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

October 29, 2007

Carolina Power and Light Company
ATTN: Mr. Tom Walt
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant
Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2007004

Dear Mr. Walt:

On September 30, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your H.B. Robinson reactor facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on October 4, 2007, with Mr. Eric McCartney and other members of your staff.

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.

On the basis of 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 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 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/

Randall A. Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-261
License No.: DPR-23

Enclosure: Inspection Report 05000261/2007004
w/Attachment: Supplemental Information

October 29, 2007

Carolina Power and Light Company
ATTN: Mr. Tom Walt
Vice President - Robinson Plant
H. B. Robinson Steam Electric Plant
Unit 2
3851 West Entrance Road
Hartsville, SC 29550

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2007004

Dear Mr. Walt:

On September 30, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your H.B. Robinson reactor facility. The enclosed integrated inspection report documents the inspection findings, which were discussed on October 4, 2007, with Mr. Eric McCartney and other members of your staff.

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.

On the basis of 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 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 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/

Randall A. Musser, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Docket No.: 50-261
License No.: DPR-23

Enclosure: Inspection Report 05000261/2007004
w/Attachment: Supplemental Information

☐ PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE ☐ NON-SENSITIVE

ADAMS: ☐ Yes ACCESSION NUMBER:_____

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RII:DRP		
SIGNATURE	RAM	RCH2 by fax	RCH2 by fax for	HJG1	GRW		
NAME	RMusser	RHagar	EMorris	HGepford	GWilson		
DATE	10/29/2007	10/26/2007	10/26/2007	10/16/2007	10/25/2007	10/ /2007	10/ /2007
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY DOCUMENT NAME: C:\FileNet\ML073020339.wpd

cc w/encl.:
Eric McCartney
Director, Site Operations
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant, Unit No. 2
Electronic Mail Distribution

Ernest J. Kapopoulos, Jr.
Plant General Manager
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

Scott D. West
Superintendent - Security
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant
Electronic Mail Distribution

Paul Fulford, Manager
Performance Evaluation and Regulatory Affairs PEB 5
Electronic Mail Distribution

C. T. Baucom, Manager
Support Services - Nuclear
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant, Unit No. 2
Electronic Mail Distribution

Henry J. Porter, Director
Div. of Radioactive Waste Mgmt.
Dept. of Health and Environmental Control
Electronic Mail Distribution

R. Mike Gandy
Division of Radioactive Waste Mgmt.
S. C. Department of Health and Environmental Control
Electronic Mail Distribution

Beverly Hall, Chief Radiation Protection Section
N. C. Department of Environment, Health and Natural Resources
Electronic Mail Distribution

David T. Conley
Associate General Counsel - Legal Dept.
Progress Energy Service Company, LLC
Electronic Mail Distribution

Supervisor, Licensing/Regulatory Programs
Carolina Power & Light Company
H. B. Robinson Steam Electric Plant, Unit No. 2
3581 West Entrance Road
Hartsville, SC 29550

John H. O'Neill, Jr.
Shaw, Pittman, Potts & Trowbridge
2300 N. Street, NW
Washington, DC 20037-1128

Chairman of the North Carolina Utilities Commission
c/o Sam Watson, Staff Attorney
Electronic Mail Distribution

Robert P. Gruber
Executive Director
Public Staff - NCUC
4326 Mail Service Center
Raleigh, NC 27699-4326

Public Service Commission
State of South Carolina
P. O. Box 11649
Columbia, SC 29211

Letter to Tom Walt from Randall A. Musser dated October 29, 2007.

SUBJECT: H.B. ROBINSON STEAM ELECTRIC PLANT - NRC INTEGRATED INSPECTION REPORT 05000261/2007004

Distribution w/encl:
M. Vaaler, NRR
C. Evans (Part 72 Only)
L. Slack, RII EICS
OE Mail (email address if applicable)
RIDSNRRDIRS
PUBLIC

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	50-261
License No:	DPR-23
Report No:	005000261/2007004
Facility:	H. B. Robinson Steam Electric Plant, Unit 2
Location:	3581 West Entrance Road Hartsville, SC 29550
Dates:	July 1, 2007 through September 30, 2007
Inspectors:	R. Hagar, Senior Resident Inspector E. Morris, Resident Inspector H. Gepford, Senior Health Physicist (Section 2OS3)
Approved by:	R. Musser, Chief Reactor Projects Branch 4 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000261/2007-004, 07/1/2007-09/30/2007; H.B. Robinson Steam Electric Plant, Unit 2; Routine Integrated Report.

The report covered a three month period of inspection by resident inspectors and an announced inspection by a regional senior health physics inspector. 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

None

B. Licensee Identified Findings

None

REPORT DETAILS

Summary of Plant Status On July 1, power in the unit was reduced to 50 percent following failure of a heater drain pump during a thunderstorm. The unit was returned to full power on July 4, and operated at full power for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

When extreme hot weather was predicted for the site August 6 through August 11, the inspectors reviewed actions taken by the licensee in accordance with Procedure PLP-118, Hot Weather Operations, prior to the onset of that weather, to ensure that the adverse weather conditions would neither initiate a plant event nor prevent any system, structure, or component from performing its design function. The inspectors reviewed the operator actions described in PLP-118 to verify that the desired results could be achieved.

Prior to the onset of hurricane season, the inspectors reviewed the actions described in Procedure OMM-021, Operation During Adverse Weather, to ensure that potential hurricane conditions would neither initiate a plant event nor prevent any system, structure, or component from performing its design function.

b. Findings

No findings of significance were identified.

1R04 Equipment Alignment

a. Inspection Scope

Partial System Walkdowns:

The inspectors performed the following three partial system walkdowns, while the indicated structures, systems, and/or components (SSCs) were out-of-service for maintenance and testing:

System Walked Down	SSC Out of Service	Date Inspected
A & B Safety Injection Pump Trains	C Safety Injection Pump	August 20
B Containment Spray Pump	A Containment Spray Pump	August 28

B Auxiliary Feedwater Train	Steam Driven Auxiliary Feedwater Pump	September 5

To evaluate the operability of the selected trains or systems under these conditions, the inspectors compared observed positions of valves, switches, and electrical power breakers to the procedures and drawings listed in the Attachment.

Complete System Walkdown:

The inspectors conducted a detailed review of the alignment and condition of coolant charging pump train A to verify that the existing alignment of the system was consistent with the correct alignment. To determine the correct system alignment, the inspectors reviewed the procedures, drawings, and the Updated Final Safety Analysis Report (UFSAR) section listed in the Attachment. The inspectors also walked down the system. During the walkdown, the inspectors reviewed the following:

- Valves were correctly positioned and did not exhibit leakage that would impact the functions of any given valve
- Electrical power was available as required
- Major system components were correctly labeled, lubricated, cooled and ventilated
- Hangers and supports were correctly installed and functional
- Essential support systems were operational
- Ancillary equipment or debris did not interfere with system performance
- Tagging clearances were appropriate
- Valves were locked as required by the locked valve program

The inspectors reviewed the documents listed in the Attachment to verify that the ability of the system to perform its functions could not be affected by outstanding design issues, temporary modifications, operator workarounds, adverse conditions, and other system-related issues tracked by the engineering department.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

For the six areas identified below, the inspectors reviewed the control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures to verify that those items were consistent with UFSAR Section 9.5.1, Fire Protection System, and UFSAR Appendix 9.5.A, Fire Hazards Analysis. The inspectors walked down accessible portions of each area and reviewed results from related surveillance tests to verify that conditions in these areas were consistent with descriptions of the areas in the UFSAR. Documents

reviewed are listed in the Attachment.

The following areas were inspected:

Fire Zone	Description
19	cable spread room
22	control room
29	service water pump area
25A/25B	turbine building ground floor
25D	dedicated shutdown diesel generator
17	station battery room

The inspectors reviewed the following corrective-action documents associated with this area to verify that the licensee identified and implemented appropriate corrective actions:

- Action Request (AR) 136122, Fire barrier penetration seal CP-6310.00-FB
- AR 240873, Installation of portable fire extinguisher near main transformers to meet National Fire Protection Association requirements.
- Work Order (WO) 1079248, Air Duct Smoke Detector 17B3 did not alarm during OST-611-10

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

Internal Flooding

The inspectors noted that the safety injection pumps and the containment spray pumps are susceptible to flooding from postulated pipe breaks in the safety injection pump room. The inspectors therefore walked down that room to verify that the area configuration, features, and equipment functions were consistent with the descriptions and assumptions used in Calculation RNP-F/PSA-0009, Assessment of Internally Initiated Flooding Events and in the supporting basis documents listed in the Attachment. The inspectors reviewed the operator actions credited in the analysis to verify that the desired results could be achieved using the plant procedures listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Requalification

a. Inspection Scope

On August 28, the inspectors observed licensed-operator performance during requalification simulator training for operating crew 1, to verify that operator performance was consistent with expected operator performance, as described in Dynamic Simulator Scenario Examination DSS-019. This training tested the operators' ability to operate components from the control room, direct auxiliary operator actions, and determine the appropriate emergency action level classifications while responding to a nuclear power range instrument failure, a main turbine steam stop valve closure, a steam break, and a loss of the Startup Transformer. The inspectors focused on clarity and formality of communication, the use of procedures, alarm response, control board manipulations, group dynamics, and supervisory oversight. Documents reviewed are listed in the Attachment.

The inspectors observed the post-exercise critique to verify that the licensee identified deficiencies and discrepancies that occurred during the simulator training.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the three degraded SSC/function performance problems or conditions listed below to verify the appropriate handling of these performance problems or conditions in accordance with 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, and 10 CFR 50.65, Maintenance Rule. Documents reviewed are listed in the Attachment.

The problems/conditions and their corresponding ARs were:

Performance Problem/Condition	AR
Unanticipated entry into Technical Specification action statement due to degraded belt on control room ventilation fan HVA-1B	209184
Engine-driven fire pump out of service due to low coolant temperature	216756

The A motor-driven auxiliary feedwater pump failed to start after receiving a low-low steam generator level signal following the automatic reactor trip on May 15, 2007. 233313

During the reviews, the inspectors focused on the following:

- Appropriate work practices
- Identifying and addressing common cause failures
- Scoping in accordance with 10 CFR 50.65(b)
- Characterizing reliability issues (performance)
- Charging unavailability (performance)
- Trending key parameters (condition monitoring)
- 10 CFR 50.65(a)(1) or (a)(2) classification and reclassification
- Appropriateness of performance criteria for SSCs/functions classified (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions classified (a)(1)

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

a. Inspection Scope

For the four time periods listed below, the inspectors reviewed risk assessments and related activities to verify that the licensee performed adequate risk assessments and implemented appropriate risk-management actions when required by 10 CFR 50.65(a)(4). For emergent work, the inspectors also verified that any increase in risk was promptly assessed, and that appropriate risk-management actions were promptly implemented. Documents reviewed are listed in the Attachment. Those periods included the following:

- June 30 - July 6, including power ascension to full power following replacement of a heater drain pump motor.

- July 14 - July 19, including maintenance on the dedicated-shutdown diesel generator and dedicated-shutdown electrical bus.

- August 18 - August 24, including maintenance on train-A coolant charging pump and electrical grid reliability alerts due to high ambient temperatures.

- September 1 - September 7, including maintenance on the steam-driven auxiliary feedwater pump train and in the switchyard

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors reviewed the operability determinations associated with the following two action requests:

- AR 246999, small pieces of concrete debris found in the service water section of the B component cooling water heat exchanger
- AR 241022, increases in component cooling water system losses

The inspectors assessed the accuracy of these evaluations, the use and control of any necessary compensatory measures, and compliance with the Technical Specifications (TS). The inspectors verified that the operability determinations were made as specified by procedure OPS-NGGC-1305, Operability Determinations. The inspectors compared the justifications provided in the determinations to the requirements from the TS, the UFSAR, and associated design-basis documents to verify that operability was properly justified and the associated components remained available, such that no unrecognized increase in risk occurred.

Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post Maintenance Testing

a. Inspection Scope

For the five post-maintenance tests listed below, the inspectors witnessed the test and/or reviewed the test data to verify that test results adequately demonstrated restoration of the affected safety functions described in the UFSAR and TS. Documents reviewed are listed in the Attachment.

The following tests were witnessed/reviewed:

Test Procedure	Title	Related Maintenance Activity	Date Inspected
OST-302-1	Service Water Pumps A & B Inservice Test	Service Water Pump B packing box to head bolt replacement	July 12
OST-910	Dedicated Shutdown Diesel Generator	Preventative maintenance on various Dedicated Shutdown Diesel Generator components	July 25
OST-101-2	[Chemical & Volume Control System] Component Test Charging Pump B	Preventive maintenance on Coolant Charging Pump B	August 7
WO 1112195-2*	B [Service Water] Pump Breaker Amptector Replacement	Service Water Pump B breaker amptector replacement	August 28
OST-908-1	Comprehensive Flow Test for the Component Cooling Water Pumps	Replacement of the C Component Cooling Water Motor	September 19

* For this post-maintenance test, test instructions were included in a work order rather than in a procedure.

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the four surveillance tests listed below, the inspectors witnessed testing and/or reviewed the test data to verify that the systems, structures, and components involved in these tests satisfied the requirements described in the TS, the UFSAR, and applicable licensee procedures, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions. Documents reviewed are listed in the Attachment.

Test Procedure	Title	Date Inspected
OST-409-1	Emergency Diesel Generator A Fast Speed Start	July 5
OST-201-1*	Motor Driven Auxiliary Feed Water System Component Test - Train A	July 10
OST-927-2	Reverse Flow Test For Check Valve SW-911	August 23
OST-202	Steam Driven Auxiliary Feedwater System Component Test	September 5

*This procedure included inservice testing requirements.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

On August 6, the inspectors observed an emergency preparedness drill to verify licensee self-assessment of classification, notification, and protective action recommendation development in accordance with 10 CFR 50, Appendix E. The inspectors also attended the post-drill critique to verify that the licensee properly identified failures in classification, notification and protective action recommendation development activities. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

2. RADIATION SAFETY

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

a. Inspection Scope

Portable Radiation Monitoring Instrumentation During the week of July 9, 2007, the inspectors evaluated completion and adequacy of radiation survey instrument calibrations performed by Progress Energy's central calibration facility located at the Shearon Harris Nuclear Plant. Availability of portable instruments for use by H. B. Robinson was evaluated through discussion with licensee personnel regarding inventory, logistics, and transfer/receipt of instruments. Calibration data for portable

instruments staged or recently used for coverage of field tasks were reviewed. Records associated with the annual certifications of the gamma irradiator and neutron source used for performing calibrations and routine response checks were reviewed in detail. In addition, the inspectors observed the relocated calibration facility for gamma and neutron instrument calibrations and discussed its adequacy for performing instrument calibrations with cognizant licensee personnel. Three corrective action program (CAP) documents and a self-assessment associated with the instrument calibration activities were reviewed and discussed with responsible licensee representatives.

Operability, reliability, and calibration of selected radiation detection instruments were reviewed against 10 CFR Part 20; Final Safety Analysis Report (FSAR) section, Chapter 12; ANSI N323-1978, Radiation Protection Instrumentation Test and Calibration; and applicable licensee procedures. The ability to characterize, prioritize, and resolve the identified CAP issues were reviewed against CAP-0200, Corrective Action Program, Rev. 19 and associated guideline documents. Documents reviewed during the inspection are listed in Section 2OS3 of the report Attachment.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

For the two performance indicators identified below, the inspectors verified the accuracy of the PI data that had been previously reported to the NRC by comparing those data to the actual data, as described below. The inspectors also compared the basis in reporting each data element to the PI definitions and guidance contained in NEI 99-02, Regulatory Assessment Indicator Guideline, Rev. 5. In addition, the inspectors interviewed licensee personnel associated with collecting, evaluating, and distributing these data. The PIs reviewed were:

- Heat Removal (Auxiliary Feedwater)
- Residual Heat Removal

For the period from the second quarter of 2006 through the second quarter of 2007, the inspectors reviewed Licensee Event Reports (LERs), records of inoperable equipment, and Maintenance Rule records to verify that the licensee had accurately accounted for unavailability hours that the auxiliary feedwater and residual heat removal systems had experienced during the subject period. The inspectors also reviewed the number of hours those systems were required to be available and the basis for identifying unavailability hours.

b. Findings

No findings of significance were identified.

4OA2 Identification and Resolution of Problems

.1 Routine Review of ARs

To aid in the identification of repetitive equipment failures or specific human performance issues for followup, the inspectors performed frequent screenings of items entered into the CAP. The review was accomplished by reviewing daily AR reports.

.2 Annual Sample Review

a. Inspection Scope

The inspectors selected AR 207175, Blocked Appendix R Pathway Trend for detailed review. The inspectors selected this AR because it relates generally to the Mitigating Systems Cornerstone. The inspectors reviewed this report to verify:

- complete and accurate identification of the problem in a timely manner
- evaluation and disposition of performance issues
- evaluation and disposition of operability and reportability issues
- consideration of extent of condition, generic implications, common cause, and previous occurrences
- appropriate classification and prioritization of the problem
- identification of root and contributing causes of the problem
- identification of corrective actions which were appropriately focused to correct the problem
- completion of corrective actions in a timely manner

The inspectors also reviewed this AR to verify compliance with the requirements of the CAP as delineated in Procedure CAP-NGGC-0200, Corrective Action Program, and 10 CFR 50, Appendix B. Documents reviewed are listed in the Attachment.

b. Observations and Findings

No findings of significance were identified.

4OA3 Event Follow-up

.1 (Closed) LER 2007-001-00, Reactor Trip Due to a Loose Wire in the Main Transformer Monitoring Circuitry . This Licensee Event Report (LER) reports the reactor trip that was discussed in section 4OA3.1 of inspection report 05000261/2007003. As described in that section, no findings of significance were identified through the inspectors' review of the event. This LER also reports that the reactor trip was caused by a main turbine-generator trip which was in turn caused by a generator lockout signal. The generator

lockout signal was caused by an electrical fault in the circuitry for a main transformer alarm panel. The electrical fault was determined to be a loose connection which allowed a wire associated with the neutral-bushing current transformer (CT) to become disconnected from the terminal. The root cause of the reactor trip was therefore the failure to crimp and verify the tightness of the lug connecting the CT to the transformer alarm panel. Because the subject failure involved maintenance activities on non-safety-related equipment, the inspectors consider it to not be a violation of regulatory requirements.

This LER further reports that following the reactor trip, the motor-driven auxiliary feedwater pump failed to start automatically in response to low-low level in the steam generators. Section 1R12 of this report describes the inspectors' review of the associated root-cause investigation report (AR 233313) and states that no findings of significance were identified. This LER presents no new information and is therefore closed.

4OA6 Meetings, Including Exit

On October 4, 2007, the resident inspectors presented the inspection results to Mr. Eric McCartney and other members of his staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

C. Baucom, Manager, Support Services - Nuclear
S. Brown, Acting Outage and Scheduling Manager
B. Clark, Training Manager
W. Farmer, Engineering Manager
J. Huegel, Maintenance Manager
E. Kapopoulos, Plant General Manager
J. Lucas, Nuclear Assurance Manager
E. McCartney, Director of Site Operations
J. Rhodes, Acting Radiation Protection Superintendent
T. Tovar, Operations Manager
T. Walt, Vice President
S. Wheeler, Supervisor, Regulatory Support

NRC personnel

R. Musser, Chief, Reactor Projects Branch 4

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

2007-001-00	LER	Reactor Trip Due to a Loose Wire in the Main Transformer Monitoring Circuitry

Opened & Closed

None

Previous Items Closed

None

Discussed

None

Attachment

LIST OF DOCUMENTS REVIEWED

1R01 Adverse Weather Protection

UFSAR Sections
3.3, Wind and Tornado Loadings

Procedures
OMM-021, Operations During Adverse Weather Conditions, Rev. 31
EPP-28, Loss of Ultimate Heat Sink, Rev. 6
PLP-118, Hot Weather Operations, Rev. 10
SPP-038, Installation, Operation, and Removal of Supplemental Cooling for HVH-1,2,3,&4, Rev. 3
OST-021,Daily Surveillances, Rev. 20
PPP-114, Service Water Temperature Measurement to HVH 1-4, Rev. 7
ADM-NGGC-0006, Online [Equipment out of Service] Models For Risk Assessment, Rev. 5

Work Orders
Work order 416559 which implemented temporary containment cooling to containment cooling fans HVH-1,2,3,&4.

1R04 Equipment Alignment

Partial System Walkdown
A Safety Injection train:
- OWP-016, Safety Injection System, Rev. 44
- Clearance Order Checklist 147918, [Safety Injection] Pump C - Remove and Replace Pump
- Drawing 5379-1082, Safety Injection System Flow Diagram, Sheet 2 of 5, Rev. 47
- Design Basis Document, DBD/R87038/SD02 Safety Injection System, Rev. 14

B Containment Spray train:
- Drawing 5379-1082, Safety Injection System Flow Diagram, Sheet 3 of 5, Rev. 26

B Auxiliary Feedwater train:
- Drawing G-190197, Feedwater Condensate and Air Evacuation System Flow Diagram, Sheet 1 of 4, Rev. 77
- Drawing G-190197, Feedwater Condensate and Air Evacuation System Flow Diagram, Sheet 4 of 4, Rev. 55
- OWP-001, Auxiliary Feedwater, Rev. 43

Complete System Walkdown (Coolant Charging System A train):
Procedure OWP-005, Chemical and Volume Control System, Rev. 56
List of Open Work Orders for System 2060, dated 8/6/2007
Maintenance Rule documents for System 2060, Chemical and Volume Control
Chemical and Volume Control System Health Report, dated 7/31/2007
Design Basis Document DBD/R87038/SD21, Chemical and Volume Control System
Drawing 5379-685, Chemical and Volume Control System Purification and Make-up Flow Diagram, Sheet 1 of 3, Rev. 51

Drawing 5379-685, Chemical and Volume Control System Purification and Make-up Flow Diagram, Sheet 2 of 3, Rev. 57
Drawing 5379-685, Chemical and Volume Control System Purification and Make-up Flow Diagram, Sheet 3 of 3, Rev. 32
UFSAR section 9.3.4 Chemical and Volume Control System

1R05 Fire Protection

UFSAR Sections of Appendix 9.5.1A
3.1.5.2, Fire Zone 16 - Battery Room
3.1.5.5, Fire Zone 19 - Unit 2 Cable Spreading Room
3.1.5.7, Fire Zone 22 - Control Room
3.9.1, Fire Zone 29 - Service Water Pump Area
3.7.1, Fire Zone 25A - Turbine Building East Ground Floor
3.7.2, Fire Zone 25B - Turbine Building West Ground Floor
3.7.4, Fire Zone 25D - Dedicated Shutdown Diesel Generator

Procedures
results from OST-645, Turbine Lube Oil Deluge System Flow Teat (Annually), Rev. 17, 6/4/07
results from OST-610, Unit 2 Portable Fire Extinguishers, Fire Hose Stations and Houses (Monthly), Rev. 46, 8/15/07
results from OST-602, Unit 2 Fire Water System Flowpath Verification (Monthly) and Valve Cycling (Annually), Rev. 42, 1/22/06
results from OST-611-10, Low Voltage Fire Detection and Actuation System Zones 16, 17, 18, 29, & 30 (Semi-Annual), Rev. 7, completed 6/18/07 & 6/28/07
results from OST-611-11, Low Voltage Fire Detection and Actuation System Zones 19 & 20 (Semi-Annual), Rev. 5, dated 6/10/07
results from OST-611-12, Low Voltage Fire Detection and Actuation System Zones 22 & 23 (Semi-Annual), Rev. 4, dated 7/6/07
results from OST-611-3, Low Voltage Fire Detection and Actuation Systems Zones 6 & 7, Rev 2, dated 3/8/07

Drawings

Other documents
OMM-003, Fire Protection Pre-Plans/Unit No. 2, Rev. 47
Work Order 1079248, Air Duct Smoke Detector 17B3 did not alarm during OST-611-10
Control-room operator logs, 6/18/2007 & 6/28/2007

1R06 Flood Protection Measures

UFSAR Sections
3.6A.6, Flooding Analysis
9.5.1.4.2, Fire Suppression Systems.

Calculations
RNP-F/PSA-0009, Assessment of Internally Initiated Flooding Events

Procedures
AOP-014, Component Cooling Water Malfunction, Rev. 23
AOP-022, Loss of Service Water, Rev. 29
AOP-032, Response to Flooding from the Fire Protection System, Rev. 5

Other Documents
AOP-014-BD, Basis Document Component Cooling Water Malfunction, Rev. 21
AOP-022-BD, Basis Document Loss of Service Water, Rev. 28
AOP-032-BD, Response to Flooding from the Fire Protection System, Rev. 5

1R11 Licensed Operator Requalification
DSS-019, Dynamic Simulator Scenario Examination, Rev. 10
TAP-409, Conduct of Simulator Training and Evaluation, Rev. 19

1R12 Maintenance Effectiveness

Action Requests
209184, Unanticipated entry into Technical Specification action statement due to degraded belt on control room ventilation fan HVA-1B
216756, Engine Driven Fire Pump out of service due to low coolant temperature
233313, The A motor-driven auxiliary feedwater pump failed to start after receiving a low-low steam generator level signal following the automatic reactor trip on May 15, 2007.

Procedures
ADM-NGGC-0104, Work Management Process, Rev. 30
PM-034, Air Handling/Air Cleaning Unit Fans and Dampers, Rev. 24
Work Order 992450
Work Order 989789

Other Documents
Engineering Change 54773, Obsolete GEMCO Switches
July 24, 2007, [Plant Review Group] Subcommittee Meeting Minutes
August 8, 2007, [Plant Review Group] Subcommittee Meeting Minutes

Maintenance Rule Documents
For system 3065, Auxiliary Feedwater:
- Event List Report for March 2006 - August 2007
- Scoping and Performance Criteria
- Monitoring Status
- Expert Panel Meeting Minutes

For system 8220, HVAC Control Room Area:
- Event List Report for January 2006 - July 2007
- Scoping and Performance Criteria
- Monitoring Status
- Expert Panel Meeting Minutes

For system 6175, Site Fire Protection System:
- Event List Report for July 2006 - July August 2007
- Scoping and Performance Criteria
- Monitoring Status
- Expert Panel Meeting Minutes

1R13 Maintenance Risk Assessments and Emergent Work Evaluation

Procedures
OMM-048, Work Coordination and Risk Assessment, Revision LATER
ADM-NGGC-0006, Online [Equipment out of Service] Models For Risk Assessment, Rev. 5
OMM-001-2, Shift Routines and Operating Practices, Rev. 51

1R15 Operability Evaluations

Action Requests
246999, Small pieces of concrete debris found in the service water section of the b component cooling water heat exchanger.
241022, increases in component cooling water system losses

Procedures
OPS-NGGC-1305, Operability Determinations, Rev. 1
UFSAR Section 9.2.1, Service Water

Drawing
G-190199, Service and Cooling Water System Flow Diagram, Sheet 9 or 13, Rev. 54

1R19 Post Maintenance Testing

Procedures
PLP-033, Post-Maintenance Testing Program, Rev. 39
OST-302-2, Service Water Pumps C & D Inservice Test, Rev. 48
OST-910, Dedicated Shutdown Diesel Generator (Monthly), Rev. 42
OP-602, Dedicated Shutdown System, Rev. 45
OST-101-2, [Chemical & Volume Control System] Component Test Charging Pump B, Rev. 35
CM-305, Westinghouse DB Type Circuit Breakers Maintenance, Rev. 14
PM-402, Inspection and Testing of Circuit Breakers for 480 Volt Bus E1, Rev. 32
OP-603-1, Electrical Breaker Operation, Rev. 11
OST-908-1, Comprehensive Flow Test for the Component Cooling Water Pumps, Rev. 7

Drawings
G-190199, Service Water and Cooling Water System Flow Diagram, Sheet 2 of 13, Rev. 63
HBR2-8679, Dedicated Shutdown Emergency Diesel Generator System Flow Diagram, Sheet 1 of 2, Rev. 4
HBR2-8679, Dedicated Shutdown Emergency Diesel Generator System Flow Diagram, Sheet 2 of 2, Rev. 1
G-190204D, Fuel Oil System Flow Diagram, Sheet 1 of 4, Rev. 17
5379-685, Chemical and Volume Control System Purification and Make-up Flow Diagram, Sheet 1 of 3, Rev. 51
5379-685, Chemical and Volume Control System Purification and Make-up Flow Diagram, Sheet 2 of 3, Rev. 57
5379-376, Component Cooling Water System Flow Diagram, Sheet 1 of 4, Rev. 37
5379-376, Component Cooling Water System Flow Diagram, Sheet 4 of 4, Rev. 33

1R22 Surveillance Testing

Procedures
OST-409-1, Emergency Diesel Generator A Fast Speed Start, Rev. 33
OST-201-1, Motor Driven Auxiliary Feed Water System Component Test - Train A, Rev. 26
OST-927-2, Reverse Flow Test For Check Valve SW-911, Rev. 9
OST-202, Steam Driven Auxiliary Feedwater System Component Test, Rev. 66

1EP6 Drill Evaluation
Emergency Response Organization Exercise, August 6, 2007
Emergency Operating Procedure logic diagram PATH-1, Rev. 18
Emergency Action Level diagram EAL-1, Rev. 15
Emergency Action Level diagram EAL-2, Rev. 20
NEI-99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 5

2OS3 Radiation Monitoring Instrumentation and Protective Equipment

Procedures
HPS-0005, Calibration of Portable Radiation and Contamination, Rev. 7
HPS-0009, Operation of Radiation & Contamination Survey Instruments, Rev. 3
HPS-0011, Cs-137 Calibration Source Standardization, Rev. 4
SIC-700, Operation and Certification of Calibration Standards, Rev. 10
SIC-720, Calibration of Semi-Portable Air Sampling Equipment, Rev. 9

Corrective Action Program (CAP) Documents
Self-Assessment 160150, Radiation Protection Central Calibration Facility, 7/18/05-7/22/05
NCR 172139, Issue 1 central cal lab output and performance, 10/10/05
NCR 191133, RO-2 instrument failure, 4/14/06
NCR 200053, HP cal lab environment out of tolerance 7/13/06

Data and Records Reviewed
Battelle Calibration Report, model 530 electrometer, s/n 219, and two probes, 9/19/06
NIST Report of Test, Ludlum model 12 with 10 rem ball, s/n 66625, 2/16/07

Neutron Certification Data Sheet, 6/13/07
Radiation Field Measurement Data, Shepherd model 28, 3/29/07
Radiation Field Measurement Data, Shepherd model 89, 3/27/07
Instrument Calibration Records: Tennelec s/n 2 (11/14/06); Tennelec s/n 3 (11/15/06); AMS-3 s/n 1407 (8/22/06); LMC-12/42-30 s/n 35965 (9/13/06); LMC 177 s/n 34541 (2/19/07); LMC 177 s/n 45559 (2/19/07); DCA 3090 s/n 473291 (2/2/07); RO-2 s/n 2557 (4/11/07); RO-2 s/n 1706 (4/11/07)

4OA1 Performance Indicator Verification
RNP-F-PSA-0057 (Calculation), NRC Mitigating System Performance Index (MSPI) Basis Document, Rev. 4
REG-NGGC-0009, NRC Performance Indicators and Monthly Operating Report Data, Rev. 7
Maintenance Rule Event List Report for March 2006 to August 2007 for System 3065, Auxiliary Feedwater System
Maintenance Rule Event List Report for May 2006 to May 2007 for System 2045, Residual Heat Removal System

4OA2 Identification and Resolution of Problems
AR 207175, Blocked Appendix R Pathway Trend
CAP-NGGC-0200, Corrective Action Program

4OA3 Event Follow-up
LER 2001-007-001, Reactor Trip Due to a Loose Wire in the Main Transformer Monitoring Circuitry
AR 233172, Reactor/turbine trip due to main generator lockout