UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
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ATLANTA, GEORGIA 30303-8931

January 12, 2001

Duke Energy Corporation
ATTN: Mr. H. B. Barron
Vice President
McGuire Nuclear Station
12700 Hagers Ferry Road
Huntersville, NC 28078-8985

SUBJECT: MCGUIRE NUCLEAR STATION - NRC INSPECTION REPORT 50-369/00-10 AND 50-370/00-10

Dear Mr. Barron:

On December 15, 2000, the NRC completed an inspection at your McGuire facility. The enclosed report documents the inspection findings which were discussed on December 14, 2000, with you and other members of your staff.

The inspection examined activities conducted under your license 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 representative records, observed activities, and interviewed personnel.

On the basis of the sample selected for review, the team concluded that in general, problems were properly identified, evaluated, and corrected. There was one Green finding identified during this inspection associated with the depth and effectiveness of corrective actions associated with the Standby Shutdown Facility (SSF). The licensee did not always treat SSF components commensurate with their risk significance. For example, the licensee did not perform an in-depth causal analysis and comprehensive corrective actions for a recent problem involving a jacket water coolant leak that rendered the diesel engine unavailable and did not formally incorporate risk insights when screening and prioritizing items entered into their corrective action program for SSF.

In accordance with 10 CFR 2.790 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 http://www.nrc.gov/NRC/ADAMS/index.html (the Public Electronic Reading Room).

Sincerely,

/RA

Robert C. Haag, 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 50-369/00-10, 50-370/00-10
w/Attached NRC's Revised Reactor
Oversight Process

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-369, 50-370
License Nos:	NPF-9, NPF-17
Report No:	50-369/00-10, 50-370/00-10
Licensee:	Duke Energy Corporation
Facility:	McGuire Nuclear Station, Units 1 and 2
Location:	12700 Hagers Ferry Road Huntersville, NC 28078
Dates:	December 4 - 15, 2000
Inspectors:	D. Roberts, Senior Resident Inspector - Catawba (lead inspector) M. Franovich, Resident Inspector R. Moore, Reactor Inspector, Region II M. Maymi, Reactor Inspector (in training), Region II
Approved by:	R. Haag, Chief Reactor Projects Branch 1 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000369-00-10, IR05000370-00-10, on 12/4-15/2000, Duke Energy Corporation, McGuire Nuclear Station, Units 1 & 2, annual baseline inspection of the identification and resolution of problems.

The inspection was conducted by two resident inspectors and a regional reactor inspector. One Green issue of very low safety significance was identified during this inspection. The issue was evaluated using the significance determination process.

Identification and Resolution of Problems

Overall, the licensee's corrective action program was effective at identifying, evaluating, and correcting problems. The threshold for entering problems into the corrective action program was sufficiently low. Reviews of operating experience information were comprehensive. In general, the licensee properly prioritized items (by Action Category) in its corrective action program database, which ensured that timely resolution and appropriate causal factor analyses were employed commensurate with safety significance. One exception involved a recent condition adverse to quality in which the standby shutdown facility's (SSF) diesel generator was unavailable following the complete draining of radiator coolant because of heater shell pin-hole leaks. The licensee did not perform an in-depth root cause analysis and thorough corrective actions following its discovery of the degraded condition. Also, for potential safety equipment operability issues, the licensee did not always conduct or document thorough evaluations of present or past inoperability.

Previous non-compliance issues documented as non-cited violations were properly tracked and resolved via the corrective action program. The results of the last comprehensive corrective action program audit conducted by the licensee (September 1999) were properly entered and dispositioned in the corrective action program. Based on discussions with plant personnel and the apparently low threshold for items entered in the corrective action program database, the inspectors concluded that workers at the site generally felt free to raise safety concerns to their management.

Cornerstone: Mitigating Systems

- Green. A finding was identified associated with the depth and effectiveness of the licensee's evaluation and corrective actions for failures of the standby shutdown facility (SSF) diesel generator. The licensee's corrective actions for recent SSF-related problems have not been commensurate with the risk significance of the system. A recent Problem Investigation Process report, which documented a jacket water coolant leak and subsequent emptying of the engine's radiator, was not screened to include a root cause evaluation. The licensee did not perform comprehensive corrective actions to evaluate the need for performing additional preventive maintenance on the SSF diesel generator components. The inspectors identified vendor-recommended maintenance practices that were not being implemented and service bulletins authored by the vendor that were not included in the associated controlled vendor manual located on site.

  This issue was determined to have very low safety significance because it was not directly linked to any specific period of unavailability for the SSF diesel generator. This

instance of ineffective corrective action was an isolated example and is not considered indicative of the licensee's overall corrective action program. (Section 4OA2b).

Report Details

4. OTHER ACTIVITIES

4OA2 Identification and Resolution of Problems

a. Effectiveness of Problem Identification

(1) Inspection Scope

This annual inspection reviewed licensee corrective action program (CAP) activities documented since December 1999. For some risk significant systems, CAP documents were reviewed back to 1998, which corresponded to the completion of the last NRC CAP inspection (see IR 50-369,370/98-04). The inspectors reviewed CAP documents for issues documented in NRC inspection reports and the plant issues matrix since the last corrective action inspection. The inspectors focused on non-cited violations in determining whether the licensee had corrected previous examples of non-compliance with NRC regulations. For further insight into potential problems, CAP entries were discussed with the resident inspectors who routinely evaluated these activities as part of the NRC baseline inspection program.

The inspectors reviewed Problem Investigation Process (PIP) reports, which served as the licensee's formal means of documenting equipment and human performance problems, concerns, issues, and events. The inspectors also reviewed other CAP documents including work requests and work orders (WR/WOs), system health reports [for safety-related systems such as component cooling water (KC), nuclear service water (RN), and the emergency diesel generators (EDGs); and risk-important systems such as the standby shutdown system], and operating experience program (OEP) documents to verify that industry-identified problems potentially or actually affecting McGuire were appropriately entered into and resolved by the formal CAP process. Items included in the OEP effectiveness review were NRC Information Notices, industry or vendor-generated reports of defects and noncompliance under 10 CFR Part 21, and vendor information letters. A detailed listing of PIPs, WR/WOs, and OEP documents that were reviewed during this inspection is included at the end of this report.

The inspectors toured areas of the plant containing equipment important to safety. This included a walkdown of the standby shutdown system facility. The inspectors observed control room activities and performed a Unit 1 and 2 control board walkdown to determine the amount and extent of any equipment deficiencies and whether they were properly addressed in the CAP. Automated control room logs were reviewed for the month of August 2000 to determine if conditions adverse to quality (CAQs) logged by operators, chemistry technicians, and others using that system were being properly dispositioned in the CAP. The inspectors discussed plant activities with various system engineers, operators, and other plant personnel to determine if the corrective action system was effective for identifying and tracking CAQs.

(2) Findings

No findings of significance were identified. The licensee's threshold for entering problems in the CAP was sufficiently low. Reviews of operating experience information

were comprehensive. The inspectors did not identify any plant equipment problems or industry-related issues that had not been entered into the CAP. Based on the number of PIPs and the apparently low threshold for documenting issues, and based on discussions with plant personnel, the inspectors determined that workers at the site generally felt free to raise safety concerns to their management.

b. Prioritization and Evaluation of Issues, and Effectiveness of Corrective Actions

(1) Inspection Scope

The inspectors reviewed PIPs that were assigned various Action Categories to determine whether issues were properly prioritized in accordance with Nuclear System Directive (NSD) 208, Rev. 22, Problem Investigation Process. The Action Categories (1 through 4) were defined in NSD 208 and were numbered based on decreasing significance. Action Category 1 PIPs were "significant" CAQs that required formal root cause evaluations, while Action Category 4 PIPs were low level CAQs or conditions not adverse to quality, neither of which required any type of causal evaluation. The majority of the reviewed PIPs were screened as Action Category 3, with the remainder falling into Action Categories 1, 2, and 4. Action Category 2 PIPs were defined as CAQs for which management could use its discretion in deciding whether to perform a formal root cause evaluation. Action Category 3 PIPs were problems for which an "apparent cause" analysis was sufficient in fixing the immediate problem.

The inspectors reviewed PIPs to assess the licensee's actions to determine causal factors, to develop and implement appropriate actions to correct the adverse condition, and, if significant, prevent recurrence. These PIPs were primarily related to cornerstones in the Reactor Safety strategic performance area of the NRC inspection program; however, PIPs were also reviewed in the areas of Radiation Safety and Safeguards to maintain some distribution across all NRC inspection program cornerstones. Also included in this review was a sample of the 20 oldest open PIPs in the licensee's database, some dating back to 1997. Problem Investigation Process reports associated with past non-cited violations (NCVs) were reviewed to verify that the associated problems were corrected.

Work orders (WOs) were reviewed to verify that equipment problems were corrected and that significant CAQs were properly resolved. The inspectors searched the PIP database to determine if problems were recurring.

The inspectors reviewed industry operating experience issues that were evaluated in the past two years to determine if this information had been appropriately assessed for applicability to the station and whether applicable issues were incorporated into the station corrective action program. Items reviewed for the OEP included vendor information letters (VILs), NRC Information Notices (INs), and NRC Generic Letters (GLs) .

The inspectors listened in on a PIP screening telephone conference and attended a Corrective Action Review Board meeting, both on December 5, 2000; and attended a McGuire Management Focus Meeting on December 13, 2000, to evaluate how effectively plant personnel screened and assigned PIPs, and how management

dispositioned them. Finally, the inspectors interviewed plant personnel directly involved with the corrective action program, as well as those cognizant of specific technical issues, to verify and understand corrective actions associated with the items listed above.

(2) Findings

One green finding was identified, as discussed below. Overall the licensee's CAP was effective at identifying, prioritizing, and resolving CAQs. In general, the licensee's priority grading system (using Action Categories 1 through 4) ensured timely resolution and appropriate level of corrective actions commensurate with safety significance. Corrective action backlog and PIP evaluation timeliness were well managed. When performed, root cause analyses were thorough and detailed.

A green finding was identified associated with the depth and effectiveness of the licensee's evaluation and corrective actions for failures of the SSF diesel generator. The SSF equipment is designed to allow operators to respond to low probability, design-basis fire and/or sabotage events that render the control room and some automatic safety systems unavailable. The McGuire probabilistic risk assessment classified the SSF as a very important, risk-significant system. The SSF shares that distinction with the residual heat removal system, the EDGs, and the steam-driven CA pumps for core damage mitigation. It's operability is required by the Selected Licensee Commitment (SLC) document, which is Chapter 16 of the McGuire Updated Final Safety Analysis Report.

On November 26, 2000, the SSF diesel generator was discovered to be inoperable after pin-hole leaks in the jacket water heater shell allowed coolant to completely drain from the radiator (PIP M-00-04748). The heater shell had been scheduled for replacement in 2001, after a previous failure of an internal heater element in October 2000. To correct the October heater element failure, plant personnel simply replaced the element and performed mechanical cleaning (scrubbing) to remove rust from the jacket water heater shell in the cooling system. The inspectors researched the associated vendor manual, which recommended a chemical treatment/flush to remove rust and scale from the engine and cooling system if there is evident of rust. The licensee did not chemically clean the cooling system following the October 2000 discovery of rust. At the close of this inspection, the licensee was performing a metallurgical examination of the shell to determine the actual failure mechanism for November's incident.

By letter (McGuire Special Report 99-01) dated March 5, 1999, the licensee had submitted a SLC-required report to the NRC for the SSF being inoperable in excess of the allowed seven days. In that letter, the licensee provided a root cause evaluation and planned corrective actions to improve SSF diesel generator reliability (PIP M-99-00366, Failed SSF Diesel Generator Exciter). Planned corrective actions included an evaluation of the need for enhanced preventative maintenance (PM) on the SSF diesel generator. Station personnel interviewed during this inspection indicated that the scope of the 1999 PM review was limited to electrical sub-components (e.g., the exciter). The inspectors identified vendor-recommended PMs for the engine's mechanical systems (e.g. jacket water pump inspections) that were not being implemented. Additionally, the inspectors identified that vendor-authored service bulletins were not included in the

associated controlled vendor manual (MCM 1301.02-0058) located on site. These service bulletins were listed by title in the controlled manual as available from the vendor, but had not been ordered by the licensee for inclusion.

The inspectors also noted that PIP M-00-04748 was screened to be an Action Category 3 PIP. As such, a formal root cause analysis was not performed to determine more comprehensive causal factors and long-term corrective actions. Nuclear System Directive 208 provides examples of Category 2 PIPs that would warrant a root cause analysis. One of the examples involves significant malfunctions to plant equipment for maintaining nuclear safety, including risk-significant and reliability significant structures, systems, and components (SSCs). Additionally, NSD 208 stated that a Category 2 PIP should be written and a root cause evaluation performed for an adverse trend in performance of these SSCs. Licensee personnel acknowledged that an adverse trend existed for the SSF diesel, and that a PIP should have been written and screened as Category 2. Related to the screening of PIP M-00-04748 as Category 3 and PIP screening in general, the inspectors learned that the licensee did not formally incorporate risk insights in the screening process.

The inspectors concluded that overall licensee corrective actions for SSF-related problems have not been commensurate with the risk-significance of the system. Near the end of the inspection, the licensee initiated additional corrective actions to review PM practices for the SSF diesel generator. Corrective action issues noted above for the SSF diesel generator were isolated examples and are not considered indicative of the licensee's overall corrective action program effectiveness. This corrective action program finding was characterized by the Significance Determination Process as having very low safety significance (Green), because it was not directly linked to any specific period of SSF diesel generator unavailability. Additionally, the inspectors determined that the issue did not involve a violation of NRC regulatory requirements.

A negative observation was made concerning some PIPs that documented conditions adverse to quality. The associated operability determinations were not always thorough, as noted for Category 3 PIPs M-00-00522 (2A KC heat exchanger high differential pressure on RN side) and M-00-02569 (1A2 KC pump motor lost significant amounts of oil for second time in 3 months). For PIP M-00-00522, the licensee failed to address the availability of the KC heat exchanger during seismic events when both A and B trains of RN would be aligned to the standby nuclear service water pond. During normal operation (and following most design basis accidents) the A train RN pumps take suction from Lake Norman. However, it was determined that in the rare event the A train was aligned to take suction from the standby nuclear service water pond, corrosion products located in the associated suction piping could migrate to the KC heat exchanger, resulting in high differential pressure across the tubes. The effect this alternate alignment and potential fouling would have on the RN system during a seismic event was not initially evaluated by the licensee. For PIP M-00-02569, there was no discussion as to current or past inoperability (or how much oil was added) when the pump's bearing oil reservoirs were found at low levels. As a result of the questions asked by the inspectors, the licensee performed evaluations and determined that there were no operability issues.

c. Effectiveness of Self-Assessments and Audits

(1) Inspection Scope

The inspectors reviewed the licensee's most recent self-assessment of the corrective action program to verify if findings and recommended areas for improvement were being entered into the licensee's CAP, and that appropriate corrective actions were taken to resolve identified CAQs or program deficiencies. As applicable, self-assessment findings were compared to recent NRC findings. The self-assessment was conducted by the Regulatory Audit group from the Duke Energy General Office from September 13-30, 1999, and was identified as SA-99-35 (ALL)(RA), Level 3 Assessment of the Corrective Action Program, requested by Safety Assurance Business Excellence Steering Team. The findings from this assessment were documented in PIP G-99-00352.

Although, no formal audit of the CAP had been conducted in the last 12 months, numerous assessments had been performed for individual functional areas such as radiation protection, security, emergency preparedness, and others. The results of these assessments were also documented in the licensee's corrective action program as appropriate. These assessments touched on corrective action elements as they related to specific issues within the functional area being evaluated. The inspectors verified that related findings were entered in the licensee's PIP database.

(2) Findings

No findings of significance were identified. Licensee self-assessments were thorough and effective in identifying deficiencies in the corrective action program and other programmatic areas. These deficiencies were routinely entered into the CAP and corrective actions were implemented.

4OA6 Meetings

Exit Meeting Summary

The inspectors presented the inspection results to Mr. H. Brew Barron, Site Vice President, as well as other members of licensee management and staff, at the conclusion of the inspection on December 14, 2000. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Barron, B., Vice President, McGuire Nuclear Station
Bradshaw, S., Superintendent, Plant Operations
Byrum, W., Manager, Radiation Protection
Cash, M., Manager, Regulatory Compliance
Dolan, B., Manager, Safety Assurance
Jamil, D., Station Manager, McGuire Nuclear Station
Patrick, M., Superintendent, Maintenance
Peele, J., Manager, Engineering

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Opened and Closed During this Inspection

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

PIPs

PIP Number	Action Category	PIP Description
M-00-00662	4	Cold leg accumulator (CLA) level and pressure calculation needs revision
M-00-01559	3	B containment sump level instrument inoperable
M-00-01811	4	Conflict between installed material and applicable pipe specification for valve 2NI-120B
M-00-01841	4	Test procedure PT/1/A/4206/002B requires local valve position verification of containment isolation valves (1NI-120B, 1NI-96B, and 1NI-144B). No positive visual verification available.
M-00-02071	3	1B CLA nitrogen make-ups; possible leak

PIP Number	Action Category	PIP Description
M-00-03519	3	Main feedwater and safety injection systems mechanical snubber did not stroke full range
M-00-03532	3	Relief valve 2NI-86 failed set pressure test
M-00-01354	3	Voltage discrepancies between Unit 2's vital bus voltage and associated transformer secondary winding voltage and diesel generator voltage when paralleled
M-00-03366	3	Unit 2 Operator Aid Computer prematurely alarmed while power was being swapped from the normal supply to diesel generator supply
M-00-03383	3	Cold Leg Accumulators A & D level transmitters found more than two times out of tolerance
M-00-00209	4	Operating Experience Database item 99-023246, Charging pump vibration problem at Vogtle
M-00-00134	4	Availability of reactor coolant (NC) pump seal injection with potential debris clogging of seal injection filters
M-00-01508	2	NC system letdown line pressure transient
M-00-01886	3	NC system unidentified leakage calculation with negative magnitudes
M-00-02501	3	Standby makeup pump sizing calculation and NC pump seal flow rate calculations not updated in accordance with minor modification
M-00-02645	4	2C NC pump seal leak off increase to 4 gallons per minute (gpm) and related abnormal procedure entered
M-00–02874	2	1B charging (NV) system centrifugal charging pump inoperable due to discharge check valve malfunction
M-00-03232	3	Equipment problem noted during emergency core cooling system pump head curve test
M-00-03873	2	2NV-226 manual valve will not operate
M-99-05152	2	Unit 1 NC pump seal injection filters clogged
M-00-04645	1	Unit 2 manual reactor trip following runback
M-99-02769	2	Response time testing on four NC pump channels not performed per Technical Specification (TS)

PIP Number	Action Category	PIP Description
M-00-00475	1	Refueling Water Storage Tank (FWST) level instrument outside design basis
M-99-05659	3	10 CFR Part 21 notification from Asea Brown Boveri regarding trip roller in HK model circuit breakers
M-99-05183	1	McGuire not consistent with industry and Westinghouse design for actions on inoperable FWST channel
M-00-00231	3	Auxiliary feedwater (CA) pump discharge valve controller malfunction
M-00-00678	3	Elevated temperatures in turbine-driven CA pump room
M-00-02270	3	Cracks discovered in Unit 1 CA tank foundation and beams
M-98–01908	3	Discrepancies in CA pump design temperature limits
M-98-00637	2	Loss of power to motor control center 2MXA due to ground fault
M-97-03255	1	MKA breaker 1B to KXA opened causing dual unit trip
M-00-00463	3	Valve 1RN-89 was found broken, unexpected TS entry
M-00-00522	3	2A KC heat exchanger high differential pressure on RN side
M-00-00595	4	Pathway to Unit 1 RN-to-KC assured makeup supply valves is unsafe for time-critical emergencies
M-00-01060	4	Evaluation needed for potential deadheading of KC pumps during a blackout signal with valve KC-53 closed
M-00-01314	3	Valve 2KC-429B found mis-positioned
M-00-02393	3	1B1 KC pump inboard bearing housing oil level was found below the red oil level mark
M-00-02569	3	1A2 KC pump motor lost significant amounts of oil for second time in 3 months
M-00-02657	3	Unit 2B KC pumps exceeded 8000 gpm for less than one minute causing several KC system alarms
M-00-02863	3	Multiple occurrences of 1KC-230A failing to open when pushbutton depressed.
M-00-03513	3	2KC-313 relief valve failed set pressure test

PIP Number	Action Category	PIP Description
M-00-03608	4	KC heat exchanger 2A tube sheet fouling caused high differential pressure across the tubes
M-00-03876	3	2KC-18B would not open from the control room when attempting to swap trains
M-00-00281	4	Recent modifications have reduced RN flow to control room ventilation system chiller condenser
M-00-00462	4	2 RN valves' handles locked together
M-00-00468	3	Valve 0RN-3A was prematurely cleared from TS action item log
M-00-00493	3	Work order to lubricate 2A RN pump strainer was erroneously scheduled during a 2B pump maintenance window
M-00-02279	3	Valve 0RN-15B failed during slave relay testing
M-00-03546	3	Valve 2RN-171 failed to open when control room operator depressed pushbutton
M-00-04748	3	SSF diesel generator inoperable due to drained radiator caused by pin-hole leaks in the jacket water cooling system
M-99-00366	2	Failed SSF diesel generator exciter
M-00-00747	3	New SSF Dynalco speed switch prevented engine from starting
M-00-01870	3	Potential for pressure locking or thermal binding of valves ND-1 and ND-2
M-99-02905	1	Engineered safety features (ESF) actuation of Unit 2 turbine-driven CA Pump during SSF maintenance
M-00-03796	3	Valve 0RN-12A failed to open on an ESF test actuation signal
M-00-00271	3	Vehicle access portal hand geometry unit failed seven-day testing
M-00-00377	3	Discovery of ammunition in Protected Area
M-00-00364	3	Compromise of compensatory key
M-00-01084	3	Tailgating event (unauthorized entry into vital area)

PIP Number	Action Category	PIP Description
M-00-04257	2	Failure to post and control access to an extra high radiation area (EHRA) in Unit 2
M-00-04265	3	Incorrect radiological posting
M-00-02337	3	25-foot section of tygon hose reading 2.2 Rem/hour on contact found in hallway waste receptacle
M-00-04518	3	Delay in upgrading radiological posting to EHRA following survey
M-00-04292	2	Door to EHRA found unlocked and unguarded
M-00-00718	3	Emerging trend in “inattention to detail” human errors in radiation protection area
M-00-03892	3	Emerging trend in “posting issues” for the radiation protection area

PIP Number	NCV	Title/Description
M-97-01403	369,370/99-01-02	Failure to follow security procedures for protected area vehicle checks
M-99-00936	369,370/99-02-01	Reactor Operator failure to follow procedure during loss of vital inverter
M-99-01149	369,370/99-02-02	Failure to maintain pressurizer heatup/cooldown limits during reactor shutdown
M-98-02794	369,370/99-02-03	Failure to complete surveillance for lower ice condenser turning vanes
M-99-00832	369,370/99-02-04	Inadequate corrective action for diesel generator spring failures
M-99-01034	369,370/99-02-05	Inadequate opening torque-testing of lower ice condenser inlet doors
M-99-00677	369,370/99-02-06	Failure to maintain electric cable separation criteria
M-98-02534	369,370/99-02-07	Failure to identify divider barrier coupons on applicable drawings
M-99-01295	370/99-03-01	Failure to meet the requirements of TS 3.4.12, Low Temperature Over - Pressure Protection (LTOP)

PIP Number	NCV	Title/Description
M-99-03276	370/99-05-01	Failure to follow procedure and an inadequate procedure regarding reactor trip breaker maintenance and testing
M-99-04840	369,370/99-09-02	Incorrect wiring associated with the Train A hydrogen recombiner
M-99-02537	369,370/00-01-01	Inadequate 10 CFR 50.59 evaluation for activities rendering both trains of control room area ventilation system inoperable
M-99-02447 M-99-02428 M-99-02435 M-99-02141	370/99-04-01	Failure to follow pressurizer vent restoration procedure
M-99-01316	370/99-04-02	Failure to take adequate corrective actions following steam generator power-operated relief valve shaft key replacement
M-99-02854	369,370/99-04-03	Inadequate corrective action for air handling unit bearing failures
M-99-02485	369,370/99-04-04	Failure to comply with TS 3.7.7 when electrically de-energizing auxiliary building filtered exhaust fans
M-98-02666	369/99-05-02	Failure to meet 10 CFR 50.48 concerning non-seismic hydrogen piping in a safety-related area
M-98-03073	369,370/99-06-01	Failure to perform an adequate 10 CFR 50.59 evaluation for use of fuel assemblies with coarse or fine mesh plates
M-99-05015	369,370/99-08-01	Non-compliance with TS 3.4.12 (LTOP) during Unit 1 restart
M-99-05321	369,370/99-08-03	Radiological consequences of a fuel handling accident involving high burn-up fuel

Work Orders

WO number	Description
98318338	Troubleshoot valve 0RN-12AC failure to open during ESF testing
98318836	2RN-231B Troubleshoot - valve went to intermediate position during ESF testing
98329865	Pump 1RNPU003 - Repair outboard bearing end leak
98333093	Valve 2RN-174B will not open from control room
98240803	0RNCANSWRC1: Replace cracked relay
98248662	2RNHX0017: Repair cover leak (2 NV pump)
98319190	Add demineralized water to SSF diesel generator radiator
98321538	Repair SSF jacket water/lube oil ground fault
98303846	Add coolant to SSF diesel generator engine

Operating Experience Program Documents

OEP #	Description
98-017094	NAMCO Control Inc., Tech. Bulletin 9801, EA180 Limit Switches with Unqualified Housing Sealant
98-01822	VIL 98-20, Ingersol Dresser Pump Co., Charging Pump Journal Bearing housing and Clearance and Leakage Mechanical Seal Leakage and Bearing anti-rotation Pin Sizing
98-018503	VIL-W 98-28, Nuclear Safety Advisory Letter (NSAL) 98-004 (REV.1) Accumulator Injection/Surge Line Piping Parameters
99-020107	VIL-W-99-11, Analysis Modeling of Pressurizer Heaters
99-020477	VIL-W-99-14, NSAL 99-04, Fuel Assembly Top Nozzle Spring Screws
98-015945	NRC GL 97-06, Degradation of Steam Generator Internals
98-017465	NRC IN 98-22, Deficiencies Identified During NRC Design Inspections
98-017558	NRC IN 98-24, Stem Binding in Turbine Governor Valves in Reactor Core Isolation Cooling and Auxiliary Feedwater Systems
00-024407	NRC IN 00-01, Operational Issues Identified in Boiling Water Reactor Trip and Transients

OEP #	Description
98-016408	VIL-O 98-04, Hydrogen Containment Monitor Switches Reported as Defective by Teledyne Electronic

LIST OF ACRONYMS USED

CA	-	Auxiliary Feedwater
CAP	-	Corrective Action Program
CAQ	-	Condition Adverse to Quality
CFR	-	Code of Federal Regulations
CLA	-	Cold Leg Accumulators
dp	-	differential pressure
EDG	-	Emergency Diesel Generator
EHRA	-	Extra High Radiation Area
ESF	-	Engineered Safety Features
FWST	-	Refueling Water Storage Tank
GL	-	Generic Letter
gpm	-	Gallons per Minute
IN	-	Information Notice
KC	-	Component Cooling Water
LTOP	-	Low Temperature Overpressure Protection
NC	-	Reactor Coolant
NCV	-	Non-cited Violation
NI	-	Intermediate Head Safety Injection
NRC	-	Nuclear Regulatory Commission
NSAL	-	Nuclear Safety Advisory Letter (Westinghouse)
NSD	-	Nuclear System Directive
NV	-	High Head Charging
OEP	-	Operating Experience Program
PIP	-	Problem Investigation Process
PM	-	Preventative Maintenance
RN	-	Nuclear Service Water
SLC	-	Selected Licensee Commitments
SSC	-	Structures, Systems, and Components
SSF	-	Standby Shutdown Facility
TS	-	Technical Specifications
VIL	-	Vendor Information Letter
WO	-	Work Order
WR	-	Work Requests

NRC's REVISED REACTOR OVERSIGHT PROCESS

The federal Nuclear Regulatory Commission (NRC) recently revamped its inspection, assessment, and enforcement programs for commercial nuclear power plants. The new process takes into account improvements in the performance of the nuclear industry over the past 25 years and improved approaches of inspecting and assessing safety performance at NRC licensed plants.

The new process monitors licensee performance in three broad areas (called strategic performance areas): reactor safety (avoiding accidents and reducing the consequences of accidents if they occur), radiation safety (protecting plant employees and the public during routine operations), and safeguards (protecting the plant against sabotage or other security threats). The process focuses on licensee performance within each of seven cornerstones of safety in the three areas:

Reactor Safety	Radiation Safety	Safeguards
● Initiating Events	● Occupational	● Physical Protection
● Mitigating Systems	● Public	
● Barrier Integrity		
● Emergency Preparedness		

To monitor these seven cornerstones of safety, the NRC uses two processes that generate information about the safety significance of plant operations: inspections and performance indicators. Inspection findings will be evaluated according to their potential significance for safety, using the Significance Determination Process, and assigned colors of GREEN, WHITE, YELLOW or RED. GREEN findings are indicative of issues that, while they may not be desirable, represent very low safety significance. WHITE findings indicate issues that are of low to moderate safety significance. YELLOW findings are issues that are of substantial safety significance. RED findings represent issues that are of high safety significance with a significant reduction in safety margin.

Performance indicator data will be compared to established criteria for measuring licensee performance in terms of potential safety. Based on prescribed thresholds, the indicators will be classified by color representing varying levels of performance and incremental degradation in safety: GREEN, WHITE, YELLOW, and RED. GREEN indicators represent performance at a level requiring no additional NRC oversight beyond the baseline inspections. WHITE corresponds to performance that may result in increased NRC oversight. YELLOW represents performance that minimally reduces safety margin and requires even more NRC oversight. And RED indicates performance that represents a significant reduction in safety margin but still provides adequate protection to public health and safety.

The assessment process integrates performance indicators and inspection so the agency can reach objective conclusions regarding overall plant performance. The agency will use an Action Matrix to determine in a systematic, predictable manner which regulatory actions should be taken based on a licensee's performance. The NRC's actions in response to the significance (as represented by the color) of issues will be the same for performance indicators as for inspection findings. As a licensee's safety performance degrades, the NRC will take more and increasingly significant action, which can include shutting down a plant, as described in the Action Matrix.

More information can be found at: http://www.nrc.gov/NRR/OVERSIGHT/index.html.

Attachment