nuclear Power Plant, Unit 1; Identification and Resolution of Problems.

The inspection was conducted by a Region II (RII) senior project engineer, a RII senior reactor inspector, and a Region II project engineer. One Green non-Cited Violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609,"Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649,Reactor Oversight Process, Revision 3, dated July 2000.

Identification and Resolution of Problems

The inspectors determined that the licensee was effective in identifying problems and entering them into the CAP. The threshold for problem evaluation was low based on observed samples, independent walkdowns and staff interviews. The inspectors determined that the licensee properly prioritized issues and performed evaluations that were technically accurate and sufficiently detailed. Formal root cause evaluations were thorough and well documented. One example was noted where a safe shutdown molded case circuit breaker failure was not evaluated for potentially generic concerns. Corrective action implementation was generally timely, effective and appropriate to the problem. In the sample reviewed, the inspectors noted frequent investigation extensions and several examples where corrective action timeliness goals were not met, which was consistent with observations within the last licensee Self Evaluation Unit program assessment. The vendor quality initiative and modification timeliness initiative were examples where detailed self-critical evaluation identified improvements to CAP implementation problems. Management emphasized the need for staff to identify and resolve issues using the CAP. A safety conscious work environment was evident.

Cornerstone: Mitigating Systems

Green. The inspectors identified a non-cited violation of 10 CFR 50 Appendix B Criterion XVI for failure to promptly correct a condition adverse to quality related to operational indicator lights on the emergency diesel generator (EDG) local engine control panel. The approved modification to fix the condition has been rescheduled five times. Indicator light changeout has resulted in several trips of EDG dc control power breakers, causing partial loss of dc control power to the effected EDG. In February 2005, an EDG pneumatic control system problem was identified that compounded the effect on the EDGs from the indicator light changeout problem.

The issue is greater than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The finding was determined to be of very low safety significance because it involved a design deficiency which did not result in a loss of function. The two degraded conditions, the indicator light changeout problem and the EDG pneumatic control system problem, combined to increase the likelihood of an EDG failure. The cause of this finding is identified as a performance aspect of the problem identification and resolution cross-cutting area, in that the failure to promptly correct the light changeout problem resulted in additional partial losses of EDG control power. (Section 4OA2.c.2)

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The inspectors reviewed Procedure CAP-NGGC-0200, Corrective Action Program, Revision (Rev.) 14, which describes the administrative process for initiating and resolving problems. A nuclear condition report (NCR) is initiated to document problems that are significant conditions adverse to quality (Priority 1), conditions adverse to quality (Priority 2), or improvement items (Priority 5).

The inspectors reviewed 150 NCRs from approximately 4200 NCRs that had been initiated by the licensee since August 2003 (coinciding with the last NRC baseline problem identification and resolution inspection (PI&R)) to verify that problems were being properly identified, appropriately characterized, and entered into the corrective action program (CAP). The reviews primarily focused on issues associated with seven risk significant plant safety systems: emergency diesel generator (EDG), auxiliary feedwater (AFW), high head safety injection (HHSI), residual heat removal (RHR),120 volt uninterruptible AC,125 volt DC, and 6.9 kilovolt AC distribution. The inspectors reviewed the NCRs related to the findings included in the NRC inspection reports (IRs) issued since the last PI&R inspection. In addition to the system reviews, the inspectors selected a sample of NCRs that were related to radiation protection, security, and emergency preparedness to ensure coverage of those cornerstones.

The inspectors reviewed completed maintenance work orders (WOs), system health reports, and the Maintenance Rule database for the seven risk significant systems to verify that equipment deficiencies were being appropriately entered into the CAP and the Maintenance Rule program. The inspectors conducted plant walkdowns of equipment associated with the seven systems to assess the material condition and to look for any deficiencies that had not been entered into the CAP. The inspectors reviewed temporary modifications, the main control room (MCR) deficiency list, failed surveillances, control room operator logs for the period October 1 through October 15, 2004, and the fire protection upgrade program safe shutdown issues, to verify that equipment deficiencies, especially those involving the seven safety systems selected for the focused review, were entered into the CAP.

The inspectors reviewed selected industry operating experience items, including NRC generic communications, to verify that both types were appropriately evaluated for applicability and whether issues identified through these reviews were entered into the CAP. The inspectors reviewed licensee audits and self-assessments (focusing primarily on problem identification and resolution) to verify that findings were entered into the CAP and to verify that these findings were consistent with the NRC's assessment of the licensee's CAP.

The inspectors attended several plant daily status and unit evaluator meetings to observe management and unit evaluator oversight functions in the corrective action process. The inspectors also interviewed personnel from operations, maintenance, engineering, security, health physics, chemistry, and emergency preparedness to evaluate their threshold for identifying issues and entering them into the CAP.

Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the licensee was effective in identifying problems and entering them into the CAP. The threshold for problem evaluation was low based on observed samples, independent walkdowns and staff interviews. NCRs normally provided complete and accurate characterization of the subject issues. Several examples were noted where problems were difficult to understand due to the absence of descriptive equipment information associated with the plant identification numbers provided in the problem description. The bases for two cancelled operating experience items could not be determined from the documented evaluation. Equipment performance issues involving maintenance effectiveness were being identified at an appropriate level and entered into the CAP. The inspectors did not identify conditions adverse to quality that were not within the CAP except for one boric acid leak noted during the walkdown of the A RHR pump.

The licensee was effective in evaluating internal and external industry operating experience items for applicability and entering issues into the CAP. Department self-assessments and audits performed by the Nuclear Assessment Section (NAS) and the Performance Evaluation Support Section were effective in identifying issues and entering these deficiencies into the CAP. Site management was actively involved in the CAP and focused attention on significant plant issues.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The inspectors reviewed the same 150 NCRs discussed in Section 4OA2.a to verify that the licensee properly described and classified the problems in accordance with Procedures CAP-NGGC-0200 and CAP-NGGC-0205. The majority of NCRs reviewed were classified as Priority 2, with 20 classified as Priority 1, and a smaller number classified as Priority 5. The inspectors' review was also intended to verify that the licensee determined the apparent cause of problems and adequately addressed operability, reportability, common cause, generic concerns, and extent of condition. For significant conditions adverse to quality, the review was also to verify that the licensee adequately determined the root and contributing causes. The inspectors also reviewed a sample of cancelled NCRs to verify they were voided for appropriate reasons.

(2) Assessment

The inspectors determined that the licensee properly prioritized issues entered into the CAP in accordance with Procedure CAP-NGGC-0200. Generally, the licensee performed adequate evaluations that were technically accurate and sufficiently detailed. Formal root cause evaluations for Priority 1 NCRs were thorough and well documented. However, in the sample reviewed, the inspectors noted frequent problem investigation extensions which was consistent with observations within the last Self Evaluation Unit Program assessment. The inspectors did not identify any items that were misclassified or had inadequate or weak cause evaluations.

However, the inspectors identified one example, discussed below, where an NCR had documented a safe shutdown (SSD) molded case circuit breaker (MCCB) failure, but had not evaluated any generic implications even though the cause was identified as a lack of preventive maintenance/testing.

NCR 128223 documented a failure of B EDG air compressor breaker 1B23-SB-2AL (breaker found in tripped condition). This MCCB was one of 80 SSD MCCBs tested per Procedure MPT-E0024, Molded Case Circuit Breaker Safe Shutdown Test. The procedure was designed to test 10 percent of the total MCCB population each refueling outage. The failed breaker had last been tested in April 1991. The evaluation determined that the PM implementing the testing only tested the same 8 breakers each outage. NCR 130984 was initiated to address the testing inadequacy. Neither NCR assessed the remainder of the untested MCCB population to determine if additional breakers had failed or had been in-service without testing since April 1991. The inspectors walked down 4 motor control centers and found no tripped breakers. Additionally, the inspectors examined the sampling test programs for steam generator tube inspections, relief valves, and the technical specification required penetration overcurrent protection testing and found these programs to be correctly sampling the entire desired testing population. NCR 162644 was initiated for resolution of potentially generic concerns.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors evaluated the same 150 NCRs discussed in Section 4OA2.a to verify that the licensee had identified and implemented timely and appropriate corrective actions to address problems. The inspectors verified that the corrective actions were appropriate for the described problem and were properly documented, assigned, and tracked to ensure completion. Selected corrective actions were sampled for detailed review to independently verify that corrective actions were implemented as intended. The sample selected for verification included corrective actions associated with NRC findings and others from NCRs associated with the focus systems. Additionally, the inspectors reviewed a sampling of the oldest NCRs to determine if implementation delays were appropriately justified.

(2) Assessment

.1 Assessment of Effectiveness of Corrective Actions

Overall, corrective actions developed and implemented for problems were generally timely and effective and appropriate to the problem. One finding was identified for untimely corrective action and is discussed below in Section 4OA.c.(2) I. In the sample reviewed, the inspectors noted several examples where corrective action timeliness goals were not met which was consistent with observations within the last Self Evaluation Unit Program assessment.

Two examples, discussed below, were noted where self-critical evaluations identified CAP implementation problems, and actions were taken to improve performance. The issues were the vendor quality initiative and an initiative in engineering to improve timeliness of modification related corrective actions.

Vendor Quality Initiative

The inspectors reviewed the actions being taken to date and proposed actions to resolve the issues of vendor quality concerns initially identified during refueling outage (RFO10) and again during RFO12. The inspectors held discussions with members of the assessment team performing the evaluations and root cause determination, to understand the breadth and scope of the issues. The basic elements of a vendor quality program have been in place for two years, however vendor quality problems continued to challenge equipment reliability. The continuing vendor quality problems have been evaluated by the licensee, actions are being identified and implementation is in progress. The inspectors reviewed various ARs, and NAS assessment H-OM-04-02-12 on vendor quality and changes to Procedure NGGM-PM-0020, “Vendor Quality Program for Critical Non-Safety Equipment”, and NGGD-1610, “Zero Tolerance for Equipment Failure Policy (ZTEF)” and noted that additional vendor oversight was placed on critical components and additional acceptance criteria specified for vendor quality processes

Modification Timeliness Initiative

The inspectors reviewed NCR 148570 which was a Priority1 trending NCR written by engineering after a series of equipment failures had occurred where corrective actions were specified but had not been implemented before the next failure. Examples included the TDAFW pump and a safety-related battery charger. This evaluation identified several problems with modification related corrective action implementation and identified several changes which will affect performance. Modification related corrective actions were specified within the CAP prior to the modification authorization process being completed. Engineering change modification (EC) approval and implementation decisions are not correlated with CAP requirements. Modification related corrective actions were often segmented into discrete pieces which would be individually tracked with timeliness goals and had the affect of extending the overall time interval to complete the action. Corrective action tracking which was performed on an individual assignment basis did not look at the entire timeframe required to identify, specify and complete implementation of corrective action for a documented problem. The

inspectors determined that this trending NCR represented a thorough and self-critical process examination.

.2 Untimely Corrective Action for EDG Condition Adverse to Quality

Introduction. The inspectors identified a non-cited violation of 10 CFR 50 Appendix B Criterion XVI for failure to promptly correct a condition adverse to quality related to operational indicator lights on the emergency diesel generator (EDG) local engine control panel. The approved modification to fix the condition had been rescheduled five times. Indicator light changeout resulted in several trips of EDG dc control power breakers, causing partial loss of dc control power to the effected EDG. In February 2005, an EDG pneumatic control system problem was identified that compounded the effect on the EDGs from the indicator light changeout problem.

Description. NCR 60174, written in May 2002, documented a design deficiency with the operational indicator lights on the local EDG engine control panel. The lights are continually energized and when bulbs are changed the indicator light socket connection short circuits and causes tripping of the effected EDG dc control power breaker. Losses of control power circuits reduce EDG reliability and burden the operators with investigations of the causes of the failures. There have been 4 instances where these indicator light sockets have caused control power breaker trips; May 2002 (NCR 60174), October 2002 (NCR 73193), July 2003 (NCR 97899), and July 2004 (NCR 131212). The condition has occurred on both EDGs and on both control power breakers CB-1 and CB-2. An investigation (in NCR 73193) was completed in October 2002, and EC 53900 was approved in May 2003 to modify the existing indicator light circuit . This corrective action assignment has been rescheduled five times and was last scheduled to be completed in March 2006. The investigation also indicated that bulb replacements have been required once per operating cycle. This issue was addressed in the last PI&R inspection (NRC Inspection Report 05000400/2003005). On June 30, 2005, NCR 162600 was initiated for resolution which included hanging caution tags and re-examining implementation scheduling.

In February 2005, an EDG control issue was identified that compounded the effect on the EDGs from the indicator light changeout problem. The licensee had identified a degraded condition of the EDG pneumatic control system as documented in two NCRs, one for each EDG. The licensee evaluated this condition and declared the EDGs operable as long as EDG dc control power remained available. With the EDG dc control power unavailable, a potential existed for an EDG start failure.

Assessment. This issue is greater than minor because it affected the equipment performance attribute of the Mitigating Systems Cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core damage). The inspectors determined that the finding had very low safety significance because it involved a design deficiency which did not result in a loss of function. The two degraded conditions, the indicator light changeout problem and the EDG pneumatic control system problem, combined to increase the likelihood of an EDG failure. The inspectors also determined that the

cause of this finding is a performance aspect of the problem identification and resolution cross-cutting area, in that the failure to promptly correct the light changeout problem resulted in additional partial losses of EDG control power.

Enforcement. 10 CFR 50 Appendix B, Criterion XVI, Corrective Action, requires in part that conditions adverse to quality be promptly corrected. Contrary to this requirement, corrective action modification (EC 53900) for EDG local engine control panel operational indicator lights was not promptly implemented. The corrective action originally scheduled for October 2003 was rescheduled five times and was subsequently rescheduled for implementation March 2006. This failure to promptly correct this problem resulted in two additional DC control power breaker trips, caused by operational indicator light changeout, occurring during the period that the modification completion had been extended. Because this finding is of very low safety significance and has been entered into the CAP (NCR 162600), this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000400/2005006-01, Failure To Promptly Correct Condition Adverse To Quality Affecting EDGs.

d. Assessment of Safety-Conscious Work Environment (SCWE)

(1) Inspection Scope

The inspectors conducted interviews with randomly selected members of the plant staff, including operations, maintenance, engineering, chemistry, health physics, emergency preparedness, and security personnel, to develop a general perspective of the safety-conscious work environment at the site and the willingness of personnel to use the CAP, employee concerns program (ECP) and plant observation program (POP). The interviews were also to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors also reviewed the licensee's ECP which provides an alternate method to the CAP for employees to raise concerns and remain anonymous. The inspectors interviewed the ECP Coordinator and reviewed a select number of ECP reports completed since August 2003 to verify that concerns were being properly reviewed and that identified deficiencies were being resolved in accordance with Procedure REG-NGGC–0001, Employee Concerns Program.

(2) Assessment

The inspectors concluded 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, ECP, Work Order System and the Plant Observation Program. These methods were readily accessible to all employees. Licensee management encouraged employees to promptly identify nonconforming conditions. Based on discussions conducted with a sample of plant employees from various departments, the inspectors determined that the site staff felt free to raise issues and felt that management wanted issues placed into the CAP for resolution. None of the staff interviewed felt that valid issues had been cancelled. The staff members also believed that feedback was good when using the CAP and the ECP, and that they were kept up to date on identified issues. The inspectors noted that, for

the ECP files they had reviewed, ARs were initiated in the CAP for any condition adverse to quality that had been identified in the file. Some SCWE concerns were noted in the ECP files reviewed but they had been resolved and were not evident in the staff interviews. The inspectors also did not identify any reluctance to report safety concerns.

4OA6 Management Meetings

The inspectors presented the inspection results to Mr. R. Duncan, and other members of licensee management at the conclusion of the inspection on July 1, 2005. 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

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J. Briggs, HNP, Superintendent, Environmental and Chemical
D. Corlett, Supervisor - Licensing/Regulatory Programs
J. Dills, HNP Superintendent, System Engineering
F. Diya, Manager - Engineering
R. Duncan, Director - Site Operations
W. Gurganious, Manager - Nuclear Assessment
E. McCartney, Training Manager
S. McCoy, Licensing Specialist
T. Mitchell, Supervisor, Planning and Procedures, Maintenance
L. Morgan, Supervisor Self Evaluation Unit
T. Morton, Manager - Support Services
T. Natale, Manager -Outage and Scheduling
T. Pilo, Supervisor - Emergency Preparedness
D. Shockley, Unit Evaluator, Harris Engineering
G. Simmons, Superintendent - Radiation Control
E. Wills, Operations Manager
B. Waldrep, General Manager Harris Plant
M. Wallace, Licensing Specialist

NRC personnel

R. Musser, Senior Resident Inspector, Harris
P. Fredrickson, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED AND DISCUSSED

Opened and Closed

05000400/2005006-01	NCV	Failure to Promptly Correct Condition Adverse to Quality Affecting EDGs (Section 4OA2.C.2)

Attachment

LIST OF DOCUMENTS REVIEWED

Procedures

ADM-NGGC-0104	Work Management Process, Rev. 28
CAP-NGGC-0200	Corrective Action Program, Rev. 14
CAP-NGGC-0201	Self Assessment Program, Rev. 8
CAP-NGGC-0202	Operating Experience Program, Rev. 8
CAP-NGGC-0205	Significant Adverse Condition Investigation, Rev. 3
CAP-NGGC-0206	Corrective Action Program Trending and Analysis, Rev. 0
REG-NGGC-0001	Employee Concerns Program, Rev. 13
MCP-NGGC-0401	Material Acquisition (Procurement, Receiving and Shipping), Rev. 17
EGR-NGGC-0207	Boric Acid Corrosion Control, Rev. 1
ADM-NGCC-0107	Equipment Reliability Process Guideline, Rev. 3
AP-930	Plant Observation Program, Rev. 5
NGGM-PM-0020,	Vendor Quality Program for Critical Non-Safety Equipment, Rev. 2
NGGD-1610	Zero Tolerance for Equipment Failure Policy (ZTEF), Rev. 1
MCP-NGCC-0401	Material Acquisition (Procurement, Receiving, and Shipping), Rev. 17
WCM-004	Returning Equipment to Service, Rev. 0
MPT-E0024	Molded Case Circuit Breaker Safe Shutdown Test, Rev. 13
CM-E0028	Molded Case Circuit Breaker Changeout, Rev. 2

Operating Experience Documents

IN 04-01	Aux Feedwater Pump Recirc Line Orifice Fouling
IN 04-009	Corrosion of Steel Containment and Liners
IN 04-010	Loose Parts in Steam Generators
00103697	OE: 16712 Detrimental Effect of Fibrous Mat on ECCS Pumps
00116765	IN 04-01, Aux Feedwater Pump Recirc Line Orifice Fouling
00126178	IN 04-009, Corrosion of Steel Containment and Liners
00126187	IN 04-010, Loose Parts in Steam Generators
00147239	Fire in Sec Locker Due to Lithium Battery Failure AR 146777
00119139	Safety related static inverter capacitor orientation

NCRs Related To NRC Findings

00087944	Repetitive FF of 1CP-1 - Ineffective Corrective Actions
00108027	Inconsistent Test Data Obtained During OST-1231 MCR HVAC
00126729	S/G Tube Indication Missed During RFO 11
00126982	RFO 11 ‘C’ SG FOSAR Missed Object (Cancel AR - See AR 125127)
00142315	Potential Entry Points for FME in Containment Recirc. Sumps
00143023	AOP-010 Entry/manually AFW Start "C" Feed Reg Bypass Valve
00147194	TDAFW T&TV Tripped Shut When Opened from MCB
00061495	Contamination Control Practices
00117670	“A” Containment Hydrogen Analyzer inoperable
00140449	Loss of 1A-SA Emergency Bus
00125127	Increased Radiation Monitor readings on REM-3534
00144390	Adverse trend in plant status control

00091818 Entry into AOP-14
00141473 Leak on Valve ICS-243
00093855 Turbine Trip / Reactor Trip
00093981 Manual Reactor Trip / Auto AFW Actuation
00080215 Potentially Insufficient AO's to do SSD Actions
00103182 Electrical Fault Condensate Pump Motor
00096156 Manual Reactor Trip Due to Loss of B MFP
00078301 Potential Weaknesses in the A/R Closeout Process

NCRs Related To Focus Systems

AFW & RHR

00104713 AOP-036 Does Not Place RHR in Service w/o Instrument Air
00110935 A RHR Hx Boron Build up Around Main Flange
00115432 A RHR Pump Breaker Failure
00115991 A RHR Outage Exceeded 10% of the Scheduled Duration
00115992 A RHR Outage Schedule Logic Tie Incorrect
00127033 Concern on RHR Temperature to Report for RCS
00129668 A RHR Pump Boron Leak at Casing Flange
00138223 A RHR Heat Exchanger Stud Examination
00138287 A RHR Pump Active Boric Acid Leak
00139935 Minor Computational Error in RHR Unavailability Data
00142301 Rhr and Ct Valve Chamber Internal Corrosion
00144040 Increased Equipment Drain In-leakage from RHR System
00145129 Unsafe Access/entry on or into the 190 RHR/CS Valve Chambers
00146239 No Head Correction Values for RHR Pressure Indicators
00153748 Electrical Scope Change to RHR Outage Inside T-0
00153749 Mechanical Scope Change to RHR Outage Inside T-0
00101464 TDAFW Minimum Flow P&I Not Followed
00101909 TDAFW Pump Speed Indication Failure
00101913 Determine past Operability of TDAFW Pump W/bad Speed Sensor
00102078 Fuses Were Not Identified on the Clearance for the TDAFW
00102223 AOP-010 Entry Due to Afw Backleakage
00109760 TDAFW Pump Tripped on Overspeed During Ost-1411
00110699 TDAFW T&t Valve Tappet Elevated
00117085 Motor Driven Afw Pump Fcv Auto Open Function
00123545 AFW Start from Trip of Last MFW Pump Signal Inoperable
00123572 Jumper Ops for AFW Auto Start on Loss of Last FW Pump
00124873 TDAFW Governor Failed to Control During EPT-283 after Maintenance
00126583 Second AFW Actuation Following Plant Trip
00127297 AFW Start Signal on Start of "A" Main Feed Pump
00128791 PCY-2150a AFW Pressure Controller Failure (w.o.558077-01)
00131000 Emerging Trend in AFW MRFF
00134609 Coil Flag Dropped on 50-51b/1922,this Is a Relay on AFW B
00134696 B AFW Pump Was Run for Hot Oil Sample Contrary to PM-M0074
00142320 1MS-477 Steam Driven AFW Turbine Casing Drain
00143023 AOP-010 Entry/manually AFW Start/"C" Feed Reg Bypass Valve

00145831 125vdc Ground When Running TDAFW Pump
00147194 TDAFW T&TV Tripped Shut When Opened from MCB
00147355 TDAFW Pump Inbd Seal Line Missing Clamp
00150664 Broken Termination Screw on TDAFW

6.9KV Electrical Distribution

128703 Emerging Trend: Breaker Failures
157566 Failure of the 86UV/1731 to trip during OST-1122
129123 MR functional failure
115432 "A" RHR pump breaker failure
126867 T1/1732 relay flag did not drop during PMTR
114941 Synch switch failure bkr-107: operabilty determination
101431 Improvement for procedure ADM-NGGC-0101
140449 Loss of the 1A-SA emergency bus
104943 Relay flags found dropped on breaker for major plant components
127495 Breaker 122 from Aux transformer failed to close
142454 Corroded connecting plates on UAT to Isophase bus linkages
157715 Improper fuse found installed in circuit
102496 Erratic voltage readings on MCC 1-4B-1022
114693 1A1 Bus outage observations
136431 M&TE out of calibration

125VDC/120VAC Electrical Distribution

119005 SI and SIII safety inverters incorrect capacitors installed
109745 125 VDC safety bus 1A-SA ground
104837 1B-SA battery charger normal/equalize switch found in equalize
114011 AOP-024 entry due to UPS bus SI transient
130512 Battery charger failed to load when placed in service
134180 Battery charger 1B-SB tripped while in operation
148536 Battery charger 1B-SB failed MST-E0014
118957 7.5 KV inverter AC input breaker 1CB tripped
146643 60 KVA inverter shifted to alternate power supply
124144 Instrument Bus S-IV slow degrading voltage
108272 S1 Inverter output volts slowly drifting high
145831 125 VDC ground when running TDAFW pump
142029 Inadvertent "B" CCW pump start during inverter power supply swap

Emergency Diesel Generator

00157729 A EDG Unplanned Unavailability
00137829 EDG-A Load Gain Adjustment As-Left Values
00148699 B EDG Tripped Following Start from Safety System Outage
00121181 Degraded Condition Not Properly Identified
00133963 B EDG Fuel Oil Transfer Pump Vibration in Alert Region
00141435 EDG B Jacket Water TCV Cracked Guide Cylinder
00136834 EDG Starting Air Valve Failure

00101107 Emergent Failure Associated with B EDG
00132177 EDG B Overspeed Governor Could Not be Adjusted
00155844 EDG Governor Venting Not Performed Following Oil Change
00128176 1EA-6 Relief Valve Lifted
00132043 Stainless Steel Tubing Failure on B EDG
00149912 EDG-A Turbocharger Broken Bolts
00073193 B EDG Operational Lights Failed to Energize During Barring
00060174 A EDG CB-1 Tripped During Light Bulb Replacement
00097899 B EDG Declared Inoperable Bue to Trip of CB-2
00121780 Repetitive Failure of EDG Light Bulbs
00131212 Loss of one Train of A EDG Start Circuitry
00150114 Loss of DC Power to B Circuit on A EDG Anomaly
00151302 EDG-B Loss of DC Power Train B Anomaly
00162600 Deficiency Review 2005 NRC PI&R Finding

High Head Safety Injection

00129321 AR Not Initiated For CSIP Failure
00123954 Through Wall Leak on B ESW Header To C CSIP
00124579 Pinhole Leak in ESW Line From C CSIP
00104584 Unplanned LCO Entry A CSIP Low SW Flow To Oil Cooler
00118823 Oil Sample Valve Installed in Wrong Location
00147199 C CSIP Excessive Seal Leakage
00135016 A CSIP Speed Increaser Oil Piping Needs Improving
00105354 B CSIP Operating Near its Min Flow Limit
00157717 Clogged Breather on C CSIP Resulted in Small Oil Leak
00104679 Potential Non-Conservative Flow Calculation Method
00146179 Potential Overpressurization of C CSIP Suction Line

Miscellaneous NCRs

149935 Time delay relay parts
152362 “A” ESCW inop/failure of Expansion tank service air leakage
023741 Long range plan for BOP breakers
154135 Improvement opportunity related to Security
110527 Wrong Number used in State/County Notification Form
124218 EP Drill Weakness
128555 Individual Unable to Perform ERO Duty Position
133924 Weakness from 8/3/04 EP Drill
133926 Weakness from 8/3/04 EP Drill
149916 EP Drill Deficiency
155717 Failure to Investigate 1SI-301 and 1SI-311 Breaker Problem
155759 ERO Drill Critique
156991 Directions Provided by TSC in Graded Exercise Not Clear
155880 Minor Deficiency in Record Markup for NRC ERO Performance KPI
147608 Incorrect Attachments in Sec ERO Notebook
149100 Adverse Met Data in EAL Flowchart,
149093 OSI/PI Emergency Notification Form

129921	EP drill weakness on scenario development and control
149710	Drill/exercise control
148570	Adverse trend in timeliness of actions to resolve equipment problems
93263	125VDC Leads swapped in MTC-2-SA
77739	Issue Calculation Revisions
02877	Bearing T/C Wiring Diagrams
162644	Corrective Actions for NCR 130894
130894	Safe Shutdown Molded Case Circuit Breaker Testing
128223	C Start A/C For B EDG Breaker Tripped

Work Orders

453521	1 PM-18, B RMUW Pump Disch Check, Backleaking when Pump Idle
189400	M, 1CS-549, Valve Stem Spindle is Broken
190130	Check Valve on Reactor Makeup Pumps 1B Discharge
271524	ENG, TR, MMP-012 Leak Test, Reroute By-Pass and Drain Lines
697845	1PM-18, Replace Valve
453521	Leak Check External and Internal 1PM-18
200267	Disassemble Inspect 1PM-18 and Leak Check
524675	B EDG Pedestal Bearing
246365	B EDG Crank Web
450190	TDAFW Pump
500649	ESFAS Train B Slave Relays
503831	1A EDG Air Tank Press Relief
677207	ESFAS Train B Slave Relay
561322	Molded Case Circuit Breaker 1A-SA-5
565312	1B23-SB-2AL
565154	1EA-6
704430	1EA-E002
718890	C CSIP Seal Leakage

Drawings

CP&L 2165-S-0633-S01, Rev. 10, EDG Lube Oil & Air Intake & Exhaust
CP&L 2165-S-0633-S02, Rev. 10, EDG Jacket Water System
CP&L 2165-S-0633-S03, Rev. 8, EDG Fuel Oil & Drainage System
CP&L 2165-S-0633-S04, Rev.19, EDG Starting Air
CP&L 2165-S-1305, Rev. 21, Simplified Flow Diagram CVCS
CP&L 2165-S-1308, Rev.12, Simplified Flow Diagram Safety Injection system sheet 1
CP&L 2165-S-1309, Rev. 17, Simplified Flow Diagram Safety Injection system sheet 2
CP&L 2165-S-1310, Rev. 12, Simplified Flow Diagram Safety Injection system sheet 3
1364-098012-S01 16" - 921 FWIV Butt Weld Ends Carbon Steel Parallel Slide Gate Valve

Other Documents

NRC Inspection Report 05000400/2005002
NRC Inspection Report 05000400/2003009
NRC Inspection Report 05000400/2003004
NRC Inspection Report 05000400/2003007
NRC Inspection Report 05000400/2003010
NRC Inspection Report 05000400/2004002
NRC Inspection Report 05000400/2004005
NRC Inspection Report 05000400/2004004
NRC Inspection Report 05000400/2004009
NRC Inspection Report 05000400/2004006
E/C 59606, Rev. 2 ,Main Feedwater Isolation Valve
E/C 59606, Rev. 1, Main Feedwater Isolation Valve
Flowserve Letter, Stem and Seat Ring Damage to Shearon Harris Main FWIV dated 12-13-04
Equipment Reliability Study IST Program Crosby Relief Valves

Self Assessments

03-06-SW-H	Performance Evaluation Support (PES) Assessment of HNP Maintenance and Operations Training
H-SF-05-01	Nuclear Assessment Section (NAS) Assessment of HNP Spent Fuel Shipping and Special Nuclear Material Accountability
111309	Station Blackout Program Self Assessment
113663	HNP CAP Program Self Assessment
H-SE-04-01	NAS Assessment of HNP Self Evaluation Program
03-13-QA/QC-H	PES Assessment of HNP NAS
H-SOER/OE-03-0	NAS Assessment of HNP SOERs and Operating Experience