



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

October 11, 2012

Mr. Steven D. Capps  
Site Vice President  
Duke Energy Corporation  
McGuire Nuclear Station  
MG01VP/12700 Hagers Ferry Road  
Huntersville, NC 28078

**SUBJECT: MCGUIRE NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000369/2012008 AND  
05000370/2012008**

Dear Mr. Capps:

On August 30, 2012, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your McGuire Nuclear Station. The enclosed report documents the inspection findings, which were discussed with you and other members of your staff. Subsequently, on October 10, 2012, an exit meeting was conducted by telephone to discuss the final results of this inspection with Mr. Abbott, and other members of your staff.

The inspection was an examination of activities conducted under your license as they relate to the problem identification and resolution, compliance with the Commission's rules, regulations, and with the conditions of your license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of activities, and interviews with personnel.

Based on the inspection sample, the inspection team concluded that the implementation of the corrective action program and overall performance related to identifying, evaluating, and resolving problems at McGuire Nuclear Station was adequate. Licensee identified problems were entered into the corrective action program at a low threshold. Problems were generally prioritized and evaluated commensurate with the safety significance of the problems. Corrective actions were generally implemented in a timely manner commensurate with their importance to safety and addressed the identified causes of problems. Lessons learned from the industry operating experience were generally reviewed and applied when appropriate. Audits and self-assessments were effectively used to identify problems and appropriate actions.

On the basis of the samples selected for review, the inspectors concluded that, in general, problems were properly identified, evaluated, and corrected. There was one Green finding identified which was determined to be a violation of NRC requirements. However, because of the very low safety significance and because it was entered into your corrective action program, the NRC is treating the violation as a non-cited violation (NCV) consistent with Section 2.3.2 of the NRC's Enforcement Policy. If you contest this NCV, you should provide a response within

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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 DC 20555-0001, with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the McGuire Nuclear Station. In addition, if you disagree with the cross cutting aspect assigned to the 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, Region II, and the NRC Resident Inspector at the McGuire Nuclear Station.

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 the 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/*

George T. Hopper, Chief  
Reactor Projects Branch 7  
Division of Reactor Projects

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

Enclosure: Inspection Report 05000369/2012008, 05000370/2012008  
w/Attachment: Supplemental Information

cc w/encl.: (See page 3)

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Sincerely,

**/RA/**

George T. Hopper, Chief  
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cc w/encl.: (See page 3)

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S. Capps

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Letter to Steven Capps from George T. Hopper dated October 11, 2012

SUBJECT: MCGUIRE NUCLEAR STATION - NRC PROBLEM IDENTIFICATION AND  
RESOLUTION INSPECTION REPORT 05000369/2012008 AND  
05000370/2012008

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 50-369, 50-370

License No.: NPF-9, NPF-17

Report No.: 05000369/2012008, 05000370/2012008

Licensee: Duke Energy Carolinas, LLC

Facility: McGuire Nuclear Station, Units 1 and 2

Location: Huntersville, NC 28078

Dates: August 13 - 30, 2012

Inspectors: R. Rodriguez, Senior Reactor Inspector (Team Leader)  
N. Coover, Fuel Facilities Inspector  
S. Nihn, Senior Project Engineer  
J. Quinones, Project Engineer

Approved by: G. Hopper, Chief,  
Reactor Projects Branch 7  
Division of Reactor Projects

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## SUMMARY OF FINDINGS

IR 05000369/2012008, 05000370/2012008; 8/13/2012 - 8/30/2012: McGuire Nuclear Station; Identification and Resolution of Problems.

The inspection was conducted by a senior reactor inspector, senior project engineer, project engineer, and a fuel facilities inspector. One Green non-cited violation (NCV) was identified. The significance of most findings is identified by their color (Green, White, Yellow, Red) using IMC 0609, Significance Determination Process (SDP); cross-cutting aspects are determined using IMC 0310; Components Within the Cross-Cutting Areas; and 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.

### Problem Identification and Resolution

The inspectors concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. The licensee was generally effective at identifying problems and entering them into the corrective action program (CAP) for resolution. Generally, prioritization and evaluation of issues, formal root cause evaluations for significant problems, and corrective actions specified for problems were consistent with licensee CAP procedures. Overall, corrective actions developed and implemented for issues were generally effective and implemented in a timely manner.

The inspectors determined that audits and self-assessments were adequate in identifying deficiencies and areas for improvement in the CAP, and appropriate corrective actions were developed to address the issues identified. Operating experience usage was found to be generally acceptable and integrated into the licensee's processes for performing and managing work, plant operations, and cause evaluations.

Based on discussions and interviews conducted with plant employees from various departments, the inspectors determined that personnel at the site felt free to raise safety concerns to management and use the CAP to resolve those concerns.

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**Cornerstone: Mitigating Systems**

- Green. A finding of very low safety significance and associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified by inspectors for the licensee's failure to perform required extent of condition assessments for Quick Cause Evaluations (QCE) in accordance with McGuire's Quality Assurance Program. Specifically, Nuclear System Directive (NSD) 212, "Cause Analysis," requires in part that an Extent of Condition review shall be conducted as soon as possible when a QCE is performed. One example included the licensee's failure to perform an extent of condition assessment for a QCE of the safety-related NSW system. To address this issue, the license entered PIP M-12-6309 into their CAP.

The failure to perform the required extent of condition assessments for QCE in accordance with NSD 212 was considered a performance deficiency. The finding was determined to be more than minor because it adversely affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to evaluate events for extent of condition applicability for the Nuclear Service Water issue (PIP M-12-0106) was not only a failure to follow a procedure requirement, but allowed the station to be susceptible to the existence of similar discrepancies in other systems, units, organizations, programs, processes, components, or trains. The finding was determined to be of very low safety significance (Green) because the finding did not result in a loss of system safety function or a loss of safety function of a single train for greater than allowed technical specification allowed outage time. The team identified a cross-cutting aspect in the work practices component of the Human Performance area, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel did not follow procedures [H.4(b)]. (Section 4OA2.a(3))



## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA2 Problem Identification and Resolution

##### a. Assessment of the Corrective Action Program

##### (1) Inspection Scope

The team reviewed the licensee's corrective action program (CAP) procedures which described the administrative process for initiating and resolving problems primarily through the use of the Problem Identification Program (PIPs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed PIPs that had been issued between October 2010 and July 2012, including a detailed review of selected PIPs associated with the following risk-significant systems: Nuclear Service Water (NSW), Component Cooling Water, and Emergency Diesel Generators (EDGs). Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed selected common causes and generic concerns associated with root cause evaluations to determine if they had been appropriately addressed. The inspectors selected a representative number of PIPs that were identified and assigned to the major plant departments, including operations, maintenance, engineering, health physics, chemistry, and security to ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process. 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 inspectors reviewed selected PIPs, verified corrective actions were implemented, and attended meetings where PIPs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors conducted plant walkdowns of equipment associated with the selected systems and other plant areas to assess the material condition and to look for any deficiencies that had not been previously entered into the CAP. The inspectors reviewed PIPs, maintenance history, completed work orders (WOs) for the systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a two-year period; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-dependent issues.

Control Room walk-downs were also performed to assess the main control room deficiency list and to ascertain if deficiencies were entered into the CAP and tracked to resolution. Operator Workarounds and Operator Burden screenings were reviewed, and the inspectors verified compensatory measures for deficient equipment were being implemented in the field.

The inspectors conducted a detailed review of selected PIPs to assess the adequacy of the root cause and apparent cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the PIPs and the guidance in licensee procedure NSD 212, "Cause Analysis." The inspectors assessed if the licensee had adequately determined the cause(s) of identified problems, and had adequately addressed operability, reportability, common cause, generic concerns, extent of condition, and extent of cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

The inspectors reviewed selected industry operating experience items, including NRC generic communications, to verify that they had been appropriately evaluated for applicability and that issues identified through these reviews had been entered into the CAP.

The inspectors reviewed site trend reports, to determine if the licensee effectively trended identified issues and initiated appropriate corrective actions when adverse trends were identified.

The inspectors attended various plant meetings to observe management oversight functions of the corrective action process.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The inspectors determined that the licensee was generally effective in identifying problems and entering them into the CAP and there was a low threshold for entering issues into the CAP. This conclusion was based on a review of the requirements for initiating PIPs as described in licensee procedure NSD 208, "Problem Investigation Process," which states the management expectation that employees were encouraged to initiate PIPs for any reason. Trending was generally effective in monitoring equipment performance. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues. Based on reviews and walkdowns of accessible portions of the selected systems, the inspectors determined that system deficiencies were being identified and placed in the CAP.

Prioritization and Evaluation of Issues

Based on the review of PIPs sampled by the inspectors during the onsite period, the inspectors concluded that problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in the PIP categorization guidance in NSD 208. Each PIP was assigned a priority level (category) by the Centralized Screening Team and adequate consideration was given to system or component operability and associated plant risk.

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The inspectors determined that station personnel had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures and assigned cause determinations were appropriate, considering the significance of the issues being evaluated. A variety of formal causal analysis techniques were used depending on the type and complexity of the issue consistent with NSD 212.

#### Effectiveness of Corrective Actions

Based on a review of corrective action documents, interviews with licensee staff, and verification of completed corrective actions, the inspectors determined that overall, corrective actions were timely, commensurate with the safety significance of the issues, and effective, in that conditions adverse to quality were corrected and non-recurring. For significant conditions adverse to quality, the corrective actions directly addressed the cause and effectively prevented recurrence in that a review of performance indicators, PIPs, and effectiveness reviews demonstrated that the significant conditions adverse to quality had not recurred. Effectiveness reviews for corrective actions to prevent recurrence (CAPRs) were sufficient to ensure corrective actions were properly implemented and were effective.

### (3) Findings

Introduction: A finding of very low safety significance and associated non-cited violation of 10 CFR 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified by inspectors for the licensee's failure to perform required extent of condition assessments for Quick Cause Evaluations (QCE) in accordance with McGuire's Quality Assurance Program. Specifically, Nuclear System Directive (NSD) 212, "Cause Analysis," requires in part that an Extent of Condition review shall be conducted as soon as possible when a QCE is performed. One example included the licensee's failure to perform an extent of condition assessment for a QCE of the safety-related NSW system.

Description: NSD 212, "Cause Analysis," Section 212.3, Definitions, defines a Quick Cause Evaluation as a quick process to determine the extent of condition and direct cause of an event and then develop corrective actions to minimize the likelihood of recurrence. The procedure also defines extent of condition as the review for applicability to other systems, units, organizations, programs, processes, components, or trains for similar conditions. Furthermore, Section 212.5.3.2, Extent of Condition, requires, in part, that an extent of condition review shall be conducted as soon as possible when a Quick Cause Evaluation is performed.

For the sample of Quick Cause Evaluations reviewed, the inspectors identified eight evaluations, dating to November 2011, which did not include the required extent of condition analysis and associated corrective actions to address potential discrepancies. One specific example, identified by the inspectors, was PIP M-12-0106, regarding the NSW system. On January 5, 2012, the licensee identified that their emergency and abnormal procedural guidance for accident mitigation could provide greater heat input to the standby nuclear service water pond than what was assumed in their licensing basis thermal analysis. Specifically, the analysis of record assumed only safety related heat input sources and sequentially reduced heat inputs through the use of procedurally

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driven operator action. However, non-safety related heat input sources also existed and Operations' procedures did not instruct those assumed actions. The licensee performed a QCE to determine the extent of condition and direct cause of the issue and then developed corrective actions to minimize the likelihood of recurrence. However, the inspectors found that the licensee did not perform an extent of condition review. Specially, the licensee stated that for all remaining safety related or safety significant SSCs, the extent of condition was indeterminate given the limited scope of the analysis performed.

As a result of this issue, the licensee generated PIP M-12-6309 and entered the issue into their corrective action program.

Analysis: The failure to perform the required extent of condition assessments for Quick Cause Evaluations in accordance with NSD 212 was considered a performance deficiency. The finding was determined to be more than minor because it adversely affected the mitigating systems cornerstone objective of ensuring the availability, reliability, and capability of systems to respond to initiating events to prevent undesirable consequences. Specifically, the licensee's failure to evaluate events for extent of condition applicability for the NSW issue (PIP M-12-0106) was not only a failure to follow a procedure requirement, but allowed the station to be susceptible to the existence of similar discrepancies in other systems, units, organizations, programs, processes, components, or trains.

In accordance with NRC Inspection Manual Chapter 0609, Attachment 4, Significant Determination Process – Phase 1 screening, the finding was determined to be of very low safety significance (Green) because the finding did not result in a loss of system safety function or a loss of safety function of a single train for greater than allowed technical specification allowed outage time. The team identified a cross-cutting aspect in the work practices component of the Human Performance area, because the licensee did not define and effectively communicate expectations regarding procedural compliance and personnel did not follow procedures [H.4(b)].

Enforcement: 10 CFR Part 50, Appendix B, Criterion V, Instructions, Procedures, and Drawings, requires, in part, that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings. McGuire's Quality Assurance Program procedure NSD 212, "Cause Analysis," Revision 24, requires in part that an extent of condition review shall be conducted as soon as possible when a Quick Cause Evaluation is performed.

Contrary to the above, on and before August 30, 2012, the licensee failed to assure that the activities affecting quality shall be accomplished in accordance with these instructions, procedures, or drawings. Specifically, the licensee failed to perform required extent of condition assessments for Quick Cause Evaluations in accordance with McGuire's Quality Assurance Program, NSD 212, "Cause Analysis," Revision 24. Because this violation was of very low safety significance and was entered into the licensee's CAP (PIP M-12-6309), it is being treated as an NCV, consistent with Section 2.3.2 of the NRC Enforcement Policy. (NCV 05000369, 370/2012008-01; Failure to

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Perform Required Extent of Condition Assessments for Quick Cause Evaluations in accordance with McGuire's Quality Assurance Program)

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

(1) Inspection Scope

The inspectors examined licensee programs for reviewing industry OE, reviewed licensee procedure NSD 204, "Operating Experience Program," reviewed and selected PIPs to assess the effectiveness of how external and internal OE data was handled at the plant. In addition, the inspectors selected a sample of OE documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since October 2010, to verify whether the licensee had appropriately evaluated each notification for applicability, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on a review of documentation related to review of OE issues, the inspectors determined that the licensee was generally effective in screening OE for applicability to the plant. Industry OE was evaluated and relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, OE was included in apparent cause and root cause evaluations in accordance with licensee procedure NSD 204, "Operating Experience Program (OEP) Description."

(3) Findings

No findings were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure NSD 607, "Self Assessments and Benchmarking." Documents reviewed are listed in the Attachment.

(2) Assessment

The inspectors determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the inspectors' independent review. The inspectors verified that PIPs were created to document all areas for improvement and findings resulting from the self-

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assessments, and verified that actions had been completed consistent with those recommendations. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends, as evidenced by the PIPs reviewed that were initiated as a result of adverse trends.

(3) Findings

No findings were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The inspectors interviewed ten randomly selected on-site workers regarding their knowledge of the CAP and their willingness to write PIPs or raise safety concerns. 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 also conducted 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) and interviewed the ECP coordinator. Additionally, the inspectors reviewed a sample of PIPs generated as a result of issues identified through the ECP to verify that concerns were being properly reviewed.

(2) Assessment

Based on the interviews conducted and the PIPs reviewed, the inspectors determined that licensee management emphasized the need for all employees to identify and report problems using the appropriate methods established within the administrative programs, including the CAP and ECP. These methods were readily accessible to all employees. Based on discussions conducted with a sample of plant employees from various departments, the inspectors determined that employees felt free to raise issues, and that management encouraged employees to place issues into the CAP for resolution. The inspectors did not identify any reluctance on the part of the licensee staff to report safety concerns.

(3) Findings

No findings were identified.

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Exit Meeting Summary

On August 30, 2012, the inspectors presented the inspection results to Mr. Steven Capps and other members of the licensee staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection. Subsequently, on October 10, 2012, an exit meeting was conducted by telephone to discuss the final results of this inspection with Mr. Abbott, and other members of your staff.

ATTACHMENT: SUPPLEMENTAL INFORMATION

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## KEY POINTS OF CONTACT

### Licensee personnel:

R. Abbot, Regulatory Compliance  
K. Ashe, Regulatory Compliance Manager  
D. Brewer, Organizational Effectiveness Manager  
S. Capps, Site Vice President  
K. Crane, Regulatory Compliance  
L. Hayes, Employee Concerns Program Manager  
L. Hentz, Regulatory Compliance Engineer  
G. Houser, Cap Lead  
S. Lipe, Operations Work Process Manager  
D. McCorkle, Operations Section Manager  
C. Morris, Plant Manager  
J. Nolin, Design Engineering Manager  
G. Patterson, Heat Exchanger Engineer  
R. Pocetti, Performance Improvement Manager  
J. Smith, RN Design Programs Engineer  
S. Snider, Engineering Manager  
R. Weathers, Raw Water Engineer

### NRC personnel:

G. Hopper, Chief, Reactor Projects Branch 7  
J. Zeiler, Senior Resident Inspector

## LIST OF ITEMS OPENED, CLOSED

### Opened and Closed

05000369, 370/2012008-01	NCV	Failure to Perform Required Extent of Condition Assessments for Quick Cause Evaluations in accordance with McGuire's Quality Assurance Program (Section 4OA2 a.(3))
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## LIST OF DOCUMENTS REVIEWED

### Procedures

Concerns Program (ECP), Revision 6  
Engineering Directives Manual (EDM)-201, Risk Category Scoping, Health Grouping and ER Strategy, Revision 15  
IP/0/A/3250/016D, D/G Woodward Controls Alignment Following Replacement, Revision 14  
IP/0/B/3211/007B, Control Rod Drive System L106 Mechanism Coil Polarity Checks, Revision 5  
Maintenance Directive (MD)-2.32, Work Order Close out Process, Revision 3  
Maintenance, Revision 23  
MD-2.43, Work Management Process Roles and Responsibilities, Revision 3  
MP/0/A/7400/014, Nordberg Diesel Governor, Governor Oil Cooler and Booster Servomotor  
MP/0/A/7400/092, Nordberg Diesel Engine Fuel Rack Maintenance, Revision 10  
NSD 204, Operating Experience Program (OEP) Description, Revision 13  
NSD 208, Problem Investigation Program (PIP), Revision 35  
NSD 212, Cause Analysis,  
NSD 310, Requirements For The Maintenance Rule, Revision 11  
NSD 411, Preventive Maintenance Program, Revision 8  
NSD 415, Operational Risk Management (Modes 1-3) per 10 CFR 50.65.(a)(4), Revision 7  
NSD 506, Operator Workarounds and Control Room Deficiencies, Revision 5  
NSD 602, Safety Conscious Work Environment (SCWE) & Employee  
NSD 607, Self Assessments and Benchmarking, Revision 17  
NSD-204, Operating Experience Program (OEP) Description, Revision 13  
NSD-208, Program Investigation Program (PIP), Revision 35  
NSD-212, Cause Analysis, Revision 24  
NSD-310, Requirements for the Maintenance Rule, Revision 10  
NSD-411, Preventive Maintenance Program, Revision 8  
NSD-506, Operator Workarounds and Control Room Deficiencies, Revision  
NSD-602, Safety Conscious Work Environment (SCWE) & Employee Concerns Program (ECP),  
NSD-607, Self-Assessment and Benchmarking, Revision 17  
OMP 5-3, Technical Specifications Action Item Log, Revision 34  
OP/1/A/6350/002, Diesel Generator, Revisions 99 and 113  
PT/0/A/4200/056, Closed Stop Screw Adjustment for 1/2 RN-89A and 1/2 RN-190B, Revision 0  
PT/0/A/4450/008A, Control Room Air Pressure Filter Train A Test, Revision 24  
PT/0/A/4450/008B, Control Room Air Pressure Filter Train B Test, Revision 24  
PT/1/A/4350/002A, Diesel Generator 1A Operability Test, Revision 93  
PT/2/A/4350/002A, Diesel Generator 2A Operability Test, Revision 89  
PT/2/A/4450/003 A, Annulus Ventilation System Train A Operability Test, Revisions 25 and 26  
PT/2/A/4450/003 B, Annulus Ventilation System Train B Operability Test, Revisions 25 and 26  
Revision 6  
RP/0/A/5700/022, Spill/Incident Response Procedure, Revision 14

**Problem Identification Program (PIPs) Documents**

M-96-2198	M-11-1315	M-11-6917	M-12-1175
M-04-4848	M-11-1316	M-11-7009	M-12-1182
M-06-4539	M-11-1802	M-11-7018	M-12-1337
M-07-1163	M-11-1903	M-11-7026	M-12-1572
M-08-1407	M-11-2694	M-11-7144	M-12-1903
M-08-5394	M-11-2758	M-11-7154	M-12-2106
M-09-2290	M-11-2758	M-11-7165	M-12-2115
M-09-2341	M-11-2780	M-11-7168	M-12-2158
M-09-3724	M-11-2802	M-11-7195	M-12-2174
M-10-0638	M-11-2964	M-11-7201	M-12-2194
M-10-0842	M-11-3088	M-11-7256	M-12-2226
M-10-3111	M-11-3134	M-11-7316	M-12-2449
M-10-4465	M-11-3140	M-11-7363	M-12-2608
M-10-4862	M-11-3508	M-11-7529	M-12-2737
M-10-5299	M-11-3600	M-11-7556	M-12-2751
M-10-5504	M-11-3737	M-11-7690	M-12-2764
M-10-5718	M-11-3756	M-11-7695	M-12-2852
M-10-6284	M-11-3960	M-11-7712	M-12-3118
M-10-6284	M-11-4184	M-11-7789	M-12-3140
M-10-6442	M-11-4492	M-11-8422	M-12-3380
M-10-6613	M-11-4756	M-11-8443	M-12-3486
M-10-6852	M-11-4785	M-11-8957	M-12-3556
M-10-6869	M-11-4899	M-11-9216	M-12-3654
M-10-7032	M-11-4906	M-11-9223	M-12-3958
M-10-7093	M-11-4912	M-11-9292	M-12-3960
M-10-7416	M-11-5178	M-11-9604	M-12-4007
M-10-7431	M-11-5201	M-11-9651	M-12-4029
M-10-7723	M-11-5505	M-12-0106	M-12-4818
M-10-7836	M-11-5622	M-12-0106	M-12-5384
M-10-7856	M-11-5654	M-12-0248	M-12-5442
M-11-0141	M-11-5725	M-12-0593	M-12-5851
M-11-0186	M-11-6379	M-12-0800	M-12-5910
M-11-0389	M-11-6406	M-12-0872	M-12-5920
M-11-0883	M-11-6454	M-12-0883	M-12-5957
M-11-0946	M-11-6618	M-12-0887	M-12-5959
M-11-1314	M-11-6916	M-12-0940	M-12-9292

**PIPs written as a result of this inspection**

M-12-0106, CA#15	M-12-5923	M-12-6356
M-12-5888	M-12-5957	M-12-6364
M-12-5909	M-12-5959	M-12-6370
M-12-5910	M-12-6309	
M-12-5920	M-12-6321	

**Self-Assessment Audit Reports**

Independent Nuclear Oversight – Audit McGuire Corrective Action Program Audit, 10-5  
 Independent Nuclear Oversight – Audit Fleet Fatigue Rule Audit, 10-27  
 Independent Nuclear Oversight – Audit Fitness for Duty/Access Authorization/Fatigue Rule Audit, 12-01  
 Independent Nuclear Oversight – Audit McGuire and Nuclear General Office Emergency Planning Audit, 12-04  
 Independent Nuclear Oversight – Audit McGuire Corrective Action Program Audit, 12-9

**Work Orders**

00425403	01974217	02019076
00425410	01974729	02019102
00500767	01975270	02022638
00500768	01975674	02030466
01832696	01995296	02038382
01952270	01995727	02045014
01952271	01997079	
01972826	02005459	

**Design Basis Specification (DBS)**

DBS for the LD System, MCS-1609.LD-00-0001, Revision 12  
 DBS for the FD System, MCS-1609.FD-00-0001, Revision 3  
 DBS for the KD System, MCS-1609.LD-00-0001, Revision 14  
 DBS for the VC System, MCS-1609.LD-00-0001, Revision 20  
 DBS for the VD System, MCS-1609.LD-00-0001, Revision 10  
 DBS for the VN System, MCS-1609.LD-00-0001, Revision 4

**System Health Reports**

Unit 1 and Unit 2 Emergency Diesel Generator System (10/1/2010-12/31/2010)  
 Unit 1 and Unit 2 Emergency Diesel Generator System (01/1/2011-03/31/2011)  
 Unit 1 and Unit 2 Emergency Diesel Generator System (04/1/2011-06/30/2011)  
 Unit 1 and Unit 2 Emergency Diesel Generator System (07/1/2011-09/30/2011)  
 Unit 1 and Unit 2 Emergency Diesel Generator System (10/1/2011-12/31/2011)  
 Unit 1 and Unit 2 Emergency Diesel Generator System (01/1/2011-03/31/2012)

**Engineering Changes (ECs)/Engineering Change Requests (ECRs)**

EC101178, Allowed Use of the Fisker 4156KR in place of the Robertshaw DT-160-A10 for 1&2KDTT5270

**Other Documents**

OP-MC-PSS-RN, Nuclear Service Water System (RN) Lesson Plan, Revision 46A36  
Technical Specification and Basis, T.S. 3.7.7, 3.7.8, SNSWP, 3.6.3, and 3.4.15  
UFSAR Section 9.2.5, Ultimate Heat Sink, and 6.2  
Drawing MCSF-1574.RN-01, Nuclear Service Water System (RN), Revision 5

**List of Acronyms**

CAP	Corrective Action Program
CAPR	Corrective Action to Prevent Reoccurrence
CFR	Code of Federal Regulations
ECP	Employee Concerns Program
NCV	Non-cited Violation
NRC	Nuclear Regulatory Commission
NSD	Nuclear System Directive
NSW	Nuclear Service Water System
OEP	Operating Experience Program
PIP	Problem Investigation Program
SCWE	Safety Conscious Work Environment
SNSWP	Standby Nuclear Service Water Pond
TS	Technical Specification
WO	Work Order