



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

April 16, 2008

Mr. Jeffrey B. Archie
Vice President
South Carolina Electric & Gas Company
Virgil C. Summer Nuclear Station
P.O. Box 88
Jenkinsville, SC 29065

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000395/2008002 AND ANNUAL ASSESSMENT MEETING
SUMMARY

Dear Mr. Archie:

On March 31, 2008, the United States Nuclear Regulatory Commission (NRC) completed an inspection at your Virgil C. Summer Nuclear Station. The enclosed integrated inspection report documents the inspection results, which were discussed with you and other members of your staff on April 8, 2008.

The inspection examined activities conducted under your license as they relate to safety and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel. Based on the results of this inspection, no findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any) will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Eugene F. Guthrie, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Docket No.: 50-395
License No.: NPF-12

Enclosure: NRC Integrated Inspection Report 05000395/2008002
w/Attachment: Supplemental Information

cc w/encl: (See next page)

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| DATE | 4/ /2008 | 4/ /2008 | 4/ /2008 | 4/ /2008 | 4/ /2008 | 4/ /2008 | 4/ /2008 |
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3

Letter to Jeffrey B. Archie from Alan J. Blamey April 16, 2008 Date of Letter

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION - NRC INTEGRATED INSPECTION
REPORT 05000395/2008

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No.: 50-395

License No.: NPF-12

Report No.: 05000395/2008002

Licensee: South Carolina Electric & Gas (SCE&G) Company

Facility: Virgil C. Summer Nuclear Station

Location: P. O. Box 88
Jenkinsville, SC 29065

Dates: January 1, 2008 – March 31, 2008

Inspectors: J. Zeiler, Senior Resident Inspector
J. Polickoski, Resident Inspector

Approved by: Eugene F. Guthrie, Chief
Reactor Projects Branch 5
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000395/2008-002; 01/01/2008 - 03/31/2008; Virgil C. Summer Nuclear Station;
Routine Integrated Inspection Report.

The report covered a three-month period of inspection by two resident inspectors. No findings of significance were identified by the NRC. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 4, dated December 2006.

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified.

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status

The unit began the inspection period at 100 percent rated thermal power (RTP). On January 24, 2008, a manual reactor trip was initiated from full power due to decreasing "C" steam generator water level following the malfunction of the associated loop feedwater flow control valve. Shortly after the manual reactor trip, the "B" circulating cooling water pump motor upper bearing increased in temperature resulting in the pump being manually tripped. The reactor was restarted on February 1 and the unit returned to 100 percent RTP on February 2. The unit remained at or near full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

Seasonal Weather Susceptibilities

a. Inspection Scope

The inspectors performed two readiness inspections for impending adverse weather conditions. These conditions involved the following:

- The onset of actual extreme cold weather conditions that existed during the week of January 1, 2008. The inspectors verified that the licensee implemented applicable sections of operations administrative procedure (OAP)-109.1, "Guidelines for Severe Weather," for the period of extreme cold weather. The inspectors walked down accessible areas of risk-significant equipment including the refueling water storage tank and condensate storage tank and verified that associated freeze protection equipment was functional.
- A tornado warning that was declared for the area on March 4, 2008. The inspectors verified the licensee had implemented applicable sections of OAP-109.1, "Guidelines for Severe Weather," and walked down outside areas of the plant to verify that loose debris was properly addressed to prevent adverse interaction with important plant equipment.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

Partial System Walkdowns

a. Inspection Scope

The inspectors conducted three partial equipment alignment walkdowns (listed below) to evaluate the operability of selected redundant trains or backup systems with the other train or system inoperable or out of service (OOS). Correct alignment and operating conditions were determined from the applicable portions of drawings, system operating procedures (SOPs), final safety analysis report (FSAR), and technical specifications (TS). The inspections included review of outstanding maintenance work orders (WOs) and related condition reports (CRs) to verify that the licensee had properly identified and resolved equipment alignment problems that could lead to the initiation of an event or impact mitigating system availability. Documents reviewed are listed in the Attachment to this report.

- “B” emergency diesel generator (EDG) (while “A” EDG was OOS for scheduled quarterly preventive maintenance);
- “B” high head safety injection (HHSI) pump (while “A” HHSI pump was OOS for scheduled preventive maintenance); and,
- “B” EDG (while “A” EDG was OOS for scheduled troubleshooting for a governor speed oscillation issue).

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Fire Protection - Tours

a. Inspection Scope

The inspectors reviewed recent CRs, WOs, and impairments associated with the fire protection system. The inspectors reviewed surveillance activities to determine whether they supported the operability and availability of the fire protection system. The inspectors assessed the material condition of the active and passive fire protection systems and features and observed the control of transient combustibles and ignition sources. The inspectors conducted routine inspections of the following ten areas (respective fire zones also noted):

- 1DA switchgear room (fire zone IB-20);
- Relay room including solid state protection system instrumentation and inverters (fire zones CB-6, 10, and 12);
- Intermediate building 412' general area (fire zones IB-25.1.1, 1.2, 1.3 and 1.5);
- “A” and “B” EDG rooms (fire zones DG 1.1/1.2 and DG 2.1/2.2);

- “A,” “B,” and “C” heating, ventilation, and air conditioning (HVAC) chill water system rooms (fire zones IB-7.2, 9, and 23.1);
- “A,” “B,” and “C” Battery and charger rooms (fire zones IB-2, 3, 4, 5, and 6);
- Turbine driven emergency feedwater (TDEFW) pump room (fire zone IB-25.2);
- “A,” “B,” and “C” charging pump rooms (fire zones AB-1.5, 1.6, 1.7);
- Auxiliary building 397' and 388' elevations (fire zone AB-1.4); and,
- Auxiliary building 374' elevation (fire zones AB-1.1, 1.2, and 1.3).

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification Program

Resident Inspector Quarterly Review

a. Inspection Scope

On January 28, 2008, the inspectors observed performance of senior reactor and reactor operators on the plant simulator during just-in-time simulator training as part of preparation for actual plant restart from a manual reactor trip event. The training scenario involved plant reactor startup, operation up to three percent RTP with only one circulating cooling water pump in operation, loss of all circulating cooling water transient, main turbine high vibration transient with turbine/reactor trip, and loss of main condenser vacuum. From the simulator control room, the inspectors verified proper procedure usage, communications, and operator command and controls were in accordance with licensee administrative procedural requirements. The inspectors evaluated the adequacy of the licensee's conduct of the simulator critique performance and verified that any significant training performance issues were captured by the licensee in their corrective action program (CAP).

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors evaluated two equipment issues described in the CRs listed below to verify the licensee's effectiveness of the corresponding preventive or corrective maintenance associated with structures, systems or components (SSCs). The inspectors reviewed maintenance rule (MR) implementation to verify that component and equipment failures were identified, entered, and scoped within the MR program. Selected SSCs were reviewed to verify proper categorization and classification in accordance with 10 CFR 50.65. The inspectors examined the licensee's 10 CFR 50.65(a)(1) corrective action plans to determine if the licensee was identifying

issues related to the MR at an appropriate threshold and that corrective actions were established and effective. The inspectors' review also evaluated if maintenance preventable functional failures (MPFF) or other MR findings existed that the licensee had not identified. The inspectors reviewed the licensee's controlling procedures, i.e., engineering services procedure (ES)-514, "Maintenance Rule Implementation," and the Virgil C. Summer "Important To Maintenance Rule System Function and Performance Criteria Analysis," to verify consistency with the MR requirements.

- CR-07-02640, Control room emergency ventilation outside air intake isolation valve failed to stroke closed during surveillance testing; and,
- CR-07-02787, "A" EDG tachometer (speed switch) read less than zero during surveillance testing.

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors evaluated, as appropriate, for the five selected work activities listed below: (1) the effectiveness of the risk assessments performed before maintenance activities were conducted; (2) the management of risk; (3) that, upon identification of an unforeseen situation, necessary steps were taken to plan and control the resulting emergent work activities; and, (4) that emergent work problems were adequately identified and resolved. The inspectors evaluated the licensee's work prioritization and risk characterization to determine, as appropriate, whether necessary steps were properly planned, controlled, and executed for the planned and emergent work activities listed below:

- Work Week 2008-1, risk assessment for scheduled maintenance and/or testing on the "B" residual heat removal (RHR) pump and associated room ventilation fan, and online leak repair using sealant injection of four valves;
- Work Week 2008-2, risk assessment for scheduled maintenance and/or testing on the "C" safety related chiller, "B" motor driven emergency feedwater (MDEFW) pump, "C" centrifugal charging pump, fuse re-installation for the intermediate building sump feedwater isolation actuation logic controls, and emergent maintenance on the "A" circulating cooling water pump;
- Work Week 2008-3, risk assessment for scheduled maintenance and/or testing for the "A" EDG quarterly preventive maintenance, "A" RHR and containment spray pump testing, and "A" train solid state protection system testing;
- Work Week 2008-7, risk assessment for scheduled maintenance and/or testing on "A" EDG speed oscillation troubleshooting, "A" service water (SW) valve testing, "C" turbine closed cycle cooling fan replacement, "A" containment spray pump testing, and "A" train slave relay testing; and,

- Work Week 2008-9, risk assessment for scheduled maintenance and/or testing on “B” EDG 24-hour load testing, “B” relay room cooling supply fan preventive maintenance, “C” SW pump preventive maintenance, and service water to emergency feedwater crossover valve testing.

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed five operability evaluations affecting risk significant mitigating systems to assess, as appropriate: (1) the technical adequacy of the evaluations; (2) whether operability was properly justified and the subject component or system remained available, such that no unrecognized increase in risk occurred; (3) whether other existing degraded conditions were considered; (4) that the licensee considered other degraded conditions and their impact on compensatory measures for the condition being evaluated; and, (5) the impact on TS limiting conditions for operations and the risk significance in accordance with the Significance Determination Process (SDP). Also, the inspectors verified that the operability evaluations were performed in accordance with station administrative procedure (SAP)-209, “Operability Determination Process,” and SAP-999, “Corrective Action Program.”

- CR-08-00043, “C” steam generator feedwater flow deviation due to sticking feedwater control pilot valve (FCV-498);
- CR-08-00251, letdown flow transmitter (FT-150) found out of tolerance impacting the calculated maximum thermal power limit;
- CR-08-00303, charging pump flow control valve (FCV-122) modulated below minimum flow following manual reactor trip;
- CR-08-00348, inadequate testing of all feedwater isolation valve accumulator check valves due to inadequate test configuration issue; and,
- CR-08-01111, evaluation of the equipment qualification of the instrumentation and control air handling unit (XAH0048) and associated duct work to maintain the control room pressure boundary.

b. Findings

No findings of significance were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following equipment change that was considered a temporary modification. The inspectors evaluated the change documents and

associated 10 CFR 50.59 reviews against the system design basis documentation and FSAR to verify that the changes did not adversely affect the safety function of safety systems. As part of this review, the inspectors verified that the changes were developed and implemented in accordance with procedures ES-526, "Engineering Controls of On-Line Sealant Repairs," SAP-300, "Conduct of Maintenance," and general test procedure GTP-215, "Troubleshooting Plan Development."

- Nonstandard repair of valve steam leaks using on-line sealant injection and re-injection for valves FV03208-FW and XVG02818A-MS including review of 10 CFR 50.59 evaluations and engineering reviews under procedure ES-526 (WOs 0600173 and 0707431).

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

For the six maintenance activities listed below, the inspectors reviewed the associated post-maintenance testing (PMT) procedures and either witnessed the testing and/or reviewed test records to assess whether: (1) the effect of testing on the plant had been adequately addressed by control room and/or engineering personnel; (2) testing was adequate for the maintenance performed; (3) test acceptance criteria were clear and adequately demonstrated operational readiness consistent with design and licensing basis documents; (4) test instrumentation had current calibrations, range, and accuracy consistent with the application; (5) tests were performed as written with applicable prerequisites satisfied; (6) jumpers installed or leads lifted were properly controlled; (7) test equipment was removed following testing; and, (8) equipment was returned to the status required to perform its safety function. The inspectors verified that these activities were performed in accordance with general test procedure (GTP)-214, "Post Maintenance Testing Guideline."

- PMT for "A" EDG quarterly preventive maintenance (WOs 0715312, 0715241, 0714344, 0714342, 0716842, 0715224, 0713614, 0715623, and 0716480);
- PMT for "C" steam generator power operated relief valve stroke time failure (WO 0800611);
- PMT for "A" EDG governor speed oscillation troubleshooting (WO 0717884);
- PMT for "C" SW pump preventive maintenance (WOs 0508843 and 0716089);
- PMT for "A" control room emergency ventilation emergent boundary leakage repair (WO 0802866); and,
- PMT for "A" steam generator steam flow differential pressure transmitter following failed multiplier-divider card (WOs 0801562 and 0803066).

b. Findings

No findings of significance were identified.

1R20 Refueling and Other Outage Activities

a. Inspection Scope

The inspectors performed the inspection activities described below for the outage following a manual reactor trip. The outage began on January 24 and ended on February 1.

The inspectors confirmed that, when the licensee removed equipment from service, defense-in-depth was maintained commensurate with the outage risk control plan for key safety functions and applicable TS, and that configuration changes due to emergent work and unexpected conditions were controlled in accordance with the outage risk control plan. Documents reviewed are listed in the Attachment to this report.

During the outage, the inspectors specifically:

- Reviewed the status and configuration of important plant safety equipment to verify that those systems met TS requirements and the licensee's outage risk control plan;
- Performed initial post-shutdown containment walkdown and reviewed licensee control of containment entries to verify that the licensee controlled these activities in accordance with the appropriate TS and procedures, and could achieve and maintain containment closure and integrity for the required conditions; and,
- Reviewed selected control room operations to verify that the licensee was controlling reactivity in accordance with the TS.

The inspectors reviewed the licensee's plans for changing plant configurations to verify, on a sampling basis, that TS, license conditions, and other requirements, commitments, and administrative procedure prerequisites were met prior to these changes.

The inspectors reviewed various problems that arose during the outage to verify that the licensee was identifying problems related to outage activities at an appropriate threshold and entering them into the CAP.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

The inspectors observed and/or reviewed the six surveillance test procedures (STPs) listed below to verify that TS surveillance requirements were followed and that test acceptance criteria were properly specified to ensure that the equipment could perform its intended safety function. The inspectors verified that proper test conditions were established as specified in the procedures, that no equipment preconditioning activities occurred, and that acceptance criteria were met.

In-Service Tests:

- STP-220.002, "Turbine Driven Emergency Feedwater Pump and Valve Test," Revision 7;

Reactor Coolant System (RCS) Leakage:

- STP-114.002, "Operational Leakage Calculation," Revision 11, Change G;

Other Surveillance Tests:

- STP-345.040, "Engineered Safety Feature Actuation Slave Relay Test for Train A XPN-7011," Revision 11;
- STP-248.002, "Feedwater Isolation Valves Actuator Air Supply Test," Revision 6, Change C;
- STP-125.009, "Diesel Generator B 24 Hour Load Test," Revision 8; and,
- STP-125.013B, "Diesel Generator B Semiannual Operability Test," Revision 0.

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

On February 13, 2008, the inspectors reviewed and observed the performance of a licensed operator requalification simulator drill that involved a steam-line break inside containment scenario (LOR-SA-012E). This scenario required a Notice of Unusual Event to be declared. The inspectors assessed emergency procedure usage, emergency plan classifications, and notifications. The inspectors attended the drill critique to ensure that any drill performance weaknesses were entered into the licensee's CAP.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

Cornerstone: Initiating Events

The inspectors verified the accuracy of the licensee's PI submittals listed below for the period January 1, 2007, through December 31, 2007. The inspectors used the performance indicator definitions and guidance contained in Nuclear Energy Institute (NEI) 99-02, "Regulatory Assessment Performance Indicator Guideline," Revision 5, and licensee procedure SAP-1360, "NRC and INPO/WANO Performance Indicators," to check the reporting for each data element. The inspectors sampled licensee event reports (LERs), operator logs, plant status reports, CRs, and performance indicator data sheets to verify that the licensee had properly reported the PI data. The inspectors discussed the PI data with licensee personnel associated with performance indicator data collection and evaluation.

- Unplanned Scrams per 7000 Critical Hours;
- Unplanned Power Transients per 7000 Critical Hour,
- Unplanned Scrams with Complications

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Review of Items Entered into the Corrective Action Program

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's corrective action program. This review was accomplished by either attending daily screening meetings that briefly discussed major CRs, or accessing the licensee's computerized corrective action database and reviewing each CR that was initiated.

.2 Annual Sample Review

a. Inspection Scope

The inspectors reviewed one issue in detail to evaluate the effectiveness of the licensee's corrective actions for important safety issues documented in CR 07-02066 and CR 07-02444. This review was associated with the licensee's evaluation of an operating experience event involving an invalid and spurious safety injection actuation with a failure to reset. The inspectors assessed whether the issue was identified;

documented accurately and completely; properly classified and prioritized; adequately considered extent of condition, generic implications, common cause, and previous occurrences; adequately identified root causes/apparent causes; and identified appropriate corrective actions. Also, the inspectors verified the issue was processed in accordance with SAP-999, "Corrective Action Program."

b. Findings and Observations

No findings of significance were identified.

4OA3 Event Followup

.1 Manual Reactor Trip Due to Rapidly Decreasing Steam Generator Levels Following Failure of "C" Feedwater Flow Control Valve

a. Inspection Scope

The inspectors reviewed the January 24, 2008, manual reactor trip due to rapidly decreasing water level in the "C" steam generator following the failure of the "C" feedwater flow control valve. The inspectors responded to the control room immediately following the trip and observed operator actions to stabilize the plant and observed aspects of the licensee post trip evaluation. In addition, the inspectors reviewed CR-08-00292 associated with the event, plant logs, plant computer data, and interviewed operations personnel to assess the cause of the event, confirm plant equipment performed as required, and ensure that operator actions were appropriate and in accordance with required operating, alarm response, abnormal, and emergency procedures.

b. Findings

No findings of significance were identified.

.2 (Closed) LER 05000395/2008001-00: Manual Reactor Trip Due to Low Steam Generator Level Caused By Feedwater Flow Control Valve Malfunction.

The inspectors reviewed the subject LER and applicable condition report (CR-08-00292) associated with the issue to verify the LER accuracy and appropriateness of the specified corrective actions. No new findings of significance were identified. This LER is closed.

.3 (Closed) LER 05000395/2007003-01: Clogged Reactor Building Cooling Unit Drain Line Results in Violation of LCO 3.4.6.1.

The inspectors reviewed the subject LER and applicable condition reports (CR-07-02167 and CR-07-03332) associated with the issue to verify the LER accuracy and appropriateness of the specified corrective actions. The supplement to this LER provided additional details of the licensee's root cause evaluation and associated

corrective actions. The failure to adhere to the LCO requirements of TS 3.4.6.1 was the subject of NRC identified non-cited violation (NCV) 05000395/2007005-02. No new findings of significance were identified. This LER is closed.

- .4 (Closed) LER 05000395/2007002-01: Failure to Follow Administrative Controls Results in Limiting Condition for Operation (LCO) 3.6.4 Violation.

The inspectors reviewed the subject LER and applicable condition report (CR-07-02894) associated with the issue to verify the LER accuracy and appropriateness of the specified corrective actions. The supplement to this LER provided additional details of the licensee's root cause evaluation and associated corrective actions. The failure to adhere to the LCO requirements of TS 3.6.4 was the subject of NRC identified NCV 05000395/2007005-01. No new findings of significance were identified. This LER is closed.

4OA6 Meetings, Including Exit

.1 Exit Meeting Summary

The inspectors presented the inspection results to Mr. Jeffrey Archie and other members of the licensee staff on April 8, 2008. The licensee acknowledged the results. The inspectors confirmed that inspection activities discussed in this report did not contain proprietary material.

.2 Annual Assessment Meeting Summary

Subsequent to the end of this inspection period, on April 1, 2008, the NRC's Chief of Reactor Projects Branch 5 and the Resident Inspector assigned to the Virgil C. Summer Nuclear Station met with South Carolina Electric and Gas Company to discuss the NRC's Reactor Oversight Process (ROP) and the NRC's annual assessment of Virgil C. Summer's safety performance for the period of January 1 through December 31, 2007. The major topics addressed were the NRC's assessment program, and the results of the Virgil C. Summer assessment. Attendees included Summer's site management, members of the site staff, corporate management, a representative from the South Carolina Public Service Authority, and a representative from the South Carolina Office of Regulatory Staff.

This meeting was open to the public. The presentation material used for the discussion and the list of attendees is available from the NRC's document system (ADAMS) as accession number ML080630301. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

J. Archie, Vice President, Nuclear Operations
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L. Blue, Manager, Nuclear Training
M. Browne, Manager, Quality Systems
A. Cribb, Supervisor, Nuclear Licensing
G. Douglass, Manager, Nuclear Protection Services
M. Fowlkes, General Manager, Engineering Services
D. Gatlin, General Manager, Nuclear Plant Operations
R. Justice, Manager, Maintenance Services
D. Lavigne, General Manager, Organizational / Development Effectiveness
G. Lippard, Manager, Operations
M. Mosley, Manager, Chemistry Services
P. Mothena, Manager, Health Physics and Safety Services
J. Nesbitt, Manager, Materials and Procurement
D. Shue, Manager, Planning / Outage
W. Stuart, Manager, Design Engineering
B. Thompson, Manager, Nuclear Licensing
S. Zarandi, General Manager, Nuclear Support Services

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None.

Closed

| | | |
|---------------------|-----|---|
| 05000395/2008001-00 | LER | Manual Reactor Trip Due to Low Steam Generator Level Caused by Feedwater Flow Control Valve Malfunction. (Section 4OA3.2) |
| 05000395/2007003-01 | LER | Clogged Reactor Building Cooling Unit Drain Line Results in Violation of LCO 3.4.6.1. (Section 4OA3.3) |
| 05000395/2007002-01 | LER | Failure to Follow Administrative Controls Results in Limiting Condition for Operation (LCO) 3.6.4 Violation. (Section 4OA3.4) |

Discussed

None.

Attachment

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Procedures and Drawings

SOP-102, Chemical and Volume Control System;
SOP-112, Safety Injection System;
SOP-306, Emergency Diesel Generator;
FSAR 6.3.2, ECCS System Design;
FSAR 9.3.4, Chemical and Volume Control System;
E-302-671/672/673/674/675/676/677, Chemical and Volume Control System; and,
E-307-691/692/693, Safety Injection.

Section 1R20: Refueling and Other Outage Activities

Procedures

SAP-116, Plant Trip/Safety Injection Plant Recovery;
GOP-3, Reactor Startup from Hot Standby to Startup (Mode 3 to Mode 2);
GOP-4A, Power Operation (Mode 1 – Ascending);
GTP-702, Operational Mode Change and Contingency Surveillance Requirements;
REP-107.001, Controlling Procedure for Refueling Startup and Power Ascension Testing;
SOP-207, Circulating Water;
SOP-210, Feedwater System;
SOP-403, Rod Control and Position Indicating System;
SOP-404, Excore Nuclear Instrumentation System; and,
STP-134.001, Shutdown Margin Verification.

Condition Reports

CR-08-00292, Manual reactor trip on feedwater flow control valve FCV-498 malfunction;
CR-08-00293, “B” circulating cooling water pump motor bearing failure;
CR-08-00295, “B” feedwater pump had to be manually tripped 3 times using control board switch;
CR-08-00301, Wear materials found downstream of check valve in FCV-498; and,
CR-08-00303, During reactor trip, flow control valve FCV-122 modulated incorrectly.

Condition Reports for NRC Identified Issues

CR-08-00063, Intermediate building sump actuation logic fuses installed without Operations entering appropriate plant risk in EOOS;
CR-08-00107, On-line leak sealant repair program weaknesses;
CR-08-00114, Surveillance precautions not being formally described at pre-job briefs;
CR-08-00250, Emergency light found with discolored lens due to melting;
CR-08-00303, During reactor trip, flow control valve FCV-122 modulated incorrectly;
CR-08-00306, Debris identified on “C” reactor coolant pump flange;
CR-08-00684, Auxiliary building 388’ elevation floor drain FD-49 found blocked;
CR-08-00738, Leak sealant repair of level transmitter LT-3773A failed and leaking steam;
CR-08-00740, Steam leak from previous valve repair found active;
CR-08-00741, Pipe cap on RHR pump suction piping drain valve found missing;
CR-08-00989, Loss of foreign material exclusion integrity at circulating cooling water pump screens;

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CR-08-01036, "B" EDG fuel oil accumulator indicates "dry" and was refilled;
CR-08-01061, EDG intercooler shell flow rate minimum not confirmed;
CR-08-01111, Instrumentation and control department air handling unit seismic and qualification review for operability of the control room pressure boundary;
CR-08-01146, "B" EDG intercooler SW engineering inspection revealed paint chips; and,
CR-08-01183, Loss of foreign material exclusion integrity during "B" EDG extended outage.

LIST OF ACRONYMS

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| AB | Auxiliary Building |
| CAP | Corrective Action Program |
| CB | Control Building |
| CR | Condition Report |
| CFR | Code of Federal Regulations |
| DG | Diesel Generator |
| EDG | Emergency Diesel Generator |
| ES | Engineering Service |
| FSAR | Final Safety Analysis Report |
| GTP | General Test Procedure |
| HHSI | High Head Safety Injection |
| HVAC | Heating Ventilation and Air Conditioning |
| IB | Intermediate Building |
| IMC | Inspection Manual Chapter |
| INPO | Institute of Nuclear Power Operations |
| IR | Inspection Report |
| LER | Licensee Event Report |
| LCO | Limiting Condition for Operation |
| MDEFW | Motor Driven Emergency Feedwater |
| MPFF | Maintenance Preventable Functional Failures |
| MR | Maintenance Rule |
| NCV | Non-Cited Violation |
| NEI | Nuclear Energy Institute |
| NRC | Nuclear Regulatory Commission |
| OAP | Operations Administrative Procedure |
| OOS | Out of Service |
| PI | Performance Indicator |
| PMT | Post-Maintenance Testing |
| RHR | Residual Heat Removal |
| ROP | Reactor Oversight Process |
| RTP | Rated Thermal Power |
| SAP | Station Administrative Procedure |
| SCE&G | South Carolina Electric and Gas |
| SDP | Significance Determination Process |
| SOP | System Operating Procedure |
| SSC | Structures, Systems, or Components |
| STP | Surveillance Test Procedure |
| SW | Service Water |
| TDEFW | Turbine Driven Emergency Feedwater |
| TS | Technical Specification |
| WO | Work Order |