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

July 23, 2010

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 05000413/2010003, 05000414/2010003

Dear Mr. Morris:

On June 30, 2010, 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 7, 2010, with Mr. Tom Ray 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.

This report documents one NRC-identified finding of very low safety significance (Green) which was determined to involve a violation of NRC requirements. Additionally, a licensee-identified violation which was determined to be of very low significance is listed in this report. However, because of the very low safety significance and because they were entered into your corrective action program, the NRC is treating these violations as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you contest any NCV, you should provide a written response within 30 days of the date of this inspection report, with the basis for your denial, to the United States Nuclear Regulatory Commission, ATTN.: Document Control Desk, Washington, D.C. 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at Catawba. In addition, if you disagree with the cross-cutting aspect assigned to any finding 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, RII, and the NRC Senior Resident Inspector at Catawba.

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 05000413/2010003, 05000414/2010003
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

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Letter to J. R. Morris from Jonathan H. Bartley dated July 23, 2010

SUBJECT: CATAWBA NUCLEAR STATION - NRC INTEGRATED INSPECTION REPORT 05000413/2010003, 05000414/2010003

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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.:	05000413/2010003, 05000414/2010003
Licensee:	Duke Energy Carolinas, LLC
Facility:	Catawba Nuclear Station, Units 1 and 2
Location:	York, SC 29745
Dates:	April 1, 2010, through June 30, 2010
Inspectors:	A. Hutto, Senior Resident Inspector R. Cureton, Resident Inspector R. Rodriquez, Senior Reactor Inspector (Section 4OA5.3)
Approved by:	Jonathan H. Bartley, Chief Reactor Projects Branch 1 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000413/2010-003, 05000414/2010-003; 4/1/2010 - 6/30/2010; Catawba Nuclear Station, Units 1 and 2; Barrier Integrity

The report covered a three month period of inspection by the resident inspectors and a senior reactor inspector. One Green finding, which was determined to be a non-cited violation (NCV), was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). The cross-cutting aspects were determined using IMC 0305, "Operating Reactor Assessment Program." Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process."

Cornerstone: Barrier Integrity

- Green. An NRC-identified non-cited violation (NCV) of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, was identified for the licensee's failure to adequately identify and correct a steam leak on a safety-related portion of the Main Steam system. The issue was entered into the licensee's corrective action program as PIP C-10-3092 to evaluate the leak for operability and establish corrective actions. An E2 work request was also written to repair the leak.

  The finding was determined to be more than minor because if left uncorrected the steam leak could degrade and exceed the value used in the existing analysis for a Design Basis Steam Generator Tube Rupture and also could affect manual operation of equipment during execution of emergency and abnormal operating procedures. It was determined to be of very low safety significance (Green) using IMC 0609, Appendix H Table 4.1, Containment-Related SSCs Considered for Large Early Release Frequency Implications, due to the small size of the flow element line. This finding had a cross-cutting aspect in the corrective action program component of the area of problem identification and resolution because the steam leak was not identified completely, accurately, and in a timely manner (P.1(a)). (Section 4OA2.2)

One violation of very low safety significance, which was identified by the licensee, has been reviewed by the inspectors. Corrective actions taken by the licensee have been entered into their corrective action program. This violation and the licensee's corrective action program tracking number are listed in Section 4OA7 of this report.

REPORT DETAILS

Summary of Plant Status

Unit 1 operated at or near 100 percent Rated Thermal Power (RTP) for the entire inspection period.

Unit 2 began the inspection period at 100 percent RTP. On June 12, 2010, RTP was reduced to approximately 18 percent to add oil to the 2A reactor coolant pump motor upper reservoir. The unit was returned to 100 percent RTP on June 15, 2010 and remained until June 19, 2010, when power was reduced to approximately 85 percent RTP to support turbine control valve movement testing. The unit was returned to 100 percent RTP on June 20, 2010, and remained at or near 100 percent RTP 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 is 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 conducted discussions with operations, engineering, and maintenance personnel responsible for implementing the licensee's hot weather protection 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. The inspectors also discussed the implementation of the procedural guidance with personnel from operations, engineering and work control. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

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 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.

- Walkdown of the B train of control area chilled water while the A train was inoperable due to maintenance
- Walkdown of the 1A diesel generator during 1B diesel generator scheduled maintenance
- Walkdown of the 2B train hydrogen skimmer/containment air return fans during testing of the A train fans.

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.

- Fire Areas 9 & 10, Unit 1 & 2 Battery Rooms
- Unit 1 and 2 Control Room
- Unit 1 Emergency Diesel Generators
- Service Building during an active fire impairment
- Fire Area 38, Unit 1 Spent Fuel Pool Purge Unit

Fire Drill Observations: The inspectors observed a graded fire drill conducted by the on-shift fire brigade members conducted on May 11, 2010, involving a simulated fire in the Unit 2 Electrical Penetration Room. The inspectors verified the fire brigade's use of protective gear and fire fighting equipment; that fire fighting pre-plan procedures and appropriate fire fighting techniques were used; that the directions of the fire brigade leader were thorough, clear and effective; and that control room personnel responded appropriately to the simulated fire events. The inspectors also attended the subsequent drill critique to assess whether they were appropriately critical, included discussions of drill observations, and identified any areas requiring corrective actions. Documents reviewed are listed in the Attachment.

b. Findings

No findings were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

On April 22, 2010, the inspectors observed Simulator Exercise S-22 to assess the performance of licensed operators during a licensed operator requalification simulator training session. The exercise included a failure of a turbine control valve as well as a loss of coolant accident which was complicated by a lock out on the A essential switchgear and a failure of the B safety injection pump. 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 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) charging unavailability for performance; (6) balancing reliability and unavailability; (7) trending key parameters for condition monitoring; (8) classification and reclassification in accordance with 10 CFR 50.65(a)(1) or (a)(2); and (9) 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.

- Evaluation of multiple Radiation Monitoring System failures in relation to Maintenance Rule
- Solid State Protection System Relay K625 latch repetitive failures

b. Findings

No findings were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following five 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.

- Yellow bus relay testing and related work activities
- Scheduled switchyard maintenance with potential for severe weather
- Nuclear service water to EDG engine cooling water Unit 1, Dig #9 Complex Activity Plan
- Review of 2A reactor coolant pump motor upper oil reservoir Oil Addition Critical Activity Plan
- Review of station risk profile following emergent unavailability of "E" instrument air dryer

b. Findings

No findings were identified.

1R15 Operability Evaluations

a. Inspection Scope

The inspectors evaluated the technical adequacy of the six 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.

- Problem Investigation Process report (PIP) C-10-2251, Feedwater Flow Oscillations
- PIP C-10-1815, B control area chilled water chiller low refrigerant
- PIP C-10-2454, Functional tasks for replaced control room area ventilation timers did not check calibration
- PIP C-10-2566, Slave relay K625 failed to latch
- PIP C-10-2703, One of four hold down bolts missing from B control room air handling unit
- PIP C-10-2963, 1A Diesel Generator 6R cylinder temperature low

b. Findings

No findings were identified.

1R19 Post Maintenance Testing

a. 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.

- Nuclear service water flow balance of the B train following the clean and coat of the B train header
- Calibration of pressure transmitter 2NSPT5250 following power supply replacement
- Unit 1 Auxiliary safeguards test following K625 relay replacement
- Containment spray pump 2A Performance Test following motor preventive maintenance
- 2FTA-1 breaker following maintenance to correct a failure to close

b. Findings

No findings were identified.

1R22 Surveillance Testing

a. 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 TS, 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/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test, Enclosures 13.11 & 13.19, Safety Injection. Rev. 195
- PT/1/A/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test, Enclosure 13.45, Containment Isolation Phase B, Rev. 235
- PT/2/A/4350/002 B, Diesel Generator 2B Operability Test, Rev. 091
- IP/2/A/3145/001 A, Containment Pressure Control System Train A Channel Operational Test (VX Portion), Rev. 022

In-Service Tests

- PT/1/A/4200/005 A, Safety Injection Pump 1A Performance Test, Rev. 052

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 April 29, 2010. The inspectors reviewed licensee activities that occurred in 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 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 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

- Emergency AC Power, Units 1 & 2
- High Pressure Safety Injection, Units 1 & 2
- Heat Removal, 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 data for the PIs listed above for the period of April 2009, through March, 2010. 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 2009-2010. 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. 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 Focused Review

a. Inspection Scope

The inspectors performed an in-depth review of PIP C-10-3092, Steam leak near 1SM-74B. The inspectors reviewed the actions taken by the licensee to verify that the issue was accurately and timely identified and was appropriately evaluated for operability and reportability. The inspectors also reviewed the completed and proposed corrective actions to verify that they were prioritized and implemented commensurate with the safety significance of the issue. Documents reviewed are listed in the Attachment.

b. Findings

Introduction: A NRC-identified Green non-cited violation of 10 CFR Part 50, Appendix B, Criterion XVI, Corrective Action, was identified for the licensee's failure to adequately identify and correct a steam leak on a safety-related portion of the Main Steam system.

Description: On May 25, 2010, during a walkdown of the Unit 1 Exterior Doghouse, the inspectors observed that an area around the access to 1SM-74B was roped off with danger tape and signage indicating a steam leak on the valve. 1SM-74B is the steam generator outlet header blowdown isolation valve upstream of the D main steam isolation valve and is part of the main steam system. Operation of this valve is directed in the licensee's emergency procedures, notably during steam generator tube rupture and leak scenarios, and is also required for containment penetration isolation. The leak was originally identified on March 14, 2010, however; the inspectors noted that the issue had not been entered into the licensee's corrective action program as required for conditions adverse to quality by the licensee's NSD 208 (PIP). As a result of this issue not being entered into PIP, the leak existed for over two months without an engineering evaluation with respect to bounding steam line leak analyses, and the steam leak's effect on the ability of operators to perform emergency and abnormal procedure manual actions on equipment near the steam leak. A PIP was subsequently written to evaluate the leak and establish corrective actions. A work request was also written to repair the

leak, which was subsequently identified to be from a flow element line which was upstream and adjacent to 1SM-74B.

Analysis: The licensee's failure to adequately identify the steam leak and enter the adverse condition into its corrective action program for resolution was a performance deficiency. The finding was determined to be more than minor because if left uncorrected the steam leak could degrade and exceed the value used in the existing analysis for a Design Basis Steam Generator Tube Rupture and also could affect manual operation of 1SM-74B and other equipment during execution of emergency and abnormal operating procedures. The inspectors used IMC 0609, Appendix H, Containment Integrity Significance Determination Process, to evaluate the finding because it represented an actual open pathway through the containment isolation system. Using Appendix H, the finding was considered a Type B finding due to no impact on core damage frequency. It was determined to be of very low safety significance (Green) using Appendix H Table 4.1, Containment-Related SSCs Considered for Large Early Release Frequency Implications, due to the small size of the flow element line. This finding had a cross-cutting aspect in the corrective action program component of the area of problem identification and resolution because the steam leak was not identified completely, accurately, and in a timely manner (P.1(a)).

Enforcement: 10 CFR Part 50 Appendix B, Criterion XVI, Corrective Action, requires, in part, that measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and non-conformances are promptly identified and corrected. Contrary to the above, from March 14, 2010, to May 26, 2010, a condition adverse to quality was not promptly identified and corrected. Specifically, the licensee failed to adequately identify a steam leak on safety-related piping and enter it into the corrective action program for resolution. Because this violation was of very low safety significance and has been entered into the licensee's corrective action program as PIP C-10-3092, it is being treated as a non-cited violation consistent with Section VI.A of the NRC Enforcement Policy: NCV 0500413/2010003-01, Failure to Enter a Steam Leak on Safety Related Main Steam Piping into the Corrective Action Program.

.3 Semi-Annual Review to Identify Trends

a. Inspection Scope

As required by Inspection Procedure 71152, "Identification and Resolution of Problems," the inspectors performed a review of the licensee's 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 primarily considered the six-month period of January 2010 through June 2010, 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 lists, Independent Nuclear Oversight reports, system and component 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. Assessment and Observations

No findings were identified. In general, the licensee has identified trends and has appropriately addressed the trends with their CAP. However, the inspectors identified a negative trend that had not previously been recognized. The trend was associated with the lack of timely recognition and application of TS requirements. This trend was identified based on inspector observations of activities performed on-site as well as the review of corrective action documents and associated licensee event reports. Observations included:

- PIP C-09-7534, Unit 2 entered Mode 4 with Containment Spray Train B inoperable resulting in Licensee Event Report (LER)
- PIP C-10-0566, TS Limiting Condition for Operation (LCO) 3.8.1 Condition A not recognized during Unit 1 tie breaker maintenance resulting in LER
- PIP C-10-1026, TS LCO 3.8.1 Condition B for Unit 2 not recognized with 1EMXG aligned to Unit 1 during Unit 1 shutdown
- PIP C-10-2566, Inoperability of 1A Air Return Fan not recognized in a timely manner resulting in delay in entering the appropriate TS LCO Action Statement
- PIP C-10-3012, TS LCO 3.3.2 Condition B not recognized in a timely manner resulting in a violation of TS

The licensee initiated PIP C-10-2587 to document the identified trend and to perform a problem evaluation to fully evaluate the site's performance in recognition and application of TS requirements. The inspectors will continue to monitor this area and assess the effectiveness of planned and in-progress corrective actions. The documents reviewed and used as the basis for this trend statement are listed in the Attachment to this report.

4OA3 Event Follow-up

.1 (Closed) Licensee Event Report (LER) 05000413/2010-001-00: Technical Specification Violation Associated with Failure to Perform Offsite Circuit Verification

On February 1, 2010, Technical Specification 3.8.1, "AC Power Sources – Operating" was violated for Units 1 and 2. The violation occurred following the racking out of a 6.9 kV tie breaker for preventative maintenance. The licensee did not recognize that with the tie breaker racked out, one offsite circuit was inoperable. As a result, Surveillance Requirement 3.8.1.1 was not performed within one hour as required by TS to verify the operability of the remaining offsite circuit. As an immediate corrective action, Surveillance Requirement 3.8.1.1 was subsequently performed for both units and the tie breaker was racked back in to restore the circuit to operable status. The licensee entered this issue into their corrective action program as PIP C-10-0566. The LER and supporting documents were reviewed by the inspectors including a review of the

Electrical Power Source Alignment procedure to ensure corrective actions were taken to revise the procedure to add a weekly check of the applicable tie breakers being racked in and opened. Due to the fact that both offsite power circuits remained aligned to power both trains of safety buses, this failure to comply with Technical Specifications constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy

.2 (Closed) Licensee Event Report (LER) 05000414/2010-001-00: Reactor Mode Change with Limiting Condition for Operation (LCO) 3.6.6 Not Met in Violation of Limiting Condition for Operation 3.0.4

During an extent of condition review, the licensee discovered that a reactor mode change was made with TS LCO 3.6.6 not met during the 2009 Unit 2 outage, as one train of the Containment Spray (NS) system was inoperable. On April 16, 2009, Unit 2 was in the process of moving from Mode 5 to Mode 4; however, TS Surveillance Requirement (SR) 3.6.6.3 could not be met due to a valve that was incapable of automatically opening resulting in one inoperable train of NS. TS 3.0.4 required that all LCOs be met before changing modes; therefore, the mode change was in violation of TS 3.0.4. The licensee entered this violation into their corrective action program as PIP C-09-7534. The LER and supporting documents were reviewed by the inspectors which included completed and planned corrective actions. A license amendment request (LAR) to remove the requirement of SR 3.6.6.3 from TS has subsequently been approved. This failure to comply with TS 3.0.4 constitutes a violation of minor significance that is not subject to enforcement action in accordance with NRC's Enforcement Policy.

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 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 Spend Fuel Storage Installation in accordance with Inspection Procedure 60855. The inspectors observed selected licensee activities related to the loading of cask numbers 26 and 37 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 were identified.

.3 (Closed) Unresolved Item (URI) 05000413/2009005-01: Inadequate 50.59 Evaluation for the Distributed Control System (DCS) Modification

This URI was opened to determine if the licensee's 10 CFR 50.59 evaluation properly addressed whether the modification resulted in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety previously evaluated in the UFSAR. The inspectors reviewed the facts of the subject URI, as well as evaluations and corrective actions taken by the licensee

The software development lifecycle oversight used by the licensee was based on a qualitative approach to mitigate the risk of an increase in system malfunctions. The inspectors questioned if this qualitative approach had adequately addressed some of the risks associated with the DCS upgrade. The licensee subsequently entered this issue into their corrective action program as PIP C-09-06936. The licensee provided a Software Hazards Analysis Report that documented in more detail the licensee's qualitative approach. The inspectors reviewed this report and concluded that the additional information documented an adequate approach to qualitative analysis. Therefore no violation of NRC requirements occurred. This URI is closed.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On July 7, 2010, the resident inspectors presented the inspection results to Mr. Tom Ray, Catawba Engineering 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.

4OA7 Licensee-Identified Violations

The following violation of very low safety significance (Green) was identified by the licensee and is a violation of NRC requirements which met the criteria of the NRC Enforcement Policy for being dispositioned as an NCV.

On April 30, 2010, during testing of the phase B isolation portion of Engineered Safety Feature Actuation System (ESFAS), relay K625 in the A train failed to latch. The licensee completed an immediate determination of operability and concluded that the latching function of the relay did not affect the automatic actuation of the phase B isolation function and declared the system operable following completion of testing. Subsequently, on May 20, 2010, as part of the cause evaluation of the relay issue, Catawba engineering determined that the A train of manual initiation of phase B isolation was affected by the relay latching failure and therefore inoperable. TS Table 3.3.2-1, Section 3.b., required entry into TS 3.3.2, Condition B. At this time, the licensee entered the TS action statement and replaced and tested relay K625 within the allowed outage time. TS 3.3.2 Condition B requires that with one channel or train of the ESFAS Instrumentation inoperable, the channel or train must be restored to operable within 48 hours or be in Mode 3 in 54 hours and be in Mode 5 in 84 hours. Contrary to the above, from April 30, 2010, to May 20, 2010, the A train of ESFAS phase B isolation function was inoperable for greater than 48 hours and the unit was not in mode 3 in 54 hours or mode 5 in 84 hours. The inspectors determined that the finding was of very low safety significance (Green), as the A train automatic actuation function of containment isolation which is credited in accident analysis remained operable and available. This issue was documented in the licensee's corrective action program as PIP C-10-2566.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel
T. Arlow, Emergency Planning Manager
W. Byers, Security Manager
J. Caldwell, Modifications Engineering Manager
D. Cantrell, Chemistry Manager
J. Ferguson, Mechanical, Civil Engineering Manager
T. Hamilton, Work Control Manager
G. Hamrick, Station Manager
R. Hart, Regulatory Compliance Manager
T. Jenkins, Superintendent of Maintenance
J. McConnell, Shift Operations Manager
J. Morris, Catawba Site Vice President
K. Phillips, Training Manager
S. Putnam, Safety Assurance Manager
T. Ray, Engineering Manager
M. Sawicki, Regulatory Compliance Engineer
T. Simril, Operations Superintendent
J. Smith, Radiation Protection Manager

NRC personnel
J. Thompson, Project Manager, NRR

ITEMS OPENED, CLOSED, AND REVIEWED

Opened and Closed

05000413/2010003-01	NCV	Failure to Enter a Steam Leak on Safety Related Main Steam Piping in the Corrective Action Program (Section 4OA2.2)

Closed

05000413/2010-001-00	LER	Technical Specification Violation Associated with Failure to Perform Offsite Circuit Verification (Section 4OA3.1)
05000414/2010-001-00	LER	Reactor Mode Change with Limiting Condition for Operation (LCO) 3.6.6 Not Met in Violation of Limiting Condition for Operation 3.0.4 (Section 4OA3.2)
05000413/2009005-01	URI	Inadequate 50.59 Evaluation for the DCS Modification (Section 4OA5.3)

LIST OF DOCUMENTS REVIEWED

Section 1R01: Adverse Weather Protection

PT/0/B/4700/039, Hot Weather Protection, Rev. 16
OP/0/B/6700/015, Weather Related Activities, Rev. 0
WO 1893522, Raise Doghouse Curtains
CNC-1381.06-00-0062, Degraded Grid Voltage Alarm Setpoints for Real Time Contingency Analysis Initiation, Rev. 9
NSD-417, Nuclear Facilities/Generation Status Communications, Rev. 11
NSD-415, Operational Risk Management (Modes 1-3) per 10 CFR 50.65(a)(4), Rev. 5
AP/1(2)/A/5500/037, Generator Voltage and Electric Grid Disturbances, Rev. 000

Section 1R04: Equipment Alignment

CN-1578-02.00, Flow Diagram of Control Area Chilled Water System (YC), Rev. 12
CN-1578-2.1, Flow Diagram of Control Area Chilled Water System (YC), Rev. 9
OP/1/A/6350/002, Diesel Generator Operation, Rev. 147
OP/2/A/6450/010, Containment Hydrogen Control Systems, Rev. 24

Section 1R05: Fire Protection

Station Fire Impairment Log
NSD-313, Control of Combustible and Flammable Material, Rev. 7
Fire Strategy Area 9, Unit 2 Battery Rooms
Fire Strategy Area 10, Unit 1 Battery Rooms
Fire Strategy Area 5, Unit 2 Electrical Penetration Room
Fire Strategy Area 38, Unit 1 Spent Fuel Pool Purge Room

Section 1R11: Licensed Operator Requalification

Simulator Exercise Guide 22, Rev. 10
AP/1/A/5500/003, Load Rejection, Rev. 037
EP/1/A/5000/FR-C.2, Response to Degraded Core Cooling, Rev. 019
RP/0/A/5000/001, Classification of Emergency, Rev. 022

Section 1R12: Maintenance Effectiveness

EMF System Health Report – 2010Q1
Maintenance Rule SCC Summary Report, EMF
PIP C-09-4564, The EMF System is Maintenance Rule Status A(1)
PIP C-10-2864, Unplanned Tech Spec Action Item log entry due to inoperability of 0EMF-41
PIP C-10-0779, 2EMF38.39 potential inoperability
Maintenance Rule SCC Summary Report, ESFAS
PIP C-10-2566, Relay K625 failed to latch
PIP C-10-3793, ISE System is Maintenance Rule status A(1)
PIP C-09-0839, While performing PT/1/A/4200/009, relay K625 did stay latched

Section 1R13: Maintenance Risk Assessments and Emergent Work Control

NSD 213, Risk Management Process, Rev. 8
SOMP 02-02, Operations Roles in Risk Management, Rev. 007
Critical Activity Plan for Yellow Bus Relay Testing
Pre-Job Brief for Yellow Bus Relay Testing
Complex Activity Plan RN to KD Unit 1 Dig #9

Section 1R15: Operability Evaluations
NSD-203, Operability/Functionality, Rev. 19
NSD-122, Temporary Configuration Changes, Rev. 00
UFSAR Section 7.1.1.2, Engineered Safety Features Actuation System
UFSAR Section 8.3.1.4.1, Diesel Generators
UFSAR Section, 9.5.5, Diesel Generator Cooling Water System
UFSAR Section 9.4.1, Control Room Area Ventilation
PT/1/A/4350/002A, Enclosure 13.3, DG Operating Parameter Data, dated July 29, 2009
PT/1/A/4350/002A, Enclosure 13.3, DG Operating Parameter Data, dated April 6, 2010
WO 997897, 1EQC DE A: 6R Cylinder Head Exhaust Temp Thermocouple Erratic

Section 1R19: Post-Maintenance Testing
PT/0/A/4400/008 B, RN Flow Balance Train B, Rev. 048
PT/1/A/4200/009 A, Auxiliary Safeguards Test Cabinet Periodic Test, Rev. 235
WR 01010669, 2FTA-1 failed to close from 2MC-11
WO 01931193, 2FTA-1 failed to close from 2MC-11
IP//0/A/3890/001, Controlling Procedure for Troubleshooting and Corrective Maintenance, Rev. 059

Section 4OA1: Performance Indicator Verification
NSD 225, NRC Performance Indicators, Rev. 4
NEI 99-02, Regulatory Assessment Performance Indicator Guideline, Rev. 5
Catawba Master File CN: 854.02-3, MSPI Emergency AC Power
Catawba Master File CN: 854.02-1, MSPI Safety Injection
Catawba Master File CN: 854.02-2, MSPI Heat Removal

Section 4OA2: Identification and Resolution of Problems
PIP C-10-3092, Steam observed from the packing of 1SM-74B
PIP C-10-3145, Steam leak from 1SM-FE-5760
PIP C-09-7534, Unit 2 entered Mode 4 with Containment Spray Train B inoperable
PIP C-10-0566, TS Limiting Condition for Operation (LCO) 3.8.1 Condition A not recognized
PIP C-10-1026, TS LCO 3.8.1 Condition B for Unit 2 not recognized
PIP C-10-2566, Inoperability of 1A Air Return Fan not recognized in a timely manner
PIP C-10-3012, TS LCO 3.3.2 Condition B not recognized in a timely manner

Section 4OA5: Other Activities
CNEI 0400-184, Cask CNZ-026
PT/0/A/4150/037, Enclosure 13.1, Internal Transfer Sheet Fuel Handling Data Sheet, Cask 26
CNEI 0400-184, Cask CNZ-037
PT/0/A/4150/037, Enclosure 13.1, Internal Transfer Sheet Fuel Handling Data Sheet, Cask 37
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
WNA-AR-00168-DCP, Software Hazards Analysis of NSSS Controls, Rev. 0

LIST OF ACRONYMS USED

CAP	-	Corrective Action Program
CFR	-	Code of Federal Regulations
DCS	-	Distributed Control System
ESFAS	-	Engineered Safety Feature Actuation System
LCO	-	Limiting Condition for Operation
LER	-	Licensee Event Report
NCV	-	Non-Cited Violation
NRC	-	Nuclear Regulatory Commission
NS	-	Containment Spray
NSD	-	Nuclear System Directive
PI	-	Performance Indicator
PIP	-	Problem Investigation Process report
RTP	-	Rated Thermal Power
SSC	-	Structures, Systems, and Components
TS	-	Technical Specifications
UFSAR	-	Updated Final Safety Analysis Report
URI	-	Unresolved Item