



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

December 22, 2015

Mr. Benjamin C. Waldrep  
Site Vice President  
Duke Energy Progress, Inc.  
Shearon Harris Nuclear Power Plant  
5413 Shearon Harris Road  
M/C HNP01  
New Hill, North Carolina 27562-0165

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC EVALUATION OF  
CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT PLANT  
MODIFICATIONS INSPECTION REPORT 05000400/2015007

Dear Mr. Waldrep:

On December 10, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Shearon Harris Nuclear Power Plant Unit 1, and discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of this inspection in the enclosed inspection report.

NRC inspectors documented one finding of very low safety significance (Green) in this report. This finding involved a violation of NRC requirements. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2.a of the Enforcement Policy.

If you contest the violation or significance of the NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC resident inspector at the Shearon Harris plant.

In accordance with Title 10 of the *Code of Federal Regulations* 2.390, "Public Inspections, Exemptions, Requests for Withholding," 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's Public Document Room or from the Publicly Available Records (PARS) component of

NRC's Agencywide Documents Access and Management 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/*

Jonathan H. Bartley, Chief  
Engineering Branch 1  
Division of Reactor Safety

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

Enclosure:  
Inspection Report 05000400/2015007  
w/Attachment: Supplementary Information

cc: Distribution via Listserv

B. Waldrep

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SIGNATURE	<b>MAR1 via email</b>	<b>SXL5 via email</b>	<b>MCG9 via email</b>	<b>EJS2 via email</b>	<b>JHB1</b>	<b>GTH1</b>	
NAME	M. Riley	S. Herrick	M. Greenleaf	E. Stamm	J. Bartley	G. Hopper	
DATE	12/18/2015	12/17/2015	12/18/2015	12/18/2015	12/22/2015	12/22/2015	
E-MAIL COPY	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	YES    NO	

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CYCLE INSPECTION FOLDER FOR ALL SITES\HARRIS\2015 MODS\HARRIS 50\_59 AND MODS INSPECTION RPT  
(2015007).DOCX

Letter to Benjamin C. Waldrep from Jonathan H. Bartley dated December 22, 2015.

SUBJECT: SHEARON HARRIS NUCLEAR POWER PLANT – NRC EVALUATION OF  
CHANGES, TESTS, AND EXPERIMENTS AND PERMANENT PLANT  
MODIFICATIONS INSPECTION REPORT 05000400/2015007

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**U. S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 50-400

License No.: NPF-63

Report No.: 05000400/2015007

Licensee: Duke Energy Progress, Inc.

Facility: Shearon Harris Nuclear Power Plant, Unit 1

Location: 5413 Shearon Harris Road  
New Hill, NC 27562

Dates: November 16, 2015, through December 10, 2015

Inspectors: Eric Stamm, Senior Reactor Inspector (Team Leader)  
Sandra Herrick, Reactor Inspector  
Marcus Riley, Reactor Inspector  
Michael Greenleaf, Trainee

Approved by: Jonathan H. Bartley, Chief  
Engineering Branch 1  
Division of Reactor Safety

Enclosure

## SUMMARY

Inspection Report (IR) 05000400/2015007; 11/16/2015 – 12/10/2015; Shearon Harris Nuclear Power Plant, Unit 1; Evaluations of Changes, Tests, and Experiments and Permanent Plant Modifications.

This report covers a two week onsite inspection by one senior reactor inspector, two reactor inspectors, and one trainee. One NRC-identified violation is documented in this report. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) and determined using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," (SDP) dated April 29, 2015. Cross-cutting aspects are determined using IMC 0310, "Aspects within the Cross-Cutting Areas," dated December 4, 2014. All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy, dated February 4, 2015. The NRC's program for overseeing the safe operations of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 5.

### NRC-Identified and Self-Revealing Findings

#### Cornerstone: Mitigating Systems

- Green: The team identified a non-cited violation of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to establish a periodic as-found testing program of safety-related 6.9kV vacuum breakers in accordance with applicable design document IEEE 308-1971. The licensee entered this issue into their corrective action program as action request 01983086 and initiated a procedure change request to have the procedure changed to verify the as-found capability of the breakers before performing the first scheduled preventative maintenance on the breakers in April 2016.

The performance deficiency was determined to be more than minor because, if left uncorrected, it had the potential to lead to a more significant safety concern. Specifically, the failure to establish as-found testing could mask degradation of the circuit breakers and decrease the reliability of the breakers to perform their safety-related function when called upon. The finding was determined to be of very low safety significance (Green), because it was a deficiency affecting the design or qualification of a structure, system, or component, which maintained its operability. The team determined that no finding cross-cutting aspect was applicable because the finding did not reflect current licensee performance. (Section 1R17)

## REPORT DETAILS

### 1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

#### 1R17 Evaluations of Changes, Tests, Experiments and Permanent Plant Modifications (71111.17T)

##### a. Inspection Scope

Evaluations of Changes, Tests, and Experiments: The team reviewed seven safety evaluations performed pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.59, "Changes, tests, and experiments," to determine if the evaluations were adequate, and that prior NRC approval was obtained as appropriate. The team also reviewed 16 screenings where licensee personnel had determined that a 10 CFR 50.59 evaluation was not necessary. The team reviewed these documents to determine if:

- the changes, tests, or experiments performed were evaluated in accordance with 10 CFR 50.59, and that sufficient documentation existed to confirm that a license amendment was not required
- the safety issues requiring the changes, tests, or experiments were resolved
- the licensee conclusions for evaluations of changes, tests, or experiments were correct and consistent with 10 CFR 50.59
- the design and licensing basis documentation used to support the change was updated to reflect the change

The team used, in part, Nuclear Energy Institute (NEI) 96-07, "Guidelines for 10 CFR 50.59 Implementation," Rev. 1, to determine acceptability of the completed evaluations and screenings. The NEI document was endorsed by the NRC in Regulatory Guide 1.187, "Guidance for Implementation of 10 CFR 50.59, Changes, Tests, and Experiments," dated November 2000.

Permanent Plant Modifications: The team reviewed eight permanent plant modifications that had been installed in the plant during the last three years. The modifications reviewed are listed below:

- EC 0000260437 – ESW Pump Wear Ring and packing Material Change
- EC 0000269609 – Replace 1A-SA EDG Governor with Upgraded Version
- EC 0000275885 – Upgrade NCD3 and NTD1 Cards for the Westinghouse 7300 System
- EC 0000279461 – Overload Relay, Ambient Compensated, Hand-Auto Reset
- EC 0000281469 – Replacement for PT-01CT-7160BSB Wide Range Containment Pressure
- EC 0000286799 – Changes Resulting from Repair at OEM
- EC 0000290607 – CM-E0010 Breaker Testing Criteria
- EC 0000291213 – CVCS Over-pressurization

The modifications were selected based upon risk significance, safety significance, and complexity. The team reviewed the modifications selected to determine if:

- the supporting design and licensing basis documentation was updated
- the changes were in accordance with the specified design requirements
- the procedures and training plans affected by the modification had been adequately updated
- the test documentation, as required by the applicable test programs, had been updated, and
- post-modification testing adequately verified system operability and/or functionality

The team also used applicable industry standards to evaluate acceptability of the modifications and performed walkdowns of accessible portions of the modifications. Documents reviewed are listed in the Attachment.

b. Findings

Introduction: The team identified a Green non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," for the licensee's failure to establish a periodic as-found testing program of safety-related 6.9kV vacuum breakers in accordance with applicable design document IEEE 308-1971.

Description: Harris was committed to Institute of Electrical and Electronics Engineers (IEEE) 308-1971, "IEEE Standard Criteria for Class 1E Power Systems for Nuclear Power Generating Stations," per the UFSAR Section 8.3.1.2.23. IEEE 308-1971, Section 6.3, titled "Periodic Equipment Tests," specified in part, that "tests shall be performed at scheduled intervals to: (1) Detect the deterioration of the system toward an unacceptable condition."

During review of EC 266427, "Replace existing Siemens FB type 6.9KV Air Circuit Breakers with new Siemens 3AH type 6.9KV Vacuum Circuit Breakers," Revision (Rev.) 12, the team noted that maintenance procedure PM E0048, "6.9kV Vacuum Breaker Inspection," Rev 9, was due to be performed for the first time on eight safety-related breakers as early as April 2016. The team found that the procedure did not require performance of electromechanical as-found testing at the reduced voltages specified by the plant design basis prior to inspecting, cleaning, and lubrication of the breakers. Inspecting, cleaning, and lubricating the breakers before performing as-found testing at reduced voltages could mask the deterioration and degradation of the circuit breakers that could be revealed at reduced voltages. As-found electromechanical functional testing under design basis conditions of circuit breakers is necessary to determine if the circuit breakers could have performed their specified safety functions, as credited in electrical design basis calculations and the safety analysis. The team was not provided any other procedures that were established which verified this capability.

The licensee initiated a procedure change request to have the procedure changed to verify the as-found capability of the breakers before performing the first scheduled preventative maintenance on the breakers in April 2016 and entered this issue into their corrective action program as action request (AR) 01983086.

Analysis: The failure to establish periodic as-found electromechanical testing of safety-related 6.9kV vacuum breakers in accordance with IEEE 308-1971 was a performance deficiency (PD). The PD was determined to be more than minor because, if left uncorrected, it had the potential to lead to a more significant safety concern.



Specifically, the failure to establish as-found testing could mask degradation of the circuit breakers and decrease the reliability of the breakers to perform their safety-related function when called upon. The finding was assessed using IMC 0609, Attachment 4, "Initial Characterization of Findings," issued June 19, 2012, for Mitigating Systems, and IMC 0612, Appendix A, "The Significance Determination Process for Findings At-Power," issued June 19, 2012, and determined to be of very low safety significance (Green), because it was a deficiency affecting the design or qualification of a structure, system, or component, which maintained its operability. This finding was not assigned a cross-cutting aspect because the issue did not reflect current licensee performance.

Enforcement: Title 10 CFR Part 50, Appendix B, Criterion XI, "Test Control," requires, in part, "A test program shall be established to assure that all testing required to demonstrate that structures, systems, and components (SSCs) will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents." UFSAR Section 8.3.1.2.23, stated the Class 1E power system conforms to IEEE 308-1971. Section 6.3 of IEEE 308-1971, titled "Periodic Equipment Tests," specified, in part, "tests shall be performed at scheduled intervals to: (1) Detect the deterioration of the system toward an unacceptable condition." Contrary to the above, since 2006, the licensee failed to establish a testing program which identified all testing required to demonstrate that SSCs would perform satisfactorily in service in accordance with written test procedures which incorporated the requirements and acceptance limits contained in IEEE 308-1971, the applicable design document. The failure to establish as-found testing could mask degradation of the circuit breakers and decrease the reliability of the breakers to perform their safety-related function when called upon. The licensee initiated a procedure change request to have the procedure changed before performing the first scheduled preventative maintenance on the breakers in April 2016. This violation is being treated as an NCV, consistent with Section 2.3.2 of the Enforcement Policy. The violation was entered into the licensee's corrective action program as AR 01983086. (NCV 05000400/2015007-01, Failure to Establish As-found Testing on 6.9kV Vacuum Breakers)

#### 4OA6 Meetings, Including Exit

On December 10, 2015, the team presented inspection results to Mr. Benjamin Waldrep and other members of the licensee's staff. The team verified that no proprietary information was retained by the inspectors, or documented in this report.

ATTACHMENT: SUPPLEMENTARY INFORMATION

## **SUPPLEMENTARY INFORMATION**

### **KEY POINTS OF CONTACT**

#### Licensee personnel:

S. Cahill, Manager, Maintenance  
J. Caves, (Acting) Manager, Nuclear Regulatory Affairs  
A. Goodman, Engineer, Regulatory Affairs  
M. Grantham, Director, Design Engineering  
T. Hamilton, Plant General Manager  
C. Holden, Consultant  
I. Nordby, Senior Engineer, Regulatory Affairs  
S. O'Connor, General Manager, Nuclear Engineering  
B. Waldrep, Site Vice President

#### NRC personnel:

J. Dodson, Senior Project Engineer, Division of Reactor Projects, Projects Branch 4  
J. Austin, Senior Resident Inspector, Division of Reactor Projects, Harris  
M. Riches, Resident Inspector, Division of Reactor Projects, Harris

### **LIST OF ITEMS OPENED, CLOSED, DISCUSSED, AND UPDATED**

#### Opened and Closed

05000400/2015007-01	NCV	Failure to Establish As-found Testing on 6.9kV Vacuum Breakers [Section 1R17]
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## LIST OF DOCUMENTS REVIEWED

### 10 CFR 50.59 Evaluations

EC 0000274909 – Isophase Bus Duct Cooling System Upgrades  
EC 0000277543 – Delete 1.5" CSIP Oil Cooler SW Supply Check Valves  
EC 0000288072 – HNP Cycle 19 Core Design and Safety Analyses  
EC 0000295499 – Revise DBD-201 and FSAR per CR 623998  
AR 514240 – Revise Technical Specification Bases and FSAR and subsequently MST-E0013 to incorporate new station battery testing methods  
AR 517267 – This is a revision to AR 514240 to change the Load Profile chart  
AR 678277 – OP-155, Rev. 71 – The effect of the change from automatic to periodic manual draining of the EDG starting air receiver

### 10 CFR 50.59 Screenings

EC 0000266427 – 6.9kV Breaker Replacement – Train B  
EC 0000272261 – Diesel Generator Time Delay Relays Obsolete  
EC 0000273014 – Replacement for Obsolete Yarway Welbond 5515B Valve  
EC 0000273393 – Reconfigure 1B CCW HX Vent & Drain Lines  
EC 0000279954 – Restore Valve 1CS-347 to Pre-RFO-16 Design Configuration  
EC 0000281290 – Environmental Qualification of Installed PORV Electro-Hydraulic Actuator  
EC 0000282397 – EDG P3 Sensor Valve is Obsolete  
EC 0000282805 – Update Design and Licensing Basis for EDG Starting Air  
EC 0000282877 – Replace 1B-SB EDG Governor (EG-A) with Upgraded Version  
EC 0000291695 – RCS Connections for NTTF 4.2  
EC 0000293880 – EQ Cond. Seals for 1MS-58:005, 60:005 & 62:005  
EC 0000293877 – Incipient Fire Detection Set Point Change  
EC 0000295243 – 1A2-SA Transformer Replacement  
EC 0000296241 – Obsolete EDG Allen Bradley Relay Changing from 700DC-N Series to 700DC-P Series  
EC 0000298880 – Replace Air Actuators on Butterfly Valves 1SW-231, -240, and -242  
AR 00618782 – AOP-038 Does Not Address SG Blowdown When Reactor and Turbine are Shut Down

### Calculations

166, System #4065 Stress Calculation, Rev. 7  
C1-CS-H-00115, CVCS Piping Hanger CS-H-115, Rev. 2  
CN-SEEE-III-10-26, Component Cooling Water System Heat Load and Temperature Analysis – Harris Unit 1, Rev. 0  
E-6000, AC Distribution System Voltage/Load Flow, Rev. 12  
E1-0002.03, Breaker Trip Unit Settings Feeders Supplying MCC's 1&4A33-SA and 1&4B33-SB, Rev. 3  
E1-.0005.01, 480V Overcurrent Protection for Station Service Transformer 1A2-SA and 1B2-SB, Rev. 2  
E2-0002.01, 6.9kV Overcurrent Protection for Station Service Transformer 1A2-SA and 1B2-SB, Rev. 2  
E4-0006, Safety Batteries 1A-SA and 1B-SB Load Profile Determination (LOCA/SBO/FLEX), Rev. 5  
E4-0008, 125 VDC Battery Sizing and Battery/Panel Voltages for Station Blackout/FLEX Loading, Rev. 8  
E4-0012, 125VDC 1E Battery Sizing and Battery/Panel Voltages for LOCA, Rev. 5  
FO-0013, Diesel Fuel Oil Transfer Pump TDH and NPSH Calculation, Rev. 4

HNP-F/NFSA-0223, HNP Cycle 19 Design Functional Requirements, Rev. 1  
 HNP-I/INST-1005, Continuous Calorimetric Calculation, Rev. 3  
 HNP-M/MECH-1210, Portable Heater Ignition Impacts, Rev. 1  
 SQN-EEB-MS-TI28-0006, Demonstrated Accuracy Calculation for Loops 2-F-3-163, 2-F-3-147,  
 2-F-3-155, and 2-F-3-178, Rev. 8  
 SW-0043, Service Water System Heat Load Calculation, Rev. 8

#### Design Basis Documents

DBD-103, Chemical & Volume Control System, Rev. 22  
 DBD-104, Safety Injection System, Rev. 16  
 DBD-128, Service Water System, Rev. 26  
 DBD-131, Component Cooling Water System, Rev. 17  
 DBD-140, Diesel Generator Building, Diesel Fuel Oil Pump, Emergency Service Water Intake  
 Structure and Security Building HVAC Systems, Rev. 6  
 DBD-201, Emergency Diesel Generator System, Rev. 16  
 DBD-202, Plant Electrical Distribution System, Rev. 34

#### Corrective Action Documents

AR 258893	AR 710044	CR 729586
AR 259090	CR 412546	CR 738619
AR 514240	CR 586837	CR 740555
AR 517267	CR 588517	CR 749682
AR 537877	CR 608927	CR 751291
AR 608508	CR 625060	CR 1968183
AR 631497	CR 627412	CR 1977928
AR 667314	CR 704190	

#### Procedures

AD-DC-ALL-0201, Development and Maintenance of Controlled Procedure Manual Procedures,  
 Rev. 14  
 AD-EG-ALL-1106, Configuration Management and Margin Management, Rev. 1  
 AD-EG-ALL-1132, Preparation and Control of Design Change Engineering Changes, Rev. 2  
 AD-EG-ALL-1520, Transient Combustible Control, Rev. 3  
 AD-PI-ALL-0400, Operating Experience Program, Rev. 2  
 AOP-001, Malfunction of Rod Control and Indication System, Rev. 46  
 AOP-010-BD, Feedwater Malfunctions, Rev. 19  
 AOP-025, Loss of One Emergency AC Bus (6.9KV) or One Emergency DC Bus (125V), Rev. 40  
 AOP-025-BD, Loss of One Emergency AC Bus (6.9KV) or One Emergency DC Bus (125V),  
 Rev. 19  
 AOP-038, Rapid Downpower, Rev. 42  
 CM-E0010, Molded Case Circuit Breaker Test, Rev. 27  
 GP-004, Reactor Startup (Mode 3 to Mode 2), Rev. 60  
 GP-006, Normal Plant Shutdown from Power Operation to Hot Standby (Mode 1 to Mode 3),  
 Rev. 66 and Rev. 77  
 MNT-NGGC-0004, Scaffolding Control, Rev. 18  
 MPT-E0022, EDG Percentage Differential and 6.9 kV Overcurrent for Safe Shutdown Relay  
 Calibration, Rev. 12  
 MPT-I0491, Diesel Generator 1A-SA Engine Control Cabinet Inspection, Pneumatic Logic  
 Device Replacement and Thermostat Calibration, Rev. 21  
 MPT-I0492, Diesel Generator 1B-SB Engine Control Cabinet Inspection, Pneumatic Logic  
 Device Replacement and Thermostat Calibration, Rev. 21

MPT-M0113, Emergency Diesel Generator Governor Replacement, Rev. 3  
 MPT-M0015, Emergency Diesel Generator Governor Oil Change, Rev. 15  
 MST-E0013, 1E Battery Performance Test, Rev. 15  
 OP-107, Chemical and Volume Control System, Rev. 113  
 OP-137, Auxiliary Feedwater System, Rev. 42  
 OP-153.01, Generator, Exciter, and Isolated Phase Bus, Rev. 57  
 OP-155, Diesel Generator Emergency Power System, Rev. 81  
 OPT-11, Emergency Diesel Overspeed Trip Test Modes 1-6, Rev. 17  
 OPT-1511, Emergency Diesel Generator Overspeed Trip Test Modes 1-6, Rev. 17  
 OST-1013, 1A-SA Emergency Diesel Generator Operability Test Monthly Interval Modes 1-2-3-4-5-6, Rev. 39  
 OST-1085, 1A-SA Diesel Generator Operability Test Semiannual Interval Modes 1 – 6, Rev. 31  
 OST-1214, Emergency Service Water System Operability Train A Quarterly Interval Modes 1-2-3-4-5-6 Defueled, Rev. 86  
 OST-1215, Emergency Service Water System Operability Train B Quarterly Interval Modes 1-2-3-4-5-6 Defueled, Rev. 83  
 OST-1823, 1A-SA Emergency Diesel Generator Operability Test 18 Month Interval Modes 1 through 6 and Defueled, Rev. 57  
 OST-1824, 1B-SB Emergency Diesel Generator Operability Test 18 Month Interval Modes 1 through 6 and Defueled, Rev. 59  
 PIC-1113, Diesel Generator Speed Switch Transmitter Calibration, Rev. 15  
 PM-E0042, Main Generator, Main Transformers, Auxiliary Transformers and Start-up Transformers Links Disconnection/Reconnection and Isolated Phase/Nonsegregated Bust Duct Inspections, Rev. 31  
 PM-E0048, 6.9kV Vacuum Breaker Inspection, Rev. 9  
 WCM-007, Temporary Alteration Monitoring Process, Rev. 1

#### Completed Procedures

13312857, MST-E0027, 1E Battery Bank Service Test (1B-SB), completed 4/9/2015  
 Emergency Diesel Generator Starting Air Dryer Check Valve Operability Test Quarterly Interval, Modes 1-2-3-4-5-6, Rev. 016, completed 10/24/2015  
 OPT-1080, Emergency Diesel Generator 1A-SA Starting Air Compressor and Air Dryer Performance Test, Rev. 2, completed 9/3/2015  
 OPT-1081, Emergency Diesel Generator 1B-SA Starting Air Compressor and Air Dryer Performance Test, Rev. 2, completed 8/19/2015  
 OST-1013, 1A-SA Emergency Diesel Generator Operability Test Monthly Interval Modes 1-2-3-4-5-6, Rev. 38, completed 5/3/2015  
 OST-1085, 1A-SA Diesel Generator Operability Test Semiannual Interval Modes 1 – 6, Rev. 31, completed 3/24/2015  
 OST-1214, Emergency Service Water System Operability Train A Quarterly Interval Modes 1-2-3-4-5-6-Defueled, Rev. 83, completed 10/24/2015  
 OST-1215, Emergency Service Water System Operability Train B Quarterly Interval Modes 1-2-3-4-5-6-Defueled, Rev. 83, completed 9/12/2015  
 OST-1823, 1A-SA Emergency Diesel Generator Operability Test 18 Month Interval Modes 1 through 6 and Defueled, Rev. 57, completed 5/3/2015  
 OST-1824, 1B-SA Emergency Diesel Generator Operability Test 18 Month Interval Modes 1 through 6 and Defueled, Rev. 58, completed 4/5/2015

#### Drawings

1364-035066-R005, Iso Phase Bus Elem Diag. Heat Excgr, Rev. 4  
 103271-09, Yarway Welbond Valve (ANSI Class 1500), Figure Number 5515B-SA105, Rev. M

5-S-0548, Simplified Flow Diagram Circulating & Service Water System, Rev. 72  
 5-G-0047, Flow Diagram Circulating & Service Water Systems Sheet 1 – Unit 1, Rev. 88  
 5-S-1321, Simplified Flow Diagram Component Cooling Water System Sheet 3 Unit 1, Rev. 8  
 CAR-2165/G-047, Flow Diagram Circulating & Service Water Systems, Sheet 1, Rev. 88  
 CAR-2165/G-0803, Flow Diagram Chemical & Volume Control System, Rev. 23  
 CCB4400D, Calif Controls Co Pressure Sensor Drawing, Rev. E6-G-0427, Motor Driven Aux.  
 Feedwater Pumps Instrument Schematics and Logic Diagrams, Rev. 8  
 CPL-2166/S-2117, Fire Protection Diesel Generator Bldg Plans Fire Hazards Analysis, Rev. 3  
 CPL-2166/S-2118, Fire Protection Diesel Generator Bldg Sections Fire Hazards Analysis,  
 Rev. 2

#### Miscellaneous Documents

2S011, Seismic Qualification Test for ABB Contactors, Allen Bradley Control Relays and Basler  
 Motor Operated Controllers, Rev. 6  
 50.59 Screening Criteria Checklist for MNT-NGGC-0004 Revision 0, Scaffolding Control  
 Procedure  
 AD-EG-ALL-1110, Design Review Requirement, Rev. 1  
 CAR-SH-E-018B, Specification Ebasco 288-71, Rev. 9  
 CAR-SH-IN-049, EDG Governor Controls Upgrade Functional Requirements Specification For  
 HNP, Rev. 1  
 Currently Installed Temporary Modifications List, dated 10/20/2015  
 E1-151-E2-35, Seismic Report 125V DC MCC's, Rev. 5  
 Ebasco Strainers/Screens Specification, Rev. 8  
 EC 079954, Put Temporary Cap on RCP Pump Seal Injection Isolation Valve 1CS-347, Rev. 1  
 EC 282234, Eliminate PS-10B4 EDG Control Air Vulnerability  
 EC 293435, EDG HVAC PS-33B3 Control Air Vulnerability Feed Water, Rev. 6  
 EC 401531, Evaluate the Use of Temporary Heaters per AP-301 to Maintain Component and  
 System Functionality, Rev. 0  
 General Design Criteria Document No. SQN-DC-V-13.9.8, Sequoyah Nuclear Plant - Auxiliary  
 Harris Unit 1 Cycle 20 Core Operating Limits Report, Rev. 0  
 T.1 – NED PQA for 73808180, Part Q Class Determination for EC86799R01, Rev. 0  
 Total Open NCON Report, dated 11/16/2015  
 VM-MBO-V01, Engine, Diesel – Inst. Manual, Rev. 30  
 VM-PPP, Allen Bradley Controls, Industrial, Rev. 13  
 VM-PQW, Westinghouse Circuit Breakers and Trip Units Vendor Manual, Rev. 13

#### Work Orders

01042366	01972634	13306685
01042367	01999272	13386751
01325048	02057296	13459955
01571449	02206308	13464518
01672624	12040769	13464521
01825929	12053338	13519439
01846416	13300032	
01896143	13300810	

#### Corrective Action Program Documents Generated as a Result of the Inspection

AR 01977019, Residue Found on Exterior of Some 125V 1E Battery Jars  
 AR 01977145, Inadequate 50.59 Screen for EDG TDR  
 AR 01979374, Discrepant Quantity of Catalog ID 0072407265 found in Stores  
 AR 01980903, OP-155 Droop Range Basis Not Retrievable

AR 01981959, Improvement Opportunity in Implementation of WCM-007  
AR 01982078, MST-E0013 Procedure Change Request  
AR 01982082, 50.59 Evaluation 514240 Needs Enhancement  
AR 01982138, TASM >90 Days – 50.59 Review Required  
AR 01982354, EC 296241 Misleading Description MOD INSP  
AR 01982777, FSAR Not Updated in Accordance with Mark-up  
AR 01983086, 6.9kV Vacuum Breaker PM Deficiency