



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

July 26, 2013

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
05000413/2013003, 05000414/2013003**

Dear Mr. Henderson:

On June 30, 2013, 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 July 9, 2013, with Tom Simril 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.

One NRC-identified finding of very low safety significance (Green), which was determined to involve a violation of NRC requirements, was identified during this inspection. The NRC is treating this violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the Enforcement Policy. If you contest the violations or the severity of this NCV, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington DC 20555-001; with copies to the Regional Administrator Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at Catawba. If you disagree with a cross-cutting aspect assignment in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at Catawba.

K. Henderson

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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
License Nos.: NPF-35, NPF-52

Enclosure: Integrated Inspection Report 05000413/2013003, 05000414/2013003
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

K. Henderson

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cc w/encl: (See page 3)

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K. Henderson

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Letter to K. Henderson from Jonathan H. Bartley dated July 26, 2013

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT
05000413/2013003, 05000414/2013003

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

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

License Nos.: NPF-35, NPF-52

Report Nos.: 05000413/2013003, 05000414/2013003

Licensee: Duke Energy Carolinas, LLC

Facility: Catawba Nuclear Station, Units 1 and 2

Location: York, SC 29745

Dates: April 1, 2013 through June 30, 2013

Inspectors: A. Hutto, Senior Resident Inspector
C. Huffman, Resident Inspector
M. Endress, Reactor Inspector (Section 40A5)

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

Enclosure

SUMMARY OF FINDINGS

IR 05000413/2013-003, 05000414/2013-003; 4/1/2013 – 6/30/2013; Catawba Nuclear Station, Units 1 and 2; Operability Determinations and Functionality Assessments

The report covered a three-month period of inspection by the resident inspectors. One Green non-cited violation (NCV) was identified. The significance of inspection findings are indicated by their color (i.e., greater than Green, or Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP) dated June 2, 2011. Cross-cutting aspects are determined using IMC 0310, "Components Within the Cross-Cutting Areas dated October 28, 2011." All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy dated June 12, 2012. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process" revision 4.

Cornerstone: Barrier Integrity

- Green: An NRC-identified non-cited violation (NCV) of Technical Specifications, 5.5.16, Control Room Envelope Habitability Program, was identified for failure to implement and maintain all provisions of the program. The seals on the control room doors were not being inspected and maintained as required.

The performancy deficiency (PD) was more than minor because, if left uncorrected, the seals could continue to degrade and challenge the control room habitability envelope. The inspectors determined the finding was of very low safety significance (Green) because the lack of control room door seal inspections only represented a degradation of the radiological barrier function provided for the control room. The cause of this finding was related to the cross cutting-aspect of providing complete, accurate and up-to-date design documentation, procedures, and work packages of the Human Performance cross-cutting area because the necessary procedures and work packages were inadequate to assure compliance with the licensee's Control Room Envelope Habitability Program. [H.2.c] (Section 1R15)

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REPORT DETAILS

Summary of Plant Status

Unit 1 began the inspection period at 100 percent Rated Thermal Power (RTP) and remained there until May 31, 2013, when power was reduced to approximately 48 percent RTP for inspection and cleaning of the 1B main feedwater pump condenser. Unit 1 was returned to 100 percent RTP on June 2, 2013, where it remained for the rest of the inspection period.

Unit 2 began the inspection period at 100 percent RTP and remained there until May 24, 2013, when power was reduced to approximately 48 percent RTP for inspection and cleaning of the 2B main feedwater pump condenser. Unit 2 was returned to 100 percent RTP on May 26, 2013, where it remained for the rest of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, Barrier Integrity

1R01 Adverse Weather Protection

a. Inspection Scope

Adverse Weather Preparation: The inspectors reviewed the licensee's preparations for adverse weather associated with hot ambient temperatures including a review of procedures and work orders implemented by the licensee to ensure plant equipment was adequately protected during the hot weather season. The inspectors also performed field walkdowns to assess the material condition and operation of ventilation and cooling equipment as well as other preparations made to protect plant equipment from high seasonal temperatures. In addition, the inspectors reviewed the licensee's corrective action program to assess the licensee's ability to identify and resolve deficient conditions associated with hot weather protection equipment prior to seasonal high temperatures. Documents reviewed are listed in the Attachment.

Evaluation of Summer Readiness of Offsite and Alternate AC Power Systems: The inspectors reviewed the licensee's procedures and measures designed to monitor and maintain availability and reliability of both the offsite AC power system (grid) and the onsite alternate AC power systems prior to the onset of summer weather conditions and the resulting higher load demand on the grid. This included the review of the licensee's station, nuclear division, and power delivery group procedures defining the coordination of activities that could impact the on-site and offsite AC power systems and the communication protocols established between the power delivery group and Catawba to verify that the appropriate information is exchanged when issues arise that could impact the AC power systems. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

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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 performed walkdowns to identify any discrepancies that could impact the function of the system and, therefore, potentially increased 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.

- 1A and 1B motor driven auxiliary feedwater pumps while the Unit 1 steam driven auxiliary feedwater pump was out of service for preventive maintenance (PMs)
- 1B diesel generator (DG) while the 1A DG was out of service for detailed flywheel measurements
- 2B charging pump while the 1A pump was out of service for PMs

b. Findings

No findings 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.

- Standby shutdown facility
- Unit 1 and 2 cable spreading room
- Auxiliary Building 522' elevation
- Service building basement (instrument air compressor area)
- 1B Diesel generator room and sequencer hallway

b. Findings

No findings were identified.

1R06 Flood Protection Measures

a. Inspection Scope

Internal Flooding: The inspectors reviewed the Updated Final Safety Analysis Report (UFSAR), Individual Plant Examination, and flood analysis documentation associated with internal plant areas to determine the effect of flooding. The inspectors reviewed the licensee's internal flood protection features for the auxiliary building 543' and 522' elevations including curbs, floor drains and sump pumps credited to protect safety related equipment on these elevations. The internal areas were selected and walked down based on the flood analysis calculations. Through observation and design review, the inspectors verified that curbs were intact, floor drains were unobstructed, and that material condition of safety related sump pumps and sump level instrumentation were good, and that the equipment was operable. The inspectors reviewed corrective action program documents to verify that the licensee was identifying issues and resolving them. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R11 Licensed Operator Regualification (LOR) Program and Licensed Operator Performance

a. Inspection Scope

Quarterly Resident Inspector LOR Activity Review: The inspectors observed Simulator Exercise S-18 to assess the performance of licensed operators during a license operator requalification simulator training session. The exercise included an inadvertent dilution event, a pressurizer power operated relief valve failing open, and a reactor coolant pump malfunction requiring a manual reactor trip. The inspectors assessed overall crew performance, clarity and formality of communications, use of procedures, alarm response, control board manipulations, group dynamics and supervisory oversight. The inspectors observed the post-exercise critique to determine whether the licensee identified deficiencies and discrepancies that occurred during the simulator training. Documents reviewed are listed in the Attachment.

Quarterly Resident Inspector Licensed Operator Performance Review: The inspectors observed operators in the main control room and assessed their performance during a Unit 2 power reduction to approximately 50 percent RTP to support inspection and cleaning of the 2B main feedwater pump condenser. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R12 Maintenance Effectivenessa. 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 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.

- Maintenance Rule Periodic Assessment, Catawba Nuclear Station, April 2, 2011 – October 2, 2012
- PIP C-13-3543, Unit 1 Standby Makeup Pump was secured due to abnormal noise

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Controla. Inspection Scope

The inspectors reviewed the following four 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.

- Equipment protection plan for 2A motor driven auxiliary feedwater pump out of service (yellow risk)
- Equipment protection plan for unit 2 turbine driven auxiliary feedwater pump out of service (yellow risk)

- Equipment protection plan of Standby Shutdown Facility (SSF) diesel generator nonfunctional due to scheduled PMs (yellow risk)
- Equipment protection plan for 1A motor driven auxiliary feedwater pump out of service (yellow risk)

b. Findings

No findings were identified.

1R15 Operability Determinations and Functionality Assessments

a. Inspection Scope

The inspectors evaluated the technical adequacy of the five operability evaluations or functionality assessments 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-13-2828, 2A Pressurizer heater panel elevated temperatures
- PIP C-13-3248, Control room door PMs do not include inspection of seals
- PIP C-13-3789, Air leak detected around valve positioner assembly for 1SV-1
- PIP C-13-4670, Unit 2 SSF pressurizer heater capacity SLC requirements does not take into account voltage drop due to long cable runs
- PIP C-13-4830, 1RN-148A Loss of control power

b. Findings

Introduction: An NRC-identified Green non-cited violation (NCV) of Technical Specifications, 5.5.16, Control Room Envelope Habitability Program, was identified for failure to implement and maintain all provisions of the program. The seals on the control room doors were not being inspected and maintained as required.

Description: During a walkdown of the areas inside and outside the Unit 1 control room, the inspectors identified a whistling sound coming from the control room door. Inspection of the door seal identified that the seal was degraded, cracked, or missing sections in several areas. Technical Specification 5.5.16, Control Room Envelope Habitability Program, was established to ensure that control room envelope occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event. The program calls for maintaining the control room in its design condition through preventative maintenance. Procedure PT/0/A/4450/022, Control Room Habitability Program, was used to implement the requirements of Technical Specification 5.5.16. This procedure referenced NEI 99-03, Control Room Habitability Guidance, Section 9, Long Term CRE Integrity Program, which specified that

periodic inspections and preventative maintenance be performed to assure that the boundary was maintained which included verification that seals were free of cracks, maintained contact around the entire door and were compressed against the door at all points. The inspectors found that the licensee's preventive maintenance procedure for inspecting the control room doors did not include inspection of the door seals themselves or provide any criteria for acceptable seal condition. The licensee determined that the control room door seal was operable based on differential pressure measurements across the door. The licensee initiated corrective actions to include control room door seal inspections in their preventative maintenance procedures.

Analysis: The inspectors determined the failure to perform inspections and preventative maintenance on the door seals was a performance deficiency (PD). The inspectors determined that the PD was more than minor because if left uncorrected, the seals could continue to degrade and challenge the control room habitability envelope. Using IMC 0609, Significance Determination Process, Attachment 4, Phase 1 Initial Screening and Characterization of Findings, Table 3, dated July 1, 2012, and IMC 0609, Appendix A, Exhibit 3, Barrier Integrity Screening Questions, dated July 1, 2012, the inspectors determined the finding was of very low safety significance (Green) because the lack of control room door seal inspections only represented a degradation of the radiological barrier function provided for the control room. The cause of this finding was related to the cross cutting-aspect of providing complete, accurate and up-to-date design documentation, procedures, and work packages of the Human Performance cross-cutting area because the necessary procedures and work packages were inadequate to assure compliance with the licensee's Control Room Envelope Habitability Program. [H.2.c]

Enforcement: TS 5.5.16, Control Room Envelope Habitability Program, specified, in part, that the licensee's control room habitability program shall include requirements for maintaining the control room envelope boundary in its design condition including configuration control and preventative maintenance. Procedure PT/0/A/4450/022 Control Room Habitability Program, specified NEI 99-03, Control Room Habitability Guidance, Section 9, Long Term CRE Integrity Program, as a means to satisfy the surveillance and preventative maintenance requirements. NEI 99-03, Section 9, specified that periodic inspections and preventative maintenance of door seals be performed to assure that the boundary was maintained. Contrary to the above, from March 29, 2011, until April 2013, all provisions of the Control Room Habitability Program as described in Section 5.5.16 of the Catawba Units 1 and 2 Administrative Controls were not met, as procedures did not include control room door seal periodic inspections and preventative maintenance to assure that the control room boundary design condition was maintained. Since the finding was of very low safety significance and has been entered into the licensee's corrective action program as PIP C-13-03248, this violation was treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy, and is identified as NCV 05000413, 414/2013003-01, Failure to Inspect Control Room Door Seal.

1R19 Post Maintenance Testinga. Inspection Scope

The inspectors reviewed the five 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.

- Diesel generator 1A operability test following preventive PMs
- Containment air return fan 1B performance test following motor PMs
- Turbine driven auxiliary feedwater pump #1 performance test following PMs
- 1A motor driven auxiliary feedwater pump performance test following PMs
- 1B charging pump performance test following PMs

b. Findings

No findings were identified.

1R22 Surveillance Testinga. Inspection Scope

For the five 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 Technical Specifications, the UFSAR, and applicable licensee procedures, and that the tests demonstrated that the SSCs were capable of performing their intended safety functions.

Surveillance Tests

- PT/2/A/4350/002 B, Diesel Generator 2B Operability Test
- PT/1/A/4350/002 B, Diesel Generator 1B Operability Test
- PT/1/A/4200/004 C, Containment Spray Pump 1B Performance Test (comprehensive)
- PT/2/A/4450/005 A, Containment Air Return Fan 2A and Hydrogen Skimmer Fan 2A Performance Test

In-Service Tests

- PT/2/A/4250/003 C, Turbine Driven Auxiliary Feedwater Pump #2 Performance Test

b. Findings

No findings were identified.

Cornerstone: Emergency Preparedness

1EP6 Drill Evaluation

a. Inspection Scope

The inspectors observed and evaluated the licensee's emergency planning performance during a drill conducted on May 9, 2013. The scenario involved a toxic gas release followed by a station blackout and large break loss of coolant accident. The inspectors reviewed licensee activities that occurred in the simulator and the Technical Support Center during the simulated events. 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 drills from an operations and emergency planning perspective. The performance of the Emergency Response Organization (ERO) was evaluated against applicable licensee procedures and regulatory requirements. The inspectors attended the post-exercise critique for the drills to evaluate the licensee's self-assessment process for identifying potential deficiencies relating to failures in classification and notification. The inspectors reviewed the completed licensee critique documenting the overall performance of the ERO.

b. Findings

No findings were identified.

4. OTHER ACTIVITIES

4OA1 Performance Indicator (PI) Verification

a. Inspection Scope

The inspectors sampled licensee data to confirm the accuracy of reported PI data for the six indicators during periods listed below. To determine the accuracy of the reported 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: Mitigating Systems

- MSPI - Emergency AC Power, Units 1 & 2
- MSPI - High Pressure Safety Injection, Units 1 & 2
- MSPI - Heat Removal System (Auxiliary Feedwater), Units 1 & 2

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

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data for the PIs listed above for the period of April 1, 2012, through March 31, 2013. 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 2012-2013. 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. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

4OA2 Problem Identification and Resolution

.1 Daily Review

As required by Inspection Procedure 71152, Problem Identification and Resolution, 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 Annual Follow-up of Selected Issues

a. Inspection Scope

The inspectors performed an in-depth review of PIP C-13-3610, CAPT #2 level switch sticking, within the Mitigating Systems cornerstone. The inspectors reviewed the actions taken to determine if the licensee had adequately addressed the following attributes. Documents reviewed are listed in the Attachment.

- 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 were identified.

.3 Semiannual Trend Review

a. Inspection Scope

As required by IP 71152, Problem Identification and Resolution, the inspectors performed a review of the licensee's Corrective Action Program (CAP) and associated documents to identify trends that could indicate the existence of a more significant safety issue. The inspectors review was focused on repetitive equipment issues, but also considered the results of daily inspector CAP item screenings discussed in Section 4OA2.1 above, licensee trending efforts, and licensee human performance results. The inspectors' review nominally considered the six month period of January 2013 through June 2013, although some examples expanded beyond those dates when the scope of the trend warranted. The review also included issues documented outside the normal CAP in major equipment problem lists, plant health team vulnerability lists, focus area reports, system health reports, self-assessment reports, maintenance rule reports, and Safety Review Group Monthly Reports. The inspectors compared and contrasted their results with the results contained in the licensee's latest quarterly trend reports. Corrective actions associated with a sample of the issues identified in the licensee's trend report were reviewed for adequacy.

b. Findings

No findings were identified. In general, the licensee has identified trends and has appropriately addressed the trends within their CAP and no new trends were identified.

4OA3 Followup of Events and Notices of Enforcement Discretion (NOED)

a. Inspection Scope

On May 28, 2013, the inspectors evaluated the licensee's response to entry conditions for a loss of nuclear service water for both units due to an invalid low pit level signal that resulted in an automatic swap to the nuclear service water pond. As appropriate, the inspectors: (1) observed plant parameters and status including mitigating systems/trains and fission product barriers; (2) determined alarms/conditions preceding or indicating the event; and (3) evaluated performance of plant systems and licensee actions. During the event, actual service water flow to both units was maintained. Documents reviewed are listed in the Attachment.

b. Findings

No findings 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 were identified.

.2 (Closed) Temporary Instruction (TI) -2515/182 - Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks, Phase 1

a. Inspection Scope

Leakage from buried and underground pipes has resulted in ground water contamination incidents with associated heightened NRC and public interest. The industry issued a guidance document, Nuclear Energy Institute (NEI) 09-14, "Guideline for the Management of Buried Piping Integrity" (ADAMS Accession No. ML1030901420) to describe the goals and required actions (commitments made by the licensee) resulting from this underground piping and tank initiative. On December 31, 2010, NEI issued Revision 1 to NEI 09-14, "Guidance for the Management of Underground Piping and Tank Integrity," (ADAMS Accession No. ML110700122), with an expanded scope of components which included underground piping that was not in direct contact with the soil and underground tanks. On November 17, 2011, the NRC issued TI-2515/182 "Review of the Industry Initiative to Control Degradation of Underground Piping and Tanks" to gather information related to the industry's implementation of this initiative.

The inspectors reviewed the licensee's programs for buried pipe, underground piping and tanks in accordance with TI-2515/182 to determine if the program attributes and completion dates identified in Sections 3.3 A and 3.3 B of NEI 09-14 Revision 1 were contained in the licensee's program and implementing procedures. For the buried pipe and underground piping program attributes with completion dates that had passed, the inspectors reviewed records to determine if the attribute was in fact complete and to determine if the attribute was accomplished in a manner which reflected good or poor practices in program management. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified. The licensee's buried piping and underground piping and tanks program was inspected in accordance with paragraphs 03.01.a through 03.01.c of TI-2515/182 and was found to meet all applicable aspects of NEI 09-14 Revision 1, as set forth in Table 1 of the TI.

.3 Independent Spent Fuel Storage Installation Radiological Controls

a. Inspection Scope

The inspectors reviewed the licensee's procedures and observed operations associated with storing spent fuel in the Independent Spent Fuel Storage Installation in accordance with Inspection Procedure 60855.1. The inspectors observed selected licensee activities related to the loading of cask number 74, to verify that they performed these activities in a safe manner and in compliance with approved procedures. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On July 9, 2013, the resident inspectors presented the inspection results to Mr. Tom Simril and other members of licensee management. The inspectors 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

T. Arlow, Emergency Planning Manager
D. Cantrell, Chemistry Manager
T. Hamilton, Engineering Manager
R. Hart, Regulatory Compliance Manager
K. Henderson, Site Vice-President
T. Jenkins, Superintendent of Maintenance
C. Kamilaris, Organizational Effectiveness Manager
E. McElroy, Buried Piping Program Engineer
A. Orton, Nuclear Training Manager
K. Phillips, Work Control Manager
S. Putnam, Superintendent of Operations
P. Simbrat, Regulatory Compliance Engineer
T. Simril, Plant Manager
J. Smith, Radiation Protection Manager
W. Suslick, Design Support Services
S. West, Security Manager

LIST OF REPORT ITEMS

Opened and Closed

050000413,414/2013003-01	NCV	Failure to Inspect Control Room Door Seal (Section 1R15)
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LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

Duke Energy Nuclear Switchyard Interface Agreement
Duke Energy response to GL 2006-02 dated March 30, 2006
AM/1/A/5100/008, 4 kV Essential Power (EPC) System Degraded Voltage Logic
NSD 417, Nuclear Facilities/Generation Status Communications
NSD 415, Operational Risk Management (Modes 1-3) per 10 CFR 50.65(a)(4)
AP/1(2)/A/5500/037, Generator Voltage and Electric Grid Disturbances
OP/0/B/6700/015, Weather Related Activities
PT/0/B/4700/039, Hot Weather Protection
Catawba Action Register Report for Hot Weather Protection

Section 1R04: Equipment Alignment

CN-1592-1.0, Unit 1 Flow Diagram of Auxiliary Feedwater System
OP/1/A/6250/002, Auxiliary Feedwater System
OP/2/A/6200/004, Chemical and Volume Control System
OP/1/A/6350/002, Diesel Generator Operation

Section 1R05: Fire Protection

Station Fire Impairment Log

NSD-313, Control of Combustible and Flammable Material, Rev. 7

Section 1R06: Flood Protection Measures

UFSAR Section 3.6.1, Postulated Piping Failures in Fluid Systems Inside and Outside Containment

CNS-1465.00-00-0020, Design Basis Specification for Flooding from Internal Sources

CNS-1565.WL-00-0001, Design Basis Specification for the Liquid Waste (WL) System

Section 1R11: Licensed Operator Requalification

Simulator Exercise, S-18

RP/0/A/5000/001, Classification of Emergency

AP/1/A/5500/008, Malfunction of Reactor Coolant Pump

AP/1/A/5500/010, Reactor Coolant Leak

AP/1/A/5500/013, Boron Dilution

EP/1/A/5000/E-0, Reactor Trip or Safety Injection, Rev. 40

OP/2/A/6100/003, Controlling Procedure for Unit Operation

Section 1R12: Maintenance Effectiveness

EDM 210, Engineering Responsibilities for the Maintenance Rule

Maintenance Rule Periodic Assessment, Catawba Nuclear Station, April 2, 2011 – October 2, 2012

PIP C-13-3543, Unit 1 Standby Make-up Pump was secured due to abnormal noise

PIP C-13-3555, Unit 1 Standby Make-up Pump #4 pony rod disconnected from #4 plunger

MP/0/B/7150/095, NV Standby Make-up Pump Plunger/Packing Removal and Replacement

SSF Maintenance Rule Summary Report

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

NSD 213, Risk Management Process

SOMP 02-02 Operations Roles in Risk Management

Section 1R15: Operability Evaluations

NSD 203, Operability/Functionality

NSD 122, Temporary Configuration Changes

NSD 106, Configuration Management

PT/0/A/4450/022, Control Room Habitability Program

NEI 99-03, Control Room Habitability Guidance

ASTM E741, Standard Test Method for Determining Air Change in a Single Zone by Means of a Tracer Gas Dilution

GL 2003-01, Control Room Habitability

CNC-1223.03-00-0033, Determination of Pressurizer Heater Capacity Powered from the SSF Diesel

Section 1R19: Post-Maintenance Testing

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

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

PT/1/A/4250/003 A, Auxiliary Feedwater Motor Driven Pump 1A Performance Test
 PT/1/A/4250/003 C, Turbine Driven Auxiliary Feedwater Pump #1 Performance Test
 PT/1/A/4200/007 B, Centrifugal Charging Pump 1B Test

Section 40A1: Performance Indicator Verification

NSD 225, NRC Performance Indicators
 NEI 99-02, Regulatory Assessment Performance Indicator Guideline
 Catawba Master File CN: 854.02-1, MSPI Emergency AC Power
 Catawba Master File CN: 854.02-4, MSPI Safety Injection
 Catawba Master File CN: 854.02-3, MSPI Heat Removal

Section 40A2: Problem Identification and Resolution

PIP C-13-3610, CAPT #2 Level Switch Sticking
 CNS-1565.WL-00-0001, Design Basis Specification for the Liquid Waste (WL) System

Section 40A3: Followup of Events and Notices of Enforcement Discretion (NOED)

AP/1/A/5500/020, Loss of Nuclear Service Water

Section 40A5: Other Activities

MP/0/A/7650/172, Trenching and Excavation
 NDE-946, Ultrasonic Thickness Measurement
 PT/0/B/4400/019, Periodic Inspection for Corrosion Induced Wall Thinning
 C-13-02766, NRC TI-182 Phase 1 Buried Piping/Tank Inspection
 C-13-02144, Track completion of Engineering Assessment C-ENG-SA-13-15
 C-13-00474, NEI NSIAC Implementation Progress
 Catawba Nuclear Station Engineering Support Document, Buried Piping Integrity Program,
 Catawba Nuclear Station Buried Pipe Inspection Plan, April 2013
 C-ENG-SA-13-15, Engineering Self Assessment of Buried Pipe Program, 3/12/13
 Catawba Nuclear Station 4th Quarter 2012 Buried Piping Integrity Program System Health
 Report
 Catawba Nuclear Station EPRI BPIRD Data Submission, 4/3/13
 MP/2/A/7650/281, Unit 2 Loading Spent Fuel into MAGNASTOR Cask
 MP/2/A/7650/281 A, Unit 2 MAGNASTOR Contingencies