



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

May 10, 2018

Ms. Tanya Hamilton
Site Vice President
Shearon Harris Nuclear Power Plant
M/C HNP01
New Hill, NC 27562-0165

**SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC INTEGRATED
INSPECTION REPORT 05000400/2018001**

Dear Ms. Hamilton:

On March 31, 2018, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris Nuclear Power Plant, Unit 1. On April 5, 2018, the NRC inspectors discussed the results of this inspection with you and other members of your staff. The results of this inspection are documented in the enclosed report.

The NRC inspectors did not identify any finding or violation of more than minor significance.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

/RA/

Steven D. Rose, Chief
Reactor Projects Branch 4
Division of Reactor Projects

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

Enclosure:
Inspection Report 05000400/2018001

cc w/ encl: Distribution via ListServ

T. Hamilton

3

SUBJECT: SHEARON HARRIS NUCLEAR STATION – NRC INTEGRATED INSPECTION
REPORT 05000400/2018001 May 10, 2018

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DATE	5/9/2018	5/9/2018	5/9/2018	5/9/2018	5/10/2018

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**U.S. NUCLEAR REGULATORY COMMISSION
Inspection Report**

Docket Number: 50-400

License Number: NPF-63

Report Number: 05000400/2018001

Enterprise Identifier: I-2018-001-0056

Licensee: Duke Energy Progress, LLC

Facility: Shearon Harris Nuclear Power Plant

Location: 5413 Shearon Harris Road
New Hill, NC 27562

Inspection Dates: January 1, 2018 to March 31, 2018,

Inspectors: J. Zeiler, Senior Resident Inspector
A. Patz, Resident Inspector
J. Dodson, Senior Project Engineer

Approved By: Steven D. Rose, Chief
Reactor Projects Branch 4
Division of Reactor Projects

Enclosure

SUMMARY

The U.S. Nuclear Regulatory Commission (NRC) continued monitoring licensee's performance by conducting a quarterly integrated inspection at Shearon Harris, Unit 1 in accordance with the Reactor Oversight Process. The Reactor Oversight Process is the NRC's program for overseeing the safe operation of commercial nuclear power reactors. Refer to <https://www.nrc.gov/reactors/operating/oversight.html> for more information. NRC and self-revealed findings, violations, and additional items are summarized in the table below.

List of Findings and Violations

Additional Tracking Items

Type	Issue number	Title	Report Section	Status
URI	05000400/2018001-01	Adequacy of Fire Brigade Response During Fire Drill	71111.05AQ	Opened

PLANT STATUS

The unit began the inspection period at 100 percent rated thermal power. On January 13, 2018, a unit shutdown to Mode 5 was initiated as a result of secondary chemistry sulfate and chloride concentrations being out of specification, necessitating the need to flush the steam generators in order to remove sulfate hideout. The unit was taken offline early January 14, 2018, and reached Mode 5 late that same day. On January 18, 2018, the reactor was restarted following steam generator cleanup activities. The unit was returned to rated thermal power on January 22, 2018, and remained at or near rated thermal power for the remainder of the inspection period.

INSPECTION SCOPES

Inspections were conducted using the appropriate portions of the inspection procedures (IPs) in effect at the beginning of the inspection unless otherwise noted. Currently approved IPs with their attached revision histories are located on the public website at <http://www.nrc.gov/reading-rm/doc-collections/insp-manual/inspection-procedure/index.html>. Samples were declared complete when the IP requirements most appropriate to the inspection activity were met consistent with Inspection Manual Chapter (IMC) 2515, "Light-Water Reactor Inspection Program - Operations Phase." The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel to assess licensee performance and compliance with Commission rules and regulations, license conditions, site procedures, and standards.

REACTOR SAFETY

71111.01 - Adverse Weather Protection

Impending Severe Weather (2 Samples)

The inspectors evaluated readiness for impending adverse weather conditions for:

- (1) Extreme cold weather during January 3-5, 2018
- (2) Extreme cold weather and snow during January 15-17, 2018

71111.04 - Equipment Alignment

Partial Walkdown (3 Samples)

The inspectors evaluated system configurations during partial walkdowns of the following systems/trains:

- (1) 'A' and 'B' train residual heat removal (RHR) systems during forced outage on January 16, 2018
- (2) 'A' train safeguards sequencer while 'B' train safeguards sequencer was out of service for maintenance on January 31, 2018
- (3) 'A' train emergency diesel generator (EDG) and 'A' train emergency service water (ESW) while 'B' train EDG and ESW was out of service for maintenance on March 6-7, 2018

71111.05AQ - Fire Protection Annual/Quarterly

Quarterly Inspection (5 Samples)

The inspectors evaluated fire protection program implementation in the following selected areas:

- (1) Containment 221', 236', and 261' elevations (fire zones 1-C-1-RCP-1A, 1-C-1-RCP-1B, 1-C-1-RCP-1C, 1-C-1-BAL, 1-C-1-CHFA, 1-C-1-CHFB, and 1-C-3-EPA) on January 16, 2018
- (2) Component cooling water (CCW) and auxiliary feedwater system pumps and valves (fire zone 1-A-3-PB/1-A-3-TA) on January 18, 2018
- (3) Alternate seal injection pump, filter, and boric acid batching areas; reactor auxiliary building (RAB) 261' elevation (fire zones 1-A-4-COMB and 1-A-4-COMC) on January 31, 2018
- (4) 'A' and 'B' essential switchgear rooms (fire zones 1-A-SWGRA and 1-A-SWGRB) on January 31, 2018
- (5) Diesel fuel oil storage building including 'A' and 'B' fuel transfer pump rooms (fire zones 1-O-PA, 1-O-PB, and 5-OBAL) on February 21, 2018

Annual Inspection (1 Sample)

The inspectors evaluated fire brigade performance during a drill on March 21, 2018.

71111.06 - Flood Protection Measures

Internal Flooding (1 Sample)

The inspectors evaluated internal flooding mitigation protections in the reactor auxiliary building, 286' elevation on February 28, 2018.

71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification (1 Sample)

The inspectors observed and evaluated an operator requalification simulator training scenario involving loss of service water and acts of sabotage against plant equipment on February 20, 2018.

Operator Performance (1 Sample)

The inspectors observed and evaluated actual control room operator performance during the following activities:

- (1) Reactor shutdown for a secondary steam generator abnormal chemistry forced outage on January 13, 2018
- (2) Reactor startup following a secondary steam generator abnormal chemistry forced outage on January 18, 2018

71111.12 - Maintenance Effectiveness

Routine Maintenance Effectiveness (2 Samples)

The inspectors evaluated the effectiveness of routine maintenance activities associated with the following equipment and/or safety significant functions:

- (1) Unavailability of the 'B' safeguards sequencer due to failure of the 86T/1732 test relay on December 14, 2018 (NCR 02172551)
- (2) 'B' motor driven auxiliary feedwater pump (MDAFW) discharge pressure control valve 1AF-34 failed to cycle closed during testing on January 15, 2018 (NCR 02177400)

71111.13 - Maintenance Risk Assessments and Emergent Work Control (5 Samples)

The inspectors evaluated the risk assessments for the following planned and emergent work activities:

- (1) Elevated electrical grid risk (Yellow, Orange, and Red) during extreme cold weather conditions and high grid demand period between January 1-8, 2018
- (2) Elevated (Green) risk during planned unavailability of 'B' solid state protection system for routine testing coupled with unavailability of the alternate seal injection system during post maintenance testing on January 10, 2018
- (3) Elevated (Yellow) risk during unit shutdown outage while steam generators were drained and unavailable for a heat sink on January 15, 2018
- (4) Elevated (Green) risk during planned unavailability of 'B' train safeguards sequencer for relay replacements on January 31, 2018
- (5) Elevated (Green) risk during planned unavailability of the 'B' train emergency service water (ESW) and 'B' EDG for electrical and mechanical preventive maintenance activities on March 6-7, 2018

71111.15 - Operability Determinations and Functionality Assessments (5 Samples)

The inspectors evaluated the following operability determinations and functionality assessments:

- (1) Cold weather impact to 250 volt battery following room heater failure on January 3, 2018 (NCR 02174181)
- (2) 'A' CCW pump inboard motor bearing oil discolored with signs of brass on January 7, 2018 (NCR 02175444)
- (3) Active boric acid leakage from body to bonnet gasket of safety injection pressure isolation check valve 1SI-83 on January 16, 2018 (NCR 02177225)
- (4) Failure of the 'B' motor driven auxiliary feedwater system flow control valve 1AF-34 during testing on January 17, 2018 (NCR 02177400)
- (5) Seat leakage from reactor coolant drain tank pump discharge inside containment isolation valve 1ED-121 on January 23, 2018 (NCR 02178585)

71111.18 - Plant Modifications (1 Sample)

The inspectors evaluated the following temporary modification:

- (1) Engineering Change 411388, 1A Condensate Booster Pump Low and Low-Low Suction Pressure Trip Defeat, on March 27, 2018

71111.19 - Post Maintenance Testing (6 Samples)

The inspectors evaluated the following post maintenance tests:

- (1) OST-1073, 1B Emergency Diesel Generator Operability Test Monthly Interval Modes 1-6, after scheduled replacement of the engine lockout relay trip timer per Work Order (WO) 20219004, on January 8, 2018
- (2) OPT-1529, Alternate Seal Injection Pump Operability Test Quarterly Interval Modes 1-3, after scheduled pump seal packing replacement per WO 20160777, on January 11, 2018
- (3) OST-1805, Pressurizer PORV Operability 18 Month Interval 5-6, after emergent replacement of failed solenoid valve associated with pressurizer power operated relief valve 1RC-116 per WO 20224988, on January 16, 2018
- (4) OPT-1538, Emergency Safeguards Sequencer System Test – Train B Quarterly Interval Modes 1-6, after scheduled replacement of two failed relays per WOs 20225339 and 20225342, on January 31, 2018
- (5) OP-139, Service Water System, after scheduled disassembly, cleaning, and inspection of “B” ESW screen wash pump suction and discharge valves per WOs 20030590 and 20030825, on March 6, 2018
- (6) OST-1073, 1B-SB Emergency Diesel Generator Operability Test Monthly Interval Modes 1-6, after scheduled replacement of starting air valves per WOs 20130713 and 20130714, on March 7, 2018

71111.20 - Refueling and Other Outage Activities (1 Sample)

The inspectors evaluated activities during a steam generator chemical cleanup forced outage from January 13 to January 18, 2018.

71111.22 - Surveillance Testing

The inspectors evaluated the following surveillance tests:

Routine (2 Samples)

- (1) OST-1506, Reactor Coolant System Isolation Valve Leak Test 18 Month Interval Mode 3 or 4, on January 17, 2018
- (2) OPT-1080, Emergency Diesel Generator 1A-SA Starting Air Compressor and Air Dryer Performance Test, on February 27, 2018

In-service (1 Sample)

- (1) EST-223, Insitu Main Steam Safety Valve Test Using Assist Device, on March 14, 2018

Reactor Coolant System Leak Detection (1 Sample)

- (1) OST-1026, Reactor Coolant System Leakage Evaluation, Computer Calculation, Daily Interval, Modes 1-4, on January 16, 2018

71114.06 - Drill Evaluation

Drill/Training Evolution (1 Sample)

The inspectors evaluated a tabletop emergency preparedness drill on March 8, 2018, titled "18-03 Mini DEP Tabletop 1."

OTHER ACTIVITIES – BASELINE

71151 - Performance Indicator Verification (3 Samples)

The inspectors verified licensee performance indicators submittals listed below for the period from January 2017 through December 2017.

- (1) unplanned scrams per 7000 critical hours on February 8, 2018
- (2) unplanned power changes per 7000 critical hours on February 8, 2018
- (3) unplanned scrams with complications on February 8, 2018

71152 - Problem Identification and Resolution

Annual Follow-up of Selected Issues (2 Samples)

The inspectors reviewed the licensee's implementation of its corrective action program related to the following issues:

- (1) Unsatisfactory Emergency Direct Current (DC) Lighting System Performance (NCR 02092163)
- (2) Assessment of unresolved item (URI) issued in 3rd Quarter 2017 Integrated IR (NCR 02170749)

Unresolved Item (Open)	Adequacy of Fire Brigade Response During Fire Drill	71111.05AQ
<p><u>Description:</u> The inspectors identified an URI during the March 21, 2018, announced fire drill that was observed. The drill involved an electrical failure inside the 'A' transfer panel located in the RAB 286' elevation 'A' cable spread room. The fire scenario assumed the electrical failure caused an explosion and fire in the room. The inspectors noted several performance weaknesses during the drill:</p>		
<ul style="list-style-type: none"> • The fire brigade leader directed three fire brigade members into the fire hot zone to fight the fire as the attack team. Since there is a 5-member fire brigade, only two fire brigade members remain, one of which is the fire brigade leader (who also serves as the site incident commander (SIC)), to be part of the designated 2-out rescue team, required when fighting internal building fires. This 2-out rescue team is responsible, if necessary, for providing assistance or rescue for any or all of the attack team members. The inspectors were concerned that this fire brigade strategy could result in challenges with fire brigade leader command and control, and with the effectiveness of conducting rescues. The fire brigade leader could be hampered in his primary role of directing a site fire response while serving as a rescue team member. Adding to this complication, in locations where radios are not allowed inside some buildings with electrical sensitive equipment during firefighting, as was the case for this fire drill, it would be difficult for the fire brigade leader to communicate and coordinate with the control room or others during a rescue situation. Regarding the actual rescue activity, its effectiveness could be challenged since a two-person rescue team would be faced with potentially assisting/removing three attack members out of the hot zone. Based on discussions with licensee fire brigade training personnel following the drill, the inspectors learned that this 3-in, 2-out deployment was the current manner in which all internal building firefighting strategies and fire training was based upon. • The fire brigade leader allowed the 3-man attack team to enter the fire hot zone with permission to commence firefighting prior to the 2-man rescue team arriving at the fire scene's pre-established incident command post and available for implementing rescue. The inspectors later learned that the rescue team, including the fire brigade leader, had arrived at the incident command post approximately five minutes after the attack team had entered the fire area. This delay involved the fire brigade leader completing his thermal protective clothing dressout in the locker room. The inspectors were concerned that under actual circumstances, if the 2-man rescue team were not ready and prepared to fulfill their rescue responsibilities upon entry of the attack team into the fire hot zone, the effectiveness of the rescue team could be challenged. • The inspectors observed that no fire hose or other form of fire suppression was pulled or readily available for the 2-man rescue team to take with them should they have needed to enter the hot zone to rescue the attack team. When questioned about this, the inspectors were told that on the same fire hose that the attack team was using, a 1-1/2 inch gated wye valve had been connected, and the rescue team could have connected another 50-foot, 1-1/2 inch fire hose to it and used that hose as a rescue hose. However, the inspectors determined this was inadequate since to get to this hose connection, the rescue team would have to enter into the hot zone prior to reaching it. In addition, the inspectors learned that the use of this 1-1/2 inch gated wye valve to create two hose streams for either attack or rescue that essentially splits the available flow capacity through a single 1-1/2 inch hose station nozzle was allowed 		

in multiple fire pre-plan strategies. At the conclusion of the inspection, the inspectors were continuing to assess whether the use of these gated wye valves had been formally reviewed by the licensee in the past to ensure that the flow capacity of fire hose streams would not be adversely impacted by their use during a fire.

Planned Closure Actions: Pending completion of additional evaluations needed to determine whether the above fire brigade issues of concern represented performance deficiencies and if so, whether the performance deficiencies were of more than minor significance, this issue was identified as an unresolved item.

Licensee Actions: The licensee initiated an NCR to address the inspectors' concerns. In addition, until a more thorough review of their fire brigade program could be performed against their NFPA 805 fire program requirements, an operator standing instruction (#18-009, "Fire Brigade 2-Out Response") was developed and implemented. This standing instruction directed the following specific fire brigade required actions:

- The brigade attack team will consist of two fire members to ensure the fire brigade SIC is not normally utilized as one of the 2-out members. If a runner is needed based on the fire area, the SIC may serve as a 2-out member, but this should be the exception.
- The 2-out members will establish a ready method of suppression that is accessible outside the fire zone. This should be the identified backup hose in the fire pre-plan. This hose does not need to be charged but should be flaked out and ready for use.
- The attack team will not enter the fire area, except when search and rescue is necessary, until the 2-out team is in the area with the suppression method ready for use.

The inspectors determined that the licensee's interim actions were adequate to ensure the fire brigade response would be effective if called upon pending resolution of the issues.

Corrective Action Reference: NCR 02194468

NRC Tracking Number: URI 05000400/2018001-01

Observation	71152
<p><u>Annual Follow-Up of Selected Issues: Unsatisfactory Emergency DC Lighting System Performance</u></p> <p>The inspectors conducted a detailed review of NCR 02092163, initiated on January 16, 2017, dealing with excessive battery failures associated with the emergency DC lighting system. The inspectors chose this sample because the emergency DC lighting system continued to exhibit high battery failure rates even though a performance improvement action plan had been implemented as a result of the system exceeding its 10 CFR 50.65 (Maintenance Rule) a(1) performance monitoring failure criterion in April 2014. The purpose of this NCR was to evaluate the continued failures in the system and identify any further actions that were needed. The results of this evaluation identified the need to expedite the development of a modification to replace the existing battery/lighting units with a more reliable unit from a different manufacturer due to the continued failures with the existing manufacturer. The inspectors noted that several more failures had occurred beginning January 2018, as documented and discussed in NCRs 02182715, 02185265, 02186870, 02187867, and 02191549. The inspectors determined that the corrective actions planned were adequate to address the long-standing issues with the system; however, the licensee had not been timely in resolving the issues resulting in continued reliability challenges.</p>	

EXIT MEETINGS AND DEBRIEFS

The inspectors confirmed that proprietary information was controlled to protect from public disclosure.

- On April 5, 2018, the inspectors presented the quarterly resident inspector inspection results to Ms. Tanya Hamilton, Site Vice President, and other members of the licensee staff.

DOCUMENTS REVIEWED

Section 71111.01: Adverse Weather Protection

Impending Severe Weather

AP-300, Severe Weather Response, Rev. 32

AP-301, Seasonal Weather Preparations and Monitoring, Rev. 83

AP-401, Installation and Control of Temporary Power and Equipment, Rev. 27

OP-161.01, Operations Freeze Protection and Temperature Maintenance Systems, Rev. 45

ORT-1415, Electrical Unit Heater Check Monthly Interval – September through March Mode: All,
Rev. 14

Temporary Heater Installation Log

Section 71111.04: Equipment Alignment

Partial Walkdown

OP-111, Residual Heat Removal System, Rev. 62

OP-155, Diesel Generator Emergency Power System, Rev. 86

Section 71111.05: Fire Protection Annual/Quarterly

Quarterly Inspection

FPP-001, Fire Protection Program Manual, Rev. 42

FPP-013, Fire Protection – Minimum Requirements, Mitigating Actions and Surveillance
Requirements, Rev. 98

AD-EG-ALL-1520, Transient Combustible Control, Rev. 8

AD-OP-ALL-1000, Conduct of Operations, Rev. 11

CSD-HNP-PFP-CNMT, Containment Building Pre-Fire Plan, Rev. 0

CSD-HNP-PFP-RAB-236, Reactor Auxiliary Building Elevation 236 Pre-Fire Plan, Rev. 2

CSD-HNP-PFP-RAB-286, Reactor Auxiliary Building Elevation 286 Pre-Fire Plan, Rev. 0

CSD-HNP-PFP-DFOSB, Diesel Fuel Oil Storage Building Pre-Fire Plan, Rev. 1

Annual Inspection

AD-OP-ALL-0207, Fire Brigade and Hazmat Team Administrative Controls, Rev. 0

FPP-001, Fire Protection Program Manual, Rev. 42

FPP-013, Fire Protection – Minimum Requirements, Mitigating Actions and Surveillance
Requirements, Rev. 98

AD-EG-ALL-1520, Transient Combustible Control, Rev. 8

Announced Fire Drill Package Number 18-A-01

Section 71111.06: Flood Protection Measures

Internal Flooding

PRA-F-E-0007, Reactor Auxiliary Building Unit 1 El. 286' Internal Flooding Analysis, Rev. 5

CSD-HNP-PFP-RAB-286, Reactor Auxiliary Building Elevation 286 Pre-Fire Plan, Rev. 0

Section 71111.11: Licensed Operator Requalification Program and Licensed Operator Performance

Operator Requalification

AOP-022, Loss of Service Water, Rev. 37

AOP-038, Rapid Downpower, Rev. 44

EOP-E-0, Reactor Trip or Safety Injection, Rev. 9

EOP-ES-0.1, Reactor Trip Response, Rev. 4

AD-TQ-ALL-0420, Conduct of Simulator Training and Evaluation, Rev. 11
(Procedure for acts of Sabotage Against the Plant)

Operator Performance

AD-OP-ALL-1000, Conduct of Operations, Rev. 9
AP-002, Plant Conduct of Operations, Rev. 66
AD-NF-ALL-0201, Reactivity Manipulation Plan, Rev. 1 (for reactor shutdown and restart)
OMM-001, Operations Administrative Requirements, Rev. 112
AOP-038, Rapid Downpower, Rev. 44
GP-006, Normal Plant Shutdown from Power Operation to Hot Standby (Mode 1 to Mode 3),
Rev. 84
GP-004, Reactor Startup (Mode 3 to Mode 2), Rev. 64

Section 71111.12: Maintenance Effectiveness

Routine Maintenance Effectiveness

10 CFR 50.65, Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power
Plants, dated July 10, 1991
NUMARC 93-01, Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear
Power Plants, Rev. 4A
Regulatory Guide 1.160, Monitoring the Effectiveness of Maintenance at Nuclear Power Plants,
Rev. 3
AD-EG-ALL-1210, Maintenance Rule Program, Rev. 1
NCR 02172601, 86UV relay damaged during 86T relay lead lift

Section 71111.13: Maintenance Risk Assessments and Emergent Work Control

AD-WC-ALL-0200, On-Line Work Management, Rev. 10
AD-WC-ALL-0410 Work Activity Integrated Risk Management, Rev. 6
AD-WC-ALL-0430, Outage Risk Review, Rev. 4
AD-NF-ALL-0501, Electronic Risk Assessment Tool (ERAT), Rev. 1
AD-OP-ALL-1000 Conduct of Operations, Rev. 9
AD-OP-ALL-0201, Protected Equipment, Rev. 4
OMM-001, Conduct of Operations, Rev. 112
WCM-001, On-Line Maintenance Risk Management, Rev. 28
NCR 02176168, PMT WO on ASI breaker preventive maintenance not properly logic tied to
schedule

Section 71111.15: Operability Determinations and Functionality Assessments

AD-OP-ALL-0105, Operability Determinations and Functionality Assessments, Rev. 4
ODP Reference Guide, Rev. 5
AD-OP-ALL-0202, Aggregate Operator Impact Assessment, Rev. 2

Section 71111.18: Plant Modifications

NEI 96-07, Guidelines for 10 CFR 50.59 Evaluations Endorsed by Regulatory Guide 1.187,
Rev. 1
Regulatory Guide 1.187, Guidance for Implementation of 10 CFR 50.59, dated November 2000
AD-EG-ALL-1110, Design Review Requirements, Rev. 5
AD-EG-ALL-1130, Activation of Engineering Changes, Rev. 2
AD-EG-ALL-1132, Preparation and Control of Design Change Engineering Changes, Rev. 9
AD-LS-ALL-0008, 10 CFR 50.59 Review Process, Rev. 0
AD-EG-ALL-1155, Post Modification Testing, Rev. 3

WCM-007, Temporary Alteration Monitoring Process, Rev. 2

Section 71111.19: Post Maintenance Testing

PLP-400, Post Maintenance Testing, Rev. 63

Section 71111.20: Refueling and Other Outage Activities

AOP-033, Chemistry Out of Tolerance, Rev. 33

ERC-008, Chemistry Action Level Response Program, Rev. 13

AOP-038, Rapid Downpower, Rev. 44

GP-006, Normal Plant Shutdown from Power Operation to Hot Standby (Mode 1 to Mode 3), Rev. 84

GP-007, Normal Plant Cooldown Mode 3 to Mode 5, Rev. 69

GP-002, Normal Plant Heatup from Cold Solid to Hot Subcritical Mode 5 to Mode 3, Rev. 69

GP-004, Reactor Startup (Mode 3 to Mode 2), Rev. 64

GP-005, Power Operation (Mode 2 to Mode 1), Rev. 104

PLP-106, Technical Specification Equipment List Program and Core Operating Limits Report, Rev. 67

AD-OP-ALL-0203, Reactivity Management, Rev. 7

AP-545, Containment Entries, Rev. 58

Section 71111.22: Surveillance Testing

Routine

OPT-1080, Emergency Diesel Generator 1A-SA Starting Air Compressor and Air Dryer Performance Test, (competed test results on 3/1/2017, 8/29/2017, and 9/1/2017)

OPT-1081, Emergency Diesel Generator 1B-SB Starting Air Compressor and Air Dryer Performance Test, (competed test results on 5/11/2017 and 8/8/2017)

NCR 02188215, 1A-NNS/1B-NNS EDG air compressors failed capacity testing

Section 71114.06: Drill Evaluation

Drill/Training Evolution

AD-TQ-ALL-0420, Conduct of Simulator Training and Evaluation, Rev. 11

AD-OP-ALL-1000, Conduct of Operations, Rev. 9

AP-002, Plant Conduct of Operations, Rev. 66

EP-EAL, Emergency Action Levels, Rev. 17

PLP-201, Emergency Plan, Rev. 69

PEP-110, Emergency Classification and Protective Action Requirements, Rev. 28

PEP-230, Control Room Operations, Rev. 30

Section 71151: Performance Indicator Verification

NEI 99-02, Regulatory Assessment Performance Indicator Guideline

AD-LS-ALL-0004, NRC Performance Indicators and Monthly Operating Report, Rev. 2

Calculation HNP-F/PSA-0068, NRC Mitigating System Performance Index Basis Document for Harris Nuclear Plant, Rev. 9

Section 71152: Problem Identification and Resolution

Annual Follow-up of Selected Issues

Procedures

AD-PI-ALL-0100, Corrective Action Program, Rev. 13

AD-PI-ALL-0104, Prompt Investigation Response Team, Rev. 3

AD-PI-ALL-0102, Apparent Cause Evaluation, Rev. 4

AD-PI-ALL-0103, Quick Cause Evaluation, Rev. 4
NCRs 02182715, 02185265, 02186870, 02187867, and 0291549 associated with emergency
DC lighting system problems
EM-132, Revision 002, Temporary Power Feed to TSC

Nuclear Condition Reports (NCR)/Action Requests (AR)

00568695
00580945
02116391
02120881
02123768
02159202
02181069
02183336
02186315
02193540
02193546
02180851
02170749
02194997

Other Documents

HNP-M/HVAC-0017, Revision 000, Technical Support Center Habitability Analysis during Loss
of Offsite Power
HNP-F/NFSA-0072, Revision 13, Determine Offsite, CR, TSC & EOF Doses for Selected
Chapter 15 Accidents
HNP-F/NFSA-0318, Revision 000, TSC Dose Following a LBLOCA/LOOP with Subsequent
Power Restoration from Leased DG