UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

September 26, 2003

Southern Nuclear Operating Company, Inc.
ATTN: Mr. H.L. Sumner, Jr.
Vice President - Hatch Plant
P. O. Box 1295
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT NO. 05000321/2003007 AND 050000366/2003007

Dear Mr. Sumner:

On August 29, 2003, the U. S. Nuclear Regulatory Commission (NRC) completed a team inspection at the Hatch Nuclear Plant. The enclosed report documents the inspection findings which were discussed on August 29, 2003, with Mr. George Frederick and other members of your staff.

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

Based on the sample selected for review, the team concluded that in general problems were properly identified and evaluated. A low threshold for identifying problems was maintained as evidenced by the large number of condition reports entered annually into the corrective action program. The team also noted, however, repetitive equipment related problems that were not resolved in a timely manner. There were two findings of very low safety significance (Green) identified in the report. The two findings are illustrative of problems associated with the effectiveness of corrective actions. These findings were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they have been entered into your corrective action program, the NRC is treating these findings as non-cited violations, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny these non-cited violations, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington DC 20555-0001; and the Resident Inspector at the Hatch Nuclear Plant.

In accordance with 10 CFR 2.790 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) 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/

Brian R. Bonser, Chief
Reactor Projects Branch 2
Division of Reactor Projects

Docket Nos.: 50-321, 50-366
License Nos.: DPR-57, NPF-5

Enclosure: Inspection Report 05000321/2003007 and
05000366/2003007
w/Attachment: Supplemental Information

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-321, 50-366
License Nos.:	DPR-57, NPF-5
Report Nos.:	05000321/2003007 and 05000366/2003007
Licensee:	Southern Nuclear Operating Company, Inc. (SNC)
Facility:	Edwin I. Hatch Nuclear Plant, Units 1 and 2
Location:	P.O. Box 2010 Baxley, Georgia 31515
Dates:	August 11, 2003 - August 29, 2003
Inspectors:	B. Desai, Senior Project Engineer (Team Leader) N. Garrett, Resident Inspector F. Jape, Senior Project Manager T. Kolb, Operator License Examiner
Approved By:	Brian R. Bonser, Chief Reactor Projects Branch 2 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000321/2003-007, 05000366/2003-007; 08/11/2003 - 08/29/2003; Edwin I. Hatch Nuclear Plant, Units 1 and 2; Identification and Resolution of Problems. Two violations were identified that are illustrative of problems with the effectiveness of corrective actions.

The inspection was conducted by a senior project engineer, a senior project manager, a license operator examiner, and a resident inspector. Two Green non-cited violations (NCVs) were 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 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 team identified that the licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution. The licensee maintained a low threshold for identifying problems as evidenced by the continued large number of condition reports (CR) entered annually into the CAP. The team also determined that the licensee was generally prioritizing and evaluating issues properly. The team concluded however, that deficiencies exist in the implementation of effective corrective actions to prevent recurrence. Numerous repetitive equipment problems had not been resolved in a timely manner. Two NCVs involving 10 CFR 50, Appendix B, Criterion XVI, Corrective Actions, were identified. Audits and self-assessments continued to identify issues related to the corrective action program. On the basis of interviews conducted during the inspection, the team identified that personnel at the site felt free to raise safety concerns to management and to resolve issues via the CAP.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. A Green NCV of 10 CFR 50, Appendix B, Criteria XVI, involving inadequate corrective actions for a previously identified NCV was identified. This resulted in the failure to perform a Technical Specification surveillance requirement within the specified frequency.

  This finding is more than minor because if left uncorrected TS required surveillances would not be performed due to procedural inadequacies. Specifically, this finding involved the failure to determine the extent of condition with regard to procedural deficiencies following initial identification of deficiencies in September 2001. In this instance, the individual channel response times could have become greater than the maximum values assumed in the safety analysis associated with the Minimum Critical Power Ratio (MCPR) Safety Limit. This missed surveillance requirement was determined to be of very low safety significance (Green) because the subsequent successful performance of the response time test demonstrated the relays were operable at all times (Section 4OA2).

- Green. A Green NCV of 10 CFR 50, Appendix B, Criteria XVI, was identified for failure to identify that recurring pressure transients during Residual Heat Removal Service Water (RHRSW) pump startup required evaluation.

  This finding is is more than minor because on multiple occasions the piping design pressure was exceeded yet the licensee failed to evaluate the effect of the pressure transient on the system. This issue is of very low safety significance (Green) because it did not actually result in the safety related system being inoperable for greater than the time allowed by plant TS (Section 4OA2).

B. Licensee-Identified Violations

None.

REPORT DETAILS

4. OTHER ACTIVITIES (OA)

4OA2 Problem Identification and Resolution

a. Effectiveness of Problem Identification

(1) Inspection Scope

The team reviewed a sample of Condition Reports (CRs) for issues across the seven cornerstones of safety to determine if problems were identified, characterized, and entered into the Corrective Action Program (CAP). The majority of the CRs reviewed by the team were for the period from July 2001 to August 2003. The team also reviewed maintenance work orders (MWOs), personnel contamination events, emergency preparedness related deficiencies documented in CRs, employee concerns log, Maintenance Rule status for various systems, selected self-assessments, audits, trend reports, operability evaluations, temporary modification log, operator workaround log, and operator logs. The team also reviewed the system health reports for the following systems: Residual Heat Removal (RHR), High Pressure Coolant Injection (HPCI), Reactor Core Isolation Cooling (RCIC), Plant Service Water (PSW), Residual Heat Removal Service Water (RHRSW), Instrument Air, Emergency Diesel Generators (EDGs), Station Batteries (vital and non-vital), Main Control Room Environmental Control (MCREC), Control Room Air Conditioning (AC), and Reactor Recirculation systems. All documents reviewed are listed in the Attachment.

The team reviewed the licensee's evaluations and, if applicable, corrective actions on a selected sample of NRC generic communications, such as NRC Information Notices, Part 21 notices, NRC Generic Letters and other related information to verify that issues had been properly assessed for impact on the plant. The inspectors also reviewed the licensee's evaluation of selected industry experience items including event reports and NRC generic communications to assess if the issues applicable to Plant Hatch were appropriately addressed.

The team reviewed all CRs written during the inspection and attended several plant status meetings and CAP review meetings to observe the evaluation of CRs, the assignment of a Significance Level (SL), and the assignment of a responsible department to evaluate and close the CR. Additionally, the team interviewed numerous plant staff members and conducted walkdowns of several areas of the plant to assess if component deficiencies were appropriately identified and entered into the CAP.

(2) Assessment

The inspectors determined that the licensee was generally effective at identifying problems and entering them into the CAP. The threshold for identifying and initiating CRs was low. Sampled CRs were complete and accurate with some minor exceptions. The CAP is used to identify equipment deficiencies and produce MWOs for equipment repair. For the MWOs reviewed that resulted from equipment deficiencies, the team determined that all had been identified and included in the CAP program.

For the audits and self-assessments reviewed, the inspectors verified that the issues raised were entered into the CAP for resolution.

During a system health report review, the team noted that the cooling tower batteries as well as the 120 -240V uninterruptible ac power system batteries had degraded to approximately 50 percent of design capacity for at least one year. While these two batteries are non class 1E and not required by plant Technical Specifications (TS), they are described in the Updated Final Safety Analysis Report (UFSAR), Chapter 8. According to the UFSAR, the cooling tower batteries provide control power to the cooling tower fan circuit breakers and the uninterruptible ac power system batteries provide power to some non safety related secondary loads. The team determined that the licensee had not performed and documented any reviews such as operator workaround, procedure impact, or 10 CFR 50.59 screening for this extended degraded condition. The inspectors concern was that letting a system degrade to below its design capacity was a defacto design change. Documents reviewed are listed in the Attachment.

Plant walkdowns were performed in the following areas: Unit 1 and Unit 2 Emergency Diesel Generator Rooms (EDG), MCR, Unit 1 HPCI, Unit 1 RCIC rooms and the servcie water intake structure. Deficiencies identified by the team during these walkdowns resulted in the following four CRs.

- CR 2003008955 Valve handle for jacket cooling water isolation valve on 1A EDG broken.
- CR 2003008956 Oil leak on tubing going to turbo charger for 1A EDG.
- CR 2003009011 Pinstripe tape on Unit 1 Control Board falling off.
- CR 2003009423 Instrument Rack isolation valve has broken lockwire in RCIC Room.

None of the above CRs generated as a result of the team walkdown were indicative of a negative trend in problem identification.

b. Prioritization and Evaluation of Issues

(1) Inspection Scope

The team reviewed procedure 10AC-MGR-004-0, Corrective Action Program, to determine the licensee's requirements for prioritizing and evaluating issues. The corrective action program coordinators (CAPCOs) assign each CR a significance level (SL) from SL1 (highest significance) to SL5 (lowest significance) and assign the CR to a responsible department for processing. The inspectors reviewed the daily CRs, attended various CAPCO meetings, and compared the assignment of SL to each CR. The team then reviewed selected CRs to ensure that CR significance level classifications, operability determinations, reportability determinations, degraded and non-conforming condition determinations, cause determinations, and selection of corrective actions were consistent with the significance of the problems described. The team also reviewed the licensee's follow-up of previously identified NCVs to assess prioritization and completion of corrective actions. Documents reviewed are listed in the Attachment.

(2) Assessment

The team determined that the CAPCOs correctly assigned SLs to the CRs sampled by the inspectors. The root cause evaluations for the CRs reviewed were adequate. The licensee was generally effective in prioritizing and processing CRs. Apparent Cause Evaluations reviewed were found to be thorough and well-documented. All of the evaluations were verified to be completed by qualified individuals

Several corporate and mid-cycle audit reports were reviewed by the team. The licensee had initiated numerous CRs as a result of the audit findings and corporate observations. The CRs primarily involved equipment reliability and aging issues. These CRs were designated as SL5 (least significant). However, the licensee's "Top Thirty" issues list had equipment reliability as the highest priority item at Plant Hatch. The top thirty list identifies and highlights plant issues in order of importance, and is used as a management tool to track status of resolution. The lowest priority given to these CRs contrasted with the highest priority assigned to the equipment reliability issues in the top thirty plant issues list. Based on inspector comments, the licensee raised the CRs significance level to SL4.

c. Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed selected CRs to verify that specified corrective actions were timely and effective in resolving the problems described. This sample was based on risk as well as SL. The CRs reviewed also included those resulting from previous NRC violations as well as licensee audits and self assessments, and covered all safety cornerstones. The team also discussed the CAP with plant staff to determine their impression of the CAP's effectiveness in resolving issues. Licensee trend reports, the Top Thirty plant issues list, action items resulting from CRs, system health reports previously mentioned, and CR backlog were also reviewed. The review was predominantly for the year 2002 and 2003, however, some older CRs were also reviewed for long standing issues. The team also reviewed the temporary modification log to determine the reason and licensee plans relating to the temporary modifications. Documents reviewed are listed in the Attachment.

(2) Assessment

(i) General

Based on a review of numerous completed as well as open CRs, discussions with plant personnel, and review of existing plant problems, the team noted that numerous repetitive equipment related problems were not resolved in a timely manner. This concern was also noted by the licensee's own staff during interviews as well as licensee self-assessments and audits. The team noted that the licensee had made progress in corrective action program management from the previous problem identification and resolution inspection conducted in November 2001 (Inspection Report Number 50-321/01-09 and 50-366/01-09). A dedicated CAPCO staff demonstrated ownership in the administration of the corrective action program.

A review of approximately 30 CRs revealed that approximately 70 percent of the repeat events occurred before the corrective actions for the initial SL3 event was corrected. In most of these events, the corrective action could not have been completed due to scheduling conflicts. For the remaining 30 percent, the investigation into the causal factors was complete and a search for common cause was made as part of the root or apparent cause. In most cases the events are well known to the licensee and the planned corrective actions have not been completed for various reasons. The licensee has designated this as an area for improvement.

The temporary modification log was reviewed to determine timeliness in restoring the system/component to original design or plans to convert the temporary modification to a permanent status. Numerous temporary modifications were noted to be beyond the original schedule to be returned to original design status. One temporary modification (1-97-30) on the PSW system was noted to exist since 1997, significantly beyond the original schedule.

The Operations department has developed a Needs and Significant Work Around list which is used to help prioritize scheduling of maintenance and/or system upgrades. Although this list allows the Operations manager to perform an aggregate review for impact on the plant, the team concluded that it loses its effectiveness if items remain on the list for an extended period of time. Five out of the twelve items have been on the list since 2000.

The team noted that CR 2003003966, involved an issue where PSW Valve 2P41-F063, Reactor Building Outlet Isolation valve, indicated open but was actually closed. This SL3 CR documented the failure of the valve operator to stem spline clamp resulting in the valve indicating open when it was closed. The corrective actions included revising the valve maintenance procedure to add a torque specification and verification of valve torque for the stem spline clamp bolts. The inspectors reviewed the completed action items and determined that the revision to the maintenance procedure did not include torque specifications or the requirement to document the final torque. The licensee initiated CR 2003009338 to correct this problem based on the team's observation.

The team reviewed the system health report for the RHRSW system. The system health report detailed a chronic and recurring problem causing degraded PSW flow and pressure to the RHRSW motor upper thrust bearing and upper guide bearing cooling coils. The degraded PSW flow, which has the potential for impacting operability, was caused by corrosion products and decayed organic matter collecting in the cooling water lines and restricting flow through the oil cooler. The cooling water lines required a periodic manual backflush. This condition was identified by the licensee as an operator workaround. Further, the RHRSW system has been a maintenance rule a(1) system since approximately November 1999, due partly to this problem. Despite these problems, the team noted that the licensee had only implemented corrective actions to partially modify the system. The licensee installed a four way valve which allows flushing the cooling lines during pump operation on four of the eight pumps, one pump in each division for each plant.

The team reviewed the maintenance rule report for the control room AC system. The maintenance rule report identified that the system exceeded the allowable maintenance preventable functional failures. One cause for the repetitive failures of the main control room air conditioners was debris clogging the in-line strainers on the pilot valves for the PSW supply valves, 1P41-F1246, 1247, and 1248. These valves supply PSW to the air conditioner condenser/evaporator. The root cause of the clogging was documented in CR 1999006444 and CR 2001001973. The recommended corrective action to prevent recurrence was determined to be the replacement of valves 1P41-F1246, 1247, and 1248 with a modified valve. Further, the system had been a maintenance rule a(1) system since approximately March 2001. Despite these problems, and the recurrence of maintenance preventable functional failures, the licensee had not implemented the recommended corrective actions to prevent the recurring failure of the main control room heating and ventilation system. The licensee initiated CR 2003009539 to document the team's concerns.

In addition to the above observations, the team identified two findings involving effectiveness of corrective actions at Plant Hatch.

(ii) Findings

1. Introduction: A Green NCV involving inadequate corrective actions for a previously identified NCV was identified. This resulted in the failure to perform a TS surveillance requirement within the specified frequency.

   Description: The team reviewed completed corrective actions resulting from previous NCV 50-366/01-05-03, Failure to Prevent Recurrence of Emergency Bus Under-voltage Relay Setpoint Drift. This NCV was identified in September 2001 when the licensee had failed to perform system response time testing for the turbine stop valves (TSV) to the Reactor Protection System (RPS) Channel D relay on Unit 2 as required by TS. Licensee corrective actions for this NCV included revision of associated surveillance procedures, including, procedure 57SV-MNT-023-2S, Response Time Testing of Channel D Relay Logic in Mode 1, to ensure that all required relays associated with the response time testing surveillance (TS SR 3.3.4.1.5) would be tested.

   During this review to assess completion of the licensee's corrective actions, the team identified additional examples where TS required surveillances for response time testing were not being performed. Specifically, the team identified that TS 3.3.4.1.5 required surveillance associated with the Turbine Control Valve End of Cycle Recirculation Pump Trip (TCV EOC- RPT) response time testing had not been performed for the period between February 24, 2000, and February 27, 2003. TS 3.3.4.1.5 requires the TCV EOC-RPT system response time test to be conducted on a 24 month staggered test basis frequency. However, the team determined that the licensee failed to identify that the TCV EOC-RPT system response time testing was not being performed. Consequently, the TS 3.3.4.1.5 required response time testing associated with the TCV to the EOC-RPT logic system was exceeded by approximately 6 months. Additionally, the team identified that procedure 57SV-MNT-021-2S, Response Time Testing of Channel B Relay Logic in Mode 1 was also found to be inadequate to meet the TS testing requirements. Further, the team noted that the current revision of the next scheduled surveillance in 2005 did not contain the steps necessary to correctly test the

TCV EOC-RPT relays. The failure to identify additional missed TS surveillances following initial identification in September 2001 illustrates a weakness the in licensee's corrective action program as the extent of condition was not adequately assessed.

Analysis: This finding is related to the mitigating system cornerstone and is more than minor because if left uncorrected, TS required surveillances would not be performed due to procedural inadequacies. Specifically, the failure to determine the extent of condition with regard to procedural deficiencies following initial identification in September 2001. In this instance, the individual channel response times could have become greater than the maximum values assumed in the safety analysis associated with the MCPR Safety Limit. This missed surveillance requirement was determined to be of very low safety significance (Green) because the subsequent successful performance of the response time test demonstrated the relays were operable at all times.

Enforcement: 10 CFR 50, Appendix B, Criteria XVI, Corrective Actions, requires in part, that measures be established for significant conditions adverse to quality that the cause of the condition is determined and corrective action taken to preclude repetition. Contrary to this requirement, in September 2001, licensee corrective actions were inadequate in that TS required surveillance procedures involving the TCV EOC-RPT system response time test were not revised to prevent future violations of TS surveillance requirements as the licensee failed to determine extent of condition. This resulted in the TCV EOC-RPT System Response test not being conducted for the B and D channels from February 2000 to February 2003. Since this violation is of very low safety significance and the licensee has entered it into the corrective action program as CR 2003009445, this violation is being treated as an NCV in accordance with Section VI.A.1 of the NRC Enforcement Policy and is identified as NCV 50-321/03-07-01 and 50-366/03-07-01, Inadequate Corrective Actions For A Previous Violation.

2. Introduction: A Green NCV was identified for failure to identify that recurring pressure transients during RHRSW pump startup required evaluation.

Description: The team reviewed the 2nd quarter 2003 system health report for the RHRSW system. The system health report described a performance problem on the RHRSW system involving pressure transients that occur during RHRSW system startup. When a RHRSW pump was started, the pressure increase resulted in damage to the air release floats and local pressure gages. This pressure transient was magnified if one RHRSW pump was already running. The team noted that since 1999 nine such pressure transients had caused damage to the air release floats resulting in their replacement. Further, upon discussion with the system engineer, the team noted that the pressure gage, which is rated to 600 psig, had been over-ranged on numerous occasions. Upon further inspection, the team determined that the pressure rating of that portion of the pipe was 525 psig. The team determined that the licensee failed to evaluate the affect on portions of the RHRSW system piping exceeding the design pressure rating each time that the design pressure was exceeded.

Analysis: This finding is related to the mitigating system cornerstone and is more than minor because on multiple occasions the piping design pressure was exceeded, yet the licensee failed to evaluate the implication of the pressure transient on the system. This

issue is of very low safety significance (Green) because it did not actually result in the safety related system being inoperable for greater than the time allowed by plant TS.

Enforcement: 10 CFR 50, Appendix B, Criteria XVI, Corrective Actions, requires in part, that measures be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to the above, the licensee failed to identify that pressure transients resulting in the design pressure being exceeded on portions of the RHRSW system required evaluation. Since this violation is of very low safety significance and the licensee has entered it into the corrective action program as CR 2003009527, this violation is being treated as an NCV in accordance with Section VI.A.1 of the NRC Enforcement Policy: NCV 50-321/03-07-023 and 50-366/03-07-02, Failure to Evaluate Pressure Transients on Safety Related System.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team reviewed numerous audits, self assessments, CRs, MWOs, as well as the Employee Concerns Program files to determine if issues affecting safety were being appropriately addressed. Discussions were held with numerous personnel at various levels in the organization to determine if a work environment and a process existed that was conducive to the identification of safety issues.

(2) Assessment

The team determined that personnel at the site felt free to raise safety concerns. All personnel stated that they would not hesitate to raise safety concerns to their management or through the CR process. They also understood and believed that they could raise issues without fear of retaliation by management. Concerns resolution files for 2002 and 2003 were sampled and the team determined that safety concerns resulted in the initiation of a CR for resolution. The team concluded that a safety conscious work environment existed at the Hatch Nuclear Plant.

4OA6 Meetings, Including Exit

On August 29, 2003, the team presented the inspection results to G. Frederick and other members of his staff who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during this inspection.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

J. Betsill, Engineering Support Manager
V. Coleman, Safety Audit and Engineering Review Supervisor
D. Davis, Plant Administration Manager
R. Dedrickson, Assistant General Manager - Plant Support
G. Frederick, General Manager - Nuclear Plant
M. Googe, Performance Team Manager
J. Hammonds, Operations Manager
W. Kirkley, Health Physics and Chemistry Manager
J. Lewis, Training and Emergency Preparedness Manager
D. Madison, Assistant General Manager - Plant Operations
R. Reddick, Site Emergency Preparedness Coordinator
R. Varnadore, Outage and Planning Manager
J. Thompson, Nuclear Security Manager
S. Tipps, Nuclear Safety and Compliance Manager

NRC Personnel

L. Plisco, Acting Deputy Regional Administrator (DRA) Region II (RII)
K. Landis, Branch Chief, Division of Reactor Projects (DRP) R II
D. Simpkins, Senior Resident Inspector, RII

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Opened and Closed

50-321, 366/03-07-01	NCV	Inadequate Corrective Actions from a previous NCV.
50-321, 366/03-07-02	NCV	Inadequate Corrective Actions for Recurring Issues.

Closed

NONE

Discussed

NONE

Attachment

LIST OF DOCUMENTS REVIEWED

Condition Reports

2002009254 Suggestions to enhance procedure 34SO-E51-001-1/2.
2002009261 Inadequate procedure steps for manual operation of RCIC.
2002011958 NRC not satisfied with operability evaluation for SRV's.
2002008176 Incorrect calculation for Main Steam Line High Flow setpoint.
2003006096 'B' Control Room A/C unit failure to run.
2003004222 No procedural guidance for Pre-conditioning.
2001005805 Undervoltage relay Out-of-Tolerance calibration concern for 1S32/2S32 relays.
2000010801 Suggestion to incorporate a Temp Mod into a procedure for "rod drift".
2003006743 Inadvertent closure of 1G11-F019 PCIV.
2002001683 Rx High Pressure Scram trip setpoint not supported by setpoint methodology.
2002003141 Shroud access cover shows signs of bypass flow.
2002003217 Spring can supports for 1G31-RWCUH-3 bottomed out.
2002003772 Spring can support for 1E11-RHRH-16 improperly adjusted.
2002003347 Spring can support 1E11-RHRH-13 reading unacceptable load.
2002003923 RHR spring can support readings reversed by ISI inspector.
2002006163 Equipment degradation rate not being utilized for monitoring.
2002006166 PM Data not being used by System Engineers.
2002006167 PM "as-found" data not being used to enhance equipment reliability.
2002006169 PM Bases not being utilized effectively.
2002006174 Addresses the amount of equipment problem lists at Hatch.
2002006179 Hatch doesn't have a pro-active aging system for plant equipment.
2000008414 Fire Diesel Storage Tanks have to be cleaned frequently.
2002006223 NRC questioned practice of moving Mode Switch to Refuel after a scram.
2003000051 SDV vent valve exceeded closing time of 60 seconds.
2001007192 Procedure 57SV-MNT-023-2S did not Time Response test RPS relay.
2001007189 Procedure 57SV-MNT-021-2S did not Time Response test RPS relay.
2001007276 Missed Tech Spec surveillance.
2002007793 Operations individual did not make-up Requal test within required time.
2003008814 Addresses overtime deviations and monthly report.
2002011203 Scram discharge volume vent/drain valves failed to immediately re-open.
2002012642 Scram discharge volume vent/drain valves failed to immediately re-open.
2002001241 Received "Scram Air low pressure alarm" while stroking vent valves.
2002001598 RHRSW Flow indicator at remote shutdown panel reading 800 gpm.
2002008590 Transmitter 2T49-N010B would not calibrate.
2003004903 Main Generator PCB's failed to auto open.
2003006987 Main Generator PCB's failed to auto open.
2003004959 Full Scram occurred while resetting half scram.
2003008780 Problems with losing Baxley Loop.
2001006864 Change to intake structure.
2001006969 MSIV Limit switch data not taken.
2001006308 Missed opportunities for improvement during EP Drill.
2002006279 Update training for General SCBA Training.
2002003930 SBGT suction damper, 1T41-F032A, failed OPEN during RPS swap.
2001003595 Inadequate wiring separation for U-2 RHRSW pump motors.
2001004707 Change to intake structure to lift roof plugs without evaluation.

2002010571 Potential vortexing effects for Unit 1 and 2 HPCI suction from CST.
1996002323 1G11-R037, (Radiological Waste) High flow to discharge canal indicator black pen spiking upscale.
1996005000 Trend report for several DCS' submitted for mismatch between various feedflow .
1997002273 Control rod 42-31 was difficult to withdraw from position 00.
1997002791 While investigating difficulty in isolating the instrument air afterfilter cartridge (2P52-D102A) under clearance 2970427, it was discovered that the instrument air dryer bypass valves (2P52-F007A/B) are leaking through.
1997002869 The drywell torus DP recorder is not advancing properly.
1997005522 The acceptance criteria for particle size on instrument air analysis was exceeded for all systems sampled.
1998001029 Shift received a "600 SAT FEEDER BRKR TRIP" alarm and a "STBY ENC PUMP RUNNING" annunciator and 600 volt bus 'B' POT lights indicated hard ground.
1998001449 Repeated personnel contaminations from the "clean area" of the refueling floor.
1998001993 The main turbine EHC servo valve strainers were found to be "dirty" with an unacceptable level of partial buildup.
1998003123 Turbine building chiller B tripped due to the tripping of the condenser water pump 1P63-C004A which in turn tripped due to chiller cooling tower basin low level.
1998005418 Received annunciator RHR HX DIFF PRESS LOW.
1998005887 Water leak on east side of the D/G building.
1998006087 The inlet housing between the inlet filter and first stage compressor element is cracked.
1999000632 2E11C001B, RHRSW pump B exceeded 205 degrees on the thrust bearing and upper guide bearing.
1999000675 Review of maintenance history on RHRSW flow indicator, 2R11R602B, shows 9 deficiency cards written on it since 10-21-96, several have been for the meter indicating flow with both "B" loop pumps secured.
1999002573 For Unit 2, a single failure could result in loss of all low pressure feedwater heaters. The cycle reload analysis did not consider the reduction in feedwater temperature.
1999002800 The turbine building chiller is tripping repeatedly on code 63 (thrust bearing high temperature).
1999002825 Battery charger has a positive ground and will not reset.
1999003779 RCIC turbine tripped for no apparent reason while performing 34SV-E51-002-1S.
1999003879 These HPCI valves are leaking by (not checking) allowing RUS water to drain back into the HPCI barometric condenser.
1999003931 Shift received high bearing temperature on 1B circulating water pump.
1999004885 Received ground on 600 v bus 1D for approximately 30 seconds, then received a trip of bus 1R24-S031.
1999004889 The 2P11-FV003 vent valve located upstream of 2E11-F068A appears to have separated from the main piping.
1999005262 Fume hood 1P33-P105D in the cold lab cannot develop sufficient exhaust flow.
1999005419 The off-gas stack has been struck by lightening on several occasions.
1999006444 Shift received the "PSW CR A/C HDR DIV I PRESS LOW" annunciator when MCR A/C unit 1Z41-B008C was stopped and 1Z41-B008B was started.
1999008052 During a review of the Unit 1 SRV testing reports, it was observed that during final testing of the SRV main S/N: 164/90 the valve failed open.
1999006587 Linkage is about to come apart on the Unit 1 condensate demineralizers.

2000005754 During coast down after turbine trip, found the fault LED flashing on the front of the main turbine #10 bearing vibration card.

2000002616 The drywell recirculation fan 2T47-C001A continued to run when the bearings failed.

2000005376 A review of the preliminary information received from Wyle Labs on testing of the Unit 2 'H' SRV, shows that the valve actuated outside the 3% criteria for the set pressure.

2000007767 At 1818 9-16-00 Unit 1 experienced a trip of station service air compressor 1C.

2001003959 Unit 2 FSAR Figure 3.4-2 is out of date and therefore incorrect. (Intake structure penetration seals)

2002001973 During the Maintenance Rule review for the Main Control Room AHU (air handling unit) for the month of December 2001 and January 2001, identified that the 1Z41-B008C (chiller/condenser) tripped twice during the month of December and once in the month of January.

2001011049 While performing system outage on Unit 1 RCIC per 52PM-E51-004-0S Section 7.7, Step 7.7.10, the bushing could not be removed.

2001011085 During post maintenance testing RCIC surveillance run per 34SV-E51-002-1S, the RCIC turbine failed to start as required.

2001010770 While investigating problem with the upstream traveling water screen, found rust in the instrument air lines.

2001011345 1E11-C001B, RHRSW pump, tripped. Pump was operating in Torus cooling at 400 gpm and approximately 360 psig discharge pressure.

2002000996 The 1B RHRSW air release valve is leaking by.

2002000704 Valves in the PSW system were found out of position rendering the 'B' main control room air conditioner inoperable. Removing the air conditioning unit from service requires entry into a 30 day Limiting Condition for Operation per Technical Specifications. This was evaluated as a human performance error.

2002005972 MWO 10104044 was written to repair logic associated with 1E11-F049. Two contacts were found not making up properly and two spare contacts were used to replace the inoperable contacts. This work was performed under a MWO however this work appears to be a design change.

2002006642 Due to concerns identified in OE 12396, an evaluation was performed and completed on May 24, 2002. The evaluation determined that temporary supports were required to be installed on the RHRSW piping when the pumps were removed. Maintenance history revealed that 2E11-C001B motor was removed and cooling water piping was not supported.

2002006720 This CR is being written to express an Engineering concern that corrective actions are not being performed in a timely manner to support equipment reliability for a leaking valve 1N62-F520B, and dose for this job will not be ALARA.

2002007360 After "B" RHRSW pump (2E11-C001B) was started for Suppression Pool Cooling (SPC), the SO reported the cooling water flow appeared to be abnormally low.

2002012632 Float of air release valve found to be slightly dented from contact with seat.

2003000356 RCIC governor valve positioning. During performance of 34SV-E51-002-1, RCIC pump failed to develop sufficient flow and pressure.

2003000484 CA to install missing RHRSW piping penetration seals at intake structure is, and has been untimely.

2003000628 The 'A' control room air conditioner, 1Z41-B008A is not cooling properly.

2003000683	While investigating CR 2003000628 found chiller 1Z41-B008A low of refrigerant and 1P41-F1246 valves failed to open and regulate PSW flow per design.
2003000905	There is a long standing problem with oil leakage form the 2B RHRSW pump motor.
20030001021	The Section XI Code required VT-2 leakage examination was not performed as required following the welded replacement of 1G11-F020 on MWO 1-02-01295 during RFO 1R20 due to an incorrect interpretation of information contained on drawing PT-16176.
2003001732	The corrective actions of LER 2000-002-01 were incomplete.
2003002365	2A Core Spray Loop was tagged out per Clearance # 2030714 which is in contradiction with Outage Safety Assessment.
2003003966	PSW valve 2P41-F063 was closed when indicated open. This resulted in PSW not being supplied to safety related equipment.
2003004265	Operations of Unit One overhead crane with clearance tag on key switch.
2003005855	The organizational response to the event documented in Severity Level 3 Condition Report 2002007628 appears to be inadequate and untimely, resulting in the same event recurring ten months later on 5/19/2003.
2003007202	The deterioration of underwater vacuum filters in the Spent Fuel Pools (SFP) was first identified in 1997 in the corrective action program, but the corrective actions taken were not effective in addressing the degraded condition of the filters.
2003008559	CR written 8/4/2003, addresses that the corrective actions listed in the apparent cause for LER 1-2002-004 are not contained in the associated CR for the LER and are not contained in and being tracked by the CAP.
2003009338	Written to document AIT 2003202058 being closed out prior to all actions being taken. Procedure 51GM-MNT-022-0, Maintenance of Masonelian Butterfly Valves, Rev. 3.0
2003000363	QA Audit Finding - CARB grading of apparent cause determination reports
2003000364	Include SL3 events as a CAP Performance Indicator
2003000367	Issue a CR when there is indication that the NRC PI will change in a negative direction.
2002007272	The root cause handbook does not specify qualifications for cause determination personnel
2002007271	Examples omitted from SAER CAP audit
2002007268	Cause Determination Handbook has an error regarding code requirements
2002007273	QA audit recommendation that CARB review Effectiveness reviews performed on SL 1 and 2 CRs
2001002601	U1 feedwater sample point does not meet minimum flow requirement
2001004683	Technician entered RCA at point where posted a No Entry At This Point
2002003660	Setpoint for level switch 2G11-NO78 is unattainable
2001004240	Calibration for LPRM past due
2002006329	At least 9 CRs submitted regarding loss of configuration control
2002002036	Water in transmitter due to high humidity
2001006524	Computer room A/C repeat problems
2001006704	Both A and B turbine building chillers tripped
2001007081	RHRSW operability and Discharge pressure degraded
2001007478	EHC oil; temperature controller not functioning properly
2001011090	Failed RCIC surveillance

Maintenance Work Orders

10302299	Craft support for ISI inspections.
10302535	Refueling Outage (RFO) activity, conduct drywell walkdown during reactor pressure vessel (RPV) leak test
10302140	RFO activity, install and remove temporary radiation shielding
10301925	Lower roof plugs on intake structure, 1 year preventative maintenance (PM)
10203507	Remove roof plugs on intake, 1 year PM
10202619	Install roof plugs on intake structure, 1 year PM
10202530	Repair grout on base plate for 1E11-1SH5A pipe support
10202313	Dredge river in front of intake structure
10201400	Spring can 1E11-RHRH-13 is out of adjustment
10201352	Spring can 1E11-RHRH-16 is out of adjustment
10201178	Spring can 1E11-RHRH-13 is out of adjustment
10103695	RFO activity, install and remove temporary shielding
10102886	Replace surge pac wiring
10100720	Replace existing breaker with refurbished spare
10300104	Repair/refurbish spare pump at Johnson Pump Company
10202815	Clean and flush listed valves, seal water supply lines, seals, and tubing
10202679	Disconnect and flush motor cooling lines
10202673	Disconnect water lines from motor cooling coils to determine if flow is restricted
10202595	Perform PM on frame 2 of 1R22S005
10202588	Inspect/lubricate operators of listed valves, 36 month PM
10202587	Perform 18 month PM on pump motor
10202527	Clean and paint unistrut for 4160 volt cables for motors
10202294	Install new RHRSW motor cooling water 4-way backflush valve
10201982	Tighten screws on upper half of motor coupling
10200322	Turn seal water flow indicator so it is visible
10104702	Build spare pump per 52PM-E11-005-0S
10302114	Valve 1E11-F217D is leaking by
10202895	Inspect/lubricate operator of listed valves, 36 month PM
10202893	Perform 18 month PM on pump motor
10202864	Disassemble pump removed form system, prepare for shipment off-site
10202816	Clean and flush listed valves, seal water supply lines, seals, and tubing
10202796	Clean seal flow sight glass
10202674	Disconnect water lines from motor cooling coils to determine if flow is restricted
10202295	Install new RHRSW motor cooling water 4-way backflush valve
10202264	Repair seal water leak at union near 1X42-F077B
10202263	The top flange of the air release valve is blowing water out of the back side during pump operations
10202255	Replace pump support bolts
10202243	The flex conduit for the pump motor is damaged and needs repair
10202233	Fabricate and install a temporary pipe support for the motor cooling water lines
10202053	Install a 1" schedule 80, 304 or 316 stainless steel ‘Q’ piping for the mechanical seal
10202008	While performing intake suction pit inspection found restraint on 1E11-C001B bolts on the south side missing
10200324	Remove and clean seal flow sight glass
10104699	Pump tripped during operation, troubleshoot pump

10104405	The pump flow and pressure are low on start
20301923	Air supply line to 2P41-F037A has a small leak
20301604	Perform 3 year PM on room cooler 2T41-B003A
20301242	Nut holding conductor to knife switch 10 inside case for relay 2S32K797-2 found off
20203119	Perform 3 year PM on room cooler 2T41-B003B
20202615	Change oil and megger pump motor per applicable procedure
20202598	Megger and lubricate motor per applicable procedure, room cooler motor 1T41-B003A
20202595	Megger and lubricate motor per applicable procedure, room cooler motor 1T41-B003B
20201325	Inspect and lubricate the operator of listed valves, 36 month PM
20200879	Repair insulation on suction side of pump
20200771	Clean pump seal water cooler, 18 month PM
20301603	Perform 3 year PM on 2T41-B002A, pump room cooler motor
20301298	Perform breaker PM on Frame 8 of 2R22S006
20301297	Inspect undervoltage trip attachment on Frame 8 of 2R22S006
20300971	Rig and remove pump motor from southeast diagonal for shipment off-site for 10 year PM
20203155	Remove and reinstall interferences in support of 10 year PM
20202722	Remove and reinstall interferences in support of 10 year PM
20202624	Change motor oil and megger per applicable procedure
20202596	Megger and lubricate motor 2T41-B002B per applicable procedure
20202591	Megger and lubricate motor 2T41-B002A per applicable procedure
20202377	Remove motor and perform 10 year PM
20201328	Inspect and lubricate operator of listed valves, 36 month PM
20200946	Rig and remove pump motor form southeast diagonal
20200774	Clean RHR pump seal water cooler, 18 month PM
20200279	Inspect undervoltage trip attachment on Frame 8 of 2R22S006
10302299	RFO activity, Provide craft support for ISI examination
10302535	RFO activity, conduct drywell walkdown during RPV leak test
10301609	Remove snubber 1E41-HTVB-H2 for functional test
10300835	Functional test and calibrate the Woodward HPCI governor controls
10203185	Repair insulation on HPCI steam turbine
10202830	Realign pump discharge piping on vertical support E41-HPCIH-701
10202813	HPCI oil pressure is high, remove and clean restricting orifice
10201021	While performing HPCI LSFT, logic associated with contacts 7 and 8 did not work
10200545	Replace insulation on cooling water lines
10200017	Install test flange at penetration 1T23-X221A for LLRT
20301131	During the 165 # low pressure HPCI run during startup, control room indication showed no RPM’s during pump run
20202739	RFO activity, perform drywell walkdown during RPV leak test
20201915	RFO activity, provide craft support for ISI examination
20200526	Steam leak on HPCI drain pipe to main condensor
20200978	Install test flange at penetration 1T23-X221B for LLRT
20200748	Replace drain line piping to main condenser downstream of 2E41-F095
20103496	Repair damaged insulation on piping in HPCI pump room
10302299	RFO activity, provide craft support for ISI examination

10302535 RFO activity, perform drywell walkdown during RPV leak test
10302534 RFO activity, perform steam chase walkdown during startup
10203655 Perform functional test and calibrate Woodward governor, 18 month PM
10201085 While performing Unit 1 RCIC LSFT, the logic for the 3 and 7 contacts did not work on relay 1B21-K1B
10201084 While performing Unit 1 RCIC LSFT, the logic for the 3 and 7 contacts did not work on relay 1B21-K1A
10200226 CR 2000010898 identified water leaking through a crack in the south wall of the RCIC diagonal on the 87 foot level. The water was cleaned up but the crack was not repaired
10200076 During resolution of CR 2002000241, the auxiliary steam spool piece was found bolted to line which is not in accordance with the drawing
10200032 During system outage work unable to remove 3 inch bushing
10200019 Install test flange at penetration 1T23-X221C for LLRT
10104704 Adjust null voltage to EGR actuator
10104656 System failed to attain rated flow and pressure during surveillance
10100006 Perform calibration of gauges on the attached list
20202739 RFO activity, perform drywell walkdown during RPV leak test
20202689 RFO activity, perform steam chase walkdown during startup
20201915 RFO activity, provide craft support for ISI examination
20201763 Perform functional test and calibrate the Woodward RCIC turbine controls
20200980 Install test flange at penetration 2T23-X221C for LLRT
20200102 Repair RCIC spool piece and reinstall
20200079 Steam leak in main steam chase on RCIC steam supply line
20102897 Replace insulation on RCIC steam turbine
20102895 RCIC EGR has small oil leak
10303377 Replace phone on exterior of intake structure
10303258 Perform intake suction pit inspection, 12 month PM
10302553 Dredge river bed in front of intake structure
10302065 Clean intake suction bay
10301925 Lower roof plug, 1 year PM
10203507 Remove roof plug, 1 year PM
10203073 Perform intake suction pit inspection, 12 month PM
10202529 Clean and paint unistrut holding cables leading to 1E11ND52A/C
10202619 Install roof plugs, 1 year PM
10202176 Install new tough boom system
10202175 Install pilings at intake in the river for tough boom system
10202312 Clean sediment and trash from intake suction pit
10202311 Construct temporary platform for use during valve operations
10200448 Remove roof plugs, 1 year PM

Documents and Procedures

34SV-E41-002-1S, Rev 24.6, HPCI Pump Operability.
57SV-MNT-022-2, Rev 1, Relay Logic Response Time Testing in Mode 1 Channel C
57SV-MNT-023-2S, Rev 2, Response Time Test of Channel D Relay Logic in Mode 1
72TR-TRN-002-0, Rev 11, License Continuing Training Program
34AB-C71-001-2, Rev 9.9, Scram Procedure
34SV-SUV-016-1S, Cold Shutdown Valve Operability

34SO-E41-001-1, Rev 20.3, High Pressure Coolant Injection (HPCI) System
10AC-MGR-004-0, Corrective Action Program
AG-MGR-64-1198N, Condition Reporting Processing
Cause Determination Handbook, Revision 16, June 2003
CAP Process Expectations Handbook, Revision 15, July 2003
Trend Coding and Analysis Handbook, Revision 5, August 2002
Hatch Nuclear Plant Major Issues Status Report, August 22, 2003 Edition
LG-ENG-007-0703, May 2003 Maintenance Rule Report
51GM-MNT-022-0, Maintenance of Masoneilan Butterfly Valves
LER 2003-001-0, Plant Service Water Valve Found Closed Requiring Emergency Core Cooling System to be Declared Inoperable
System Health Report, Residual Heat Removal System, 1E11/2E11, 2nd QTR 2003
Plant Modification Proposal, 03-ES-06, The RHRSW air release valves should be removed.
02-CA-2, Audit of Corrective Action Program, January 14, 2003
02-CA-1,.Audit of Corrective Action Program, July 18, 2002
Self-Assessment, Corrective Action Program, July 10-14, 2000
SA03-ENG-03, Plant Hatch Battery Program, 7/7/2003 - 7/11-2003
00-CA-2, Audit Report of CA Program Effectiveness, 1/4/01
Mid-INPO Cycle Assessment, MICA, February 2002
00AC-REG-004-0, Operating Experience Program, Rev. 2.0
10AC-MGR-004-0, Corrective Action Program, Rev 19.2
AG-MGR-63-0598, Self-Assessment Process, Rev 7
NMP-GM-003, Self Assessment Procedure, Rev 1.0
03RC-CPL-002-OS, Defects and Noncompliance, Rev 2

Plant Drawings

A-11000, Sheet E11C
H-17806, Sh 1 of 14, Nuclear Steam Supply Shutoff System A71, Unit 1
H-17812, Sh 7 of 14, Nuclear Steam Supply Shutoff System A71, Unit 1
H-27613, Sh 9 of 16, Reactor Protection System 2C71, Unit 2
H-27850, Sh 16 of 16, Reactor Protection System 2C71, Unit 2
H-27614, Sh 10 of 16, Reactor Protection System 2C71, Unit 2
H-27611, Sh 7 of 16, Reactor Protection System 2C71, Unit 2

Operability Evaluations/Licensing Requirements

LR-REG-005-0103 - MCREC Operability during work on 1Z41-F008C.
LR-REG-004-0103 - Unit 2 RHR & CS Pump Room Cooler (2T41B002B).
LR-REG-013-0203 - Maintenance work for valve 1E11-F070.
LR-REG-003-1202 - Support Installation Configuration of 8 Unit 1 Yokagawa Recorders.
LR-REG-007-1102 - Unit 2 Diesel Generator “2C”.
LR-REG-006-1102 - Unit 1 Offgas Post Treatment Instrument 1D11K615A.
LR-REG-004-1102 - Unit 1 Diesel Generator “A”.
LR-REG-011-1002 - RHRSW Pumps 1(2)E11-C001A,B,C,D.
LR-REG-007-1002 - Inconsistent As-Left Stroke Times: SRV’s 1F, 1J and 1L.
LR-REG-004-1002 - Unit 1 Diesel Generator “1C”.
LR-REG-002-1002 - SRV Operating Order OO-01-0702S and NSAC Letter LR-REG-002-0702.
LR-REG-001-1002 - Unit 1 HPCI Overspeed Trip Valve 1E41-F3082
LR-REG-008-0902 - Unit 2 HPCI Control Logic.

LR-REG-007-0902 - RHRSW Pumps 1(2)E11-C001A,B,C,D.
LR-REG-006-0902 - Unit 1 HPCI Turbine Overspeed Control Valve.
LR-REG-005-0902 - Unit 2 HPCI Control Logic.
LR-REG-002-0902 - Unit 2 HPCI Oil Tank Level Low Alarm circuit.
LR-REG-001-0203 - Unit 2 Diesel Generator "2A".
LR-REG-011-0203 - Section XI Component, Valve 1G11-F020.
LR-REG-002-0203 - Section XI Component, Valve 1G11-F020.
LR-REG-003-0203 - Support Installation Config. of Unit 2 Yokogawa Recorder 2B21-R623B.
LR-REG-009-0203 - Kilowatt Meter installed for 2R43-R615C.
LR-REG-002-1202 - Unit 1 HPCI Flow Control Logic.

Action Items

2002200807 - Add position indication lights for valves 1N62F133A/B.
2001200661 - Monitor vacuum breaker performance during one cycle.
2003202568 - Engineering investigate need for different switch or a pushbutton.
2003203355 - Engineering review EHC system for aging or cal problems.
2003200584 - Replace valve 1E41-F500.
2003203243 - Complete MWO 1-03-03301.
2003201722 - Revise rigging procedure.
2003202524 - Provide instruction to start area cooler when putting cond pump into service.
2003200877 - Establish goals for Radwaste.
2003201221 - Remove/replace reference to Nucleus in procedure 29IS-CSC-003-0.

NRC Information Notices

IN 2003-004, Summary of Fitness for Duty Program Performance Reports for Calender Year 2000
IN 2002-024, Potential Problems with Heat Collectors on Fire Protection Sprinklers
IN 2002-025, Challenge to Licencee' Ability to Provide Prompt Public Notification and Information During an Emergency Preparedness Event in 2002-026, Failure of Steam Dryer Cover Plate After a Recent Power Uprate
IN 2002-029, Recent Design Problems in Safety Functions of Pneumatic Systems
IN 2002-032, Electro migration on Semiconductor Integrated Circuits
IN 2002-034, Failure of Safety Related Circuit Breaker External Auxiliary Switches at Columbia Generating Station
IN 2003-001, Failure of a Boiling Water Reactor Target Rock Main Steam Safety/Relief Valve
IN 2002-003, Highly Radioactive Particle Control Problems During Spent Fuel Pool Clean out
IN 2002-004, Wire Degradation at Breaker Cubicle Door Hinges
IN 2002-005, Foreign Material in Stand by Liquid Control Storage Tanks
IN 2002-006, Design Vulnerability in BWR Reactor Vessel Level Instrumentation Backfill Modification
IN 2002-007, Use of Sodium Hypochlorite for Cleaning Diesel Fuel Oil Supply Tanks
IN 2002-008, Pump Shaft Damage due to Excessive Hardness of Shaft Sleeve
IN 2002-012, Submerged Safety Related Electrical Cables
IN 2002-014, Ensuring a Capability to Evacuate Individuals, Including Members of the Public, from the Owner Controlled Areas
IN 2002-015, Foreign Experience with Hydrogen Combustion Events in Foreign BWR Piping
IN 2002-018, Effect of Adding Gas into Water Storage Tanks on the Net Positive Suction Head for Pumps

IN 2001-019, Improper Maintenance and assembly of Automatic Oil Bubblers
IN 2002-001, Metalclad Switchgear Failures and Consequence of Loss of Offsite Power
IN 2001-015, Non-conservative Errors in Minimum Critical Power Ratio Limits

Part 21 Reports
2002-018, Rockbestos Suprenant Corp., 1/14/03
GE SILs 383, 473, 477, 534, Main Steam Isolation Valve Disc Separated from Stem, 1/7/03
2003-08, Electrak Corp, 3/7/03
2002-05, General Electric, 2/18/02
2002-04, General Electric, 4/3/02
GE SIL 642, General Electric, 4/12/02