



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

October 29, 2009

Mr. J. R. Morris
Site Vice President
Duke Energy Carolinas, LLC
Catawba Nuclear Station
4800 Concord Road
York, SC 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000413/2009004, 05000414/2009004 AND EMERGENCY PREPAREDNESS
INSPECTION REPORT 05000413/2009501, 05000414/2009501

Dear Mr. Morris:

On September 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Catawba Nuclear Station Units 1 and 2. The enclosed inspection report documents the inspection results which were discussed on October 6, 2009, with Mr. George Hamrick and other members of your staff.

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

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

Sincerely,

/RA/

Jonathan H. Bartley, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos.: 50-413, 50-414, 72-45
License Nos.: NPF-35, NPF-52

Enclosure: Integrated Inspection Report 05000413/2009003, 05000414/2009004 and
Emergency Preparedness Inspection Report 05000413/2009501,
05000414/2009501
w/Attachment: Supplemental Information

cc w/encl: (See page 2)

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 Site Vice President
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cc w/encl:

Randy D. Hart
Regulatory Compliance Manager
Duke Energy Carolinas, LLC
Electronic Mail Distribution

R. L. Gill, Jr.
Manager
Nuclear Regulatory Issues & Industry Affairs
Duke Energy Carolinas, LLC
Electronic Mail Distribution

Dhiaa M. Jamil
Group Executive and Chief Nuclear Officer
Duke Energy Carolinas, LLC
Electronic Mail Distribution

Kathryn B. Nolan
Senior Counsel
Duke Energy Corporation
526 South Church Street-EC07H
Charlotte, NC 28202

Lisa F. Vaughn
Associate General Counsel
Duke Energy Corporation
526 South Church Street-EC07H
Charlotte, NC 28202

David A. Repka
Winston Strawn LLP
Electronic Mail Distribution

North Carolina MPA-1
Suite 600
P.O. Box 29513
Raleigh, NC 27525-0513

Susan E. Jenkins
Director, Division of Waste Management
Bureau of Land and Waste Management
S.C. Department of Health and
Environmental Control
Electronic Mail Distribution

County Manager of York County
York County Courthouse
York, SC 29745

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

Beverly O. Hall
Chief, Radiation Protection Section
Department of Environmental Health
N.C. Department of Environmental
Commerce & Natural Resources
Electronic Mail Distribution

Vanessa Quinn
Federal Emergency Management Agency
500 C Street, SW
Room 840
Washington, DC 20472

Steve Weatherman, Operations Analyst
North Carolina Electric Membership
Corporation
Electronic Mail Distribution

Piedmont Municipal Power Agency
Electronic Mail Distribution

Peggy Force
Assistant Attorney General
State of North Carolina
P.O. Box 629
Raleigh, NC 27602

DEC

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Letter to J. R. Morris from Jonathan H. Bartley dated October 29, 2009

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000413/2009004, 05000414/2009004 AND EMERGENCY PREPAREDNESS
INSPECTION REPORT 05000413/2009501, 05000414/2009501

Distribution w/encl:

C. Evans, RII

L. Slack, RII

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RIDSNRRDIRS

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RidsNrrPMCatawba Resource

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.: 50-413, 50-414, 72-45

License Nos.: NPF-35, NPF-52

Report Nos.: 05000413/2009004, 05000414/2009004
05000413/2009501, 05000414/2009501

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station, Units 1 and 2

Location: York, SC 29745

Dates: July 1, 2009, through September 30, 2009

Inspectors: A. Hutto, Senior Resident Inspector
A. Sabisch, Senior Resident Inspector
R. Cureton, Resident Inspector
L. Miller, Senior Emergency Preparedness Inspector
(Sections 1EP and 4OA1)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000413/2009004, 05000414/2009004, 05000413/2009501, and 05000414/2009501; 7/1/2009 - 9/30/2009; Catawba Nuclear Station, Units 1 and 2; Routine Integrated Report

The report covered a three month period of inspection by three resident inspectors and an emergency preparedness inspector. No findings of significance were identified. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

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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, Barrier Integrity

1R04 Equipment Alignment

a. Inspection Scope

Partial Walkdowns: The inspectors performed three partial system walkdowns during the activities listed below to assess the operability of redundant or diverse trains and components when safety-related equipment was inoperable. The inspectors attempted to identify any discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures and walked down system components, selected breakers, valves, and support equipment to determine if they were in the correct position to support system operation. The inspectors reviewed protected equipment sheets, maintenance plans, and system drawings to determine if the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program. Documents reviewed are listed in the Attachment.

- Protection of 2A train equipment during the period the 2B train of component cooling (KC) was removed from service for cleaning of the 2B KC heat exchanger and maintenance activities on the 2B1/2B2 KC pumps and 2B residual heat removal (ND) pump
- 1B emergency diesel generator (EDG) while protected for A train maintenance
- 'A' train of controlled area chilled water (YC) while the 'B' train was removed from service due to a controller modification

Complete System Walkdown: The inspectors conducted one detailed walkdown/review of the Unit 2 Containment Valve Water Injection System. The inspectors used licensee procedures and licensing and design documents to verify that the system (i.e., pump, valve, and electrical) alignment was correct; valves and pumps did not exhibit leakage that would impact their function; major portions of the system and components were correctly labeled; hangers and supports were correctly installed and functional; and essential support systems were operational. In addition, pending design and equipment issues were reviewed to determine if the identified deficiencies significantly impacted the system's functions. Items included in this review

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were: the operator workaround list, the temporary modification list, and outstanding maintenance work requests/work orders. A review of open Problem Investigation Process reports (PIPs) was also performed to verify that the licensee had appropriately characterized and prioritized safety-related equipment problems for resolution in the corrective action program. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

a. Inspection Scope

Fire Protection Walkdowns: The inspectors walked down accessible portions of the five plant areas listed below to assess the licensee's control of transient combustible material and ignition sources, fire detection and suppression capabilities, fire barriers, and any related compensatory measures. The inspectors observed the fire protection suppression and detection equipment to determine whether any conditions or deficiencies existed which could impair the operability of that equipment. The inspectors selected the areas based on a review of the licensee's safe shutdown analysis probabilistic risk assessment and sensitivity studies for fire-related core damage accident sequences. Documents reviewed are listed in the Attachment.

- Unit 2 Mechanical Penetration Room, 543' elevation
- Unit 1 Mechanical Penetration Room, 577' elevation
- Unit 2 spent fuel pool and truck bay area
- Unit 1 Main Transformer Area
- Unit 1 'A' EDG room and sequencer hallway

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

a. Inspection Scope

The inspectors entered two conduit manholes (nuclear service water (RN) Conduit CMH-11B and CMH-18B) to verify that the cables were not submerged, that the cables were not damaged or degraded, and that the sump pumps were functioning properly.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance

a. Inspection Scope

Annual Review: The inspectors reviewed the performance of the Unit 2 'A' Containment Spray (NS) Heat Exchanger heat capacity test and evaluated the test data for acceptable performance. The inspectors reviewed the system configuration associated with the test, heat load requirements, the methodology used in calculating heat exchanger performance, and the method for tracking the status of tube plugging activities via the data logger and computer processing equipment. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R11 Licensed Operator Regualification

a. Inspection Scope

The inspectors observed Simulator Exercise S-28 to assess the performance of licensed operators during a license operator requalification simulator training session. The exercise included a steam generator tube leak followed by a steam generator tube rupture complicated by a steam generator power operated relief valve failing to close. The inspection focused on high-risk operator actions performed during implementation of the abnormal and emergency operating procedures, and the incorporation of lessons-learned from previous plant and industry events. The classification and declaration of the Emergency Plan by the Shift Technical Advisor and Operations Shift Manager was also observed during the scenario. The post-scenario critique conducted by the training instructor and the crew was observed. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the two activities listed below for items such as: (1) appropriate work practices; (2) identifying and addressing common cause failures; (3) scoping in accordance with 10 CFR 50.65(b) of the Maintenance Rule; (4) characterizing reliability issues for performance; (5) trending key parameters for condition monitoring; (6) charging unavailability for performance; (7) classification and reclassification in accordance with 10 CFR 50.65(a)(1) or (a)(2); and (8) appropriateness of performance criteria for Structures, Systems, and Components (SSCs)/functions classified as (a)(2) and/or appropriateness and adequacy of goals and corrective actions for SSCs/functions

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classified as (a)(1). For each item selected, the inspectors performed a detailed review of the problem history and surrounding circumstances, evaluated the extent of condition reviews as required, and reviewed the generic implications of the equipment and/or work practice problem. Documents reviewed are listed in the Attachment.

- Unit 2 Component Cooling Maintenance
- Maintenance activities on the Control Room Air Handling Unit following an emergent repair to the inboard fan

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following six activities to determine if the appropriate risk assessments were performed prior to removing equipment for work. When emergent work was performed, the inspectors reviewed the risk assessment to determine that the plant risk was promptly reassessed and managed. The inspectors reviewed the use of the licensee's risk assessment tool and risk categories in accordance with Nuclear System Directive (NSD) 415, Operational Risk Management (Modes 1-3), to verify there was appropriate guidance to comply with 10 CFR 50.65(a)(4). Documents reviewed are listed in the Attachment.

- Review of planned work activities for Work Week 29
- Transformer SATA critical lift
- Review of Critical Activity Plan associated with the cleaning of the 2B KC heat exchanger and maintenance activities on the 2B1/2B2 KC pumps and 2B EDG engine cooling water (KD) pump which placed Unit 2 in an Orange risk condition
- Review and walk down of Protected Equipment following emergent work on the 'B' YC Chiller during an 'A' train work week
- Review Complex plans for RN to KD Modification Dig #6
- Review of Complex Activity Plan associated with the Standby Shutdown Facility Load Bank (Isochronous) Test

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the technical adequacy of the five operability evaluations listed below to determine if Technical Specification (TS) operability was properly justified and

the subject components and systems remained available such that no unrecognized increase in risk occurred. The inspectors reviewed the operability determinations to verify that they were made as specified by NSD 203, Operability. The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR) to determine that the systems and components remained available to perform their intended function. Documents reviewed are listed in the Attachment.

- PIP C-09-4202, Potential Auxiliary Feedwater Condensate Storage Tank Vortexing and Air Entrainment at Maximum Flow Conditions
- PIPs C-09-4874, C-09-4881, Increased 1A Reactor Coolant Pump Seal Leakoff
- PIP C-09-5240, 2RN-291 Full Open and not Throttling as Expected
- PIP C-09-5532, 2A Diesel Generator Tripped on Overspeed During Periodic Test
- PIP C-09-4954, Lack of Thread Engagement on Several Flange Bolts on 1VG-75

b. Findings

No findings of significance were identified.

1R18 Plant Modifications

a. Inspection Scope

The inspectors reviewed the following temporary plant modification to verify the adequacy of the modification package, and to evaluate the modification for adverse affects on system availability, reliability and functional capability. Documents reviewed are listed in the Attachment.

- CD 101717 - Revise the high temperature alarm set point for Reactor Coolant Pump 1A Seal Water Temperature

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the four post-maintenance tests listed below to determine if procedures and test activities ensured system operability and functional capability. The inspectors reviewed the licensee's test procedures to determine if the procedures adequately tested the safety function(s) that may have been affected by the maintenance activities, that the acceptance criteria in the procedures were consistent with information in the applicable licensing basis and/or design basis documents, and that the procedures had been properly reviewed and approved. The inspectors also witnessed the tests and/or reviewed the test data to determine if test results adequately

demonstrated restoration of the affected safety function(s). Documents reviewed are listed in the Attachment.

- PT/1/A/4200/007 B, Centrifugal Charging Pump 1B Test, following routine preventive maintenance activity
- OP/2/A/6400/005, Component Cooling System, Enclosure 4.4, Operation of Additional KC Pumps / Parallel Operation, performed as a functional test of the 2B1 and 2B2 KC pumps following planned maintenance work
- PT/1/A/4450/005 A, Containment Air Return Fan 1A And Hydrogen Skimmer Fan 1A Performance Test, Enclosure 13.1, HSF-1A and ARF-1A Test With Correct Fan Speed and Motor Currents, performed as a functional test of the Unit 1A Hydrogen Skimmer Fan following planned work
- PT/1/A/4350/002 A, Diesel Generator Operability Test, performed following planned work on the 1A Diesel Generator

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the seven tests listed below, the inspectors witnessed testing and/or reviewed the test data to determine if the SSCs 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.

Surveillance Tests

- IP/1/A/3145/001 B, Containment Pressure Control System Train 'B' Channel Operational Test (1CPCC2)
- IP/1/A/3200/001 A, Solid State Protection System Train 'A' Periodic Testing
- IP/1/A/3150/004 B, Unit 1 Train 'B' Containment Valve Injection Water System, Enclosure 11.1.5 1NWLT5030 Calibration
- PT/1/A/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test, Enclosure 13.12 Safety injection (K609) Train 'B'
- OP/1/A/6200/032, Primary Sampling Using a Rheodyne Model 7010 Valve
- PT/1/A/4150/001 D, Reactor Coolant System Leakage Calculation

In-Service Tests

- Unit 2 'B' Containment Spray Pump inservice light water pump test

b. Findings

No findings of significance were identified.

Cornerstone: Emergency Preparedness

1EP2 Alert and Notification System Testinga. Inspection Scope

The inspector evaluated the adequacy of licensee's methods for testing the alert and notification system in accordance with NRC Inspection Procedure 71114, Attachment 02, Alert and Notification System Evaluation. The applicable planning standard 10 CFR 50.47(b)(5) and its related 10 CFR 50, Appendix E, Section IV.D requirements were used as reference criteria. The criteria contained in NUREG-0654, Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants, Revision 1, was also used as a reference. Documents reviewed are listed in the Attachment. This inspection activity satisfied one inspection sample for the alert and notification system on a biennial basis.

b. Findings

No findings of significance were identified.

1EP3 Emergency Response Organization (ERO) Augmentationa. Inspection Scope

The inspector reviewed the licensee's ERO augmentation staffing requirements and process for notifying the ERO to ensure the readiness of key staff for responding to an event and timely facility activation. The qualification records of key position ERO personnel were reviewed to ensure all ERO qualifications were current. A sample of problems identified from augmentation drills or system tests performed since the last inspection were reviewed to assess the effectiveness of corrective actions.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 03, Emergency Response Organization Staffing and Augmentation System. The applicable planning standard, 10 CFR 50.47(b)(2) and its related 10 CFR 50, Appendix E requirements were used as reference criteria. Documents reviewed are listed in the Attachment. This inspection activity satisfied one inspection sample for the ERO staffing and augmentation system on a biennial basis.

b. Findings

No findings of significance were identified.

1EP4 Emergency Action Level (EAL) and Emergency Plan Changesa. Inspection Scope

Since the last NRC inspection of this program area, revision 09-1 of the Catawba Nuclear Station Emergency Plan was implemented based on the licensee's

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determination, in accordance with 10 CFR 50.54(q), that the changes resulted in no decrease in the effectiveness of the Plan, and that the revised Plan continued to meet the requirements of 10 CFR 50.47(b) and Appendix E to 10 CFR 50. The inspector conducted a sampling review of the Plan changes and implementing procedure changes made between August 1, 2008, and June 30, 2009, to evaluate for potential decreases in effectiveness of the Plan. However, this review does not constitute formal NRC approval of the changes. Therefore, these changes remain subject to future NRC inspection in their entirety.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 04, Emergency Action Level and Emergency Plan Changes. The applicable planning standard (PS), 10 CFR 50.47(b)(4) and its related 10 CFR 50, Appendix E requirements were used as reference criteria. Documents reviewed are listed in the Attachment. This inspection activity satisfied one inspection sample for the emergency action level and emergency plan changes on an annual basis.

b. Findings

No findings of significance were identified.

1EP5 Correction of Emergency Preparedness Weaknesses and Deficiencies

a. Inspection Scope

The inspector reviewed the corrective actions identified through the Emergency Preparedness program to determine the significance of the issues and to determine if repeat problems were occurring. The facility's self-assessments and audits were reviewed to assess the licensee's ability to be self-critical, thus avoiding complacency and degradation of their emergency preparedness program. In addition, the inspector reviewed licensee self-assessments and audits to assess the completeness and effectiveness of all emergency preparedness related corrective actions.

The inspection was conducted in accordance with NRC Inspection Procedure 71114, Attachment 05, Correction of Emergency Preparedness Weaknesses. The applicable planning standard, 10 CFR 50.47(b)(14) and its related 10 CFR 50, Appendix E requirements were used as reference criteria. Documents reviewed are listed in the Attachment. This inspection activity satisfied one inspection sample for the correction of emergency preparedness weaknesses on a biennial basis.

b. Findings

No findings of significance were identified.

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed and evaluated the licensee's emergency planning performance during a drill conducted on September 17, 2009. The inspectors reviewed licensee activities that occurred in the Simulator and the Technical Support Center during a simulated event. The inspectors' assessment focused on the timeliness and accuracy of the event classification, notification of offsite agencies and the overall response of the personnel involved in the drill from an operations and emergency planning perspective. The performance of the Emergency Response Organization was evaluated against applicable licensee procedures and regulatory requirements. The inspectors attended the post-exercise critique for the drill to evaluate the licensee's self-assessment process for identifying potential deficiencies relating to failures in classification and notification. The inspectors reviewed the completed critique developed by the licensee documenting the overall performance of the Emergency Response Organization.

b. Findings

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator Verification

a. Inspection Scope

The inspectors sampled licensee data to confirm the accuracy of reported performance indicator (PI) data for the nine indicators during periods listed below. To determine the accuracy of the report PI elements, the reviewed data was assessed against PI definitions and guidance contained in Nuclear Energy Institute 99-02, Regulatory Assessment Indicator Guideline, Rev. 5. Documents reviewed are listed in the Attachment.

Cornerstone: Initiating Events

- Unplanned Scrams, Unit 2
- Unplanned Power Changes, Unit 2

Cornerstone: Mitigating Systems

- Reactor Coolant System Activity, Unit 1
- Reactor Coolant System Leakage, Unit 1
- Mitigating Systems Performance Index, Residual Heat Removal, Unit 1
- Mitigating Systems Performance Index, Residual Heat Removal, Unit 2

The inspectors reviewed the licensee's procedures and methods for compiling and reporting the Performance Indicators including the Reactor Oversight Program Mitigating Systems Performance Indicator Basis Document for Catawba. The inspectors reviewed

the raw data for the PIs listed above for the period of July 1, 2008, through June 30, 2009. The inspectors also independently screened TS Action Item Logs, selected control room logs, work orders and surveillance procedures, and maintenance rule failure determinations to determine if unavailability/unreliability hours were properly reported. The inspectors compared the licensee's raw data against the graphical representations and specific values contained on the NRC's public web page for 2008-2009. The inspectors also reviewed the past history of PIPs for systems affecting the Mitigating Systems Performance Indicators listed above for any that might have affected the reported values. The inspectors reviewed Nuclear Energy Institute 99-02, Regulatory Assessment Performance Indicator Guideline, to verify that industry reporting guidelines were applied.

Cornerstone: Emergency Preparedness

- Emergency Response Organization Drill/Exercise Performance (DEP)
- Emergency Response Organization Readiness (ERO)
- Alert and Notification System Reliability (ANS)

For the period April 1, 2008, through March 31, 2009, the inspector examined data reported to the NRC, procedural guidance for reporting PI information, and records used by the licensee to identify potential PI occurrences. The inspector verified the accuracy of the DEP through review of a sample of drill and event records. The inspector reviewed selected training records to verify the accuracy of the ERO PI for personnel assigned to key positions in the ERO. The inspector verified the accuracy of the PI for ANS reliability through review of a sample of the licensee's records of periodic system tests. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

40A2 Identification and Resolution of Problems

.1 Daily Review

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed screening of items entered into the licensee's corrective action program. This was accomplished by reviewing copies of PIPs, attending selected daily Site Direction and PIP screening meetings, and accessing the licensee's computerized database.

.2 Focused Review

a. Inspection Scope

The inspectors performed an in-depth review of PIP 09-0268, "2A2 KC pump suction was throttled, 2KC7 instead of 2KC9 (discharge) as required by procedure," previously entered into the licensee's corrective action program. The sample was within the

Enclosure

mitigating systems cornerstone and involved risk significant systems. Documents reviewed are listed in the Attachment. The inspectors reviewed the actions taken to determine if the licensee had adequately addressed the following attributes:

- Complete, accurate and timely identification of the problem
- Evaluation and disposition of operability and reportability issues
- Consideration of previous failures, extent of condition, generic or common cause implications
- Prioritization and resolution of the issue commensurate with safety significance
- Identification of the root cause and contributing causes of the problem
- Identification and implementation of corrective actions commensurate with the safety significance of the issue

b. Findings

No findings of significance were identified.

4OA3 Event Follow-up

a. Inspection Scope

The inspectors evaluated the entry into AP/1/A/5500/008, Malfunction of Reactor Coolant Pump, due to 1A NCP #2 seal leakage to assess the overall impact on the plant and mitigating actions. As appropriate, the inspectors: (1) observed plant parameters and status, including mitigating systems/trains; (2) determined alarms/conditions preceding or indicating the event; and (3) evaluated performance of licensee actions.

b. Findings

No findings of significance were identified.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours. These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status reviews and inspection activities.

b. Findings

No findings of significance were identified.

.2 Independent Spent Fuel Storage Installation (ISFSI) Radiological Controls

a. Inspection Scope

The inspectors reviewed the licensee's procedures and observed operations associated with storing spent fuel in the ISFSI in accordance with Inspection Procedure 60855. The inspectors observed selected licensee activities related to the loading of cask numbers 31 and 42 to verify that they performed these activities in a safe manner and in compliance with approved procedures. The inspectors reviewed the cask loading verification video for each of the above casks to verify that the alpha-numeric identification numbers stamped on the loaded fuel assemblies and burnable poison assemblies matched the identification numbers designated in the associated documentation packages. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On October 6, 2009, the resident inspectors presented the inspection results to Mr. George Hamrick, Catawba Station Manager, and other members of licensee management, who acknowledged the findings. The inspectors confirmed that any proprietary information provided or examined during the inspection period had been returned.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

T. Arlow, Emergency Planning Manager
S. Beagles, Chemistry Manager
D. Brenton, Operations Superintendent
W. Byers, Security Manager
J. Caldwell, Modifications Engineering Manager
S. Coy, Operations Training Manager
J. Ferguson, Mechanical, Civil Engineering Manager
J. Foster, Radiation Protection Manager
T. Hamilton, Work Control Manager
G. Hamrick, Station Manager
R. Hart, Regulatory Compliance Manager
M. Helton, Radiation Protection
T. Jenkins, Superintendent of Maintenance
J. McConnell, Shift Operations Manager
G. Mitchell, Emergency Planner
J. Morris, Catawba Site Vice President
K. Phillips, Safety Assurance Manager
T. Ray, Engineering Manager
M. Sawicki, Regulatory Compliance Engineer
R. Smith, Emergency Planner
D. Ward, Civil Engineering Supervisor
R. Weatherford, Training Manager

NRC personnel

J. Thompson, Project Manager, Office of Nuclear Reactor Regulation (NRR)
R. Bernhard, Senior Reactor Analyst, RII

LIST OF DOCUMENTS REVIEWED

Section 1R04: Equipment Alignment

Drawings

CN-2569-1.0, Flow Diagram of Containment Valve Injection Water System (NW), Rev. 22

Procedures

SOMP 02-02, Operations Role in the Risk Management Process, Rev. 05
PT/2/A/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test, Enclosure 13.38
Containment Isolation Phase A (K613, K646) Train B, Rev. 194
OP/2/A/6200/019, Containment Valve Water Injection System, Enclosure 4.5 Valve Check list,
Rev. 031

PIPs

C-08-00501, 2B NW Surge Chamber is slowly decreasing at a rate of .22 gallons per hour
 C-08-01796, 2A/2B NW Surge Chambers have to be repressurized more frequently than usual
 C-08-01931, 1B NW Surge Tank level is increasing unexpectedly
 C-08-02306, 1NW-217B did not indicate OPEN during Aux Safeguards testing
 C-08-05487, 2A NW Surge Chamber is not maintaining pressure above the alarm setpoint
 C-08-05926, 2A NW Surge Chamber pressure decreasing
 C-08-07211, 1B NW tank level decreasing ~7% in 24 hour
 C-09-00399, 1B NW surge chamber and pressure decreased greater than expected during Aux safeguards testing
 C-09-01015, 2B NW surge chamber and pressure decreased greater than expected during Aux safeguards testing
 C-09-04487, Tech Spec work on 1NW-195 was not performed as scheduled due to lack of resources to remove supports

Other

CNS-1569.NW-00-0001, Design Basis Specification for the Containment Valve Injection Water System (NW), Rev. 15
 Tech Spec 3.6.17, Containment Valve Injection Water System (CVIWS)

Section 1R05: Fire ProtectionStation Fire Impairment Log

NSD-313, Control of Combustible and Flammable Material, Rev. 7
 NSD-314, Hot Work Authorization, Rev. 7
 Fire Strategy for Fire Area 4, Auxiliary Building 543 Level
 Fire Strategy for Fire Areas 18, Auxiliary Building 577 Level
 Fire Strategy for Fire Areas 23, Auxiliary Building 605 Level
 Fire Strategy AY, Transformer Yard Unit 1
 Fire Strategy for Fire Area 25, Diesel Generator Building Room 1A
 Fire Strategy for Fire Area 41, Diesel Generator Building 1A Corridor
 AP/0/A/5500/045, Plant Fire, Rev. 6
 RP/0/B/5000/029, Fire Brigade Response, Rev. 21

Section 1R07: Heat Sink Performance - Annual Review

PT/2/A/4400/006B, NS Heat Exchanger 2B Heat Capacity Test, Rev. 034

Section 1R11: Licensed Operator Requalification

Simulator Exercise Guide S-28; OP-CN-LOR-S-28, Rev. 07
 EP/1/A/5000/E-0, Reactor Trip or Safety Injection
 EP/1/A/5000/E-2, Faulted Steam Generator Isolation
 EP/1/A/5000/E-3, Steam Generator Tube Rupture
 RP/0/A/5000/001, Classification of Emergency

Section 1R12: Maintenance Effectiveness

VC/YC - Control Room Ventilation/Chilled Water Health Report - 2009Q2
 PIP C-09-04916, Smoke, acrid odor and unusual ventilation noise in the control room
 PIP C-08-01467, RN flow to YC Chiller A exceeded 2000 gpm while 2 RN pumps were running
 PIP C-08-02434, RN flow to YC chiller B increased from 300 gpm to 1900 gpm

PIP C-08-06743, "A" YC Chiller could not be started following maintenance due to failed chilled water temperature switch

PIP C-09-00372, 1RN-304B was found full open with the chiller shut down

KC - Component Cooling System Health Report - 2009Q2

PIP C-09-0268, 2A2 KC pump exhibited unusual parameters

PIP C-09-0698, RN resistance factor low across KC HX 2B

PIP C-09-1246, Delay filling 2A KC HX

PIP C-09-2049, 2KC-12 seat ring material missing

PIP C-09-2770, 2A1 KC pump excessive suction noise

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

2B KC Heat Exchanger Critical Activity Plan for execution on 8/13/09

NSD-104, Material Condition / Housekeeping, Cleanliness, Foreign Material Exclusion and Seismic Concerns

PIP C-09-4838, Work not released as scheduled for 2B KCHX Critical Maintenance Plan

Section 1R15: Operability Evaluations

NSD-203, Operability/Functionality, Rev. 19

Catawba Technical Specification 3.7.5, Auxiliary Feedwater System

Catawba Technical Specification 3.8.1, AC Sources - Operating

Catawba Technical Specification 3.7.8, Nuclear Service Water System (NSWS)

Drawing CN-1590-2.0, Condensate Storage System (Unit 1), Rev. 12

Drawing CN-1592-1.0, Auxiliary Feedwater System (Unit 1), Rev. 30

Action Register Report dated 7/16/2009, CACST Vortexing

Section 1R18: Plant Modifications

CD 101717 - Revise high temperature alarm setpoint for C1A0824

Section 1R19: Post-Maintenance Testing

PT/1/A/4200/007 B, Centrifugal Charging Pump 1B Test

OP/2/A/6400/005, Component Cooling System, Enclosure 4.4, Operation of Additional KC Pumps / Parallel Operation

PT/1/A/4450/005 A, Containment Air Return Fan 1A And Hydrogen Skimmer Fan 1A Performance Test

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

Section 1R22: Surveillance Testing

TS 3.3.2, ESFAS Instrumentation

IP/1/A/3145/001 B, Containment Pressure Control System Train B Channel Operational Test

IP/1/A/3200/001 A, Solid State Protection System Train A Periodic Testing

IP/1/A/3150/004 B, Unit 1 Train B Containment Valve Injection Water System

PT/1/A/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test

OP/1/A/6200/032, Primary Sampling Using a Rheodyne Model 7010 Valve

PT/1/A/4150/001 D, Reactor Coolant System Leakage Calculation

UFSAR Section 6.2, Containment Systems

UFSAR Section 7.2, Reactor Trip System

UFSAR Section 7.3, Engineered Safety Features Actuation System

PT/2/A/4200/004C, Containment Spray Pump 2B Performance Test, Rev. 037

Section 1EP2: Alert and Notification System TestingProcedures and Manual

DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 3.3, Alert and Notification System (Siren Program), Rev. 10

Records and Data

Records of Silent, Full Cycle, and Growl ANS testing - June 5, 2007, to June 30, 2009
Selected documentation of ANS repair and annual preventative maintenance conducted in accordance with EPFAM section 3.3 - June 5, 2007, to June 30, 2009

Section 1EP3: Emergency Response Organization (ERO) AugmentationProcedures

PT/0/B/4600/006, Emergency Exercises and Drills, Rev. 014
DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 3.20, Emergency Planner Training & Qualification, Rev. 0
NSD-117, Emergency Response Organization Staffing, Training and Responsibilities, May 12, 2009
EP Group Manual Guideline 5.4.1, Emergency Response Organization Training Program, Rev. 19

Records and Data

Emergency Response Organization current contract list
PT/0/B/4600/005B, Quarterly Communications Verification, 1st-4th Qtr 2008 and 1st-2nd Qtr 2009
Documentation of weekly pager tests, January 2, 2008 - May 26, 2009
PIP C-09-04326, Apparent lack of historical training records for Emergency Planning staff
Documentation of ERO augmentation Drill conducted December 14, 2007 at 1922 hours and December 9, 2008 at 1923 hours

Section 1EP4: Emergency Action Level (EAL) and Emergency Plan Changes

DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 3.1, Administration of the Emergency Plan and Emergency Plan Implementing Procedures, Rev. 9
DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 10, 10 CFR 50.54(q) Evaluations, Rev. 10

Change packages for Plans and Procedures

Catawba Nuclear Station Emergency Plan, Rev. 09-1
RP/0/A/5000/001, Classification of Emergency, Rev. 19 and 20
RP/0/A/5000/010, Conducting a Site Assembly or Preparing the Site for an Evacuation, Rev. 22
RP/0/A/5000/005, General Emergency, Rev. 045
RP/0/A/5000/020, Technical Support Center (TSC) Activation Procedure, Rev. 024

Section 1EP5: Correction of Emergency Preparedness Weaknesses and Deficiencies

DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 3.2, Emergency Planning Business Measures, Rev. 11
NSD-208, Problem Investigation Process, Rev. 031

Audits and Self-Assessments

EMP-01-09, Site Emergency Response Participation Review, February 02-12, 2009
 EMP-02-07, 1st Quarter 2007 CNS Emergency Planning (EP) Business Measures and EP Track & Trend Review, April 3, 2007
 EMP-03-07, 2nd Quarter 2007 CNS Emergency Planning (EP) Business Measures and EP Track & Trend Review, July 2, 2007
 GO-07-20(NPA)(EP)(ALL), 2007 Emergency Planning Functional Area Evaluation
 08-05(INOS)(EP)(CNS), 2008 Emergency Planning Regulatory Program Audit

Records and Data

Drill package documentation (Logs, timeline, notification forms, critique report, corrective actions) of ERO drills 07-4, 07-3, 07-2, 07-1, 08-6, 08-5, 08-3, 08-2, 08-1, 09-3, and 09-2

PIPs

C-07-00010, 12/27/2006 an Unusual Event declared due to NC system leakage
 C-07-01023, Miscommunication initiated unnecessary notifications by Operations
 C-07-01791, Technical Support Center ventilation system is not operating properly
 C-07-02055, 2 high pressure Emergency Breathing air cylinders were stored in Ops supervisor's office
 C-07-06574, LMS Learning Management System is not reporting training records correctly
 C-08-01320, 51 members of the ERO, Fire Brigade, and Hazmat teams are indicating expired on medical physicals on LMS
 C-08-02008, Classification of Emergency procedure does not agree with background document
 C-09-04134, Offsite notification made as a result of MERT response to personal illness

Section 40A1: Performance Indicator Verification

NSD-225, NRC Performance Indicators, Rev. 4
 NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 5

Procedures

DPND-1551.00-0001, Emergency Planning Functional Area Manual (EPFAM), Section 3.7

Records and Data

Siren System Availability Test Records, April 1, 2008, through March 31, 2009
 ERO Personnel Participation, April 1, 2008, through March 31, 2009
 DEP Opportunities, April 1, 2008, through March 31, 2009
 Catawba Master File CN: 854.03-1, RCS Activity
 Catawba Master File CN: 854.03-2, RCS Identified Leak Rate
 Catawba Master File CN: 854.02-4, MSPI data, RHR

Section 40A2: Identification and Resolution of Problems

PIP 09-0268, 2A2 KC pump suction was throttled, 2KC7 instead of 2KC9 (discharge) as required by procedure
 NSD-208, Problem Investigation Process
 NSD-212, Cause Analysis

Section 40A5: Other Activities

CNEI 0400-184, Cask CNZ-042

PT/0/A/4150/037, Enclosure 13.1, Internal Transfer Sheet Fuel Handling Data Sheet, Cask 42

CNEI 0400-184, Cask CNZ-031

PT/0/A/4150/037, Enclosure 13.1, Internal Transfer Sheet Fuel Handling Data Sheet, Cask 41

OP/0/A/6550/019, Enclosure 4.4, NAC-UMS TSC Storage Array Orientation Schematic

MP/0/A/7650/181, Loading Spent Fuel Assemblies into NAC-UMS Casks