



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

April 28, 2016

Mr. Kelvin Henderson
Site Vice President
Duke Energy Corporation
Catawba Nuclear Station
4800 Concord Road
York, SC 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000413/2016001 AND 05000414/2016001

Dear Mr. Henderson:

On March 31, 2016, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Catawba Nuclear Station Units 1 and 2. On April 4, 2016, the NRC inspectors discussed the results of this inspection with you and other members of your staff. Inspectors documented the results of the inspection in the enclosed inspection report.

The NRC inspectors did not identify any findings or violations of more than minor significance.

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

K. Henderson

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Sincerely,

/RA/

Frank Ehrhardt, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos.: 50-413, 50-414
License Nos.: NPF-35, NPF-52

Enclosure:
IR 05000413/2016001 and 05000414/2016001
w/Attachment: Supplemental Information

cc: Distribution via ListServ

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Letter to Kelvin Henderson from Frank Ehrhardt dated April 28, 2016

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000413/2016001, 05000414/2016001

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-413, 50-414

License Nos.: NPF-35, NPF-52

Report No.: 05000413/2016001 and 05000414/2016001

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station, Units 1 and 2

Location: York, SC 29745

Dates: January 1, 2016 through March 31, 2016

Inspectors: A. Hutto, Senior Resident Inspector
L. Pressley, Resident Inspector
C. Scott, Resident Inspector
J. Parent, Acting Resident Inspector
M. Toth, Project Engineer
J. Worosilo, Senior Project Engineer

Approved by: Frank Ehrhardt, Chief
Reactor Projects Branch 1

Enclosure

SUMMARY

IR 05000413/2016-001, 05000414/2016-001; 1/1/2016 – 3/31/2016; Catawba Nuclear Station, Units 1 and 2; Integrated Inspection Report

The report covered a three-month period of inspection by the resident inspectors and region-based project engineers. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" revision 5. No findings were identified during this inspection period.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near 100 percent rated thermal power for the entire inspection period.

Unit 2 operated at or near 100 percent rated thermal power for the entire inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R01 Adverse Weather Protection (71111.01)

a. Inspection Scope

.1 Impending Adverse Weather Conditions

The inspectors reviewed the licensee's preparations to protect risk-significant systems from ice forming conditions expected on January 22, 2016. The inspectors evaluated the licensee's implementation of adverse weather preparation procedures and compensatory measures, including operator staffing, before the onset of the adverse weather conditions. The inspectors reviewed the licensee's plans to address the consequences that may result from potential significant icing conditions. The inspectors verified that operator actions specified in the licensee's adverse weather procedure maintain readiness of essential systems. The inspectors verified that required surveillances were current, or were scheduled and completed, if practical, before the onset of anticipated adverse weather conditions. Documents reviewed are listed in the attachment.

.2 Readiness to Cope with External Flooding

The inspectors evaluated the licensee's implementation of flood protection procedures and compensatory measures during impending conditions of flooding or heavy rains. The inspectors reviewed the updated final safety analysis report and related flood analysis documents to identify those areas containing safety related equipment that could be affected by external flooding and their design flood levels. The inspectors walked down flood protection barriers and yard drain catchments, and reviewed procedures for coping with external flooding. The inspectors verified that the procedures for coping with flooding could reasonably be used to achieve the desired results. For those areas where operator actions are credited, the inspectors assessed whether the flooding event could limit or prevent the required actions. Documents reviewed are listed in the attachment.

The inspectors conducted walkdowns of the following plant areas containing risk-significant structures, systems, and components that are below flood levels or otherwise susceptible to flooding:

- Yard drainage catchments and diesel generator (DG) room exterior access flood barriers

b. Findings

No findings were identified.

1R04 Equipment Alignment (71111.04)

a. Inspection Scope

.1 Partial Walkdown

The inspectors verified that critical portions of the selected systems were correctly aligned by performing partial walkdowns. The inspectors selected systems for assessment because they were a redundant or backup system or train, were important for mitigating risk for the current plant conditions, had been recently realigned, or were a single-train system. The inspectors determined the correct system lineup by reviewing plant procedures and drawings. Documents reviewed are listed in the attachment.

The inspectors selected the following four systems or trains to inspect:

- 2A1 and 2A2 component cooling (KC) system with 2B1 and 2B2 out of service (OOS) for planned maintenance
- 1B DG with 1A DG OOS for pre-outage maintenance
- 1A motor driven auxiliary feedwater (CA) pump with the 1B CA pump OOS for preventive maintenance (PM)
- Unit 2 motor driven CA pumps while the turbine driven pump was OOS for planned PMs

.2 Complete Walkdown

The inspectors verified the alignment of the Unit 2 KC system. The inspectors selected this system for assessment because it is a risk-significant mitigating system. The inspectors determined the correct system lineup by reviewing plant procedures, drawings, the updated final safety analysis report, and other documents. The inspectors reviewed records related to the system's outstanding design issues, maintenance work requests, and deficiencies. The inspectors verified that the selected system was correctly aligned by performing a complete walkdown of accessible components.

To verify the licensee was identifying and resolving equipment alignment discrepancies, the inspectors reviewed corrective action documents, including condition reports and outstanding work orders. The inspectors also reviewed periodic reports containing information on the status of risk-significant systems, including maintenance rule reports and system health reports. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R05 Fire Protection (71111.05AQ)a. Inspection ScopeQuarterly Inspection

The inspectors evaluated the adequacy of selected fire plans by comparing the fire plans to the defined hazards and defense-in-depth features specified in the fire protection program. In evaluating the fire plans, the inspectors assessed the following items:

- control of transient combustibles and ignition sources
- fire detection systems
- fire suppression systems
- manual firefighting equipment and capability
- passive fire protection features
- compensatory measures and fire watches
- issues related to fire protection contained in the licensee's corrective action program

The inspectors toured the following six fire areas to assess material condition and operational status of fire protection equipment. Documents reviewed are listed in the attachment.

- Unit 1, electrical penetration room, auxiliary building 577' level, fire area 13
- Unit 1, CA pump room, auxiliary building 543' level, fire area 3
- Unit 2, CA turbine driven pump pit, auxiliary building 543' level, fire area 39
- Unit 2, essential switchgear room, auxiliary building 560' level, fire area 7
- Unit 2, mechanical penetration room, 577' level, fire area 18
- Unit 1 and Unit 2, residual heat removal pump rooms, auxiliary building 522' level, fire area 1

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program and Licensed Operator Performance (71111.11)a. Inspection Scope.1 Resident Inspector Quarterly Review of Licensed Operator Requalification

On January 27, 2016, the inspectors observed a simulator scenario conducted for training of an operating crew in preparations for upcoming requalification.

Inspectors observed Simulator Exercise Guide S-24, which included a steam generator tube leak and failure of steam line radiation monitors, a turbine runback, and a reactor coolant pump seal failure.

The inspectors assessed the following:

- licensed operator performance
- the ability of the licensee to administer the scenario and evaluate the operators
- the quality of the post-scenario critique
- simulator performance

Documents reviewed are listed in the attachment.

.2 Resident Inspector Quarterly Review of Licensed Operator Performance in the Actual Plant/Main Control Room

The inspectors observed licensed operator performance in the main control room following the failure of AS-2, main steam to aux steam header control bypass valve on Unit 1 and entry into AP-28, "Secondary Steam Leak" on January 28, 2016. The inspectors also observed licensed operator performance in the main control room during the performance of Unit 2, Train B safety injection system interlock (cold leg recirculation) testing and surveillance testing of the 2B EDG on March 29, 2016.

The inspectors assessed the following:

- use of plant procedures
- control board manipulations
- communications between crew members
- use and interpretation of instruments, indications, and alarms
- use of human error prevention techniques
- documentation of activities
- management and supervision

Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R12 Maintenance Effectiveness (71111.12)

a. Inspection Scope

The inspectors assessed the licensee's treatment of the two issues listed below to verify the licensee appropriately addressed equipment problems within the scope of the maintenance rule (10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants"). The inspectors reviewed procedures and records to evaluate the licensee's identification, assessment, and characterization of the

problems as well as their corrective actions for returning the equipment to a satisfactory condition. The inspectors also interviewed plant personnel to assess the licensee's treatment of performance deficiencies and extent of condition. Documents reviewed are listed in the attachment.

- Unit 2, 2NW-8A failed to open from the control room, Condition Report (CR) 1994011
- Unit 1, 1B DG electronic governor failure during parallel operation, CR 1996912

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control (71111.13)

a. Inspection Scope

The inspectors reviewed the six maintenance activities listed below to verify that the licensee assessed and managed plant risk as required by 10 CFR 50.65(a)(4) and licensee procedures. The inspectors assessed the adequacy of the licensee's risk assessments and implementation of risk management actions. The inspectors also verified that the licensee was identifying and resolving problems with assessing and managing maintenance-related risk using the corrective action program. Additionally, for maintenance resulting from unforeseen situations, the inspectors assessed the effectiveness of the licensee's planning and control of emergent work activities. Documents reviewed are listed in the attachment.

- Unit 2, January 6, 2016, Yellow risk condition for the 2B1 and 2B2 KC pumps OOS for planned maintenance
- Unit 1, February 3, 2016, Yellow risk condition for the 1B DG OOS for unplanned maintenance
- Unit 1, February 15, 2016, Yellow risk condition for the 1A train nuclear service water (RN) OOS for planned maintenance
- Unit 1 and 2, February 24, 2016, Yellow risk condition for the standby shutdown facility (SSF) DG OOS for planned maintenance
- Unit 1, March 10, 2016, Yellow risk condition for the 1B decay heat removal pump (ND) OOS for planned maintenance
- Unit 1, March 22, 2016, Yellow risk condition for the 1A DG OOS for planned maintenance

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments (71111.15)

a. Inspection Scope

Operability and Functionality Review

The inspectors selected the six operability determinations or functionality evaluations listed below for review based on the risk-significance of the associated components and systems. The inspectors reviewed the technical adequacy of the determinations to ensure that technical specification operability was properly justified and the components or systems remained capable of performing their design functions. To verify whether components or systems were operable, the inspectors compared the operability and design criteria in the appropriate sections of the technical specification and updated final safety analysis report to the licensee's evaluations. Where compensatory measures were required to maintain operability, the inspectors determined whether the measures in place would function as intended and were properly controlled. Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the attachment.

- Unit 1, 1A2 component cooling water pump seal leakage, CR 1988896
- Unit 1, Cracking observed on vital battery 1EBB cell #16 terminal post, CR 1993848
- Unit 2, Service water (RN) train to CA vent valve 2CA-310 leaking from flange, CR 1991715
- Unit 1, Elevated input rate to the 1A containment floor & equipment sump (CF&E), CR 1987159
- Unit 1 and 2, Refueling water storage tank level instrument conduit unprotected, CR 2000632
- Unit 1, 1A DG oil leak from the engine driven cooling water pump, CR 2012930

b. Findings

No findings were identified.

1R18 Plant Modifications (71111.18)

a. Inspection Scope

The inspectors verified that the plant modification listed below did not affect the safety functions of important safety systems. The inspectors confirmed the modifications did not degrade the design bases, licensing bases, and performance capability of risk significant structures, systems and components. The inspectors also verified modifications performed during plant configurations involving increased risk did not place the plant in an unsafe condition. Additionally, the inspectors evaluated whether system operability and availability, configuration control, post-installation test activities, and changes to documents, such as drawings, procedures, and operator training materials, complied with licensee standards and NRC requirements. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with modifications. Documents reviewed are listed in the attachment.

- EC 110921, "Control Room Area Ventilation (VC) Intake Extension Unit 1"

b. Findings

No findings were identified.

1R19 Post-Maintenance Testing (71111.19)a. Inspection Scope

The inspectors either observed post-maintenance testing or reviewed the test results for the six maintenance activities listed below to verify the work performed was completed correctly and the test activities were adequate to verify system operability and functional capability.

- PT/1/A/4350/002 A, "Diesel Generator 1A Operability Test" following PM
- PT/2/A/4350/002 B, "Diesel Generator 2B Operability Test" following mid-cycle PMs
- PT/1/A/4350/002 B, "Diesel Generator 1B Operability Test" following emergent governor replacement
- PT/0/A/4200/017 A, "Standby Shutdown Facility Diesel Test" following PMs and fuel pump solenoid replacement
- PT/1/A/4400/003 E, "Component Cooling Miniflow Verification" following 1KC81B actuator replacement
- PT/1/A/4250/003, "Turbine Driven Auxiliary Feedwater Pump #1 Performance Test" following PMs

The inspectors evaluated these activities for the following:

- acceptance criteria were clear and demonstrated operational readiness
- effects of testing on the plant were adequately addressed
- test instrumentation was appropriate
- tests were performed in accordance with approved procedures
- equipment was returned to its operational status following testing
- test documentation was properly evaluated

Additionally, the inspectors reviewed a sample of corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with post-maintenance testing. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

1R22 Surveillance Testing (71111.22)a. Inspection Scope

The inspectors reviewed the five surveillance tests listed below and either observed the test or reviewed test results to verify testing adequately demonstrated equipment operability and met technical specification and current licensing basis. The inspectors

evaluated the test activities to assess for preconditioning of equipment, procedure adherence, and equipment alignment following completion of the surveillance. Additionally, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with surveillance testing. Documents reviewed are listed in the attachment.

Routine Surveillance Tests

- PT/2/A/4200/009 A, Enclosure 13.35, "Containment Isolation Phase A – Train A"
- PT/1/A/4200/004 B, "Containment Spray 1A Performance Test"
- PT/2/A/4250/003 A, "Auxiliary Feedwater Motor Driven Pump 2A Performance Test"
- PT/1/A/4350/002 B, "Diesel Generator 1B Operability Test" (24 hour run)

In-Service Tests (IST)

- PT/1/A/4200/013 E, "Auxiliary Feedwater Valve In-service Test"

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation (71114.06)

a. Inspection Scope

The inspectors observed the emergency preparedness drill conducted on January 28, 2016. The inspectors observed licensee activities in the simulator and technical support center to evaluate implementation of the emergency plan, including event classification, notification, and protective action recommendations. The inspectors evaluated the licensee's performance against criteria established in the licensee's procedures. Additionally, the inspectors attended the post-exercise critique to assess the licensee's effectiveness in identifying emergency preparedness weaknesses and verified the identified weaknesses were entered in the corrective action program. Documents reviewed are listed in the attachment.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification (71151)

a. Inspection Scope

The inspectors reviewed a sample of the performance indicator (PI) data, submitted by the licensee, for the Unit 1 and Unit 2 PIs listed below. The inspectors reviewed plant records compiled between January 2015 and December 2015 to verify the accuracy and completeness of the data reported for the station. The inspectors verified that the PI data complied with guidance contained in Nuclear Energy Institute 99-02, "Regulatory Assessment Performance Indicator Guideline," and licensee procedures. The inspectors verified the accuracy of reported data that were used to calculate the value of each PI. In addition, the inspectors reviewed a sample of related corrective action documents to verify the licensee was identifying and correcting any deficiencies associated with PI data. Documents reviewed are listed in the attachment.

Cornerstone: Initiating Events

- unplanned scrams with complications

Cornerstone: Mitigating Systems

- cooling water system

Cornerstone: Barrier Integrity

- reactor coolant system specific activity

b. Findings

No findings were identified.

40A2 Problem Identification and Resolution (71152)

.1 Routine Review

The inspectors screened items entered into the licensee's corrective action program to identify repetitive equipment failures or specific human performance issues for followup. The inspectors reviewed problem identification program reports, attended screening meetings, or accessed the licensee's computerized corrective action database.

.2 Annual Followup of Selected Issues

a. Inspection Scope

The inspectors conducted a detailed review of problem identification program report for CR 1903604, Evaluation of IN 2015-05, "Inoperability of Auxiliary Feedwater Auto-start Circuits on Loss of Main Feedwater Pumps"

The inspectors evaluated the following attributes of the licensee's actions:

- complete and accurate identification of the problem in a timely manner
- evaluation and disposition of operability and reportability issues
- consideration of extent of condition, generic implications, common cause, and previous occurrences
- classification and prioritization of the problem
- identification of root and contributing causes of the problem
- identification of any additional condition reports
- completion of corrective actions in a timely manner

Documents reviewed are listed in the attachment.

b. Findings and Observations

No findings were identified.

4OA6 Meetings, Including Exit

On April 4, 2016, the resident inspectors presented the inspection results to Mr. Kelvin Henderson and other members of the licensee's staff. The inspectors verified that no proprietary information was retained by the inspectors or documented in this report.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

S. Andrews, Regulatory Affairs Specialist
T. Arlow, Emergency Planning Manager
M. Carwile, Chemistry Manager
C. Fletcher, Regulatory Affairs Manager
B. Foster, Operations Manager
K. Henderson, Site Vice-President
T. Jenkins, Maintenance Manager
L. Keller, General Manager Nuclear Engineering
B. Leonard, Training Manager
K. Phillips, Work Management Manager
T. Simril, Plant Manager
J. Smith, Radiation Protection Manager
J. Schell, Corporate Nuclear Engineering
S. West, Director, Nuclear Plant Security

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

AD-WC-ALL-0230, "Seasonal Readiness"
OP/0/B/6700/015, "Weather Related Activities"
PT/0/B/4700/038, "Cold Weather Protection"
Operations Cold Weather Update Status and associated outstanding items
CN-1024-01, "Yard Drainage Section Details and Schedules"
CN-1024-02, "Yard Drainage Section Details and Schedules"
Catawba USFSAR, Section 2.4; "Hydrologic Engineering"
Catawba UFSAR, Section 3.4; "Water Level (Flood) Design"
CNS-1465.00-00-0011, "Design Basis Specification for Flooding from External Sources"

Section 1R04: Equipment Alignment

Plan of the Day and plant status including schedules for 1/6/16
Clearance PRT-2-16-2B12B2KCPUMP-0002
2B1/2B2 KC Pumps OOS Protected Equipment and ESOMS clearance
OP/2/A/6350/002, "Diesel Generator Operation"; Enclosure 4.8, "D/G 2B Checklist for ES Actuation"
DWGS: CN-2573-01.00, CN-2573-1.2, CN-2573-2.3, Flow Diagrams of KC System
UFSAR Section 9.2.2, "Component Cooling System"
OP/2/A/6400/005, "Component Cooling System"

Section 1R05Q: Fire Protection

AD-EG-ALL-1520, "Transient Combustible Control"
Fire Brigade Response Strategies for Safety Related Areas
PT/0/A/4400/001P, "Inspection of Portable Fire Extinguishers"
Fire Strategy Fire Area 13, "Auxiliary Building 577 level, Unit 1 Electrical Penetration Room"
Fire Strategy Fire Area 03, "Auxiliary Building 543 level, Unit 1 CA Pump Room"
Fire Strategy Fire Area 39, "Auxiliary Building 543 level, Unit 2 CA Turbine Driven Pump Pit"
Fire Strategy Fire Area 07, "Auxiliary Building 560 level, Unit 2 Essential Switchgear Room"
Fire Strategy Fire Area 1, "Auxiliary Building 522 level, Unit 1 and Unit 2 RHR Pump Rooms"
RP/0/B/5000/029, "Fire Brigade Response"
AD-EN-ALL-0045, "Nuclear Chemical Control"
OP/2/A/6450/018, Enclosure 4.3, "Auxiliary Feedwater Pump Pits CO2 System"

Section 1R11: Licensed Operator Requalification

S-24, Simulator Exercise Guide
AP/1/A/5500/003, "Load Rejection"
AP/1/A/5500/008, "Malfunction of Reactor Coolant Pump"
AP/1/A/5500/010, "Reactor Coolant Leak"

Section 1R12: Maintenance Effectiveness

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline"
AD-EG-ALL-1210, "Maintenance Rule Program"
CR 1994011, 2NW-8A failed to open from the control room
CR 1996912, Diesel generator breaker 1ETB-18 tripped during a 24hr D/G run

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

Plan of the Day and plant status including schedules for 1/6/16

Clearance PRT-2-16-2B12B2KCPUMP-0002

2B1/2B2 KC Pumps OOS Protected Equipment and ESOMS clearance

Plan of the Day and plant status including schedules for 2/2-3/16

Clearance PRT-1-16-1BDGOOS-0026

Plan of the Day and plant status including schedules for 3/22/16

Clearance PRT-1-16-1ADGOOS-0059

Section 1R15: Operability Evaluations

AD-OP-ALL-0105, "Operability Determinations and Functionality Assessments"

NCR 1991715, 2CA-310 leaking from flange

DWG CN-2574-02.01, Flow diagram of RN System

CR 1987159, Elevated input rate to the 1A containment floor & equipment sump

FIP package and updates for elevated input rate to the 1A CF&E sump

CR 2012930, I/R 1A DG oil leak from engine driven KD pump

CR 1988896, 1A2 component cooling water pump seal leakage

CR 1993848, Cracking observed on vital battery 1EBB cell #16 terminal post

CR 1991715, Service water (RN) train to CA vent valve 2CA-310 leaking from flange

CR 2000632, Refueling water storage tank level instrument conduit unprotected

Section 1R18: Plant Modifications

AD-LS-ALL-0007, "Applicability Determination Process"

AD-LS-ALL-0008, "10 CFR 50.59 Review Process"

AD-EG-ALL-1132, "Preparation and Control of Design Change Engineering Changes"

NEI 96-07, Revision 1, "Guidelines for 10 CFR 50.59 Implementation"

EC 110921, "VC Intake Extension Unit 1"

A/R 1344318, 10 CFR 50.59 Screen, EC 110921, "VC Intake Extension Unit 1"

CNC-1211.00-00-0141, "Is Tornado Missile Protection Required for the Control Room Ventilation (VC) System"

OP/0/A/6450/011, "Control Room Area Ventilation/Chilled Water System"

Section 1R19: Post-Maintenance Testing

PT/1/A/4350/002 A, "Diesel Generator 1A Operability Test"

PT/2/A/4350/002 B, "Diesel Generator 2B Operability Test"

PT/1/A/4350/002 B, "Diesel Generator 1B Operability Test"

PT/0/A/4200/017 A, "Standby Shutdown Facility Diesel Test"

PT/1/A/4400/003 E, "Component Cooling Miniflow Verification"

PT/1/A/4250/003, "Turbine Driven Auxiliary Feedwater Pump #1 Performance Test"

Section 1R22: Surveillance Testing

PT/2/A/4200/009 A, Enclosure 13.35, "Containment Isolation Phase A (K612) – Train A"

PT/1/A/4200/004 B, "Containment Spray 1A Performance Test"

PT/2/A/4250/003 A, "Auxiliary Feedwater Motor Driven Pump 2A Performance Test"

PT/1/A/4200/013 E, "Auxiliary Feedwater Valve In-service Test"

PT/1/A/4350/002 B, "Diesel Generator 1B Operability Test" (24 hour run)

Section 1EP6: Drill Evaluation

CNS Drill Control Package and Scenario Manual for 2016 Dress Rehearsal, January 28, 2016
RP/0/A/5000/001, "Classification of Emergency"

Nuclear Power Plant Emergency Notification Forms, ERO Drill messages 1-6, 1/28/16

Section 4OA1: Performance Indicator Verification

NSD 225, "NRC Performance Indicators"

NEI 99-02, "Regulatory Assessment Performance Indicator Guideline"

SRPMP 10-1, "NRC Performance Indicator Data Collection, Validation, Review and Approval"

Catawba Master File, CN: 854.02-04, Cooling Water System 1

Catawba Master File, CN: 854.02-06, Cooling Water System 2

Catawba Master File, CN: 854.03-01, Reactor Coolant System Specific Activity

Section 4OA2: Problem Identification and Resolution

OP/1(2)/A/6250/001, Condensate and Feedwater System