UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
SAM NUNN ATLANTA FEDERAL CENTER
61 FORSYTH STREET, SW, SUITE 23T85
ATLANTA, GEORGIA 30303-8931

October 30, 2009

Mr. Preston D. Swafford
Chief Nuclear Officer and Executive Vice President
Tennessee Valley Authority
3R Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000327/2009004 AND 05000328/2009004

Dear Mr. Swafford:

On September 30, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at your Sequoyah Nuclear Plant, Units 1 and 2. The enclosed inspection report documents the inspection results, which were discussed on October 6, 2009, with Mr. Timothy Cleary and other members of your staff.

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

Based on the results of this inspection, the NRC has identified one NRC-identified finding and two self-revealing findings of very low safety significance (Green). Two of these findings were determined to involve violations of NRC requirements. However, because of the very low safety significance and because they are entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A of the NRC Enforcement Policy. If you contest any NCV in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the 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 Sequoyah Nuclear Plant.

In addition, if you disagree with the characterization of any finding in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the Regional Administrator, Region II, and the NRC Resident Inspector at the Sequoyah Nuclear Plant. The information you provide will be considered in accordance with Inspection Manual Chapter 0305.

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

Sincerely,

/RA/

Eugene F. Guthrie, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos.: 50-327, 50-328
License Nos: DPR-77, DPR-79

cc w/Encl: (See page 3)

Enclosure: Inspection Report 05000327/2009004 and 05000328/2009004
w/Attachment: Supplemental Information

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NAME	CKontz	CYoung	MSpeck	BCollins	JEargle	RMoore	EGuthrie
DATE	10/30/2009	10/30/2009	10/30/2009	09/24/2009	10/30/2009	10/30/2009	10/30/2009
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Letter to Preston D. Swafford from Eugene Guthrie dated October 30, 2009

SUBJECT: SEQUOYAH NUCLEAR PLANT - NRC INTEGRATED INSPECTION REPORT 05000327/2009004 AND 05000328/2009004

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U. S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos.:	50-327, 50-328
License Nos.:	DPR-77, DPR-79
Report Nos.:	05000327/2009004 and 05000328/2009004
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Sequoyah Nuclear Plant, Units 1 and 2
Location:	Sequoyah Access Road Soddy-Daisy, TN 37379
Dates:	July 1, 2009 – September 30, 2009
Inspectors:	C. Young, Senior Resident Inspector M. Speck, Resident Inspector B. Collins, Reactor Inspector (1R07) J. Eargle, Reactor Inspector (4OA5) R. Moore, Senior Reactor Inspector (4OA5)
Approved by:	Eugene F. Guthrie, Chief Reactor Projects Branch 6 Division of Reactor Projects

SUMMARY OF FINDINGS

IR 05000327/2009-004, 05000328/2009-004; 07/01/2009 – 09/30/2009; Sequoyah Nuclear Plant, Units 1 and 2; Operability Evaluations and Event Follow-up

The report covered a three-month period of inspection by resident inspectors and announced inspections by regional inspectors. Three Green findings, two of which are non-cited violations (NCVs), were identified. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process" (SDP). 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 4, dated December 2006.

A. <u>NRC-Identified and Self-Revealing Findings</u>

Cornerstone: Initiating Events

<u>Green</u>. A self-revealing finding was identified for an inadequate maintenance procedure which was used to perform a rebuild of the Unit 1, Loop 1, main feedwater regulating valve (FRV) actuator. The failure to specify an applicable torque requirement associated with the installation of the control air diaphragm resulted in a failure of the diaphragm and a reactor trip due to a loss of main feedwater to the Loop 1 steam generator. The event was reported to the NRC as event notification (EN) 45045 and documented in the licensee corrective action program as PER 170598.

The finding was determined to be greater than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability, in that the FRV actuator failure caused a reactor trip and loss of main feedwater to the Loop 1 steam generator. Using Inspection Manual Chapter (IMC) 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to have very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems will not be available. The cause of this finding was determined to have a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to the availability of resources necessary for complete accurate and up-to-date work packages. [H.2(c)] Specifically, the licensee’s vendor manual for the affected component was not maintained up-to-date to contain the most current information and requirements from the vendor applicable to the maintenance activities conducted (Section 4OA3.2).

<u>Green.</u> The inspectors identified a Severity Level IV NCV of 10 CFR 50.59 for the licensee’s failure to perform a 10 CFR 50.59 evaluation for a new station Abnormal Operating Procedure (AOP) - M.09, “Loss of Charging,” Rev. 0, that included a preplanned, proceduralized 10 CFR 50.54(x) action that was a deviation from the Technical Specifications (TS). The licensee entered this issue into their corrective action program as PER 158739, and completed the corrective actions to remove the NRC unapproved operator actions from the procedure.

This finding was assessed using traditional enforcement. The finding was more than minor because the change requiring 10 CFR 50.59 evaluation would have required NRC review and approval prior to implementation. A regional senior risk analyst performed a Phase 3 Significance Determination and characterized the performance deficiency as very low safety significance (Green) based on risk. The inspectors concluded that the finding reflected current licensee performance and involved the cross-cutting aspect of non-conservative assumptions of the decision-making component of the cross-cutting area of Human Performance [H.1(b)]. (Section 4OA5.2)

Cornerstone: Mitigating Systems

Green. A self-revealing non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for the licensee's failure to follow plant procedures for performing independent verifications of procedural steps. Emergency Diesel Generator (EDG) 1B-B was declared operable when it was unable to perform its required safety function due to 11 of 32 cylinder test plugs not being positioned as required following pre-start rolling, which subsequently resulted in EDG damage during testing. This issue was entered into the licensee's corrective action program as Problem Evaluation Report (PER) 201282. The licensee performed corrective maintenance and returned the emergency diesel generator to service.

The finding was determined to be greater than minor because it was associated with the configuration control attribute of the mitigating system cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences, in that operator error and damage to the 1B-B EDG rendered the EDG unavailable to perform its safety function. Using Inspection Manual Chapter (IMC) 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because the it did not represent a loss of safety function, a loss of single train of safety equipment for greater than the TS allowed outage time, a loss of significant maintenance rule equipment for greater than 24 hours, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event. The cause of this finding was determined to have a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to the training of personnel [H.2(b)]. Specifically, the operator that performed the independent verification of the vent valves positions did not receive training on the operation of the new design of EDG cylinder vent valves. (Section 1R15).

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Status:

Unit 1 operated at or near 100 percent RTP for the entire inspection period, with the exception of a power reduction to approximately 80 percent RTP on July 11, 2009, for maintenance on the #7 heater drain system. Unit 1 returned to 100 percent RTP on July 12, 2009, and operated there for the remainder of the inspection period.

Unit 2 operated at or near 100 percent RTP for the entire inspection period, with the exception of a power reduction to approximately 85 percent RTP on July 17, 2009, for maintenance on the main feedwater pump turbine condenser drain tank. Unit 2 returned to 100 percent RTP on July 19, 2009, and operated there for the remainder of the inspection period.

1. REACTOR SAFETY

Cornerstones: Initiating Events, Mitigating Systems, and Barrier Integrity

1R04 Equipment Alignment

.1 Partial System Walkdowns

a. Inspection Scope

The inspectors performed a partial walkdown of the following four systems to verify the operability of redundant or diverse trains and components when safety equipment was inoperable.

The inspectors focused on identification of discrepancies that could impact the function of the system and, therefore, potentially increase risk. The inspectors reviewed applicable operating procedures, walked down control system components, and determined whether selected breakers, valves, and support equipment were in the correct position to support system operation. The inspectors also verified that the licensee had properly identified and resolved equipment alignment problems that could cause initiating events or impact the capability of mitigating systems or barriers and entered them into the corrective action program (CAP). Documents reviewed are listed in the Attachment to this report.

- Auxiliary control air compressor train A and attendant safety-related equipment during train B planned maintenance
- Unit 2 motor-driven auxiliary feedwater trains A and B during turbine-driven auxiliary feedwater pump unavailability
- Vital battery V and battery charger during vital battery I replacement
- Off-site Power Supplies and Emergency Diesel Generators 1A-A, 2A-A, and 1B-B during Emergency Diesel Generator 2B-B Emergent Maintenance

b. Findings

No findings of significance were identified.

.2 Semi-Annual Complete System Walkdown

a. Inspection Scope

The inspectors conducted two detailed walkdowns/reviews of the alignment and condition of the Units 1 and 2 auxiliary feedwater systems (AFW) to verify proper equipment alignment and to identify any discrepancies that could impact the function of the system and increase risk. The inspectors utilized licensee procedures, as well as licensing and design documents, when verifying that the system alignment was correct. During the walkdown, the inspectors also verified, as appropriate, that: (1) valves were correctly positioned and did not exhibit leakage that would impact the function(s) of any valve; (2) electrical power was available as required; (3) major portions of the system and components were correctly labeled, cooled, ventilated, etc.; (4) hangers and supports were correctly installed and functional; (5) essential support systems were operational; (6) ancillary equipment or debris did not interfere with system performance; (7) tagging clearances were appropriate; and, (8) valves were locked as required by the licensee's locked valve program. Pending design and equipment issues were reviewed to determine if the identified deficiencies significantly impacted the system's functions. Items included in this review were the operator workaround list, the temporary modification list, system health reports, and outstanding maintenance work requests/work orders (WOs). In addition, the inspectors reviewed the licensee's corrective action program to ensure that the licensee was identifying equipment alignment problems and that they were properly addressed for resolution. Further, various operating experience documents and reports were reviewed to identify if this experience was utilized and addressed by the licensee. The inspectors also performed this inspection sample using the guidance contained in Operating Experience Smart Sample (OpESS) FY 2009-02, "Negative Trend and Recurring Events Involving Feedwater Systems." Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R05 Fire Protection

Quarterly Fire Protection Inspection

a. Inspection Scope

The inspectors conducted a tour of the six areas listed below to assess the material condition and operational status of fire protection features. The inspectors evaluated whether: combustibles and ignition sources were controlled in accordance with the licensee's administrative procedures; fire detection and suppression equipment was available for use; passive fire barriers were maintained in good material condition; and compensatory measures for out-of-service, degraded, or inoperable fire protection equipment were implemented in accordance with the licensee's fire plan. Documents reviewed are listed in the Attachment.

- Control building elevation 669 (mechanical equipment room, 250 VDC battery and battery board rooms)
- Auxiliary building elevation 734 6.9kV and 480V shutdown board rooms
- Control building elevation 685 (auxiliary instrument rooms)
- Control building elevation 706 (cable spreading room)
- Auxiliary building elevation 690 (corridor)
- Auxiliary Building Elevation 714 (Corridor)

b. Findings

No findings of significance were identified.

Annual Fire Drill

a. Inspection Scope

The inspectors observed the performance of the site fire brigade during unannounced drills on August 6, 2009, and September 3, 2009 to evaluate the readiness of the fire brigade to fight fires and to assess the drill against the requirements of the Sequoyah Nuclear Plant Fire Protection Report, Revision 25. The observed drills simulated fires in a communications equipment room in the basement of the control building, as well as in the train 'A' 6.9-kV shutdown board room. Specifically, the inspectors reviewed the following aspects of the drills: use of protective clothing, use of breathing apparatus, proper use of fire hoses, and control of the drill scenario.

b. Findings

No findings of significance were identified.

1R06 Flood Protection Measures

.1 Annual Review of Cables Located in Underground Bunkers/Manholes

a. Inspection Scope

The inspectors conducted a review of licensee inspections of safety-related cables located in underground bunkers/manholes. Specifically observed inspections of ERCW cable manholes and handholes subject to flooding to determine if water was present and if found, whether it would affect safety-related system operation. Inspections of ERCW train A and B manholes and handholes MH12, MH29, MH31 and HH52 were observed. Inspectors also observed maintenance technicians check for proper operation of dewatering sump pumps in several manholes/handholes. In addition, the inspectors reviewed the licensee's corrective action program to ensure that the licensee was identifying underground cabling issues and that they were properly addressed for resolution. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R07 Heat Sink Performance (71111.07T)

.1 Triennial Review of Heat Sink Performance

a. Inspection Scope

The inspectors reviewed operability determinations, completed surveillances, vendor manual information, associated calculations, performance test results and cooler inspection results associated with the Unit 1 and Unit 2 Essential Raw Cooling Water/Component Cooling System (ERCW/CCS) heat exchangers, the Unit 1 and Unit 2 Containment Spray heat exchangers (CS HX) and the Unit 1 and Unit 2 Diesel Generator (DG) Water Jacket heat exchangers. These heat exchangers/coolers were chosen based on their risk significance in the licensee's probabilistic safety analysis, their important safety-related mitigating system support functions and their relatively low margin.

For the ERCW/CCS heat exchangers, CS heat exchangers and DG heat exchangers, the inspectors determined whether testing, inspection, maintenance, and monitoring of biotic fouling and macrofouling programs were adequate to ensure proper heat transfer. This was accomplished by determining whether the test method used was consistent with accepted industry practices, or equivalent, the test conditions were consistent with the selected methodology, the test acceptance criteria were consistent with the design basis values, and reviewing results of heat exchanger performance testing. The inspectors also determined whether the test results appropriately considered differences between testing conditions and design conditions, the frequency of testing based on trending of test results was sufficient to detect degradation prior to loss of heat removal capabilities below design basis values and test results considered test instrument inaccuracies and differences.

For the ERCW/CCS heat exchangers, CS heat exchangers and DG heat exchangers, the inspectors reviewed the methods and results of heat exchanger performance inspections. The inspectors determined whether the methods used to inspect and clean heat exchangers were consistent with as-found conditions identified and expected degradation trends and industry standards, the licensee's inspection and cleaning activities had established acceptance criteria consistent with industry standards, and the as-found results were recorded, evaluated, and appropriately dispositioned such that the as-left condition was acceptable.

In addition, the inspectors determined whether the condition and operation of the ERCW/CCS heat exchangers, CS heat exchangers and DG heat exchangers were consistent with design assumptions in heat transfer calculations and as described in the final safety analysis report. This included determining whether the number of plugged tubes was within pre-established limits based on capacity and heat transfer assumptions. The inspectors determined whether the licensee evaluated the potential for water hammer and established adequate controls and operational limits to prevent heat exchanger degradation due to excessive flow induced vibration during operation. In addition, eddy current test reports and visual inspection records were reviewed to determine the structural integrity of the heat exchanger.

The inspectors determined whether the performance of ultimate heat sinks (UHS) and their subcomponents such as piping, intake screens, pumps, valves, etc. was appropriately evaluated by tests or other equivalent methods to ensure availability and accessibility to the in-plant cooling water systems.

The inspectors reviewed the licensee's operation of service water system and UHS. This included a review of licensee's procedures for a loss of the service water system or UHS and the verification that instrumentation, which is relied upon for decision making, was available and functional. In addition, the inspectors determined whether macrofouling was adequately monitored, trended, and controlled by the licensee to prevent clogging. The inspectors determined whether the licensee's biocide treatments for biotic control were adequately conducted and whether the results were adequately monitored, trended, and evaluated. The inspectors also reviewed strong pump-weak pump interaction and design changes to the service water system and the UHS.

The inspectors performed a system walkdown of the service water intake structure to determine whether the licensee's assessment on structural integrity and component functionality was adequate and that the licensee ensured proper functioning of traveling screens and strainers, and structural integrity of component mounts. In addition, the inspectors determined whether service water pump bay silt accumulation was monitored, trended, and maintained at an acceptable level by the licensee, and that water level instruments were functional and routinely monitored. The inspectors also determined whether the licensee's ability to ensure functionality during adverse weather conditions was adequate.

In addition, the inspectors reviewed condition reports related to the heat exchangers/ coolers and heat sink performance issues to determine whether the licensee had an appropriate threshold for identifying issues and to evaluate the effectiveness of the corrective actions. The documents that were reviewed are included in the Attachment.

These inspection activities constituted six heat sink inspection samples as defined in IP 71111.07-05.

b. <u>Findings</u>

No findings of significance were identified.

1R11 Licensed Operator Requalification Program

a. Inspection Scope

The inspectors performed one licensed operator requalification program review. The inspectors observed a simulator session on September 14, 2009. The training scenarios involved a small loss of coolant accident due to a reactor coolant pump seal failure, as well as a steam line break outside containment with a failure of the main steam isolation valves to close. The inspectors observed crew performance in terms of: communications; ability to take timely and proper actions; prioritizing, interpreting and verifying alarms; correct use and implementation of procedures, including the alarm response procedures; timely control board operation and manipulation, including high risk operator actions; oversight and direction provided by shift manager, including the ability to identify and implement appropriate Technical Specification (TS) action; and, group dynamics involved in crew performance. The inspectors also observed the evaluators' critique and reviewed simulator fidelity to verify that it matched actual plant response. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R12 Maintenance Effectiveness

a. Inspection Scope

The inspectors reviewed the three maintenance activities and/or maintenance rule monitored systems/functions below to verify the effectiveness of the activity in terms of: appropriate work practices; identifying and addressing common cause failures; scoping in accordance with 10 CFR 50.65 (b); characterizing reliability issues for performance; trending key parameters for condition monitoring; charging unavailability for performance; classification in accordance with 10 CFR 50.65(a)(1) or (a)(2); appropriateness of performance criteria for structures, systems, and components (SSCs) and functions classified as (a)(2); and, appropriateness of goals and corrective actions for SSCs and functions classified as (a)(1). Documents reviewed are listed in the Attachment.

- Radiation monitors
- PER 177309, EDG 2A battery cells 19, 24 low individual cell voltage
- Main control room air conditioning system

b. Findings

No findings of significance were identified.

1R13 Maintenance Risk Assessments and Emergent Work Control

a. Inspection Scope

The inspectors reviewed the following five activities to determine whether appropriate risk assessments were performed prior to removing equipment from service for maintenance. The inspectors evaluated whether risk assessments were performed as required by 10 CFR 50.65 (a 4), and were accurate and complete. When emergent work was performed, the inspectors reviewed whether plant risk was promptly reassessed and managed. The inspectors also assessed whether the licensee's risk assessment tool use and risk categories were in accordance with Standard Programs and Processes Procedure (SPP)-7.1, "On-Line Work Management," Revision 12, and Instruction 0-TI-DSM-000-007.1, "Risk Assessment Guidelines," Revision 8. Documents reviewed are listed in the Attachment to this report.

- Unit 2 turbine-driven auxiliary feedwater pump unavailability for planned maintenance
- Unit 1 – planned maintenance motor-driven auxiliary feedwater pump B-train level control valve maintenance and testing
- Unit 2 – planned maintenance A-train motor-driven auxiliary feedwater pump
- Units 1 and 2 – Alternate alignment of start buses to backup common station service transformer
- Unit 2 – Planned Maintenance B-train Emergency Core Cooling System

b. Findings

No findings of significance were identified.

1R15 Operability Evaluations

a. Inspection Scope

For the six operability evaluations described in the PERs listed below, the inspectors evaluated the technical adequacy of the evaluations to ensure that TS operability was properly justified and the subject component or system remained available, such that no unrecognized increase in risk occurred. The inspectors compared the operability evaluations to updated final safety analysis report (UFSAR) descriptions to determine if the system or component's intended function(s) were adversely impacted. In addition, the inspectors reviewed compensatory measures implemented to determine whether the compensatory measures worked as stated and the measures were adequately controlled. The inspectors also reviewed a sampling of PERs to assess whether the licensee was identifying and correcting any deficiencies associated with operability evaluations. Documents reviewed are listed in the Attachment.

- PER 174210, Unit 1 loop 4 MSIV test switch found in "Test Maintain" position
- PER 174514, Non-safety related dampers may mask EGTS damper leakage

- PER 175534, Broken station grounding cable adjacent to emergency diesel generator building
- PER 175138, Containment purge system suction ductwork inspection ports found uncovered - potential ABSCE breach
- PER 177382, Capacity test not done following EDG 2A-A cells 19 and 24 replacement
- PER 201282, 1B-B EDG Inoperable Due to Damaged Kiene Valves

b. Findings

Introduction. A Green self-revealing non-cited violation (NCV) of 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures, and Drawings, was identified for the licensee's failure to follow procedures for performing independent verifications of valve positions. This resulted in Emergency Diesel Generator (EDG) 1B-B being declared operable when it was unable to perform its safety function and consequently resulted in EDG damage during testing.

Description. On September 8, 2009, following the pre-start rolling of EDG 1B-B, per 0-SO-82-2, "Diesel Generator 1B-B," revision 31, the EDG was declared operable, and a monthly loaded run of the 1B-B EDG per 1-SI-OPS-082-007.B, "Electrical Power System Diesel Generator 1B-B," revision 50, was completed. After completion of the loaded run, operators observed that 11 of 32 cylinder test plugs appeared damaged with indications of overheating from cylinder exhaust gases leaking by. The licensee declared the emergency diesel generator inoperable, entered TS LCO 3.8.1.1, and made the generator unavailable to perform its safety function by actuating the 1B-B Emergency Stop hand switch. The damaged cylinder test plugs were replaced, and the diesel generator was successfully tested and declared operable.

While investigating the damaged condition of the valves after the surveillance run, it was discovered that 11 of the 32 cylinder test plugs were not closed. Procedure 0-SO-82-2, "Diesel Generator 1B-B," revision 31 required operators to close the 32 cylinder test plugs, 1 per cylinder, and an independent verification of the test plugs positions per SPP-10.3, Verification Program, Revision 2. The operator performing the independent verification failed to ensure that 11 of the 32 valves were closed as directed by the procedure. The licensee determined that the open cylinder test plugs constituted a functional failure of the EDG.

The inspectors reviewed the procedures, interviewed operators, and inspected the damaged cylinder test plugs as well as the other emergency diesel generators to ensure the other emergency diesels did not have similar problems.

This event was entered into the licensee's corrective action program as PER 201282.

Analysis. The licensee's failure to follow procedures for performing independent verifications of procedural steps, which resulted in EDG 1B-B being declared operable when it was unable to perform its safety function and damage to 11 of 32 cylinder test plugs requiring the EDG to be declared inoperable, was a performance deficiency. The finding was determined to be greater than minor because it was associated with the configuration control attribute of the mitigating system cornerstone and affected the cornerstone objective to ensure the availability of systems that respond to initiating events to prevent undesirable consequences, in that operator error and damage to the 1B-B EDG rendered the EDG unavailable to perform its safety function. Using Inspection IMC 0609, “Significance Determination Process,” Attachment 4, “Phase 1 - Initial Screening and Characterization of Findings,” the finding was determined to have very low safety significance (Green) because the it did not represent a loss of safety function, a loss of single train of safety equipment for greater than the TS allowed outage time, a loss of significant maintenance rule equipment for greater than 24 hours, or screen as potentially risk-significant due to a seismic, flooding, or severe weather initiating event.

The cause of this finding was determined to have a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to the training of personnel [H.2(b)]. Specifically, the operator that performed the independent verification of the vent valves positions did not receive training on the operation of the new design of EDG cylinder vent valves.

Enforcement. 10 CFR 50 Appendix B, Criterion V, Instructions, Procedures, and Drawings, requires, in part, that activities affecting quality shall be accomplished in accordance with procedures of a type appropriate to the circumstances. Procedure SPP-10.3, Verification Program, revision 2, was a plant procedure that implemented a portion of these requirements. Specifically, section 3.3.2, “Independent Verification Standard,” contained requirements for the performance of the independent verification process. Section 3.3.2.E required that the “verifier verifies the as-found configuration or condition matches the required position.” Procedure 0-SO-02-2, “Diesel Generator 1B-B,” revision 31, required that the above independent verification process be performed on all 32 cylinder test plugs. Contrary to the above, on September 8, 2009, the licensee failed to accomplish an activity affecting quality in accordance with appropriate procedures, when the licensee failed to independently verify that all 32 cylinder test plugs matched the required shut position as required by SPP-10.3, revision 2, when directed by 0-SO-82-2, Revision 31, leaving 11 of 32 valves in the open position. Because the finding was of very low safety significance and has been entered into the licensee’s CAP as PER 201282, this violation is being treated as an NCV, consistent with Section VI.A of the Enforcement Policy: NCV 05000327,328/2009004-01, “Failure to Follow Emergency Diesel Generator Operating Procedure.”

1R18 Plant Modifications

.1 Permanent Modifications

a. Inspection Scope

The inspectors reviewed DCN 22294, Revision A, Install Additional Appendix R Lighting, walked down installed modifications, and interviewed engineering and fire protection personnel regarding the modification and associated post-modification testing to verify that (1) the design bases, licensing bases, and performance capability had not been degraded through this modification, and (2) the modification was not performed during increased risk-significant configurations that placed the plant in an unsafe condition. The inspectors also reviewed applicable sections of the UFSAR, plant modification procedures, system drawings, supporting analyses, fire protection program requirements, and related PERs. Documents reviewed are listed in the Attachment.

b. Findings

No findings of significance were identified.

1R19 Post-Maintenance Testing

a. Inspection Scope

The inspectors reviewed the four post-maintenance tests associated with the work orders (WOs) listed below to assess whether procedures and test activities ensured system operability and functional capability. The inspectors reviewed the licensee's test procedure to evaluate whether: the procedure adequately tested the safety function(s) that may have been affected by the maintenance activity; the acceptance criteria in the procedure were consistent with information in the applicable licensing basis and/or design basis documents; and the procedure had been properly reviewed and approved. The inspectors also witnessed the test or reviewed the test data to determine whether test results adequately demonstrated restoration of the affected safety function(s). Documents reviewed are listed in the Attachment.

- WO 03-011358-000, Move EDG 2A-A generator rotor to magnetic center
- WO 09-777974-000, Restore EDG 2A cell 24 to within category B TS limit - EDG 2A battery cells 19 and 24 replaced
- WO 09-778532-000, Protection set rack III trouble light, troubleshoot/repair
- WO 09-778734-000, Unit 2 failed RCS loop 2 flow instrument

b. Findings

No findings of significance were identified.

1R22 Surveillance Testing

a. Inspection Scope

For the four surveillance tests identified below, the inspectors assessed whether the SSCs involved in these tests satisfied the requirements described in the TS surveillance requirements, the UFSAR, applicable licensee procedures, and the tests demonstrated that the SSCs were capable of performing their intended safety functions. This was accomplished by witnessing testing and/or reviewing the test data. Documents reviewed are listed in the Attachment.

<u>In-Service Test</u>:

- 1-SI-SXP-074-201.B, Residual heat removal system pump 1B-B performance test, Revision 13

<u>Routine surveillance tests</u>:

- 0-SI-NUC-000-007.0, Measurement of the at-power moderator temperature coefficient, Revision 14
- 0-SI-OPS-082-007.W, AC Electrical Power Source Operability Verification, Revision 17

<u>Containment isolation valve test</u>:

- 0-SI-SLT-030-258.1 Containment Isolation Valve Local Leak Rate Test Purge Air (Unit 1), Revision 6

b. <u>Findings</u>

No findings of significance were identified.

1EP6 <u>Drill Evaluation</u>

a. <u>Inspection Scope</u>

Resident inspectors evaluated the conduct of a routine licensee emergency drill on September 22, 2009, to identify any weaknesses and deficiencies in classification, notification, and protective action recommendation (PAR) development activities. The inspectors observed emergency response operations in the simulated control room and technical support center to verify that event classification and notifications were done in accordance with EPIP-1, Emergency Plan Classification Matrix, Revision 41. The inspectors also attended the licensee critique of the drill to compare any inspector-observed weakness with those identified by the licensee in order to verify whether the licensee was properly identifying failures.

b. <u>Findings</u>

No findings of significance were identified.

4. OTHER ACTIVITIES

4OA2 <u>Identification and Resolution of Problems</u>

.1 <u>Daily Review</u>

a. <u>Inspection Scope</u>

As required by Inspection Procedure 71152, Identification and Resolution of Problems, and in order to help identify repetitive equipment failures or specific human performance issues for follow-up, the inspectors performed a daily screening of items entered into the licensee's CAP. This was accomplished by reviewing the description of each new PER and attending daily management review committee meetings.

b. Findings and Observations

No findings of significance were identified.

.2 Annual Sample Review of Licensed Operator Use of Overtime

a. Inspection Scope

In March 2009, an anonymous PER, PER 164836, identified routine, heavy use of overtime was required to man the minimum number of licensed operators on shift, in violation of technical specification requirements. The licensee's corrective action document stated that technical specification requirements were not violated. In order to determine whether any requirements were violated, the inspectors reviewed licensee procedures for controlling licensed operator use of overtime, administrative procedures for authorizing exceptions to individual overtime limits and records documenting its use, records documenting hours worked by licensed operators, and documents pertaining to operations department human performance index clock resets attributable to persons on overtime exception. The inspectors sampled records detailing licensed operator work hours to independently assess whether requirements of licensee procedure SPP-1.5, "Overtime Restrictions," Revision 5, were adhered to and whether operator fatigue contributed to recent plant events. Additionally, the inspectors reviewed corrective actions as a result of the PER and interviewed licensed operators, operations support personnel, and operations department management. Documents reviewed are listed in the Attachment.

b. Findings and Observations

There were no findings of significance identified during this review. The inspectors noted that for the 3 month period reviewed, excess overtime requiring plant manager approval was almost exclusively associated with operations personnel. Overtime work was shared by many operators although some instances were noted where some individuals worked appreciably more overtime than others. The licensee noted one instance where excess overtime was worked without plant manager approval and was documented in PER 175971. The inspectors found no other similar instances. The inspectors noted some administrative errors on approval forms. The licensee also noted similar discrepancies and these were documented in PER 176378. The inspectors noted that many of the forms stated that the reason for the overtime was to fill minimum staffing requirements. The inspectors questioned whether this constituted a valid use of overtime. Discussions with operations management indicated that the underlying reason was to support previously granted vacation time and the unplanned loss of two licensed operators for medical reasons and one unplanned retirement. The licensee initiated PER 177121 requiring a root cause evaluation to determine why an integrated plan to increase operations staffing was not established. The inspectors reviewed operations department human performance errors during 2009 to determine if any could be attributed to operators working overtime. None were attributed to operators performing licensed duties. The inspectors interviewed operations shift managers to determine if they were aware if any of the operators on shift were on overtime exception requiring them to be monitored for fatigue by direct supervision. There were none in these specific instances however shift managers were not already aware of this and required a review of shift staffing records to determine this. Subsequent to this observation, managers identifying individuals on overtime exception as part of assuming the shift was observed. The inspectors observed that SPP-1.5 required periodic reviews to monitor program compliance. The inspectors observed that nearly all licensed operators were presently assigned to fill plant shifts operator requirements as a corrective action for PER 164836, an adequate number of qualified operators were assigned, and that operator qualification classes were now filled however the licensee has very little margin to handle any unforeseen personnel losses.

4OA3 Event Follow-up

.1 (Closed) LER 05000327/2009-004-00, Unit 1 Manual Reactor Trip Following Isolation of Two Intermediate Pressure Feedwater Heater Strings

On April 28, 2009, following a manual reactor trip of Unit 1 in response to a loss of condensate flow that occurred following a manual trip of the main turbine generator, the inspectors evaluated plant status, mitigating actions, and the licensee's classification of the event, to enable the NRC to determine an appropriate NRC response. The event was reported to the NRC as event notification (EN) 45029 and documented in the licensee corrective action program as PER 169863.

The inspectors discussed the event with operations, maintenance, engineering, and licensee management personnel to gain an understanding of the conditions leading up to the event and assess licensee actions taken following the event. Additionally, the inspectors reviewed the root cause report to assess the detail and thoroughness of the evaluation and the adequacy of the proposed corrective actions.

The inspectors reviewed the LER and PER 169863 to verify that the cause of the reactor trip was identified and whether corrective actions were appropriate. The loss of condensate flow was the result of two of the three parallel “strings” of intermediate pressure feedwater heaters automatically isolating due to high level on the shell side of the #2 heaters in each string, with the third string isolation imminent for the same reason. Operators responded in accordance with plant procedures by manually tripping the reactor due to imminent loss of condensate supply to the main feedwater pumps, and, thus, main feedwater supply to the steam generators. The cause of the heater string isolations was determined to be inadequate plant operating procedures which established the conditions that resulted in the event.

The inspectors concluded that the licensee’s corrective actions to this event were appropriate. The inspectors also verified that timely notifications were made in accordance with 10 CFR 50.72, that licensee staff properly implemented the appropriate plant procedures, and that plant equipment performed as required. The inspectors identified a Green self-revealing NCV 05000327/2009003-02, “Reactor Trip due to Inadequate Plant Operating Procedures,” which was documented in NRC Inspection

Report 05000327,328/2009003. No additional findings of significance were identified. This LER is closed.

.2 (Closed) LER 05000327/2009-005-00, Manual Reactor Trip Following a Loss of Flow Through Loop 1 Feedwater Regulating Valve

a. Inspection Scope

On May 6, 2009, following a manual reactor trip of Unit 1 in response to decreasing water level in loop 1 steam generator, the inspectors evaluated plant status, mitigating actions, and the licensee's classification of the event, to enable the NRC to determine an appropriate NRC response. The event was reported to the NRC as event notification (EN) 45045 and documented in the licensee corrective action program as PER 170598.

The inspectors discussed the event with operations, maintenance, engineering, and licensee management personnel to gain an understanding of the conditions leading up to the event and assess licensee actions taken following the event. Additionally, the inspectors reviewed the root cause report to assess the detail and thoroughness of the evaluation and the adequacy of the proposed corrective actions.

The inspectors reviewed the LER and PER 170598 to verify that the cause of the reactor trip was identified and whether corrective actions were appropriate. The loss of water level in the Loop 1 steam generator was due to an inadvertent closure of the Loop 1 main feedwater regulating valve (FRV). This was the result of a ruptured control air diaphragm within the valve actuator. The cause of the failure was determined to be inadequate torque having been applied to the diaphragm plate cap screw when the valve actuator was reassembled in April 2009 during a planned refueling outage. The inspectors concluded that the licensee’s corrective actions to this event were appropriate, including plans to update and revise the applicable vendor manual and maintenance instructions, the planned replacement of all other similarly installed FRV diaphragms, and revision to the site’s guidelines for maintaining vendor manuals given in SPP-2.5, “Vendor Manual Control.” The inspectors also verified that timely notifications were made in accordance with 10 CFR 50.72, that licensee staff properly implemented the appropriate plant procedures, and that plant equipment performed as required. One finding of significance was identified, as discussed below. This LER is closed.

b. Findings

Introduction: A Green self-revealing finding was identified for an inadequate maintenance procedure as specified by site standard MMDP-1, revision 14, Maintenance Management System, which was used to perform a rebuild of the Unit 1 Loop 1 main feedwater regulating valve (FRV) actuator. The failure to specify an applicable torque requirement associated with the installation of the control air diaphragm resulted in a failure of the diaphragm and a reactor trip due to a loss of main feedwater to the Loop 1 steam generator.

Description: On May 6, 2009, Unit 1 was manually tripped in response to lowering level in the Loop 1 steam generator caused by inadvertent closure of the Loop 1 FRV. The licensee entered this issue into their CAP as PER 170598. A ruptured control air diaphragm was determined to be the result of inadequate torque having been applied to the diaphragm plate cap screw when the valve actuator was reassembled during the preceding month's refueling outage. This activity was conducted using WOs 08-780623-000 and WO 08-771594-000 which included the maintenance instruction 0-MI-MVV-003.001.0, "Fisher Main Feedwater Regulating Valve Maintenance," revision 11. This maintenance instruction was found to not contain a specific torque requirement for installing the actuator stem cap screw. A review of the current instruction manual from the vendor found that this component should be secured with 400 ft-lbs of torque. This torque specification was not given in the version of the vendor manual used by the licensee.

Insufficient clamping force of the diaphragm plates resulting from insufficient actuator stem cap screw torque was determined to be the cause of the failure. The absence of the appropriate torque specification in the maintenance instruction was determined to be the result of the licensee's vendor manual control policy (SPP-2.5) not requiring the site's vendor manual for the FRV to be maintained up-to-date with current vendor information. The inspectors noted that licensee procedure MMDP-1, "Maintenance Management System," revision 14, section 3.2.3 contained guidance pertaining to the level of detail of work order content. In particular, "The work order package should contain sufficient controls and instructions to perform the activity in a safe, quality manner without unanticipated impact on the plant and without the introduction of latent problems into the equipment." The inadequate maintenance procedure constituted a failure to meet this site standard.

Analysis: The licensee's failure to ensure that an adequate level of detail was contained in the work order instructions for performing maintenance, as specified by site standard MMDP-1,revision 14, section 3.2.3, on the Unit 1, Loop 1, FRV was a performance deficiency. This resulted in the introduction of a latent problem by leaving the equipment in a condition that led to the rupture of the control air diaphragm and a plant trip. The finding was determined to be greater than minor because it was associated with the procedure quality attribute of the initiating events cornerstone and affected the cornerstone objective to limit the likelihood of those events that upset plant stability, in that the FRV actuator failure caused a reactor trip and loss of main feedwater to the Loop 1 steam generator. Using Inspection IMC 0609, "Significance Determination Process," Attachment 4, "Phase 1 - Initial Screening and Characterization of Findings," the finding was determined to have very low safety significance (Green) because it did not contribute to both the likelihood of a reactor trip and the likelihood that mitigating systems will not be available.

The cause of this finding was determined to have a cross-cutting aspect in the area of human performance associated with the resources component. It was directly related to the availability of resources necessary for complete accurate and up-to-date work packages [H.2(c)]. Specifically, the licensee's vendor manual for the affected component was not maintained up-to-date to contain the most current information and requirements from the vendor applicable to the maintenance activities conducted.

Enforcement: Enforcement action does not apply because the performance deficiency did not involve a violation of regulatory requirements. No violation of NRC requirements was identified since the FRV control air diaphragm was not a safety-related component. Because this finding has been entered into the licensee's corrective action program as PER 170598, and has very low safety significance, it is identified as FIN 05000327/ 2009004-02, "Feedwater Regulating Valve Failure due to Inadequate Maintenance Procedure."

.3 (Closed) LER 05000327/2009-006-00, Units 1 and 2 Inoperability of Auxiliary Building Gas Treatment System Because of Inadequate Surveillance

On May 27, 2009, the licensee determined that the auxiliary building gas treatment system (ABGTS) pressure test surveillance instruction (SI) was not being performed adequately on safety-related auxiliary building secondary containment enclosure (ABSCE) dampers. This SI served to implement TS SR 4.7.8.d. Non safety-related dampers were determined to be in a shut position during the surveillance testing such that the test results were not indicative of the condition of the safety-related ABSCE dampers. The licensee invoked the provisions of Surveillance Requirement (SR) 4.0.3, which provides guidance in the case of a surveillance requirement that is discovered to have not been performed within its specified surveillance interval. The inspectors stated that the NRC's position was that the provisions of SR 4.0.3 were not applicable under the circumstances of a surveillance test that had never been adequately performed. The licensee placed the system in a condition where reasonable assurance existed that the system would be capable of performing its required safety function, and proceeded to conduct confirmatory testing to properly meet the SR. The system satisfactorily passed the revised surveillance testing.

The licensee subsequently agreed with the NRC's position, namely that the application of the provisions of SR 4.0.3 was not appropriate for the given situation. As such, the event was reported in accordance with 10 CFR 50.73(a)(2)(i)(B) because prior to the implementation of the revised testing methodology, SR 4.7.8.d had not been adequately performed. This LER was submitted to the NRC on August 28, 2009.

The inspectors discussed the event with operations, maintenance, engineering, and licensee management personnel to gain an understanding of the conditions leading up to the event and assess licensee actions taken following the event. The inspectors reviewed the LER and PERs 173281 and 175806 to verify that the cause of the reportable condition was identified and whether corrective actions were appropriate. The cause of the event was determined to be an inadequate surveillance testing procedure, as a result of the licensee's failure to recognize that the auxiliary building general ventilation configuration beyond the test boundary could potentially mask ABSCE boundary leakage. The inspectors reviewed the revised surveillance testing procedures and results, and determined that the testing was adequate to satisfy the TS SR.

No findings of significance were identified. The inspectors determined that the licensee's failure to establish an adequate surveillance testing procedure to implement TS SR 4.7.8.d constituted a violation of Units 1 and 2 TS 6.8.1.a. The failure to comply with above requirements constituted violations of minor significance that are not subject to enforcement action in accordance with the NRC's Enforcement Policy. Specifically, the violation of TS 6.8.1.a was determined to be similar to Example 4.I. of IMC 0612 Appendix E, in that the required testing was not conducted, but the system was subsequently found to meet the applicable acceptance criteria.

4OA5 Other Activities

.1 Quarterly Resident Inspector Observations of Security Personnel and Activities

a. Inspection Scope

During the inspection period, the inspectors conducted observations of security force personnel and activities to ensure that the activities were consistent with licensee security procedures and regulatory requirements relating to nuclear plant security. These observations took place during both normal and off-normal plant working hours.

These quarterly resident inspector observations of security force personnel and activities did not constitute any additional inspection samples. Rather, they were considered an integral part of the inspectors' normal plant status review and inspection activities.

b. Findings

No findings of significance were identified.

.2 (Closed) URI 05000327,328/2008005-02: Acceptability of Proceduralized Departures from TS Requirements Without NRC Approval in AOP-M.09

a. Inspection Scope

During the inspection of station evaluations of changes, tests, or experiments and permanent plant modifications conducted December 1-12, 2008, the inspectors identified an unresolved item related to a new abnormal operating procedure which included a preplanned, proceduralized operator action that was a deviation from the technical specifications (TS). The item was unresolved pending additional review by the NRC, and determination if the finding was a violation of 10 CFR 50.59. The item involved the use of NRC regulations 10 CFR 50.59 and 10 CFR 50.54(x).

b. Findings

Introduction: The inspectors identified a Severity Level IV, NCV of 10 CFR 50.59 for the licensee's failure to perform a 10 CFR 50.59 evaluation for a new station Abnormal Operating Procedure (AOP) - M.09, "Loss of Charging," that included a proceduralized 10 CFR 50.54(x) action that was a deviation from the TS. The action directed the use of safety injection (SI) pumps to inject in Mode 4 on loss of centrifugal charging pumps (CCPs). This action was a deviation from TS 3.4.12, Low Temperature Overpressure Protection, which directed that the SI pumps be incapable of injection in Mode 4. The licensee's 10 CFR 50.59 screening incorrectly concluded that no 10 CFR 50.59 evaluation was required.

Description: The licensee implemented a new abnormal operating procedure, AOP-M.09, "Loss of Charging," Rev. 0 (dated 09/15/2008), to address the loss of one or both CCPs in Modes 1-4. This procedure replaced a portion of the guidance in Annunciator Response Procedure 1,2-AR-M6-C Window D-3 (Charging Line Flow Abnormal alarm). The licensee determined that a loss of both CCPs would result in the loss of reactor coolant system (RCS) boration and makeup (charging) capability. AOP-M.09 contained contingency actions for reducing RCS pressure and using a SI pump to inject into the RCS to borate and maintain pressurizer level. At Mode 4, AOP-M.09 required an evaluation of 50.54(x) criteria and further directed use of the SI pumps. Injection using the SI pumps in Mode 4 would violate the requirements of TS LCO 3.4.12, Low Temperature Overpressure Protection System, which required that the SI pumps be incapable of injection.

The inspectors concluded that a 10 CFR 50.59 evaluation was required because the procedure was within the scope of 10 CFR 50.59 and included an operator action that deviated from the TS. AOP M.09 was within the scope of 10 CFR 50.59 because the procedure "contained information described in the UFSAR such as how SSCs are operated and controlled, including assumed operator actions and response times" (10 CFR 50.59 (a)(5)). The regulation provided no exception to 10 CFR 50.59(c)(1) in cases where the procedure included a step that first directed that 10 CFR 50.54(x) be invoked. Additionally, a 10 CFR 50.59 evaluation was not exempted by 10 CFR 50.54(x) because the deviation from TS, proceduralized in the AOP, was not "immediately needed" and the "opportunity to provide adequate or equivalent protection" is available if there was time to review and approve a procedure.

Following the identification of this issue by the inspectors, the licensee entered this issue into their corrective action program as PER 158739, and completed the corrective action to delete the procedure operator action that deviated from the TS. The inspectors reviewed procedure AOP M.09 and verified that the operator action was deleted.

Analysis: The licensee's failure to perform a 10 CFR 50.59 evaluation for AOP M.09 was identified as a performance deficiency. This finding was assessed using traditional enforcement because it impacted the NRC's ability to perform its regulatory function, in that the licensee improperly used the 10 CFR 50.59, "Changes, Tests, and Experiments," process to incorporate operator actions inconsistent with the TS. The NRC Enforcement Policy, Supplement I, Reactor Operations, Section E, indicated that the finding was more than minor because the change requiring a 10 CFR 50.59 evaluation would have required NRC review and approval prior to implementation, in that a change to the TS was required for this procedure action. The finding was identified as a Severity Level IV violation in accordance with Section D of Supplement I, because the significance determination process (SDP) determined this violation resulted in conditions having a very low safety significance (Green). A regional senior risk analyst performed a Phase 3 SDP and characterized the performance deficiency as very low safety significance, with the dominant accident sequence involving a complete loss of charging to the RCS as the initiator, followed by operators initiating high pressure injection but failing to properly control flow to the RCS, filling the pressurizer. The subsequent plant state was conservatively assumed to cause core damage via pressurized thermal shock. A 114 day exposure period was used in the analysis, and the human error probability associated with improper Pressurizer level control was based upon an "action" error with the performance shaping factors of time set greater than nominal.

The inspectors concluded that the finding reflected current licensee performance and involved the cross-cutting aspect of conservative assumptions of the decision-making component in the area of Human Performance [H.1(b)]. Specifically, the licensee used non-conservative assumptions when performing the 50.59 screening review, which led to the procedure being implemented without a 50.59 evaluation or license amendment.

Enforcement: 10 CFR 50.59(c)(1) states, in part, that a licensee may make changes in the facility as described in the UFSAR or make changes in the procedures as described in the UFSAR without obtaining a license amendment pursuant to 10 CFR 50.90 only if a change to the TS incorporated by the license is not required. Contrary to the above, on 09/15/2008, the licensee made a change in the procedures as described in the UFSAR which required a change to the TS incorporated in the license, without obtaining an amendment. Specifically, new station Abnormal Operating Procedure - M.09, "Loss of Charging," required a license amendment because it included a preplanned, proceduralized operator action that was a deviation from the station TS. In accordance with Section VI.A of the NRC Enforcement Policy, this violation is classified as a Severity Level IV violation because the underlying technical issue is of very low safety significance. Because this non-willful violation is non-repetitive and was entered into the licensee's corrective action program (PER 158739) it is considered a non-cited violation consistent with Section VI.A.1 of the NRC enforcement Policy: NCV 05000327, 328/2009004-03: Failure to Perform a 10 CFR 50.59 Evaluation for Abnormal Operating Procedure M.09, "Loss of Charging."

4OA6 Meetings

Exit Meeting Summary

On September 21, 2009, the engineering inspectors conducted an interim exit meeting with licensee management to discuss the finding associated with the close out of URI 05000327,328/2008005-02.

On August 28, 2009, the engineering inspectors presented the inspection results to Mr. Timothy Cleary and other members of the licensee staff. The licensee acknowledged the issues presented. The inspectors confirmed that none of the potential report input discussed was considered proprietary.

On October 6, 2009, the resident inspectors presented the inspection results to Mr. Timothy Cleary and other members of his staff, who acknowledged the findings. The inspectors asked the licensee whether any of the material examined during the inspection should be considered proprietary. No proprietary information was identified.

ATTACHMENTS: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

D. Bodine, Chemistry/Environmental Manager
D. Boone, Radiation Protection Manager
S. Bowman, Licensing Engineer
E. Camp, GL 89-13 Program Owner
C. Church, Plant Manager
T. Cleary, Site Vice President
D. Clift, Site Support Manager
L. Cross, Maintenance Manager
J. Dvorak, Outage and Site Scheduling Manager
N. Eggemeyer, Site Security Manager
D. Foster, PI Manager
J. Hodge, ERCW System Engineer
K. Jones, Engineering Manager
M. Kerwin, Nuclear Assurance Manager
R. Krich, Licensing Vice President
T. Marshall, Maintenance and Modifications Manager
F. Mashburn, Corporate Licensing
G. Morris, Manager, Site Licensing
S. Newell, CCS System Engineer
D. Porter, Operations Procedures
P. Simmons, Operations Manager
D. Sutton, Licensing Engineer
R. Thompson, Emergency Preparedness Manager
B. Wetzel, Licensing and Industry Affairs Manager
K. Wilkes, Operations Support Superintendent

NRC personnel:

R. Bernhard, Region II, Senior Reactor Analyst
S. Lingam, Project Manager, Office of Nuclear Reactor Regulation
Brendan Collins, Reactor Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000327,328/2009004-01	NCV	Failure to Follow Emergency Diesel Generator Operating Procedure (Section 1R15)

05000327/2009004-02	FIN	Feedwater Regulating Valve Failure due to Inadequate Maintenance Procedure (Section 4OA3.2)
05000327,328/2009004-03	NCV	Failure to Perform a 10 CFR 50.59 Evaluation for Abnormal Operating Procedure M.09, "Loss of Charging" (Section 4OA5.2)

Closed

05000327/2009-004-00	LER	Unit 1 Manual Reactor Trip Following Isolation of Two Intermediate Pressure Feedwater Heater Strings (Section 4OA3.1)
05000327/2009-005-00	LER	Manual Reactor Trip Following a Loss of Flow Through Loop 1 Feedwater Regulating Valve (Section 4OA3.2)
05000327/2009-006-00	LER	Units 1 and 2 Inoperability of Auxiliary Building Gas Treatment System Because of Inadequate Surveillance (Section 4OA3.3)
05000327,328/2008005-02	URI	Acceptability of Proceduralized Departures from TS Requirements Without NRC Approval in AOP-M.09 (Section 4OA5.2)

LIST OF DOCUMENTS REVIEWED

Section R04: Equipment Alignment

NUREG/CR-5832, Auxiliary Feedwater System Risk-Based Inspection Guide for the D.C. Cook Nuclear Power Plant
Functional Evaluation 43657-Missing Cap Screw Head on TDAFWP Stuffing Box Extension Housing
FSAR Section 10.4.7.2, AFW System
1,2-47W803-2, Flow Diagram Auxiliary Feedwater, Revision 62
1,2-47W420-5, Mechanical Condensate Piping, Revision 4
1,2-47W309-2, Mechanical Large Reservoirs, Revision 0
OPDP-6, Locked Valve/Breaker Program, Revision 1
0-TI-OPS-000-012.64, Locked Valve List, Revision 21
1-SI-OPS-003-005.M, Auxiliary Feedwater Valve Position Verification, Revision 2
1-SI-OPS-000-186.M, Locked Valve Position Verification, Revision 19
2-SI-OPS-000-186.M, Locked Valve Position Verification, Revision 18

Section R05: Fire Protection
TVAN Fire Protection Report, Revision 25

Section R06: Flood Protection Measures
PM SQN-0-MNHWY-317-HH3: Check manholes/handholes for standing water
15N810-1, Conduit and Grounding Main Plant Plan, Revision 46

Section R07: Heat Sink Performance (HS) Activities
Procedures
0-PI-CEM-067-712.0, ERCW Microbiologically-Induced Corrosion/Mollusk Control, Rev. 17
0-PI-DXX-000-704.1, MIC and Cavitation Degradation Monitoring Program, various dates
0-PI-SFT-067-006.0, ERCW Performance Testing, Rev. 7
0-PI-SFT-070-001.0, 5-19-09 Test of CCS HX 0A1, 0A2, Rev.0017
1-SI-SXP-070-201.A, Component Cooling Water Pump 1A-A Performance Test, Rev. 0011
1-SI-SXP-070-201.B, Component Cooling Water Pump 1B-B Performance Test, Rev. 0011
2-SI-SXP-070-201.A, Component Cooling Water Pump 2A-A Performance Test, Rev. 0011
2-SI-SXP-070-201.B, Component Cooling Water Pump 2B-B Performance Test, Rev. 0011
0-SI-SXP-070-201.C, Component Cooling Water Pump 1C-S Performance Test, Rev. 0011
0-SI-SXP-067-201.J, ERCW Pump Performance Test, Rev. 16
0-SI-SXP-067-201.K, ERCW Pump Performance Test, Rev. 19
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