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

July 29, 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: WATTS BAR NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000390/2009006

Dear Mr. Swafford:

On June 26, 2009, the U. S. Nuclear Regulatory Commission (NRC) completed an inspection at your Watts Bar Nuclear Plant Unit 1. The enclosed report documents the inspection findings, which were discussed on June 26, 2009 and July 28, 2009, with Mr. Greg Boerschig and other members of your staff.

The inspection was an examination of 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 operating license. Within these areas, the inspection involved examination of selected procedures and representative records, observations of plant equipment and activities, and interviews with personnel.

On the basis of the samples selected for review, the team concluded that in general, problems were properly identified, evaluated, and corrected. However, during the inspection, some examples of minor issues were identified, including incomplete evaluations and not entering conditions adverse to quality into your corrective action program (CAP). Two self-revealing findings of very low safety significance (Green) were identified. These issues were determined to involve violations of NRC requirements. However, because of their very low safety significance and because they were entered into your corrective action program, the NRC is treating these findings as non-cited violations (NCVs) consistent with Section VI.A.1 of the NRC Enforcement Policy. If you wish to contest this non-cited violation, 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 20555-001; 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 Senior Resident Inspector at the Watts Bar 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 Watts Bar Unit 1. 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 the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

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

Docket Nos. 50-390
License Nos. NPF-90

Enclosure: Inspection Report 05000390/2009006
w/Attachment: Supplemental Information

cc w/encl. (See next page)

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Letter to Preston D. Swafford from Eugene F. Guthrie dated July 29, 2009.

SUBJECT: WATTS BAR NUCLEAR PLANT – NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000390/2009006

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-390
License Nos:	NPF-90
Report No:	05000390/2009006
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Watts Bar Nuclear Plant, Unit 1
Location:	Spring City, TN 37381
Dates:	June 15 – 26, 2009
Inspectors:	D. Merzke, Senior Project Engineer, Team Leader J. Baptist, Senior Construction Project Inspector J. Heath, Reactor Operations Inspector M. Pribish, Resident Inspector, Watts Bar
Approved by:	Eugene F. Guthrie, Chief Reactor Projects Branch 6 Division of Reactor Projects

Enclosure

SUMMARY OF FINDINGS

IR 05000390/2009006; June 15 – 26, 2009; Watts Bar Nuclear Plant Unit 1; biennial inspection of the identification and resolution of problems.

The inspection was conducted by a senior reactor engineering inspector, senior construction project inspector, a reactor inspector, and resident inspector. Two Green self-revealing findings were identified. The significance of most findings is indicated by its color (Green, White, Yellow, Red) using the Significance Determination Process in Inspection Manual Chapter (IMC) 0609, Significance Determination Process (SDP). The cross-cutting aspect was determined using IMC 0305, Operating Reactor Assessment Program. Findings for which the Significance Determination Process 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.

Identification and Resolution of Problems

The team concluded that, in general, problems were properly identified, evaluated, prioritized, and corrected. Generally, the threshold for initiating problem evaluation reports (PERs) was appropriately low, as evidenced by the types of problems identified and large number of PERs entered annually into the Corrective Action Program (CAP). Employees were encouraged by management to initiate PERs. However, the team determined that recently there have been some conditions adverse to quality identified by the resident inspectors that were not appropriately entered into the CAP.

Generally, prioritization and evaluation of issues were consistent with the licensee's CAP guidance, formal root cause evaluations for significant problems were adequate, and corrective actions specified for problems were acceptable. Overall, corrective actions developed and implemented for issues were generally timely, effective, and commensurate with the safety significance of the issues.

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

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

A. NRC Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

Green. A self-revealing non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI was identified for failure to take timely and effective corrective action to maintain the capillary line to the Essential Raw Cooling Water (ERCW) condenser water temperature control valve (1-TCV-67-158) filled with

water to ensure operability of the 'A' Shutdown Boardroom chiller. The licensee vented the line, returning the chiller to service, and entered the issue into their CAP.

The finding is more than minor because it affects the Mitigating Systems Cornerstone objective of ensuring the availability of the 'A' Shutdown boardroom chiller, which is a system that responds to initiating events. It is also associated with the cornerstone attribute of equipment availability and reliability. This finding was assessed using the Phase 1 screening worksheet of the SDP and determined to be of very low safety significance (Green) because it did not result in an actual loss of safety function of a single train for greater than the Technical Specification (TS) allowed outage time and was not potentially risk-significant due to external events. This finding has a cross-cutting aspect in the Work Control component of the Human Performance area (H.3(b)), because the licensee failed to properly prioritize the compensatory maintenance activities to support safety system operability of an operable but degraded system. (Section 4OA2.a.3.i)

Cornerstone: Public Radiation Safety

Green. A self-revealing NCV of Technical Specification 5.7.1 was identified for the licensee's failure to follow plant procedures which resulted in the failure of the Unit 1 Shield Building Vent Radiation Monitor System, an effluent radiation monitor.

The inspectors determined the licensee's failure to follow site procedures for PM cancellation was a performance deficiency and a finding. The inspectors reviewed Inspection Manual Chapter (IMC) 0612 and determined that the finding is more than minor because the finding is associated with the plant facilities/equipment and instrumentation attribute (reliability of process radiation monitors) of the radiation safety cornerstone (public radiation safety) and adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian use. The finding was assessed using the IMC 0609, Appendix D, Public Radiation SDP, and because there was no failure to implement the effluent program, the finding was determined to be of very low safety significance (Green). No cross-cutting aspect was assigned to this finding because the direct cause was not considered indicative of current performance. (Section 4OA2.a.3.ii)

B. Licensee Identified Violations

None

REPORT DETAILS

4. OTHER ACTIVITIES

4OA2 Problem Identification and Resolution

a. Assessment of the Corrective Action Program

(1) Inspection Scope

The inspectors reviewed the licensee's CAP procedures which described the administrative process for initiating and resolving problems primarily through the use of problem evaluation reports (PERs). To verify that problems were being properly identified, appropriately characterized, and entered into the CAP, the inspectors reviewed PERs that had been issued between September 2007 and June 2009, including a detailed review of selected PERs associated with the following risk-significant systems: Auxiliary Feedwater (AFW), Emergency Diesel Generators (EDGs), Essential Raw Cooling Water (ERCW), and Shutdown Boardroom (SDBR) cooling. Where possible, the inspectors independently verified that the corrective actions were implemented as intended. The inspectors also reviewed selected common causes and generic concerns associated with root cause evaluations to determine if they had been appropriately addressed. To help ensure that samples were reviewed across all cornerstones of safety identified in the NRC's Reactor Oversight Process (ROP), the team selected a representative number of PERs that were identified and assigned to the major plant departments, including Operations, Maintenance, Engineering, Health Physics, Chemistry, and Security. These PERs were reviewed to assess each department's threshold for identifying and documenting plant problems, thoroughness of evaluations, and adequacy of corrective actions. The inspectors reviewed selected PERs, verified corrective actions were implemented, and attended meetings where PERs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the CAP at an appropriate threshold.

The inspectors conducted plant walkdowns of equipment associated with the selected systems and other plant areas to assess the material condition and to look for any deficiencies that had not been previously entered into the CAP. The inspectors reviewed PERs, maintenance history, completed work orders (WOs) for the systems, and reviewed associated system health reports. These reviews were performed to verify that problems were being properly identified, appropriately characterized, and entered into the CAP. Items reviewed generally covered a 21-month period of time; however, in accordance with the inspection procedure, a five-year review was performed for selected systems for age-dependent issues.

Control Room walkdowns were also performed to assess the main control room (MCR) deficiency list and to ascertain if deficiencies were entered into the CAP. Operator Workarounds and Operator Burden screenings were reviewed, and the inspectors verified compensatory measures for deficient equipment which were being implemented in the field.

The team conducted a detailed review of selected PERs to assess the adequacy of the root-cause and apparent-cause evaluations of the problems identified. The inspectors reviewed these evaluations against the descriptions of the problem described in the PERs and the guidance in licensee procedures Performance Improvement Department Procedure PIDP-5, "Apparent Cause Evaluations," and PIDP-6, "Root Cause Analysis." The inspectors assessed if the licensee had adequately determined the cause(s) of identified problems, and had adequately addressed operability, reportability, common cause, generic concerns, extent-of-condition, and extent-of-cause. The review also assessed if the licensee had appropriately identified and prioritized corrective actions to prevent recurrence.

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

The inspectors attended various plant meetings to observe management oversight functions of the corrective action process. These included PER Screening Committee (PSC) meetings, Corrective Action Review Board (CARB) meetings, and the Work Order Review Group (WORG) meeting.

Documents reviewed are listed in the Attachment.

(2) Assessment

Identification of Issues

The team determined that the licensee was generally effective in identifying problems and entering them into the CAP and there was a low threshold for entering issues into the CAP. This conclusion was based on a review of the requirements for initiating PERs as described in licensee procedure Standard Programs and Processes SPP-3.1, "Corrective Action Program," management expectation that employees were encouraged to initiate PERs for any reason, a review of system health reports, and the fact that the team did not identify any deficiencies during plant walkdowns not already entered into the CAP. Trending was generally effective in monitoring equipment performance. Site management was actively involved in the CAP and focused appropriate attention on significant plant issues. However, the team noted that there have been several recent examples where the resident inspectors identified conditions adverse to quality during plant walkdowns and document reviews that the licensee staff had not previously identified and entered into the CAP. The team identified a performance deficiency in this area related to 10 CFR 50, Appendix B, Criterion V, for failure to follow procedures. In accordance with SPP 3.1, it is the responsibility of all personnel to initiate PERs for conditions adverse to quality. Contrary to this, on June 10, 2009, the licensee failed to initiate a PER for entering into the unplanned LCO 3.6.12 due to the identification of nine ice condenser intermediate deck doors frozen shut. This was the third example in one month where the NRC resident inspectors informed the licensee of a condition adverse to quality for which the licensee did not generate a PER. The performance deficiency was assessed using IMC 0612 Appendix B and was screened as Minor because the condition was identified and corrected immediately as part of the weekly surveillance procedure, and no safety consequences were exceeded as a result of the deficiencies. The licensee initiated PER 174335 to address this issue. This failure to

comply with the requirement to initiate PERs for all conditions adverse to quality constitutes a violation of minor significance that is not subject to enforcement action in accordance with the NRC's Enforcement Policy.

Prioritization and Evaluation of Issues

Based on the review of audits conducted by the licensee and the assessment conducted by the inspection team during the onsite period, the team concluded that the licensee was generally effective in the prioritization and evaluation of identified problems. Problems were generally prioritized and evaluated in accordance with the licensee's CAP procedures as described in the PER significance determination guidance in PIDP-4, "Corrective Action Program Screening and Oversight." Each PER written was assigned a priority level at the PER Screening Committee meeting, and adequate consideration was given to system or component operability and associated plant risk.

The team determined that the station had conducted root cause and apparent cause analyses in compliance with the licensee's CAP procedures, and assigned cause determinations were appropriate considering the significance of the issues being evaluated. A variety of causal-analysis techniques were used depending on the type and complexity of the issue consistent with licensee procedure PIDP-6, "Apparent Cause Analysis." The licensee had performed evaluations that were technically accurate and of sufficient depth. The team further determined that operability, reportability, and degraded or non-conforming condition determinations had been completed consistent with the guidance contained in PIDP-3, "Operability and Reportability Reviews of PERs," and NEDP-22, "Functional Evaluations." However, the team identified two examples of incomplete or inconsistent evaluations:

- PER 147170 initiated for failure of the 'B' Exhaust Gas Treatment System (EGTS) humidity heater due to a breaker opening. This PER was not evaluated for reportability as directed by licensee procedure PIDP-3, "Operability and Reportability Reviews of PERs." The licensee initiated PER 174940 to address this issue. The failure to comply with the requirements of PIDP-3 constitutes a violation of minor significance that is not subject to enforcement action in accordance with NRC's Enforcement Policy.

- PER 168321 initiated for a hole in the skin of intermediate deck door (IDD) 21-6 of the ice condenser. The functional evaluation performed to evaluate this condition asserted that the ice condenser could perform its safety function with a total of 48 IDDs blocked, with no more than six located within any 24 contiguous doors. The team challenged this evaluation, as it was based on judgment, not a calculation, and appeared to be inconsistent with the design basis that up to 15 percent of the intermediate deck flow area can be blocked. 48 doors represent 25 percent of the door area in the intermediate deck. The team reviewed past surveillance testing results and determined the 15 percent flow area blockage for operability has never been challenged. The licensee initiated PER 174736 to address this issue.

Effectiveness of Corrective Actions

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

(3) Findings

i. Failure to Promptly Correct a Condition Adverse to Quality Associated with the 'A' Shutdown Boardroom Chiller

Introduction: A Green, self-revealing, non-cited violation (NCV) of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, was identified for failure to take timely and effective corrective action to maintain the capillary line to the Essential Raw Cooling Water (ERCW) condenser water temperature control valve (1-TCV-67-158) filled with water to ensure operability of the 'A' Shutdown Boardroom chiller. This resulted in the 'A' chiller tripping on high discharge pressure and entry into Technical Specification 3.8.9.

Description: On June 16, 2007, the 'A' SDBR chiller was started and then tripped on high discharge pressure. The licensee determined that 1-TCV-67-158, the ERCW condenser water temperature control valve, did not properly respond to maintain control pressure. The TCV had to be manually adjusted to allow for continued operation. The failure of the valve to modulate was attributed to an insufficiently filled refrigerant sensing line. This was caused by suspected air in-leakage in the capillary line. The licensee initiated PER 126359 to address the issue.

One of the corrective actions developed from PER 126359 was to initiate work orders to test the SDBR chiller TCVs quarterly for loss of capillary fill until implementation of a design change (DCN 52128) to replace the capillary fill line system. Work Order 07-819073-000 was written to perform fill tube level verification quarterly for the 'A' SDBR chiller in October 2007. The licensee failed to place the work order into the work week schedule and it was never performed. Subsequently, on November 30, 2007, the 'A' SDBR chiller tripped on high pressure during chiller startup, resulting in an unplanned entry into Technical Specification 3.8.9, as a result of a loss of a water-solid capillary line to 1-TCV-67-158. The licensee initiated PER 134494, filled the capillary tube and returned the chiller to operable status.

Analysis: The failure to take timely and effective corrective action to maintain the capillary line to 1-TCV-67-158 filled with water was determined to be a performance deficiency. The finding is more than minor because it affects the Mitigating Systems cornerstone objective of ensuring the availability, reliability, and capability of systems that respond to initiating events to prevent undesirable consequences (i.e., core

damage). It is also associated with the cornerstone attribute of equipment availability and reliability. The finding was assessed using the Phase 1 screening worksheet of the At-Power Reactor significance determination process (SDP), IMC 0609, Appendix A, and determined to be of very low safety significance (Green) because it did not result in an actual loss of safety function of a single train for greater than the Technical Specification allowed outage time and was not potentially risk-significant due to external events. The finding had a cross-cutting aspect in the Work Control component of the Human Performance area, Work Activity Coordination, because the licensee failed to properly prioritize the compensatory maintenance activity to support safety system operability of an operable but degraded system (H.3(b)).

Enforcement: 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, states, in part, that "Measures shall be established to assure that conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances are promptly identified and corrected." Contrary to the above, on October 30, 2007, the licensee failed to promptly identify and correct an adverse condition to quality of the loss of solid water fill in the capillary line to 1-TCV-67-158 by failing to perform a fill tube level verification as a corrective action to verify that the capillary line remained filled with water. The control valve subsequently failed to open during chiller startup, and the chiller tripped on high condenser pressure. Because this finding is of very low safety significance and was entered into the CAP as PER 134494, this violation is being treated as an NCV, consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000390/2009006-01, Failure to Promptly Correct a Condition Adverse to Quality Associated with the 'A' Shutdown Boardroom Chiller.

ii. Failure to Follow Plant Procedures for Canceling Preventive Maintenance

Introduction: A Green self-revealing NCV of TS 5.7.1 was identified for the licensee's failure to follow plant procedures which resulted in the failure of the Unit 1 Shield Building Vent Radiation Monitor; an effluent radiation monitor.

Description: Licensee procedure PM 0463W, Replace Pump Motor Assembly for 1-PMP-90-400A, the Unit 1 Shield Building Vent Radiation Monitor Sample Pump, was a preventive maintenance (PM) procedure written to replace the sample pump every 96 weeks. PM 0463W was last performed on April 21, 2005. In anticipation of replacing the sample pump with a new design, the licensee canceled PM 0463W. In December of 2007, the original design sample pump subsequently failed.

Licensee procedure SPP-6.2, Preventive Maintenance, contained instructions for canceling PMs and stated, in part, that SPP-6.2 data sheets shall be used for PM cancellations. The SPP-6.2 data sheets required written technical justification and management approval for the cancellation of PM tasks or PM work orders. The SPP-6.2 PM cancellation process was not used for cancelling PM 0463W. The licensee initiated PER 137022 and determined the failure of the sample pump would have been prevented if PM 0463W had been completed, as originally scheduled.

Analysis: The inspectors determined the licensee's failure to follow site procedures for PM cancellation was a performance deficiency and a finding. The inspectors reviewed Inspection Manual Chapter (IMC) 0612 and determined that the finding is more than minor because the finding is associated with the plant facilities/equipment

and instrumentation attribute (reliability of process radiation monitors) of the radiation safety cornerstone (public radiation safety) and adversely affected the cornerstone objective of ensuring adequate protection of public health and safety from exposure to radioactive materials released into the public domain as a result of routine civilian use. The finding was assessed using the IMC 0609, Appendix D, Public Radiation SDP, using the flowchart for the effluent release program, and because there was no failure to implement the effluent program, the finding was determined to be of very low safety significance (Green). No cross-cutting aspect was assigned to this finding because the direct cause was not considered indicative of current performance.

Enforcement: TS 5.7.1.1.a states, in part, that written procedures shall be established, implemented and maintained covering the activities in the applicable procedures recommended by Regulatory Guide (RG) 1.33, Revision 2, Appendix A. Procedures for the control of radioactivity through stack monitoring of gaseous effluent systems are covered under Part 7.c of RG 1.33. Contrary to this requirement, on December 12, 2006, the licensee did not properly implement procedural requirements for the control of radioactivity of the Unit 1 Shield Building Vent Radiation Monitor by canceling the PM for 1-PMP-90-400A. Because this violation was of very low safety significance and was entered into the corrective action program as PER 137022, this violation is being treated as an NCV consistent with Section VI.A.1 of the NRC Enforcement Policy: NCV 05000390/2009006-02, Failure to Follow Plant Procedures for Canceling Preventive Maintenance.

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

(1) Inspection Scope

The team examined licensee programs for reviewing industry operating experience, reviewed licensee procedure SPP-3.9, “Operating Experience Program,” reviewed the licensee’s operating experience database, and interviewed the OE Coordinator, to assess the effectiveness of how external and internal operating experience data was handled at the plant. In addition, the team selected operating experience documents (e.g., NRC generic communications, 10 CFR Part 21 reports, licensee event reports, vendor notifications, and plant internal operating experience items, etc.), which had been issued since September 1, 2007, to verify whether the licensee had appropriately evaluated each notification for applicability to the Watts Bar plant, and whether issues identified through these reviews were entered into the CAP. Documents reviewed are listed in the Attachment.

(2) Assessment

Based on interviews with the OE coordinator and a review of documentation related to the review of operating experience issues, the team determined that the licensee was generally effective in screening operating experience for applicability to the plant. This was demonstrated by the inspectors finding no OE that wasn’t screened for applicability, and no events occurring which would have been prevented by applying OE lessons learned. Industry OE was evaluated at either the corporate or plant level depending on the source and type of document. Relevant information was then forwarded to the applicable department for further action or informational purposes. OE issues requiring action were entered into the CAP for tracking and closure. In addition, operating experience was included in all apparent cause and root cause

evaluations in accordance with licensee procedure PIDP-5, “Apparent Cause Evaluations,” and PIDP-6, “Root Cause Analysis.”

(3) Findings

No findings of significance were identified.

c. Assessment of Self-Assessments and Audits

(1) Inspection Scope

The team reviewed audit reports and self-assessment reports, including those which focused on problem identification and resolution, to assess the thoroughness and self-criticism of the licensee's audits and self assessments, and to verify that problems identified through those activities were appropriately prioritized and entered into the CAP for resolution in accordance with licensee procedure SPP-1.6, “NPG Self-Assessment and Benchmarking Program.

(2) Assessment

The team determined that the scopes of assessments and audits were adequate. Self-assessments were generally detailed and critical, as evidenced by findings consistent with the team’s independent review. The team verified that PERs were created to document all areas for improvement and findings resulting from the self-assessments, and verified that actions had been completed consistent with those recommendations. Generally, the licensee performed evaluations that were technically accurate. Site trend reports were thorough and a low threshold was established for evaluation of potential trends, as evidenced by the PERs reviewed that were initiated as a result of adverse trends.

(3) Findings

No findings of significance were identified.

d. Assessment of Safety-Conscious Work Environment

(1) Inspection Scope

The team randomly interviewed 24 on-site workers regarding their knowledge of the CAP at Watts Bar and their willingness to write PERs or raise safety concerns. During technical discussions with members of the plant staff, the inspectors conducted interviews to develop a general perspective of the safety-conscious work environment at the site. The interviews were also conducted to determine if any conditions existed that would cause employees to be reluctant to raise safety concerns. The inspectors reviewed the licensee’s Concerns Resolution Program (CRP) and interviewed the CRP coordinator. Additionally, the inspectors reviewed a sample of completed CRP reports to verify that concerns were being properly reviewed and identified deficiencies were being resolved and entered into the CAP when appropriate.

(2) Assessment

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

(3) Findings

No findings of significance were identified.

4OA6 Meetings, Including Exit

On June 26, 2009 and July 28, 2009, the inspectors presented the inspection results to Mr. Greg Boerschig and other members of the site staff. The inspectors confirmed that proprietary information was not provided or examined during the inspection.

ATTACHMENT: SUPPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee personnel

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G. Boerschig, Plant Manager
M. Brandon, Licensing and Industry Affairs Manager
B. Eford-Lee, Chemistry Manager
A. Hooks, Radiation Protection Supervisor
B. Hunt, Operations Superintendent
M. King, Nuclear Assurance
M. McFadden, Site Nuclear Assurance Manager
T. Nahay, Scheduling Manager
M. Pope, Licensing Engineer
A. Scales, Operations Manager
D. Voeller, Maintenance and Modifications Manager
T. Wilkerson, Site Support

NRC

R. Monk, Senior Resident Inspector

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000390/2009006-01	NCV	Failure to Promptly Correct A Condition Adverse to Quality Associated With the 'A' Shutdown Boardroom Chiller (Section 4OA2.a.3.i)
05000390/2009006-02	NCV	Failure to Follow Plant Procedures for Canceling Preventive Maintenance (Section 4OA2.a.3.ii)

Closed

None

Discussed

None

LIST OF DOCUMENTS REVIEWED

Procedures

NEDP-22, Functional Evaluations, Revision 6
OPDP-1, Conduct of Operations
PM 0463W, Replace pump motor assembly for 1-PMP-090-400A
PIDP-1, PER Initiation, Revision 0
PIDP-2, PER Supervisory Review, Revision 0
PIDP-3, Operability and Reportability Reviews of PERs, Revision 0
PIDP-4, Corrective Action Program Screening and Oversight, Revision 2
PIDP-5, Apparent Cause Evaluations, Revision 1
PIDP-6, Root Cause Analysis, Revision 1
PIDP-7, PER Actions, Revision 2
PIDP-8, PER Operating Experience and Generic Reviews, Revision 2
PIDP-9, PER Closure, Revision 0
PIDP-10, PER Effectiveness Reviews, Revision 0
PIDP-11, PER Trending, Revision 0
PIDP-14, CAP Health Monitor, Revision 1
PIDP-19, Performance Improvement Qualification Requirements and Training Program, Revision 0
SPP-3.1, Corrective Action Program, Revision 15
SPP-3.9, Operating Experience Program, Revision 2
SPP-6.1, Work Order Process Initiation, Revision 6
SPP-6.2, Preventive Maintenance, Revision 5
SPP-6.3, Post Maintenance Testing
SPP-8.1, Conduct of Testing
SPP-8.2, Surveillance Test Program
SPP-9.4, 10CFR50.59 Evaluations of Changes, Tests and Experiments
SPP-9.16, Plant, System, Component, and Program Health, Revision 2
TI-119, Maintenance Rule Performance Indicator Monitoring, Trending, Reporting – 10CFR50.65

Problem Evaluation Reports (PERs)

87486	121169	122963	123228
126210	126359	127211	130474
130477	130481	130491	130590
130605	130813	131167	131960
132331	132474	132476	132486
133015	133386	133548	133653
133796	133872	133912	134230
134502	134613	134716	134765
134937	135081	135199	135228
135329	136400	136403	136404
136459	136563	136608	136694
136933	137022	137120	137187
137430	137533	137952	138349
139152	139447	139608	139963
140037	140284	140305	140315
140415	140526	140641	140662
140674	141672	142009	142011
142313	142389	142475	142476

142477	142722	143056	143265
144311	144393	144462	144742
145316	145385	146208	146594
146799	146917	146939	147132
147170	147334	147351	147589
147750	147835	147955	148012
148575	148716	148853	149161
149646	149778	149800	149891
150123	150241	150286	150905
151244	151282	151766	152955
153610	154446	154449	154455
154460	154676	154753	154789
154876	154897	154904	155152
155371	155844	155878	156007
156112	156239	156765	156781
157476	157550	157788	158162
158253	158695	158831	159351
159721	160227	160277	160314
161312	161321	161648	161650
162448	162486	162777	163110
163419	164059	164071	164279
164494	164752	164772	164863
165885	166441	166665	166805
166930	170984	174336	174773
174784			

Work Orders
07-813696-000
07-817617-000
07-821480-000
07-823795-000
08-823034-000
09-810016-000
09-811346-000
09-812254-000
09-812327-000
09-813829-000
09-814165-000

Self-Assessments
Audit SSA0806, TVA Nuclear Assurance & Nuclear Power Group (NPG)-Wide – Systems Engineering Area
Audit SSA0807, Nuclear Assurance & Nuclear Power Group (NPG)-Wide – Maintenance Functional Area
Audit SSA0903, Corrective Action Program Audit
WBN-CEM-08-006, QA/QC 2007 Trend Review
WBN-CEM-F-09-001, Chemistry Knowledge and Skills
WBN-Ops-F-08-001, Status Control/Plant Monitoring
WBN-SIT-08-006, PER Cause Analysis & Closure Quality Snapshot
WBN-SIT-08-010, Snapshot Self-Assessment Report, Self-Assessment Program Quality
WBN-SIT-08-012, Benchmarking Program Quality

WBN-SIT-S-08-022, PER Closure Extension Requests Processed Since SPP-3.1, Rev. 14 Requirement Changes

Other Documents

1-SI-61-6, Weekly Ice Condenser Intermediate Deck Doors Visual Inspection, Revision 5
CAT012.012, Corrective Action Training Program, Revision 2
Nuclear Safety Culture Survey, Watts Bar, February 2009
TVA Watts Bar Nuclear Plant Integrated Trend Review, Nov – Dec 2008

NRC Identified PERs

174332 – Trending PER to show LCO 3.6.12 Action B entry require for ice condenser inlet door open on 4/1/09 while running the containment air return fan
174335 – Trending PER to show LCO 3.6.12 Action B entry required for ice buildup on intermediate deck door on 6/10/09
174545 – The floor drain in the 1B-B mechanical equipment room is backed up and not draining (operator workaround)
174736 – TI-119, Maintenance Rule Performance Indicator Monitoring, Trending, Reporting – 10CFR50.65, ice bed minimum flow area is not supported by a calculation
174773 – PMMM2000 appendix A or B was not completed when PM 0463W was terminated
174797 – There is no clear tracking method for tracking operator workarounds per OPDP-1
174804 – PER 147170 was incorrectly closed without completing procedure revisions
174940 – A reportability evaluation was missed during the performance of 147170