



UNITED STATES
NUCLEAR REGULATORY COMMISSION

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

March 8, 2007

Duke Power Company
d/b/a Duke Energy Carolinas, LLC
ATTN: Mr. G. R. Peterson
Vice President
McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078-8985

SUBJECT: MCGUIRE NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000369/2007006 AND
05000370/2007006

Dear Mr. Peterson:

On February 8, 2007, the US Nuclear Regulatory Commission (NRC) completed an inspection at your McGuire Nuclear Station. The enclosed report documents the inspection findings which were discussed with Mr. Scott Brown and 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 licenses. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

On the basis of the sample selected for review, the team concluded that problems were generally being properly identified, evaluated, and corrected. There was one Green finding identified associated with the adequacy of corrective actions for a previously identified NRC violation. This finding was determined to be a violation of NRC requirements. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this finding as a non-cited violation (NCV), in accordance with Section VI.A of the NRC Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, 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 the McGuire facility.

In addition, several minor examples of conditions adverse to quality that were not entered into the corrective action program, problem evaluations that lacked thoroughness or were not performed, and corrective actions that were inadequate or incomplete were identified.

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

Sincerely,

/RA/

James H. Moorman, III, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Docket Nos.: 50-369, 50-370
License Nos.: NPF-9, NPF-17

Enclosure: NRC Inspection Report 05000369/2007006 and 05000370/2007006
w/Attachment - Supplemental Information

cc w/encl: (See page 3)

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 Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

James H. Moorman, III, Chief
 Reactor Projects Branch 1
 Division of Reactor Projects

Docket Nos.: 50-369, 50-370
 License Nos.: NPF-9, NPF-17

Enclosure: NRC Inspection Report 05000369/2007006 and 05000370/2007006
 w/Attachment - Supplemental Information

cc w/encl: (See page 3)

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: X Yes ACCESSION NUMBER: ML070670273

OFFICE	RII:DRP	RII:DRP	RII:DRP	RII:DRS	RI:DRP		
SIGNATURE	JHM /RA/	GAH /via email/	EXW /via email/		AAR /via email/		
NAME	JMoorman	AHutto	SWalker	JFuller	ARosebrook		
DATE							
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encls:

C. J. Thomas
Regulatory Compliance Manager (MNS)
Duke Power Company LLC
d/b/a Duke Energy Carolinas, LLC
Electronic Mail Distribution

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

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

Kathryn B. Nolan
Senior Counsel
Duke Energy Corporation
526 South Church Street-EC 07H
Charlotte, NC 28202

David A. Repka
Winston & Strawn LLP
Electronic Mail Distribution

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

County Manager of Mecklenburg County
720 East Fourth Street
Charlotte, NC 28202

Distribution w/encl: (See page 4)

Letter to G. R. Peterson from James H. Moorman, III dated March 8, 2007

SUBJECT: MCGUIRE NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND
RESOLUTION INSPECTION REPORT 05000369/2007006 AND
05000370/2007006

Distribution w/encl:

J. Stang, NRR
C. Evans, RII EICS
L. Slack, RII EICS
OE Mail
RIDSNRRDIRS
PUBLIC

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos: 50-369, 50-370

License Nos: NPF-9, NPF-17

Report Nos: 05000369/2007006, 05000370/2007006

Licensee: Duke Power Company

Facility: McGuire Nuclear Station, Units 1 and 2

Location: Huntersville, NC 28078

Dates: January 22-26, 2007
February 5-8, 2007

Inspectors: A. Hutto, Resident Inspector (Lead Inspector)
S. Walker, Resident Inspector
J. Fuller, Engineering Inspector
A. Rosebrook, Project Engineer (Region I DRP)

Approved by: James H. Moorman, III, Chief
Reactor Projects Branch 1
Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR05000369/2007-006, IR05000370/2007-006; 01/22/2007 - 02/09/2007; McGuire Nuclear Station, Units 1 and 2; Identification and Resolution of Problems. A violation was identified in the area of adequacy of corrective actions.

The inspection was conducted by two resident inspectors, an engineering inspector, and a project engineer. One Green non-cited violation (NCV) was identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). 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," Revision 3, dated July 2000.

Identification and Resolution of Problems

The team concluded that, in general, problems were properly identified, evaluated, and corrected. The licensee was effective at identifying problems and entering them into the corrective action program (CAP) for resolution. The team observed several minor plant material condition deficiencies during plant system walkdowns that had gone undetected by licensee personnel. The licensee maintained a low threshold for identifying problems as evidenced by the large number of Problem Investigation Process reports (PIPs) entered annually into the CAP. Generally, the licensee properly prioritized and evaluated issues. For some lower significance issues, investigations lacked thoroughness or the documentation was not sufficient to substantiate conclusions. Formal root cause evaluations for significant problems were thorough and detailed. Corrective actions specified for problems were generally adequate, although some corrective actions were not complete or comprehensive. Audits and self-assessments were effective in identifying deficiencies and areas for improvement in the CAP, and in most cases, corrective actions were developed to address these issues. Operating experience usage was found to be effective and well integrated into the licensee's processes for performing and managing work, and plant operations. Personnel at the site felt free to raise safety concerns to management and use the CAP to resolve.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The NRC identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the licensee failed to take adequate corrective actions in response to a Green NCV issued for nonconformance with respect to the seismic qualification of positioners on the RN to KC Heat Exchanger flow control valves..

This finding is of very low safety significance because the design/qualification deficiency did not result in a loss of function per Regulatory Issue Summary (RIS) 2005-020. The licensee determined that adequate loads existed to prevent damage to both RN pumps if the corresponding flow control valves failed to close. In addition, the RN pump vendor provided documentation to the licensee which indicated that the RN pumps could satisfactorily operate at flow rates below the

Enclosure

minimum flow value of 2700 gpm for up to two hours without sustaining damage. This was considered adequate time to detect and respond to the problem. This finding has a cross cutting aspect of timely corrective actions in the area of problem identification and resolution.

B. Licensee Identified Violations

None.

Report Details

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The team reviewed procedures associated with the corrective action program (CAP) which described the administrative process for initiating and resolving problems using Problem Investigation Process (PIP) reports. The inspectors reviewed approximately 165 PIPs from approximately 12200 that had been issued between January 2005 and December 2006 to determine if problems were being properly identified and entered into the CAP for resolution. The team 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. Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed common causes and generic concerns to determine if they had been appropriately addressed.

The team conducted a detailed review, primarily focused on selected issues associated with five risk significant systems: Residual Heat Removal (ND), Nuclear service water (RN), Emergency Diesel Generators (EQA/EDG), and Vital AC and DC Distribution (EPL/EPG). For these systems and associated components, the team reviewed PIPs, system health reports, maintenance history, and completed Work Orders (WOs). The team 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 team reviewed selected industry operating experience items, including NRC generic communications, to verify that they were appropriately evaluated for applicability and that issues identified through these reviews were entered into the CAP.

To help ensure that samples were reviewed across all cornerstones, the team selected a representative number of PIPs that were identified and assigned to the major plant departments, including operations, maintenance, engineering, health physics, chemistry, emergency preparedness, and security. These PIPs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions.

The team reviewed licensee audits and self-assessments, including those which focused on problem identification and resolution, to determine if these audits and assessments were effective in identifying deficiencies and areas for improvement, and to determine if appropriate corrective actions were developed and implemented. Action Category 1, 2, and 3 PIPs were reviewed to assess the adequacy of the root/apparent cause evaluations of the selected problems. The inspectors reviewed the root/apparent cause evaluations against the description of the problem in the PIP and the guidance in procedure NSD-212, Cause Analysis. The inspectors attended daily site direction

Enclosure

meetings, PIP screening meetings, and scheduled 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 inspectors determined that the licensee was effective in identifying problems and entering them into the CAP. PIPs normally provided complete and accurate characterization of the subject issues. In general, the threshold for initiating PIPs was low as evidenced by the continued large number of PIPs entered annually into the CAP. Employees were encouraged by management to initiate PIPs. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues. The inspectors' independent review did not identify any significant adverse conditions which were not in the CAP for resolution.

During the system reviews and walkdowns of accessible portions of the RN, ND, EQA/EDG and EPL/EPG systems, the inspectors determined that system deficiencies were being identified and placed in the CAP and that the system engineers were appropriately tracking and trending these issues. The inspectors identified the following minor deficiencies for which PIPs had not been written:

- A minor oil leak from valve 0RN12 actuator. The licensee documented this condition in PIP M-07-0484 and initiated work request 915540 to repair the leak.
- A leak on the reservoir for snubber 1-MCA-TE-H007(B) and snubber oil level was low. The licensee documented an operability assessment for this condition in PIP M-07-0484 and initiated work request 915556 to add oil to the snubber.
- Corroded piping supports for RN/KD 8" outlet header. The licensee documented this condition in PIP M-07-0468 and initiated work request 915505 to clean and repaint the supports.

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. 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. Use of trending at the site was comprehensive and effective as it is performed at the system, functional area, and site level. The licensee was tracking six significant adverse trends and 29 emerging trends.

The team determined that the station conducted an adequate number of root cause analyses (RCA) based on the overall number and significance of issues entered into the

CAP. The classifications were consistent with established procedures. A variety of causal analysis techniques were used depending on the type and complexity of the issue. Barrier analysis and change analysis appeared to be the most common techniques employed. For root causes that were identified, the licensee appropriately developed corrective actions to prevent recurrence (CAPR). While most of the root cause analyses and problem evaluations were detailed and thorough, the following were not performed to this level:

- The common cause analysis for four Design Control Green NCVs that resulted from an NRC Component Design Basis Inspection (CDBI) (PIP M-06-2658), contained a lack of supporting documentation for each of the violations and the corresponding event cause code. The original PIPs documenting each violation individually did not perform a cause analysis, therefore, the bases for each attributed cause came into question. The common cause assessment did not identify any emerging trend and that common cause did not exist. The validity of the assessment and the subsequent corrective actions can not be substantiated until supporting information can be documented for the basis for attributing each event cause with each finding.
- The licensee created PIP M-05-2000 to address the concerns stated in a NRC NCV of 10CFR50.73 (failure to report). The licensee created this category 3 PIP to “evaluate how the original reportability call was missed,” but instead the PIP was used to only document the submittal of their Licensee Event Report 369/2005-02. There was no problem evaluation to address the missed reportability.
- The team found an example (PIP M-05-3648) where additional new information concerning the failure of a 2B EDG fuel pump was not fed back into the root cause analysis. This was a missed opportunity for the CAs developed to be evaluated as CAPRs and to get CARB input and management attention on the new information.
- Category 1 PIP M-05-2107 contained a root cause analysis from an event where plant start up above 5% was continued despite secondary O2 being above Chemistry Manual limits and start up procedure guidance. The RCA did not identify a failed barrier (Operators not intervening due to knowledge gap on importance of secondary chemistry specs). The manner in which the decision was made, post transient power levels, and interviews with operations staff, confirmed that many operators did not understand the impact of operating with secondary O2 high out of spec. As a result they did not question the Chemistry Manager's decision to deviate from the procedural hold at 5% until O2 returned to specification.

The team further determined that operability, reportability, and degraded or non-conforming condition determinations were consistent with the guidance contained in NSD-208; Problem Investigation Process, NSD-203, Operability, and NSD-202, Reportability.

Effectiveness of Corrective Actions. Based on a review of numerous PIP corrective actions and their implementation, the team found in general, that the licensee's corrective actions were timely, effective, and commensurate with the safety significance of the issues. Effectiveness reviews for CAPRs and audits were generally of good

depth and correctly identified issues. Where CAPRs were found not to be effective, the licensee wrote a new category 2 PIP to drive out the root cause for why the CAPR was not effective and to establish additional corrective actions based on the evaluation. The team identified the following examples where corrective actions were either incomplete or inadequate for several lower significance issues:

- PIP M-06-2968, dealt with a failure of a Struthers Dunn relay of the 2A EDG due to a bad solder joint on a connection pin. A CAPR was written to replace the defective relay. The inspectors noted that there was no corrective action to address the receipt inspection of future relays to look for this condition. A corrective action was added to the PIP to address this issue.
- During a 5 year review of PIPs for the Vital Batteries, the team noted multiple malfunctions of the test equipment used to test the vital batteries and battery chargers. Specifically, six PIPs were identified that demonstrated a negative trend in the Albere test equipment reliability which in turn impacted the vital battery availability. A Category 3 PIP was written in 2006 to address one of the failures and it was thought to be corrected. However, due to an inadequate extent of condition review, the test equipment subsequently failed a few months later causing approximately 50 hours of unnecessary unavailability for the "C" vital battery. This latest failure was categorized as a Cat 4 w/ no corrective actions. As a result of the team's observations, the licensee initiated PIP M-07-0504 to document an emerging trend with the test equipment. Additionally, PIP M-07-0787 was written to evaluate upgrading/replacing the test equipment to alleviate the impact of continued failures during testing.
- During a walkdown of time critical manual operator actions in the interior doghouse, it was noted that a portable oxygen monitor was dedicated to Operations at the entrance of the Unit 1 interior doghouse. Temporary postings require the use of a portable oxygen monitor inside the interior doghouse because the normal oxygen monitors were out of service. The inspectors questioned the availability of temporary oxygen monitors to operations personnel when responding to an event and specifically when time critical manual actions are required in the interior doghouse. The licensee stated that an exception to this temporary requirement to have portable oxygen monitors was provided in PIP M-05-3007, and the expectation for operators to ignore the posting in the case of an emergency was communicated through an email to the operations staff. The inspectors identified that the email communication may not be adequate to ensure that the operators would not question the postings which could lead to delays in completing the time critical manual actions within the required time. The licensee re-opened the 2005 PIP and created a new corrective action to change the temporary posting to communicate the exception.

Additionally, the team identified one finding that was a violation of NRC requirements related to inadequate corrective actions.

(3) Findings

Introduction. The NRC identified a Green non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. Specifically, the inspectors determined that the licensee failed to take adequate actions in response to a Green NCV issued for nonconformance with respect to seismic qualification of positioners on the RN to KC Heat Exchanger flow control valves.

Description. While reviewing the effectiveness of corrective actions for PIP M-06-1256, the team noted the licensee had not adequately addressed the documented issue. PIP M-06-1256 was initiated to address NCV 05000369, 370/2006007-05, Valve Positioners Not Analyzed for Seismic Requirements. The positioners, which control operation of nuclear service water valves 1RN-0089A and 1RN-190B, were not safety related nor seismically qualified. The licensee had not evaluated the impact of the positioners' failure on the valves' ability to perform their design functions following a seismic event. The PIP included actions to pursue a long term engineering resolution which would alleviate the need to rely on the operator actions in place of the qualified components to address the design basis events. Upon reviewing the corrective actions, the inspectors identified that no corrective actions had been taken to address the nonconformance. The PIP documented conflicting licensee positions between the regulatory assessment and the engineering analysis. However, the licensee did not document a valid technical basis for not correcting the condition. As a result of the team's finding, the licensee expedited a procedure change to RP/0/A/5700/007, Earthquake, to mitigate the potential impact of the positioners failing non-conservatively during a seismic event.

Analysis. Failure to develop timely corrective actions as required by the licensee CAP is a performance deficiency. This finding is more than minor based on the initial violation for the non-seismic positioners, in that it affected the design control attribute of the mitigating systems cornerstone objective to ensure the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences. This finding is of very low safety significance (Green) because the design/qualification deficiency did not result in a loss of function per Regulatory Issue Summary 2005-020. The licensee determined that adequate loads existed to prevent damage to both RN pumps if the corresponding flow control valves failed to close. In addition, the RN pump vendor provided documentation to the licensee which indicated that the RN pumps could satisfactorily operate at flow rates below the minimum flow value of 2700 gpm for up to two hours without sustaining damage, which was considered adequate time to detect and respond to the problem. This finding has a cross cutting aspect of timely corrective actions in the area of problem identification and resolution.

Enforcement. 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that conditions adverse to quality such as deficiencies, deviations, and nonconformances shall be promptly identified and corrected. Contrary to this, on January 24, 2007, the team identified that the licensee did not take adequate corrective actions for a previously identified Green NCV. Because this finding is of very low safety significance and was entered into the licensee's corrective action program as PIP M-07-

Enclosure

0584, it is identified as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy. This item will be tracked as NCV 05000369, 370/2007006-01, Failure to Take Appropriate Corrective Actions for Valve Positioners not Analyzed for Seismic Requirements.

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 Catawba, NRC generic letters and information notices, and generic vendor notifications, to ensure that issues applicable to McGuire 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. RCAs were reviewed to verify that OE was considered when conducting an investigation into why an event occurred as required by NSD-212, Cause Analysis.

(2) Assessment

The team determined that operating experience, both from within the Duke nuclear fleet and the industry, was being used regularly in the corrective action program at McGuire. The Operating Experience program was coordinated by the General Office for all three nuclear sites. Personnel in the General Office screen incoming OE from outside the Duke organization and transfer the information deemed to be applicable into the Operating Experience Database. The team found that OE usage was found to be effective and well integrated into the licensee's processes for performing and managing work, and plant operations.

The team observed, some inconsistency in how OE was being reviewed and evaluated. Security OE PIPs were consistently structured, contained thorough assessments, and robust corrective actions. Other organizational PIPs varied with respect to assessment and robustness. The team determined that some insight may be gained from contrasting Security OE PIPs with others to determine if there are any prevalent differences which offer benefit to all site organizations.

(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 team 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 team also determined that site trend reports were thorough and that a low threshold was established for evaluation of potential trends.

The team reviewed licensee effectiveness reviews and confirmed the implementation of various corrective actions associated with PIPs which dealt with improvements to the CAP. The team found one example where a self assessment was not fully effective. Self assessment, 05-2830, a Duke Corporate three-site assessment which assessed the reactivity management program, identified one deviation, five Areas for Improvement (AFI), and three observations for McGuire. However, no corrective actions were developed for the AFIs or observations.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors conducted interviews with the plant staff 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. The inspectors interviewed the ECP Coordinator and reviewed ECP reports 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

The team 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 team did not identify any reluctance to report safety concerns.

(3) Findings

No findings of significance were identified.

4OA6 Management Meetings

On February 8, 2007, the inspectors presented the inspection results to Mr. S. Brown, 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.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

Black, D., Security Manager
Boyle, J., Manager, Modification Engineering
Bradshaw, S., Superintendent, Plant Operations
Bramblett J., Outage Manager
Brown, S., Manager, Engineering
Crane, K., Licensing Specialist
Evans, K., Superintendent, Maintenance
Harrall, T., Station Manager, McGuire Nuclear Station
Hull, P., Chemistry Manager
Jenkins, J., Safety Review Group Manager
Kammer, J., Manager, Safety Assurance
Mooneyhan, S., Radiation Protection Manager
Nolan, J., Manager, Mechanical and Civil Engineering (MCE)
Parker, R., Superintendent, Work Control
Peterson, G., Site Vice President, McGuire Nuclear Station
Piercy, B., Human Resources Manager
Repko, R., Plant General Manager
Snyder, S., Manager, RES Engineering
Thomas, J., Manager, Regulatory Compliance

NRC personnel

J. Moorman, III, Chief, Reactor Projects Branch 1
J. Brady, Senior Resident Inspector

LIST OF ITEMS OPENED AND CLOSED

05000369,370/2007006-01	NCV	Failure to Take Appropriate Corrective Actions for Valve Positioners not Analyzed for Seismic Requirements (Section 40A2a.(3))
-------------------------	-----	--

LIST OF DOCUMENTS REVIEWED

Procedures:

AP/1/A/5500/046 Abnormal Primary or Secondary Chemistry, Revision 3
AP/1/A/5500/046, Abnormal Primary or Secondary Chemistry, Revision 6
AP/2/A/5000/015, Loss of VI System “ (Instrument Air), Revision 17
EP/1/A/5000/G1, CA Flow Control with Loss of VI” (Auxiliary Feedwater), Revision 3
OP/2/A/6100/003, Controlling Procedure for Unit Operation, Revision 106, 114
PT 1/A/4200/038, Venting of the CA System Suction Piping, Revision 20
PT 2/A/4200/038, Venting of the CA System Suction Piping, Revision 20

AP/1/A/5500/24, Loss of Plant Control Due to Fire or Sabotage, Revision 24
 AP/0/A/5500/039, Control Room Hi Temperature, Revision 10
 EP/2/A/5000/G-1, Enclosure 16, CA Flow Control with Loss of VI, Revision 27
 EP/1/A/5000/FR-H.3, Response to Steam Generator Hi Level, Revision 5
 RP/0/A/5700/007, Earthquake, Revision 10, 11
 PT/1/A/4350/002A, Diesel Generator 1A Operability Test, Revision 70
 MP/0/A/7400/076, Nordberg Diesel Engine Full Flow Lube Oil Filter Removal and Replacement, Revision 6
 NSD-208, Problem Investigation Process, Revision 27
 NSD-212, Cause Analysis, Revision 15
 NSD-210, Corrective Action Program, Revision 4
 NSD-602, Safety Conscious Work Environment & Employee Concerns Program, Revision 4
 NSD-203, Operability, Revision 18
 NSD-202, Reportability, Revision 21
 McGuire Safety Review Workplace Procedure 3.10, Guidelines for Evaluating Effectiveness of Corrective Actions to Prevent Recurrence, Revision 1

Self Assessments:

M-05-2830, Reactivity Management Assessment GO-05-01
 M-06-0721, Fourth Quarter Operational Decision Making Issues
 M-06-0168, Effectiveness of Operability Assessments
 M-06-3455, Assessment of 2EOC-17 Shutdown Risk
 M-05-1492, Self Assessment for ASME Section XI Repair and Replacement
 M-05-4029, McGuire Nuclear Station Midcycle Assessment
 M-06-1151, Self Assessment for Radiation Protection
 M-06-3500, Self Assessment for Maintenance and Work Control
 M-05-5727, Safety Review Group Assessment SR-SA05-05
 M-06-0371, Self Assessment for Effectiveness of Root Cause Program Improvements
 M-06-0903, 2005 Root Cause Extent of Cause Assessment
 M-06-1718, Group Self Assessment of CAPR Effectiveness Review
 M-06-2850, 2006 Engineering Functional Area Evaluation
 M-06-5516, PORC Effectiveness Assessment SR-SA06-07
 M-06-6008, 2005 MNT Corrective Action Effectiveness Review Assessment
 M-05-4026, MNS Mid-Cycle Assessment
 M-05-5394, Security Functional Area Evaluation
 M-06-3815, Operations Functional Area Evaluation
 M-07-0591, Self Assessment SC-SA07-03, Security Work Practices

Problem Investigation Process Reports:

M-92-0406	M-05-2107	M-05-5136	M-06-0799
M-04-0847	M-05-2222	M-05-5608	M-06-1039
M-04-4543	M-05-2830	M-05-5652	M-06-1206
M-05-0078	M-05-3541	M-05-5869	M-06-1394
M-05-0882	M-05-3645	M-06-0168	M-06-1496
M-05-2049	M-05-5111	M-06-0721	M-06-2148

M-06-2282	M-05-3757	M-06-0460	M-05-5374
M-06-2284	M-06-0645	M-06-1956	M-05-5985
M-06-2889	M-06-0645	M-04-2109	M-06-0498
M-06-3239	M-06-0734	M-04-5043	M-06-0097
M-06-3240	M-06-0924	M-04-5133	M-06-1156
M-06-3243	M-06-1425	M-04-5315	M-06-1221
M-06-3244	M-06-1570	M-05-0841	M-06-1236
M-06-3455	M-06-1582	M-05-2000	M-06-1512
M-06-3491	M-06-1593	M-06-3241	M-06-1803
M-06-3730	M-06-1628	M-05-3065	M-06-2069
M-06-3958	M-06-2241	M-05-3064	M-06-2145
M-06-3961	M-06-2320	M-05-3066	M-06-2529
M-06-4410	M-06-2946	M-06-1206	M-06-2538
M-06-4498	M-06-3241	M-06-1620	M-05-1608
M-06-4977	M-06-3241	M-06-1381	M-05-0827
M-06-5573	M-06-5174	M-06-1450	M-05-3648
M-06-5589	M-06-5946	M-06-1256	M-06-2968
M-06-5891	M-06-5952	M-06-2658	M-06-3494
M-07-0295	M-03-2828	M-03-2272	M-06-1034
M-07-0365	M-04-3025	M-03-2693	M-06-1113
M-07-0584	M-04-3765	M-04-2279	M-06-2859
M-01-4406	M-04-5400	M-04-4088	M-06-3423
M-02-4182	M-05-0326	M-06-2216	M-06-5703
M-04-3803	M-05-0939	M-06-2845	M-05-1350
M-04-4206	M-05-0981	M-05-0139	M-05-4793
M-04-5883	M-05-1130	M-05-0210	M-05-0835
M-05-0091	M-05-1555	M-05-0240	M-06-0019
M-05-0276	M-05-1765	M-05-0815	M-05-1160
M-05-0687	M-05-2168	M-05-0856	M-05-2958
M-05-0911	M-05-2545	M-05-1438	M-06-2354
M-05-1212	M-05-2786	M-05-2029	M-06-1606
M-05-2400	M-05-3007	M-05-2183	M-05-3680
M-05-3284	M-05-4509	M-05-3183	M-05-0040
M-05-3473	M-05-4616	M-05-3548	M-06-0209
M-05-3476	M-05-5802	M-05-4037	
M-05-3711			

Work Orders:

581683	1516587	586548
581684	575263	583696
583923	1708393	579446
583925	579504	576487
590192	1704213	589921
590201	590272	

Drawings:

MCFD-2254-01.00 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2254-01.01 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2254-01.02 Rev 7, Flow Diagram of Chemical and Volume Control System
MCFD-2254-01.03 Rev 3, Flow Diagram of Chemical and Volume Control System
MCFD-2254-02.00 Rev 16, Flow Diagram of Chemical and Volume Control System
MCFD-2254-02.01 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2254-03.00 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2254-03.01 Rev 17, Flow Diagram of Chemical and Volume Control System
MCFD-2254-05.00 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2254-05.00 Rev 6, Flow Diagram of Chemical and Volume Control System
MCFD-2562-01.00 Rev 2, Flow Diagram of the SI System
MCFD-2562-02.00 Rev 4, Flow Diagram of the SI System
MCFD-2562-02.01 Rev 2, Flow Diagram of the SI System
MCFD-2562-03.00 Rev 12, Flow Diagram of the SI System
MCFD-2562-03.01 Rev 7, Flow Diagram of the SI System
MCFD-2592-01.00 Rev 9, Flow Diagram of the AFW System
MCFD-2592-01.01 Rev 16, Flow Diagram of the AFW System
MCFD-2592-02.00 Rev 2, Flow Diagram of the AFW System
MCID-1499-RN.03 Rev 1, RN Flow Controller
2NV-356 Rev 7, Isometric Drawing-MCSR D of NV System Piping
2NV-362 Rev 2, Isometric Drawing-MCSR D of ND System Piping
UFSAR Fig 6-182, ECCS Piping Layout, Dtd 14Oct2000
MCID-1499-RN.03 Rev 1, Instrument Detail Control for KC HX RN Discharge Throttle Valve
1RN89A and 1RN190B

System Health Report:

Chemical and Volume Control and High Head Safety Injection System 2nd Quarter 2006
Containment Spray System 2nd Quarter 2006
Residual Heat Removal And Low Head Safety Injection System 3rd Quarter 2006
Residual Heat Removal And Low Head Safety Injection System 2nd Quarter 2006
RN - Nuclear Service Water Health Report 2006T1
RN - Nuclear Service Water Health Report 2006T2
EDG - Emergency Diesel Generator Health Report 2006T1
EDG - Emergency Diesel Generator Health Report 2006T2
EPL - DC Power Systems Health Report 2004T1
EPL - DC Power Systems Health Report 2004T2
EPL - DC Power Systems Health Report 2004T3
EPL - DC Power Systems Health Report 2005T3
EPL - DC Power Systems Health Report 2006T1
EPL - DC Power Systems Health Report 2006T2

Miscellaneous:

Active TSAIL Item Report, Dtd 1/23/07.

LTR from P. Kasztejna of Flowserve to Duke-McGuire, Subj "Concerns Involving Mixtures of Air and Water to Pumps", DTD 3/28/2006

LTR from G. Peterson to W.D. Travers, Subj "Plans for Assuring the Appropriate Updating of the USFAR", DTD 1/24/2007

MCS-1554-NV.00-001, Rev 15, MNS Design Basis Specifications for the NV System

MCS-1561-ND.00-001, Rev 8, MNS Design Basis Specifications for the ND System

MCS-1592-CA.00-001, Rev 3, MNS Design Basis Specifications for the CA System

MD 200641 Engineering Change Package for Remove Relieve Valves 2-NV-482, -486, -487

MNS Site Director's Meeting Package for February 7th 2006

MNS Site Trending Report for 3rd Quarter 2006

MNS Unit 2 ECCS Monthly Venting Results Spreadsheet for period of 10/4/2004-1/5/2007

NRC Reg Guide 1.82 Rev 3, Water Sources For Long Term Recirculation Cooling Following a Loss of Coolant Accident

NRC SDP Risk Informed Notebook-Pre Solved Cases for McGuire NPP Rev 2

Root Cause Analysis and Attachments 05-02222, RCA for Unit 2 NV Gas Intrusion Post 2EOC16, Rev 0

Worksheet used to determine Froude Number used to support Operability in M-05-2222.

WCAP 14192, Centrifugal Charging Pump Shaft Failure Investigation

OEDB 06-43481, Information Notice 2006-13