



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

September 22, 2006

Duke Power Company, LLC d/b/a
Duke Energy Carolinas, LLC (Duke)
ATTN: Mr. D. M. Jamil
Site Vice President
Catawba Site
4800 Concord Road
York, SC 29745-9635

SUBJECT: CATAWBA NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000413/2006007 AND
05000414/2006007

Dear Mr. Jamil:

On August 25, 2006, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Catawba Nuclear Station. The enclosed inspection report documents the inspection findings which were discussed with Mr. R. Repko and other members of your staff.

The inspection examined activities conducted under your licenses as they relate to the identification and resolution of problems, and compliance with the Commission's rules and regulations and with the conditions of your license. The inspectors reviewed selected procedures and records, conducted plant observations, and interviewed personnel.

On the basis of the samples selected for review, there were no findings of significance identified during the inspection. The team concluded that, in general, problems were properly identified, evaluated, and corrected. It was noted that actions taken to correct equipment problems have sometimes been slow but, increased management attention has been applied to equipment problems since 2004. There were also several instances identified where problems had not been promptly and/or thoroughly captured in the Corrective Action Program. The lack of detail and accuracy in these PIPs adversely impacted the proper coding of problems, especially human performance deficiencies, for trending and development of proper corrective actions.

DPC

2

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 Web site at www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael E. Ernstes, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: NRC Inspection Report 05000413/2006007
and 05000414/2006007
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

DPC

2

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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 Web site at www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Michael E. Ernstes, Chief
Reactor Projects Branch 1
Division of Reactor Projects

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

Enclosure: NRC Inspection Report 05000413/2006007
and 05000414/2006007
w/Attachment: Supplemental Information

cc w/encl: (See page 3)

X PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE X NON-SENSITIVE

ADAMS: X Yes ACCESSION NUMBER: ML062650342

OFFICE	DRP:II	DRP:II	DRP:II	DRP:II	DRP:II	DRP:II	
SIGNATURE	CWR /RA/	MEE /RA/	ATS /RA/	HJG /RA/	JAH /RA/		
NAME	CRAPP	MERNSTES	A. Sabisch	H. Gepford	J. Hickey		
DATE	09/20/2006	09/21/2006	09/20/2006	09/20/2006	09/20/2006		
E-MAIL COPY?	YES NO	YES NO	YES NO				

OFFICIAL RECORD COPY DOCUMENT NAME: E:\Filenet\ML062650342.wpd

DPC

3

cc w/encl:
Randy D. Hart
Regulatory Compliance Manager
Duke Power Company, LLC
Electronic Mail Distribution

Lisa Vaughn
Associate General Counsel
Duke Power Company, LLC
526 South Church Street
Mail Code EC 07H
Charlotte, NC 28202

Timika Shafeek-Horton
Assistant General Counsel
Duke Power Company, LLC
526 South Church Street-EC07H
Charlotte, NC 28202

David A. Repka
Winston & Strawn LLP
Electronic Mail Distribution

North Carolina MPA-1
Electronic Mail Distribution

Henry J. Porter, Asst. Director
Div. of Radioactive Waste Mgmt.
S. C. Department of Health
and Environmental Control
Electronic Mail Distribution

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

Elizabeth McMahon
Assistant Attorney General
S. C. Attorney General's Office
Electronic Mail Distribution

Vanessa Quinn
Federal Emergency Management Agency
Electronic Mail Distribution

North Carolina Electric
Membership Corporation
Electronic Mail Distribution

County Manager of York County, SC
Electronic Mail Distribution

Piedmont Municipal Power Agency
Electronic Mail Distribution

R. L. Gill, Jr., Manager
Nuclear Regulatory Issues
and Industry Affairs
Duke Power Company, LLC
526 S. Church Street
Charlotte, NC 28201-0006

Distribution w/encl: (See page 4)

DPC

4

Letter to D. M. Jamil from Michael E. Ernstes dated September 22, 2006

SUBJECT: CATAWBA NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000413/2006007 AND
05000414/2006007

Distribution w/encl:

J. Stang, NRR

C. Evans

L. Slack, RII EICS

RIDSNRRDIRS

OE Mail

PUBLIC

U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-413, 50-414

License Nos: NPF-35, NPF-52

Report No: 05000413/2006007, 05000414/2006007

Licensee: Duke Energy Corporation

Facility: Catawba Nuclear Station, Units 1 and 2

Location: York, SC

Dates: August 7-10, 2006
August 21-25, 2006

Inspectors: C. Rapp, Senior Project Engineer (Lead Inspector)
A. Sabisch, Resident Inspector
J. Hickey, Resident Inspector
H. Gepford, Project Engineer

Approved by: M. Ernstes, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000413/2006-007, 05000414/2006-007; 08/07-25/2006; Catawba Nuclear Station; Units 1 & 2; Identification and Resolution of Problems.

The inspection was conducted by two project engineers and two resident inspectors. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000.

Identification and Resolution of Problems

No findings of significance were identified. The licensee was generally effective in identifying problems at a low threshold and entering them into the corrective action program. The licensee properly prioritized issues and routinely performed adequate evaluations that were technically accurate and of sufficient depth. However, there were examples where the licensee failed to initiate corrective action documents for conditions adverse to quality. In addition, there were examples where problems were not accurately and thoroughly described in corrective action documents, adversely impacting the licensee's ability to properly code the problems for trending. This was especially true with respect to human performance deficiencies.

It was also noted that actions taken to correct equipment problems have sometimes been slow; but, licensee management applied increased attention to equipment problems and increasing equipment reliability through the Equipment Reliability Initiative started in early 2004. The licensee's self-assessments and audits were effective in identifying deficiencies in the corrective action program. The inspectors did not identify any reluctance by plant personnel to report safety concerns.

Enclosure

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed procedures associated with the corrective action program (CAP) which described the administrative process for initiating and resolving problems via Problem Investigation Process reports (PIPs). The inspectors reviewed approximately 100 PIPs from approximately 15,000 that had been issued between August 2004 and August 2006. The inspectors also reviewed NRC inspection reports that documented NRC reviews over the last two years. This review was performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP.

The inspectors conducted a detailed review of Residual Heat Removal (ND), Component Cooling Water (KC), Drinking Water (YD), and the Standby Shutdown Facility (SSF). For these systems and associated components, the inspectors reviewed PIPs, system health reports, maintenance history, and completed Work Orders (WOs). The inspectors conducted plant walkdowns of these systems to assess the material condition and to identify any deficiencies that had not been entered into the CAP. The inspectors reviewed selected industry and NRC operating experience items associated with the systems and components to verify that these were appropriately evaluated for applicability and that issues identified were entered into the CAP.

The inspectors reviewed licensee audits and self-assessments, including those which focused on problem identification and resolution, to verify that findings were entered into the CAP and to verify that these findings were consistent with the NRC's assessment of the licensee's CAP. The inspectors attended daily site direction meetings, PIP screening meetings, and both the site and departmental Corrective Action Review Board (CARB) meetings to observe management and oversight functions of the CAP. The inspectors reviewed CARB meeting results for the review period. The inspectors also held discussions with various personnel to evaluate their threshold for identifying issues and entering them into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues. The team determined that the licensee was generally effective at identifying problems and entering them into the CAP. In general, the threshold for initiating PIPs was low and employees were encouraged to initiate PIPs or work requests. Equipment performance issues were being identified at low threshold levels and entered into the CAP for monitoring, follow-up, and resolution. Some examples were noted where potential conditions adverse to quality were being handled outside of the CAP or were not captured due to unclear expectations or an inconsistent understanding of established programmatic guidance. Examples included the following:

Enclosure

- In late 2005, the licensee determined that an adverse trend related to scaffolding deficiencies existed. Corrective actions were developed that focused solely on the construction of scaffolds rather than also with the end-users of scaffolds. One of these corrective actions allowed scaffold builders to correct deficiencies noted in the field without documenting the condition or informing their management of their actions. While correcting the deficiencies helped ensure the scaffolds met the established corporate guidance regarding their construction, the informal process did not allow station management to identify the cause of the inappropriate scaffold modifications and correct the behavior of end-users that had made changes to properly-constructed scaffolds.
- The Fluid Leak Monitoring (FLM) program was implemented through a Nuclear System Directive (NSD) procedure common to all three Duke nuclear sites. It is intended to provide a formal process to identify, monitor, and repair fluid leaks in the plant. Once a leak was entered into the FLM program, a label was placed at the leak site that states additional PIPs should not be initiated. Operations had interpreted this to mean that other groups or individuals were monitoring the condition. Therefore, changes in leakage observed by operations personnel were typically not raised to Operations management. Excessive boric acid buildup on both the 1A and 2A ND pumps was noted by the inspectors; however, this condition had not been documented by operators conducting rounds in the area of the pumps in the form of AutoTour notes, work orders, or additional PIPs.
- A PIP was not initiated following the discovery that the B Train service water flow indicator on the Auxiliary Shutdown panel was not in a calibration program. Therefore, an extent of condition evaluation was not performed and the issue was not made available for tracking and trending in the CAP. The licensee subsequently issued PIP C-06-1147 and performed an extent of condition review. No additional deficiencies were identified.

Some examples were noted where PIP descriptions did not fully describe the condition or actions taken. As a result, CAP documents may not contain the information necessary to readily evaluate and assess corrective actions taken, use the information in the assessment of future issues, or ensure adverse trends are promptly identified. Examples included the following:

- PIP C-04-6580, the Category 1 PIP associated with the root cause analysis (RCA) for the Magnetrol level switch failure that resulted in a turbine and reactor trip in December 2004, did not accurately describe all postulated failure mechanisms in the problem evaluation, did not appropriately identify, assess, and prioritize installed Magnetrol level switches for required inspections, and did not accurately document corrective actions which had been performed in response to the event for "critical" Magnetrol level switches. This PIP also did not contain consistent documentation for the closure of corrective actions to other corrective actions, work requests, etc. This condition made evaluating and assessing the status of corrective actions, including Corrective Actions to Prevent Recurrence (CAPRs), cumbersome.

- PIP C-06-5911, initiated to document the boric acid buildup on the 1A and 2A ND pumps identified by the inspectors, described the condition as a housekeeping issue. While the component engineer properly evaluated this issue, the specific assessments he performed were not contained in the PIP. In addition, the PIP associated with the boric acid buildup on the 2A ND pump had been initiated prior to the Spring 2006 refueling outage. An attempt to repair the leak had been made during the outage; however, the leak recurred and increased following the repair efforts. No re-evaluation of the subsequent leak was documented or addressed in a CAP document following completion of the outage. While some of this information was captured in other programs such as the Fluid Leak Management (FLM) program, ECCS Leak Dose Calculation program, Boric Acid Corrosion Control program, and the work management system, there was no clear, easily-retrievable link between these other programs and the CAP.

Prioritization and Evaluation of Issues. The inspectors determined that the licensee had adequately prioritized issues entered into the CAP consistent with established procedures. This was confirmed through the review of audits conducted by the licensee and the assessment conducted by the inspection team during the on-site period. Generally, the licensee performed evaluations that were technically accurate and of sufficient depth. The inspectors determined that site trend reports were thorough and that a low threshold was established for evaluation of potential trends.

The team determined that the station conducted an adequate number of RCAs based on the overall number and significance of issues entered into the CAP. The classifications were consistent with established procedures as evidenced by the number of Category 1 (six) and Category 2 (58) PIPs initiated in the period between August 2004 and August 2006 which required a RCA to be performed. A variety of RCA techniques were used depending on the type of issue; i.e., equipment failure, human performance, etc., that initiated the RCA. While most of the root cause analyses reviewed by the team were detailed and thorough, a few examples of weak or less than fully effective root cause analyses were identified by the team. In addition, some root cause analyses presented to PORC and CARB for approval required multiple revisions due to weaknesses identified by members of these oversight organizations such as a failure to review all possible failure mechanisms. These problems with the initial RCAs created the potential for less than adequate root cause analyses to be approved and corrective actions not fully effective to prevent recurrence. These include the following:

- The RCA for the inaccurate Mixed Oxide Fuel license amendment (PIPs G-04-0334 and C-04-4116) narrowly focused on license amendment requests and responses to requests for additional information. Other NRC communications, such as Licensee Event Reports (LERs) and responses to generic NRC communications, were not considered in the evaluation. Consequently, the corrective actions to prevent recurrence were ineffective in that inaccurate information was submitted in later NRC communications at the McGuire and Oconee sites. The licensee's RCA for these later incidents had identified this weakness.

- On October 25, 2005, the 1B Spent Fuel Pool Cooling (KF) Pump outboard bearing failed. Corrective maintenance was performed; however, the cause of the bearing failure was not adequately determined. On December 17, 2005, the 1B KF Pump outboard bearing again failed. After the second failure, the licensee issued PIP C-06-1618 and performed a RCA. The results of the RCA were presented to the CARB on August 23, 2006. Based on feedback from the CARB, the RCA required re-review which resulted in a different root cause than originally proposed.
- The RCA for the Magnetrol level switch failure that resulted in a turbine/reactor trip in December 2004 determined the root cause to be the moisture separator reheater (MSR) level switches actuating due to the microswitches internal to the level switches being out of the desired adjustment band, concurrent with an external event which resulted in minor vibration allowing one microswitch (of two) in each level switch to change state. Investigation of the suspect level switches found that one of the two microswitches inside each level switch was “locked-in” in the tripped position. The RCA identified the number of “critical” level switches that required inspection based on this “locked-in” condition. However, discussions with the licensee determined that the number of “critical” level switches actually inspected was based on only those susceptible to momentary actuation. As a result, the prioritization of level switch inspection was inconsistent with the RCA conclusions.

The team further determined that operability, reportability, degraded or non-conforming condition determinations and cause evaluations were consistent with the guidance contained in NSD-208; Problem Investigation Process.

For some problems, the licensee had been slow in completing corrective actions. A contributor to this condition was the practice of closing corrective actions to subsequent corrective actions effectively extending the time before a corrective action was considered overdue. This was not done with CAPRs; however, routine corrective actions were often passed between organizations by closing the existing corrective action and opening a new corrective action. Some corrective actions involving procedure changes were closed to the procedure change program (DocuTracks) which has its own monitoring metrics; however, status reports were not presented to station management in the same manner as PIPs to ensure corrective actions are closed in a timely manner. This practice in some cases contributed to and delayed development and implementation of corrective actions.

- PIP C-04-6580 was written in response to the Unit 1 turbine/reactor trip which occurred in December 2004 (LER 413/2004-004). The practice of closing corrective actions to subsequent corrective actions has resulted in a failure to perform inspections on a number of the level switches specified in the PIP as “critical” because a procedure for performing the inspections had not yet been developed and approved. Originally, the proposed due date for these inspections was March 7, 2005, however, this date has been extended several times and procedural approval has not yet been received. As a number of the inspections must be performed at reduced power, the delay in developing an inspection procedure has resulted in missed opportunities to complete the inspections. In addition, the initial corrective action to inspect the specified level switches has been closed. Therefore, there was

no status from the CAP to indicate that these additional inspections had not been completed.

- During a routine surveillance to evaluate the specific gravity of the SSF battery, the licensee identified a weakness in the procedure when stratification had occurred in one or more of the cells. PIP C-05-1039 was initiated to resolve this problem with a procedure change identified as the appropriate corrective action. This corrective action was closed to DocuTracks. Because the procedure change was considered an enhancement, it was not assigned a high priority in DocuTracks. The revision to the procedure was not completed until after a second occurrence of the problem, approximately seven months later, as documented in PIP C-05-4437.

Effectiveness of Corrective Actions. Based on a review of numerous corrective action plans and their implementation, the team found, for the most part, that the licensee's corrective actions developed and implemented for problems were timely, effective, and commensurate with the safety significance of the issues. Effectiveness reviews and audits were generally of good depth and correctly identified issues similar to those raised during previous NRC inspections.

The inspectors observed that, in some cases, the licensee had been slow in completing corrective actions. The licensee had recognized this and was providing more management attention such as oversight via the CARB for the more significant corrective actions and management review of the oldest PIPs. The inspectors noted that the licensee frequently initiated a corrective action in a PIP for another group to provide an evaluation or review rather than perform these evaluations as part of the overall problem evaluation prior to assignment of required corrective actions. This practice in contributed to lengthy completion of corrective actions.

(3) Findings

No findings of significance were identified.

b. Assessment of the Use of Operating Experience (OE)

(1) Inspection Scope

The team interviewed station personnel, attended daily Site Direction Meetings, event screening meetings and site/department CARB meetings, and evaluated corrective action program documentation to determine if OE was being used effectively in the CAP. In addition, the inspectors reviewed the licensee's evaluation of selected Duke and industry operating experience information, including PIPs from Oconee and McGuire, INPO OE, NRC generic letters and information notices, and generic vendor notifications, to ensure that issues applicable to Catawba were appropriately addressed. Nuclear Site Directive NSD-204; Operating Experience Program Description, was reviewed to verify that the requirements delineated in the program were being implemented at the station. NSD-212, Cause Analysis, requires that Operating Experience be reviewed when conducting an investigation into why an event occurred.

(2) Assessment

The inspectors determined that operating experience, both from within the Duke nuclear fleet and the industry, was being used regularly in the corrective action program at Catawba with the one exception noted below.

The Operating Experience program was coordinated by the General Office (GO) for all three nuclear sites. Personnel in the GO screen incoming OE from outside the Duke organization and transfer the information deemed to be applicable into the Operating Experience Database (OEDB). This database was easily searchable by station personnel investigating an event. While the OEDB does contain a considerable amount of industry operating experience, it does not contain all event or component failure information that is available from sources such as INPO, EPRI, the NRC, and NEI. The team determined, based on interviews and a review of the program set forth in NSD-204, that some station personnel were not fully aware of the capabilities afforded by other sources such as INPO's Nuclear Network or Equipment Performance Information Exchange (EPIX) which were readily available through the licensee's computer network. As a result, the available outside information were not fully used during causal investigations into events or equipment failures at the station.

(3) Findings

No findings of significance were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed site trend reports, CAP backlogs, CAP performance indicators, and trend PIPs to verify that the licensee appropriately prioritized and evaluated problems with the CAP in accordance with their risk significance. The inspectors assessed if the licensee adequately determined the cause(s) of the problems, including RCA where appropriate, and adequately addressed operability, reportability, common cause, generic concerns, extent of condition, and extent of cause. The review also assessed if the licensee appropriately identified and prioritized corrective actions to prevent recurrence. Documents reviewed are listed in the Attachment.

(2) Assessment

The team determined that the scopes of assessments and audits were adequate. Department self-assessments were generally detailed and critical. Corrective actions developed as a result of these assessments were incorporated back into the CAP and tracked to completion. Updates were provided to station management at department and site level CARB meetings.

The inspectors determined that the licensee had adequately prioritized issues entered into the CAP. Generally, the licensee performed evaluations that were technically

accurate and of sufficient depth. The inspectors determined that site trend reports were thorough and that a low threshold was established for evaluation of potential trends. As identified in previous reports, a number of PIPs failed to document the human performance aspects of the issues which adversely affected the ability to conduct self-assessments and identify trends.

The inspectors reviewed licensee effectiveness reviews and confirmed the implementation of various corrective actions associated with PIPs which dealt with improvements to the CAP. For some of the PIPs discussed in Sections 4OA2 a., the inspectors assessed if the licensee had identified and implemented timely and appropriate corrective actions to address deficiencies to the CAP. Documents reviewed are listed in the Attachment.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

During technical discussions with members of the plant staff the inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee's employee concerns program (ECP) which provides an alternate method to the CAP for employees to raise concerns and remain anonymous. The inspectors interviewed the ECP Coordinator and reviewed an ECP report and associated corrective actions to verify that concerns were being properly reviewed and that identified deficiencies were being resolved and entered into the CAP when appropriate. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on this inspection and the PIP reviews, the inspectors concluded that licensee management emphasized the need for all employees to promptly identify and report problems using the appropriate methods established within the administrative programs. The inspectors did not identify any reluctance to report safety concerns.

(3) Findings

No findings of significance were identified.

4OA3 Event Followup

- .1 (Closed) Severity Level III Violation 05000413,414/2005006-01, Failure to Provide Complete and Accurate Information Involving MOX Amendment Fuel Assemblies and Related Dose Calculations. This violation involved the submitting of inaccurate information in the February 27, 2003, license amendment request to revise Technical Specifications to allow the use of four mixed oxide (MOX) fuel lead test assemblies (LTAs) at Catawba Nuclear Station. This violation is in the licensee's CAP as PIPs G-04-0334 and C-04-4116. No additional findings of significance were identified.
- .2 (Closed) LER 05000413/2004-004, Spurious Moisture Separator Reheater High Level Actuation Resulting in an Automatic Turbine Trip and Reactor Trip. On December 5, 2004, with Unit 1 operating at 100% power, an automatic reactor trip occurred due to a turbine trip. The turbine trip was due to an invalid high water level indication from two of the three level switches for the 1B moisture separator reheater. The root cause of the reactor trip was due to micro-switch mechanisms on the two level switches being out of adjustment, concurrent with external vibration to the switches. The plant response to the reactor trip as expected. This LER is in the licensee's CAP as PIP C-04-6580. The inspectors reviewed the LER and no findings of significance were identified.

4OA6 Management Meetings

On August 25, 2006, the inspectors presented the inspection results to Mr. R. Repko, Station Engineering Manager, and other members of his staff, who acknowledged the findings. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

SUPPLEMENTARY INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

G. Arzani, Component Engineer
K. Caldwell, System Engineer
B. Cauthen, System Engineer
M. Edmunds, Engineer
B. Felker, Engineer
J. Foster, RP Manager
L. Fraedrich, Engineer
M. Furtick, Work Control Coordinator
A. Gooch, Engineering Supervisor
W. Green, Engineering Manager
A. Gullion, Engineer
G. Hamrick, Engineering Manager
C. Hood, System Engineer
T. Jackson, Engineer
R. Kayler, System Engineer
R. Kidd, Engineering Supervisor
S. Mays, System Engineer
P. McIntyre, Safety Assurance Section Manager
W. Montgomery, Engineer
R. Neigenfind, Engineer
D. O'Brien, Technical Training Manager
T. Ray, Maintenance Manager
R. Repko, Station Engineering Manager
T. Robinson, System Engineer
N. Sisk, Maintenance Section Manager
M. Standridge, Senior Technical Specialist
G. Strickland, Engineer
J. Teofilak, Nuclear Support Section Manager
C. Trezise, Operations Manager
E. Wagner, System Engineer
E. Wallace, Work Control Supervisor
D. Ward, System Engineer
R. White, Engineer

NRC Personnel

E. Guthrie, Senior Resident Inspector, Catawba
S. Shaeffer, Chief, Reactor Projects Branch 2

LIST OF ITEMS CLOSED

05000413,414/2005006-01	AV	Failure to Provide Complete and Accurate Information Involving MOX Amendment Fuel Assemblies and Related Dose Calculations (Section 4OA3.1)
05000413/2004-004	LER	Spurious Moisture Separator Reheater High Level Actuation Resulting in an Automatic Turbine Trip and Reactor Trip (Section 4OA3.2)

LIST OF DOCUMENTS REVIEWED**Procedures**

NSD 208, Problem Investigation Process, Rev. 26
 NSD 210, Corrective Action Program, Rev. 4
 NSD 223, Trending Program, Rev. 4
 NSD 120, Equipment Reliability Process, Rev. 0
 NSD 203, Operability, Rev. 17
 NSD 204, Operating Experience Program (OEP) Description, Rev. 9
 NSD 208, Problem Investigation Process (PIP), Rev. 27
 NSD 209, 10CFR50.59 Process, Rev. 12
 NSD 210, Corrective Action Program, Rev. 4
 NSD 212, Cause Analysis, Rev. 15
 NSD 215, Duke Power Company Nuclear Network Program, Rev. 3
 NSD 223, Trending Program, Rev. 5
 NSD 413, Fluid Leak Management Program, Rev. 4
 NSD 600, Technical Audits, Rev. 5
 NSD 602, Employee Concerns Program, Rev. 3
 Site Directive 3.0.8, Duke Power Company Catawba Nuclear Station Scheduling Philosophy for Priority Work, Rev. 22
 WPM 400, Immediate Repair Guidelines, Rev. 9
 WPM 402, SPOC Troubleshooting Guidelines, Rev. 9
 WPM 601, On-Line Management, Rev. 15
 EDM 201, Engineering Support Program, Rev. 9
 NSD 219, Instrument and Electrical Device Calibration Out of Tolerance, Rev. 3
 EDM 102, Instrument Setpoint/Uncertainty Calculations, Rev. 3
 EDM 101, Engineering Calculations/Analyses, Rev. 13

ND

PIPs: C-06-3397, C-06-3290, C-05-7586, C-06-0908, C-05-5624, C-06-3748, C-04-6590, C-05-00083, C-05-00644, C-05-02653, C-05-01584, C-05-06553, C-06-00639, C-06-02961, C-06-03290, C-06-03397
 WOs: 98788504-01, 01122919, 01115588, 01121779, 01701834
 Work Request 00673642
 PT/2/A/4200/010A, 2A ND pump IWP, Rev. 46
 Catawba Maintenance Procedure Use and Adherence Report Card (Innage and Outage periods)

Catawba Maintenance Equipment Reliability Overall Report Card, July 2006
 Catawba Nuclear Station Operations Procedure Change Status Reports, June 2006
 Catawba Maintenance DART package on scaffold use and construction

KC

PIPs: C-06-2234, C-05-4481, C-06-2232, C-06-4298, C-05-1355, C-05-1591, C-05-4587,
 C-04-4668, C-04-5554, C-05-2697, C-04-6302, C-06-5314, C-04-3791

OE: 22819, 20020, 22747, 22402

WOs: 011000455

Health Reports: 2004T2, 2004T3, 2005T1, 2005T2, 2005T3, 2006T1

IP/2/A/3112/012, Calibration of RN Flow Monitoring (ASP) Instrumentation, Rev. 8

AP/1/A/5500/017, Loss of Control Room, Rev. 47

YD

PIPs: C-04-5878, C-06-0851, C-06-0287, C-06-0430, C-05-4294, C-05-4357, C-05-4624,
 C-05-4625, C-05-4269, C-05-5864, C-04-3743, C-04-5511, C-05-4924, C-02-2351, C-01-2276,
 C-05-4546, C-04-3454,

SSF

PIPs: C-06-3882, C-04-6321, C-05-4651, C-05-1033, C-05-4794, C-06-0766, C-06-3291,
 C-06-3349, C-05-5210, C-05-3040, C-05-7464, C-01-5390, C-01-5586, C-02-0780, C-04-3251,
 C-04-4655, C-03-2934, C-03-7167, C-03-4799, C-06-3375, C-05-1022, C-05-5169, C-04-5141,
 C-06-1671, C-06-3533, C-05-4437, C-05-1039

WOs: 98758222-01, 98735996-01, 98684103-01, 98704762

ENG-38-04, Assessment of the Effectiveness and Completion Status of Corrective Actions Over
 the Past 3 Years Regarding Trace Heating on SA System, 8/17/04

Root Cause Failure Analysis Report: SA Heat Trace Solid State Relay (SSR) Failure, 10/12/04
 3-Site PM Review of Magnetrol Level Switches, 2/28/06

Engineering Instructions for Magnetrol CF Level Switches Inspections, 5/22/06

CE 200500, Replace valves 2KC344, 2KC363, 2KC393 and 2KC412 with new item number
 09J-2024

Electric Heat Trace Health Reports: 2003T1, 2004T1, and 2005T1

Auxiliary Feedwater Health Report: 2006T1

Standby Shutdown Facility Health Reports: 2005T1, 2005T2, 2005T3, and 2006T1

Scaffolding

PIPs: C-05-03178, C-05-03197, C-05-03560, C-05-04053, C-05-04201, C-05-05379,
 C-05-05653, C-05-06482, C-05-06563, C-05-06878, C-06-03092, C-06-03820

Self- Assessment Documents

Corrective Action Program Assessment GO-05-12

Safety Review Group Monthly Reports for August 2004 through May 2006

Miscellaneous Documents

Safety Review Group Monthly Report, May 2006

Operations CARB meeting package, 8/7/06

Operations CARB meeting package, 8/10/06

Site CARB Presentation Document PIP C-06-01618 Repeat MPFF Pump 1B Bearing Failure

Root/Apparent Cause To CARB Status sheet dated Tuesday, August 22, 2006

NCVs: 2005002-03, 2005004-01, 2005003-01, 2004006-01, 2004006-02, 2005002-04,
2005004-03, 2005006-02

LERs: 05000414/2004-001

PIPs: G-05-0412

CARB Meeting Minutes for December 1, 2004; January 26, 2005; February 9, 2005; March 23,
2005; May 18, 2005; May 25, 2005; April 13, 2005; August 3, 2005; October 12, 2005;
November 2, 2005; January 25, 2006; February 22, 2006; March 22, 2006; May 3, 2006
Employee concerns log book entries for 2004, 2005, and 2006 (to date of inspection)