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

May 30, 2003

Tennessee Valley Authority
ATTN: Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT - NRC PROBLEM IDENTIFICATION AND RESOLUTION INSPECTION REPORT NO. 50-390/03-08 AND 50-391/03-08

Dear Mr. Scalice:

On May 2, 2003, the NRC completed an inspection at your Watts Bar 1 & 2 reactor facilities. The enclosed report presents the results of that inspection. The results were discussed with Mr. Larry S. Bryant and other members of your staff during an exit meeting on May 2, 2003.

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 activities, and interviews with personnel.

On the basis of the sample selected for review, the team concluded that problems were properly identified, evaluated, and corrected. There was one green finding identified during this inspection associated with the effectiveness of corrective actions regarding the post maintenance testing program. This finding was determined to be a violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action. However, because of its very low safety significance and because it has been entered into your corrective action program, the NRC is treating this issue as a non-cited violation, in accordance with Section VI.A.1 of the NRC's Enforcement Policy. If you deny this non-cited violation, you should provide a response with the basis for your denial, within 30 days of the date of this inspection report, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001; with copies to the Regional Administrator, Region II; the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001; and the NRC Resident Inspector at the Watts Bar facility.

In addition, some examples of minor problems were identified, including corrective actions that were ineffectively specified, documented, and implemented.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Public Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/

Stephen J. Cahill, Chief
Reactor Projects Branch 6
Division of Reactor Projects

Docket Nos. 50-390, 50-391
License No. NPF-90 and Construction
Permit No. CPPR-92

Enclosure: NRC Inspection Report 50-390/03-08, 50-391/03-08
w/Attachment

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PUBLIC DOCUMENT (circle one): YES NO

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DATE		05/30/2003	5/30/2003	05/30/2003	05/30/2003		
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Docket Nos:	50-390, 50-391
License Nos:	NPF-90 and Construction Permit CPPR-92
Report Nos:	50-390/03-08, 50-391/03-08
Licensee:	Tennessee Valley Authority (TVA)
Facility:	Watts Bar Nuclear Plant, Units 1 and 2
Location:	1260 Nuclear Plant Road Spring City TN 37381
Dates:	April 14, 2003 through May 2, 2003
Inspectors:	S. Freeman, Senior Resident Inspector, Sequoyah, Lead Inspector J. Lenahan, Senior Reactor Inspector J. Reece, Resident Inspector, Watts Bar R. Taylor, Nuclear Safety Intern
Approved by:	Stephen J. Cahill, Chief Reactor Projects Branch 6 Division of Reactor Projects

Enclosure

Summary of Findings

Adams Template:

IR 05000390/2003-008, 05000391/2003-008; Tennessee Valley Authority; on 4/14/2003 - 5/2/2003; Watts Bar, Units 1 & 2; Identification and Resolution of Problems.

The inspection was conducted by a senior resident inspector, a resident inspector, a Region II senior reactor inspector, and a Region II nuclear safety intern. The significance of most findings is indicated by their color (Green, White, Yellow, Red) using IMC 0609, "Significance Determination Process" (SDP). Findings for which the SDP does not apply may be Green or be assigned a severity level after NRC management review. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000. One green finding of very low safety significance was identified during this inspection and was classified as a non-cited violation. The finding was evaluated using the SDP.

Identification and Resolution of Problems

The team determined that the licensee was identifying plant deficiencies at an appropriately low level and effectively entering them into their corrective action program. After review of numerous items and several tracking databases, the team was only able to identify a few deficiencies that had not been previously self-identified. The team also determined that the licensee was generally prioritizing and evaluating issues properly. The team concluded, however, that the licensee's selection of the proper corrective actions to fix problems and the follow-through on those actions could be improved. The team found several performance deficiencies in this area. Except for one finding associated with the failure to correct problems in the post-maintenance testing program, the licensee was generally providing effective corrective actions. On the basis of interviews conducted during this inspection, workers at the site felt free to put safety findings into the corrective action program.

A. Inspector-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Green. The team identified a non-cited violation of 10 CFR 50, Appendix B, Criterion XVI, Corrective Action, for a failure to correct problems in the post maintenance test program that had resulted in a previous non-cited violation. Corrective actions for the previous violation called for lessons learned to be issued so that specific test conditions would be used on work orders. However, in April 2003, the licensee used non-specific conditions, such as, normal operating temperature and pressure, in the work order for testing a diesel generator jacket water temperature switch. The technician subsequently did the test without waiting for the jacket water to fully warm to operating temperature. The team also identified numerous similar examples in other work orders.

  This finding is greater than minor because, if left uncorrected, it would at some time result in more significant occurrences of testing under incorrect conditions. The finding was of very low safety significance because the diesel jacket water testing was later successfully done at the correct conditions and the other work orders did not actually test under incorrect conditions. (Section 4OA2.c)

B. Licensee Identified Violations

None

Report Details

4. OTHER ACTIVITIES (OA)

4OA2 Identification and Resolution of Problems

a. **Effectiveness of Problem Identification**

(1) Inspection Scope

The team reviewed items selected across the seven cornerstones of safety to determine if problems were being properly identified, characterized, and entered into the corrective action program for evaluation and resolution. Specifically, the team reviewed 108 problem evaluation reports (PERs) from approximately 5400 that had been issued during the inspection review period of May, 2001, to April, 2003. The team examined work orders (WOs) and health reports associated with the Ice Condenser System, the Emergency Gas Treatment System (EGTS), and the Component Cooling System (CCS). The team reviewed personnel contamination events and reports associated with radiological protection deficiencies, PERs and safeguards event reports for security deficiencies, as well as PERs and drill critiques for emergency preparedness deficiencies. The team reviewed operating experience screening meeting minutes, selected employee concerns, the trending and reporting of open items system (TROI) database, and the activities management and oversight system (AMOS) database. The team evaluated these items to determine the licensee's threshold for identifying problems. Additionally, the team reviewed these items to ensure that when items listed in other lower-tier processes, such as WOs, personal contamination events and reports, and safeguards event reports, met that threshold, a PER was initiated. Specific items reviewed are listed in the attachment.

The team also reviewed licensee self assessments from 2001 and 2002 as well as nuclear assurance department audits from 2002 and 2003. The effectiveness of these assessments and audits was evaluated by comparing the assessment and audit results against self-revealing and NRC-identified issues.

The team conducted system walkdowns to verify that observed problems were being properly identified. A member of the team also attended the licensee's daily management review committee meeting to observe how site management implemented the initial phase of the corrective action program.

(2) Issues

The team determined that the licensee was effective at identifying problems at an appropriately low level and entering them into the corrective action program. After review of the above mentioned items and databases, the team only was able to identify a few deficiencies that had not been previously self-identified. Assessments and audits were generally of good depth and identified issues similar to those that were self-revealing or raised during previous NRC inspections. Also, during this inspection, there were no instances identified where plant deficiencies did not result in the initiation of a PER.

The team also noted the use of several databases to track action items at the site. In addition to PERs, which represented the highest degree of importance, the WO process was used in the maintenance area, the personal contamination event and report processes were used in the radiological protection area, and the safeguards event report process was used for the security area. Other processes included the plant housekeeping issues list (PHIL), the accreditation maintenance program (AMP), the training tracking items (TTI) and the computer automated laboratory system (CALS) databases. Also included were the AMOS and TROI databases, which the team reviewed. Although these processes provided the potential for individuals to circumvent the identification part of the corrective action process, and did not require the same level of evaluation and correction as the PER process, the team found no evidence of problems in these processes that should be tracked as PERs.

b. **Prioritization and Evaluation of Issues**

(1) Inspection Scope

The team reviewed Procedure SPP-3.1, Corrective Action Program, Revision 4, to determine the various licensee requirements for prioritizing and evaluating issues. The team then reviewed selected PERs to ensure that PER level classifications, operability determinations, reportability determinations, degraded and non-conforming condition determinations, cause evaluations, and selection of proper corrective actions were consistent with the significance of the problem described. The team reviewed a sample of PERs on the Ice Condenser System, the EGTS, and the CCS written between May, 2001, and April, 2003, as well as a sample of the PERs initiated by radiation protection, emergency planning, and security personnel over the same time period. The team also reviewed the follow-up PERs for each violation of NRC requirements since May, 2001, and reviewed the PER associated with the loss of power event of September, 2002. Specific items reviewed are listed in the attachment.

(2) Issues

The team determined that PER level classifications were generally consistent with SPP-3.1 and that licensee self assessments and audits generally confirmed that conclusion. The team further determined that operability, reportability, and degraded or non-condition determinations were also consistent with SPP-3.1. While cause evaluations were also generally consistent with SPP-3.1, the team did note that the apparent cause listed in one PER did not match the actual cause. This case (PER 02-018090-000) documented a CCS Pump C-S problem and attributed the cause to a sub-component failure. However, the WO that evaluated the failure found that there was no problem with the breaker. The cause listed in the PER did not match the actual work done.

The team found several performance deficiencies in the licensee's selection of the proper corrective actions to fix problems and the follow-through on those actions. The team found one case where an action recommended by the self assessment of 2001 was not implemented, one case (PER 02-007538-000), where the wrong corrective action was specified, one case (PER 02-000729-000), where the actual corrective action

was not listed in the PER, and another case (PER 02-012266-000), where the specified corrective action was only partially implemented.

In the September, 2001, self-assessment (WBN-PAG-01-001) of the corrective action program the licensee recommended, as an area for improvement, that Procedure SPP-3.1, Appendix A, be revised to list Procedure NEDP-12, Equipment Failure Trending, as the primary reference document for WO failure trending. This area for improvement was listed in PER 02-014259-000, which the team reviewed. None of the corrective actions in PER 02-014259-000 would resolve the issue. The team concluded, however, that the trending required by SPP-3.1 and NEDP-12 was being performed. The licensee initiated PER 03-008779-000 for corrective action.

PER 02-007538-000 concerned the EGTS and listed three problems related to single failure. One problem concerned the ability of the EGTS to meet the required response time of 20 seconds assuming a single failure of the lead pair of annulus pressure control valves. The PER addressed this problem by referencing bounding calculations that showed the dose consequences of an accident would be well within the limits of 10 CFR Part 100, assuming an initial annulus pressure of 0 psig. The licensee concluded from this that the consequences of not meeting the response time with the failure of the pressure control valves were acceptable. The team concluded that this approach did not consider that the design basis of the EGTS was that annulus pressure always remained negative following an accident. The licensee initiated PER 03-009329-000 as a result of the team's questions and planned to recalculate the dose consequences assuming a single failure of the lead pressure control valves. The calculation would then start with a negative annulus pressure and assume the EGTS flow started at the point where the standby pressure control valves opened. The preliminary conclusion from the licensee was that in this case annulus pressure would remain negative.

PER 02-000729-000 concerned the CCS C heat exchanger. The PER stated that differential pressure testing on the ERCW side of the heat exchanger showed 30% of the flow area to be blocked. The PER further stated that even after cleaning the flow area was still 10% blocked and this was acceptable due to instrument problems. The team learned that the indicated blockage was not due to instrument problems but rather was due to where the differential pressure was measured. The team further noted that a DCN was being developed to correct the problem, but this DCN was not listed in the PER. The licensee issued PER 03-008749-000 to correct the problem.

PER 02-012266-000 was a followup to NCV 50-390/02-03-01 and specified changes to Procedure TI-124, Equipment to Plant Risk Matrix. The PER called for a change to the procedure to add guidance designed to fix the problem from the NCV. The guidance was added to the procedure as an appendix but no step was added to the procedure body to direct users to the appendix. The team noted that, without the step, there was no assurance that users would actually reference the appendix. The licensee issued PER 03-009333-000 to correct the problem.

c. **Effectiveness of Corrective Actions**

(1) Inspection Scope

The team reviewed selected PERs to verify that the specified corrective actions were effective in fixing the problems described. The team reviewed a sample of PERs on the Ice Condenser System, the EGTS, and the CCS written between May, 2001, and April, 2003, as well as a sample of the PERs initiated by radiation protection, emergency planning, and security personnel over the same time period. The team also reviewed the follow-up PERs for each violation of NRC requirements since May, 2001, and reviewed the PER associated with the loss of power event of September, 2002. Specific items reviewed are listed in the attachment.

(2) Issues

(i) General

Based on a review of numerous corrective action plans and their implementation, the team found, for the most part, that the licensee's corrective actions were effective. However, the team did have one finding that was of a more than minor nature.

(ii) Finding

Introduction: A green, non-cited violation (NCV) was identified for failure to correct problems in the post maintenance test (PMT) program that resulted in a previous NCV.

Description: On March 22, 2002, the licensee initiated PER 02-004360-000 to perform corrective actions in response to NCV 50-390/02-02-02, Failure to Adequately Perform PMT. Corrective action 3 of that PER called for a "Lessons Learned" document to be issued to the licensee staff so that specific conditions would be used for PMTs. However, on April 1, 2003, the resident inspectors observed an inadequate PMT on an EDG jacket water temperature switch performed on WO 03-006161-000. The test conditions specified by the PMT required the EDG to be operating at 900 rpm with the jacket water system at normal operating pressure and temperature. The inspectors observed the licensee start the EDG, increase speed up to 900 rpm, and, without waiting for the jacket water to warm up, visually check the temperature switch for any leaks. Neither the maintenance technician nor the SRO knew what specific pressure and temperature conditions were considered normal. The SRO proceeded to check the appropriate EDG procedures to determine normal conditions, and the PMT was subsequently performed at the correct conditions.

As part of this inspection, the team reviewed a larger sample of WO samples initiated since January 1, 2003, and found numerous examples of WOs planned, ready for test, and completed with non-specific system conditions for PMTs. Based on these examples in conjunction with the PMT on the EDG jacket water, the team considered the corrective action for the original problem was ineffective.

Analysis: Because the resident inspectors observed the PMT deficiency on the EDG, this finding is directly related to the mitigating systems cornerstone. However, because this finding involves the effectiveness of corrective actions, it could be related to the initiating events and containment barrier cornerstones depending on the systems, structures or components involved in the PMT process. This finding was more than minor because if left uncorrected it would at some time result in more significant occurrences of PMTs at incorrect system conditions. However, it was of very low significance (green) because it did not represent a design or qualification deficiency, result in an actual loss of a safety system, impact the TS allowed outage time, or impact a non-TS risk significant safety system.

Enforcement: 10 CFR 50, Appendix B, Criterion XVI requires in part that measures 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, the corrective actions taken by the licensee to ensure that required system conditions be specified for PMTs did not effectively correct the previously identified problems in the PMT program. Therefore, the team considered this to be a violation of 10 CFR 50, Appendix B, Criterion XVI. Since this violation is of very low significance and the licensee has entered it into the corrective action program as PER 03-006204-000, this violation is being treated as a NCV in accordance with Section VI.A of the NRC Enforcement Policy: NCV 50-390/2003-08-01, Inadequate corrective action for a previous NCV.

d. **Assessment of Safety-Conscious Work Environment**

(1) Inspection Scope

The team reviewed numerous audits, assessments, PERs, WOs, and other corrective action documents and held discussions with numerous personnel at various levels in the organization to assess if a work environment existed that was conducive to the identification of nuclear safety issues. The team also examined the licensee's Employee Concerns Program files to determine if issues affecting nuclear safety were being appropriately addressed.

(2) Issues and Findings

The team determined that workers at the site felt free to raise safety concerns. Personnel stated that they would not hesitate to raise nuclear safety issues to their management. They also understood and believed that they could raise issues without fear of retaliation by their management. The workers also stated that use of direct supervision was their preferred approach to raising issues, but there would be no hesitation to use other mechanisms such as the concerns resolution program or the NRC if the desired results were not achieved through normal reporting chains.

4OA6 Management Meetings

The team presented the inspection results to Mr. L. S. Bryant and other members of licensee management at the conclusion of the inspection on May 2, 2003. The licensee acknowledged the findings presented.

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

SUPPLEMENTAL INFORMATION
PARTIAL LIST OF PERSONS CONTACTED

Licensee personnel

M. Brickey, Design Engineering Manager
J. Bushnell, Licensing Engineer
D. Boone, Radiological Control Manager
L. Bryant, Plant Manager
J. Cox, Training Manager
J. Kammeyer, Engineering Manager
D. Kulisek, Assistant Plant Manager
J. Laughlin, Engineering and Support Manager
D. Malone, Maintenance Specialist
P. Pace, Licensing and Industry Affairs Manager
K. Parker, Maintenance and Mods Manager
L. Parscale, Site Support Manager
R. Stockton, Licensing Engineer
G. Vickery, OPS Support Manager

NRC personnel

V. McCree, Deputy Director, Division of Reactor Projects

ITEMS OPENED AND CLOSED

Opened and Closed

50-390/03-08-01	NCV	Inadequate corrective action for a previous NCV (Section 4OA2.c).

Attachment

PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures

SPP-3.1	Corrective Action Program, Revision 2
SPP-6.1	Work Order Process Initiation, Revision 3
SPP-9.8	Drawing Deviations (DD) Program, Revision 1
SPP-6.6	Maintenance Rule Performance Indicator Monitoring, Trending and Reporting - 10CFR50.65, Revision 6
NEDP-12	Equipment Failure Trending, Revision 2
MMDP-1	Maintenance Management System, Revision 5
OPDP-8	Limiting Conditions for Operation Tracking, Revision 1
0-SI-65-6-A	Emergency Gas Treatment System Train A 10-Hour Operation, Revision 5
SOI-65.02	Emergency Gas Treatment System System Operating Instruction, Revision 15
TI-124	Equipment to Plant Risk Matrix, Revision 6
TVAN Business Practice (BP)-250	Corrective Action Program Handbook
TVAN Employment Policy Number 16	Employee Discipline

Concerns Resolution Staff Instruction 1, Revision 6

Audits, Self-Assessments, Related PERs and Nuclear Safety Review Board Meeting Minutes

WBN-SIT-03-001	TVAN Corrective Action Program, completed 10/28 - 12/4-01
WBN-SA-PAG-01-001	Corrective Action Program, dated April 23, 2001
WBN-ENG-02-001	Engineering & Site Support Effectiveness Assessment for 2001 Self Assessments, completed 10/28 - 11/26/02
NA-WB-01-006	Corrective Action Program, dated 9/26/01
NA-CH-02-002	Corrective Action Program Follow-up Assessment, dated August 2, 2002
NA-CH-03-001	Corrective Action Program Assessment, January - February, 2003

Operating Experience Evaluations

Licensee's evaluation for NRC Information Notice 2002-14, Ensuring Capability to Evacuate Individuals, Including Members of the Public, from the Owner Controlled Area (PER 02-001992-000).

Licensee's evaluation for NRC Information Notice 2002-22, Degraded Bearing Surfaces in GE/EMD Emergency Diesel Generators. (TVAN Engineering Bulletin, Subject NRC Information Notice 2002-22)

Security PERs and SGERs

PER 01-015464-000	Drills with Live Weapons
PER 01-016296-000	Static Post not Meeting Expectations
PER 01-015796-000	Weapons Bag Seals
PER 01-012555-000	Security Equipment Failure not Logged
PER 01-014577-000	Improper Notification
PER 01-012147-000	Visitor at A-100
PER 01-012671-000	Vodka
PER 02-017268-000	Code White
PER 02-012384-000	Tailgating
PER 02-016993-000	Code White
PER 02-014720-000	IG, Training
PER 02-010820-000	Unauthorized Person inside OCA
PER 02-011081-000	Officers Questioned About Equipment
PER 02-005420-000	Hoax Survey
PER 02-000902-000	Vehicle Passing Check Point without Paperwork
PER 02-011004-000	NRC ID'd 4 Individuals Inside PA without Badges Visible
PER 02-012606-000	Sample Badge
PER 02-011599-000	Human Performance
PER 01-008004-000	Lost Time
PER 01-017109-000	Issues (Safety and/or Quality)
PER 01-010267-000	Security Zone 11B Failures
PER 01-012593-000	Security Zone 26B Failures
PER 02-011405-000	Mechanical Penetrations A1867AM and A1868AM
PER 01-016719-000	Oil Found in CCS Seal Leakoff Tank

Corrective Action Program PERs and Trend Reports

01-013065-000	Revision 3 to SPP-3.1 not Processed in Timely Manner to Address GL 91-18
02-000374-000	MRC not Meeting Three Day Time Frame for MRC Review of New PERs
02-017700-000	Closure of PER 02-15408 with Work Order which did not Cross Reference Back to PER
02-017940-000	Inadequate Program for Trend Information Associated with Lower Tier Problems
03-003838-000	Adequacy of Identification and Tracking of PER Interim Actions by the MRC
03-005526-000	Ineffective Corrective Action to Resolve Timeliness Issues Associated with Corrective Actions
03-005529-000	Inadequate Documentation for PER Extension Requests
02-000347-000	Corporate PER With TVA Response to INPO SOER 02-004 Concerning Reactor Head Degradation at Davis-Besse

Ice Condenser System PERS and WOs

02-008500-000	1B Glycol Pump Breaker Failed Instantaneous Test
02-008594-000	1C Glycol Pump Breaker Failed Instantaneous Test
02-005828-000	Problems with Glycol Chiller J
03-005783-000	Scheduling Problems with AHU 17B
03-005592-000	Glycol Chiller D Exceeded Maximum Leakage Rate
02-016189-000	Glycol Chiller D Tripped
02-008798-000	Preventive Maintenance on Glycol Chiller Not Performed as Scheduled
02-000033-000	Unable to Work on Glycol Pump B Circuit Breaker Due Incorrect Reference in WO
01-008896-000	Multiple Problems with Glycol Pumps
01-012017-000	Ice Condenser Doors Opened and Ice Bed Temperature Alarms Occurred
02-002742-000	Found Damaged Ice Baskets during RFO4 (WO 01-008502)
02-004245-000	Damage Found in Ice Condensers during RFO4 (WOs 02-003756 & 02-003865)
02-016306-000	High Suction and Discharge Pressure Gauge Readings on Glycol Cooled Floor Pumps
02-002414-000	Ice condenser lower inlet doors opened in Mode 5
02-004245-000	Documentation of additional damage found in ice condenser
02-004235-000	Closed PER reopened to change description
02-004868-000	1-SI-61-2 data package had step 7.0[4] marked N/A
02-013338-000	Review of SQN PER determined SOI-61.01 was inadequate for venting system 61 headers
02-015402-000	Incorrect data entry for 1-SI-0-2A-01 regarding ice bed temperature
02-018394-000	Ice condenser access door open annunciator found in alarm
03-005738-000	WO scheduled late with resulting bearing failure on ice condenser AHU 17B
02-001753-000	Glycol spill from manipulation of a Unit 1/Unit 2 boundary valve.

List of System 61 Non-SI work orders closed since 5/1/01 or still open
List of canceled PERs since 5/1/01

Emergency Gas Treatment System PERs and WOs

03-005715-000	Unplanned Entry Into LCO 3.6.15 due to Low Annulus Delta P
03-000771-000	Unit May be in LCO 3.6.15 Without Alarm
00-002190-000	Several EGTS Problems
02-004380-000	Unplanned Entry Into LCO 3.6.15 for Annulus Vacuum not Within Limits
02-018426-000	Annulus Vacuum Dropped Below LCO Limit During 10 Hr EGTS Run
02-005060-000	Annulus Vacuum Fan 1A Belts Broke
02-007297-000	Evaluation of Need for Hold Order, PMT, and LCO when Calibrating 0-TS-65-72D
02-003940-000	Leakage Problems During Surveillance Testing
02-000536-000	Disabled Annunciator Window
01-013230-000	Unplanned LCO Entry due to Insufficient Filter Bank Differential Pressure
01-014194-000	Operations Procedures do not Adequately Address Proper Restoration of EGTS Controller Following Loss of Power
01-014451-000	Problems Following Reactor Trip on September 4, 2001

02-007538-000	Single Failure Problems in EGTS Logic
03-009329-000	Corrective Action 2 for PER 02-007538-000 Does not Fully Resolve Condition 2
01-016131-000	Inadequate PM on 1-FCO-65-27-B
02-016760-000	Failure of 2-RM-90-400 (for system 065)
03-001734-000	Unexpected LCO entry for 2 minutes for low annulus vacuum

List of System 65 Non-SI work orders closed since 5/1/01 or still open
List of canceled PERs since 5/1/01

Component Cooling System PERs and WOs

02-014871-000	Disassemble and Repair as Necessary 0-CKV-70-504, CCS C-S Discharge Check Valve
02-013447-000	RHR Heat Exchanger Return Flow Low Alarm Periodically Alarming
02-017959-000	CCS Pump C-S Failed PMT After Replacement of Seals
02-000105-000	CCS Unit 1A Train Copper and Iron Concentration Indicate an Increasing Trend
03-001280-000	CCS Pump 2A-A Breaker Spring Charging Motor Failed to Charge
03-000716-000	CCS Pump 2A-A Failed to Start
01-016217-000	CCS Operating Mode Calculations
02-000970-000	Relief Valve Sizing Calculation did not Adequately Consider Increased SFP Heat Load During Rerack
02-005628-000	Unplanned LCO Entry for Inoperable Remote Shutdown Level Indicator
02-008672-000	Problems with Calibration of Surge Tank Level Indicator
02-018090-000	CCS Pump C-S Normal Feeder Breaker did not Charge
01-008677-000	Discrepancy Between Installed Support and Piping Analysis
02-011431-000	Terminated performance of 0-SI-67-914-B which would have challenged B train ERCW pressure control from isolation of CCS heat exchanger
02-003730-000	“C” CCS heat exchanger placed in service with relief valve tailpipe not installed which affected seismic analysis
01-013567-000	1-FOR-70-5 procedure enhance to include direction for an OR entry when placing the ‘B’ TBBP in pull-to-lock
01-011818-000	CCS heat exchanger C ERCW control valve had slow stroke time
01-008460-000	0-PI-OPS-22.0 did not include controllers for CCS surge tank makeup or CCS surge tank vent
03-008749-000	Implementation of DCN 51295
02-000729-000	CCS HX Fouling
00-000808-000	CCS HX C Performance Test
01-008595-000	HX Tube Plugging Margins

List of System 70 Non-SI work orders closed since 5/1/01 or still open
List of canceled PERs since 5/1/01

System Status Health Reports

System 61 Third Quarter 2001
System 61 Fourth Quarter 2001
System 61 First Quarter 2002
System 61 Second Quarter 2002
System 61 Third Quarter 2002
System 61 Fourth Quarter 2002
System 65 Third Quarter 2001
System 65 Fourth Quarter 2001
System 65 First Quarter 2002
System 65 Second Quarter 2002
System 65 Third Quarter 2002
System 65 Fourth Quarter 2002
System 65 First Quarter 2003
System 70 Third Quarter 2001
System 70 Fourth Quarter 2001
System 70 First Quarter 2002
System 70 Second Quarter 2002
System 70 Third Quarter 2002
System 70 Fourth Quarter 2002

Watts Bar Hydro Station and Loss of Power Event Documents (PER 02-013616-000)

PER 02-013616-000	Loss of Offsite Power and Notice of Unusual Event
Event Critique	
Final Summary Report of the 27 September 2002 Watts Bar Hydro Plant Fire Event	
Transmission System Study - Watts Bar Nuclear Plant - Temporary Operating Instructions, Revision 2	
LER 50-390/2002-005-00	Loss of Offsite Power Due to Fire at Watts Bar Hydro Station
45W501	Wiring Diagrams, Development Single Line, Revision 31
1-15E500-1	Key Diagram, Station Aux Power System, Revision 28
1-15E500-2	Key Diagram, Station Aux Power System, Revision 24
1-75W500	Wiring Diagram Development, Single Line, Revision 15
SK-W0422	Watts Bar HP April & Summer 2003 Configurations Specifications Diagram, Revision 1
SK-W0423	Watts Bar HP - Phase 4 Minimum Four Bus Configuration Specification Diagram, Revision 1

Non-Cited Violations (NCV) Associated PERs

01-012550-000	Wrong Valve Closed During Performance of Surveillance Test
02-003922-000	Oil Drums Improperly Stored Near Thermo-lag Protected Conduit
02-012266-000	Schedule Scrub Failed to Remove125V Vital Charger from Schedule
02-003368-000	Exceeded Hours of Work w/o Approval
02-003763-000	Individual Entered High Rad Area with Electronic Dosimeter In Pause Mode
01-014825-000	Sense Line Clogged During Performance of Performance Test
02-007342-000	Open Fire Doors in ERCW Strainer Rooms

02-002593-000	Green NCV 50-390/02-02-04 issued for isolation of suction supply to RHR pump in operation during performance of 1-SI-63-907
02-016996-000	Green NCV 50-390/02-04-01 issued for a grading error on a written exam associated with the Licensed Operator Requalification program.
02-003508-000	Trend of exceeding overtime limits during U1C4RFO exceeds management's expectations
02-004360-000	PMT for WO 01-003940-000 not completed as required
02-012505-000	NRC identified problems with PMTs on SDBR chiller B
02-014424-000	NRC identified problem with no PMT performed for minor maintenance on 1A DG switchgear cabinet
02-014499-000	Licensee initiates PER for potential trend regarding incomplete/inadequate PMT
03-000699-000	Evaluate an enhancement to the PMT process
03-011106-000	NRC identified problem with failure to provided evidence of completion for corrective action #3 associated with PER 02-004360-000 regarding a Green NCV issued for an inadequate PMT
03-006204-000	MNT/OPS personnel not clear on PMT requirements for 1A DG

List of Maintenance Rule Program Functional Failures (Cause Determination Reports) 5/121/01 to 12/31/2002

Others

PER 03-003747-000	Programmatic Problem with Documenting Corrosion Issues
PER 03-005254-000	Inadequate Instructions for Clearance for EDG Air Tank Valves
PER 02-017936-000	Failure to Ship Refrigerent Sample to Test Laboratory
PER 02-013111-000	Inadequate Instructions in Surveillance Instruction 1-SI-63-10-A
PER 02-011702-000	Increase in Number of Significant Events
PER 03-006853-000	NRC identified problem with failure to initiate PER and failure to follow management expectations

List of PERs with revisions since 5/1/01 (4 listings: Revisions 1, 2, 3 & 4)
List of Radcon PERs
List of personnel contamination events
List of WOs in PMT status
List of priority 3 WOs
List of priority 5 WOs
List of TROI open items since May 1, 2001
List of TROI closed items since May 1, 2001
DCN 51075 Install Channel Side ERCW Pressure Taps
WBN - 2002 Offyear Exercise Critique
WBN - 2001 Intergrated Training Drill Critique
WBN - 2001 Graded Exercise Critique
WBN - 2002 Tritium Exercise Critique
WBN - Green Team Drill Report
WBN - 2003 Green Team Training Drill Critique
AMOS Item # 20033001-8 Emergency Drill Team Tracking
AMOS Item # 20020001-14 Team Dispatch
AMOS Item # 20020001-19 Team Tracking Boards