



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

May 22, 2015

Mr. Michael D. Skaggs
Senior Vice President
Nuclear Generation Development and Construction
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

**SUBJECT: WATTS BAR NUCLEAR PLANT UNIT 2 CONSTRUCTION - NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT
05000391/2015613**

Dear Mr. Skaggs:

On April 10, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection of construction activities at your Watts Bar Unit 2 reactor facility. The enclosed inspection report documents the inspection results, which were discussed on April 10, 2015, with Mr. Zeringue and other members of your staff.

This problem identification and resolution (PI&R) inspection examined activities conducted under your Unit 2 construction permit as they relate to identification and resolution of problems, compliance with the Commission's rules and regulations, and with the conditions of your construction permit. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

No findings were identified during this inspection.

In accordance with 10 *Code of Federal Regulations* (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).

M. Skaggs

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Should you have questions concerning this letter, please contact us.

Sincerely,

/RA/

Robert C. Haag, Chief
Construction Projects Branch 3
Division of Construction Projects

Docket No. 50-391
Construction Permit No: CPPR-92

Enclosure: Inspection Report 05000391/2015613 w/Attachment

cc w/encl: (See next page)

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cc w/encl: (See next page)

* Previous Concurrence

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NAME	C. Taylor	J. Baptist	C. Jones	N. Staples	E. Patterson	J. Fuller	
DATE	05/18/2015	05/18/2015	05/18/2015	05/18/2015	05/18/2015	05/20/2015	
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M. Skaggs

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cc w/encl:

Mr. Gordon P. Arent
Director, Licensing
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

Mr. O. J. Zeringue, General Manager
Engineering and Construction
WBN Unit Two
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

Mr. Paul Simmons, Vice President
WBN Unit Two Project
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City Tennessee 37381

Mr. James O'Dell, Manager
Licensing and Industry Affairs
WBN Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

Mr. Joseph P. Grimes
Chief Nuclear Officer
and Executive Vice President
Tennessee Valley Authority
1101 Market Place
3R Lookout Place
Chattanooga, Tennessee 37402-2801

County Executive
375 Church Street
Suite 215
Dayton, Tennessee 37321

Mr. Sean Connors
Plant Manager, WBN Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

Mr. R. R. Baron, Senior Manager
Nuclear Construction Quality Assurance
WBN Unit Two
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

Mr. Joseph Shea, Vice President
Nuclear Licensing
Tennessee Valley Authority
1101 Market Street
3R Lookout Place
Chattanooga, TN 37402-2801

Mr. E. J. Vigluicci
Assistant General Counsel
Tennessee Valley Authority
400 West Summit Hill Drive
6A West Tower
Knoxville, Tennessee 37402

Mr. Lawrence E. Nanney, Director
Tennessee Department of Environmental
Health & Conservation
Division of Radiological Health
3rd Floor, L&C Annex
401 Church Street
Nashville, TN 37243-1532

Mr. Kevin Walsh
Site Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
P.O. Box 2000
Spring City, Tennessee 37381

County Mayor
P.O. Box 156
Decatur, Tennessee 37322

Ms. Ann P. Harris
Public
341 Swing Loop
Rockwood, TN 37854

M. Skaggs

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cc email distribution w/encl:
Greg Scott
Tennessee Valley Authority
Electronic Mail Distribution

Watts Bar 2 Licensing
Tennessee Valley Authority
Electronic Mail Distribution

Letter to Michael D. Skaggs from Robert C. Haag dated May 22, 2015.

WATTS BAR NUCLEAR PLANT UNIT 2 CONSTRUCTION - NRC PROBLEM
IDENTIFICATION AND RESOLUTION INSPECTION REPORT 05000391/2015613

Distribution w/encl:

Region II Regional Coordinator, OEDO (J. Cassidy)

J. Quichocho, NRR

J. Poole, NRR

J. Dion, NRR

A. Minarik, NRR

L. Douglas, RII EICS

M. King, RII DRP

J. Nadel RII WBN Unit 1 SRI

OE Mail (email address if applicable)

ConE_Resource@nrc.gov

PUBLIC

U.S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No: 50-391

Construction Permit No: CPPR-92

Report No.: 05000391/2015613

Applicant: Tennessee Valley Authority (TVA)

Facility: Watts Bar Nuclear Plant, Unit 2

Location: 1260 Nuclear Plant Rd
Spring City TN 37381

Inspection Dates: April 06 through April 10, 2015

Inspectors: C. Taylor, (Lead) Senior Construction Project Inspector
J. Baptist, Senior Construction Project Inspector
C. Jones, Senior Construction Inspector
N. Staples, Senior Project Inspector
E. Patterson, Construction Resident Inspector
J. Fuller, Senior Construction Resident Inspector

Approved By: Robert C. Haag, Chief
Construction Projects Branch 3
Division of Construction Projects

Enclosure

EXECUTIVE SUMMARY
Watts Bar Nuclear Plant, Unit 2
NRC Inspection Report 05000391/2015613

This inspection assessed implementation of the corrective action program (CAP) for the Watts Bar Unit 2 construction completion project and ongoing CAP transitional activities to merge Unit 2 into the Watts Bar site wide CAP. The inspection program for Unit 2 construction activities is described in NRC Inspection Manual Chapter 2517. Information regarding the Watts Bar Unit 2 Construction Project and NRC inspections can be found at <http://www.nrc.gov/info-finder/reactor/wb/watts-bar/construction-insp-info.html>.

Inspection Results

- In general, the threshold for initiating problem evaluation reports (PERs) was low and PERs were appropriately categorized. For the majority of PERs reviewed, the inspectors determined that problem evaluations were effective in identifying corrective actions that addressed the problem. [Section Q.1.1]
- The inspectors determined that adequate measures have been established to evaluate and incorporate applicable operating experience into the CAP. [Section Q.1.1]
- The inspectors determined that TVA and Bechtel have established an acceptable program and environment for allowing employees to identify quality or safety-related concerns. [Section Q.1.1]
- The inspectors determined that TVA and Bechtel have established an acceptable transition process that will integrate the Unit 2 CAP into the CAP that Unit 1 is under. [Section Q.1.1]

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REPORT DETAILS

I. QUALITY ASSURANCE PROGRAM

Q.1 Quality Assurance Program Implementation

Q.1.1 Implementation of Corrective Action Program During Construction (IP 35007)

a. Inspection Scope

The inspectors assessed the adequacy of the Tennessee Valley Authority (TVA) and Bechtel program for identification, evaluation, and corrective action of conditions adverse to quality (CAQs) during the period since the previous problem identification and resolution inspection in April 2014. This was accomplished by reviewing selected problem evaluation reports (PERs), verifying corrective actions were implemented, and attending meetings where PERs were screened for significance to determine whether the licensee was identifying, accurately characterizing, and entering problems into the Corrective Action Program (CAP) at an appropriate threshold.

The inspectors reviewed a sample of PERs and Service Requests (SRs) selected from the applicant's CAP for Watts Bar Unit 2. The sample included problems addressed by a diverse selection of plant departments and issues classified under all of the significance levels. The sample also covered a diverse selection of sources, including problems identified in audits and assessments, nonconforming results from inspections and tests, findings from NRC inspections, concerns from anonymous sources, and concerns identified as adverse trends. Most PERs were reviewed after corrective actions had been implemented; however, some were reviewed after the corrective action plan was developed but prior to implementation.

The inspectors also reviewed the applicant's alternate issue tracking systems that address issues that were not classified as CAQs. This review targeted verification of appropriate characterization and closure of issues managed outside the CAP. The alternative issue tracking systems that were sampled included Test Deficiency Notices (TDNs), Quality Control (QC) Rejects, and Over/Short/Damaged/and Discrepant (OSD&D) receipt inspection items. These systems were defined as corrective Work Processes approved to track/implement correction, according to TVA's CAP procedure (NC-PP-3, Revision 16).

The inspectors reviewed the current CAP procedures to assess the adequacy of the CAP instructions for the identification, evaluation, and corrective action of CAQs. The inspectors assessed the process utilized to screen PERs for applicability to Unit 1. It was identified that designated staff from Unit 1 routinely reviewed all PERs to determine applicability of PERs and risk significance. For PERs that were determined to have impact on Unit 1, a separate PER was created under the CAP program for Unit 1 and all associated procedures such as root cause guidance and trend guidance would be utilized to resolve the issue. The inspectors' review evaluated the applicant's consideration for extent of condition, generic implications, common cause and previous occurrences (trending), including the identification of root and contributing causes along with actions to prevent recurrence for significant CAQs.

The inspectors reviewed the plans to transition the Unit 2 CAP into the TVA Nuclear Power Group (NPG) CAP that is currently in place for Watts Bar Unit 1. The inspectors interviewed staff from both Unit 1 and Unit 2 who were directly involved in developing these transition plans. The inspectors also reviewed relevant procedures, discussed staffing levels, and required training to fully support a dual-unit Watts Bar CAP.

The inspectors reviewed TVA's and the major contractor's (Bechtel) programs for resolving employee concerns. The inspectors interviewed TVA's and Bechtel's employee concerns representatives, reviewed a sample of PERs related to employee concerns, and PERs initiated as a result of employee concerns. The inspectors also reviewed several anonymous PERs to determine if they had been adequately captured and addressed. The inspectors reviewed and evaluated the adequacy of the programs, which provide employees with an alternate method to identify quality or safety-related concerns. The inspectors also reviewed surveys and assessments of the employee concerns programs.

The inspectors reviewed a sample of the applicant's management and quality assessments, audits, and trend reports to verify adverse results were properly evaluated and dispositioned within the CAP. The inspectors reviewed the revision history for CAP implementing procedures and assessed the integration of industry operating experience into the corrective action process. Direct observations by inspectors included meetings of the Project Review Committee (PRC) and the Construction Completion Management Review Committee (CCMRC) as they screened newly reported problems and reviewed dispositions for selected issues.

Specific PERs and other documents reviewed are listed in the attachment.

b. Observations and Findings

No findings were identified.

The inspectors made the following observations as a result of their inspections:

(1) Effectiveness of Identifying, Evaluating, and Correcting Problems

Identifying Problems

The inspectors determined that, for the most part, the applicant was effective in identifying problems and entering them into the CAP. PERs normally provided complete and accurate characterization of the subject issues. Employees were encouraged by management to initiate PERs. The inspectors' independent review did not identify any significant adverse conditions which were not in the CAP for resolution. The use of trending at the site was comprehensive and effective in identifying areas for improvement.

Evaluating Problems

Through the attendance of CAP meetings, including the PRC and CCMRC, the inspectors determined that the applicant adequately prioritized issues that were entered into the CAP. Service requests that were discussed during the meetings were appropriately dispositioned. The inspectors determined that the threshold for closing

items as SRs, closing items to a WO, and creating a PER when necessary were determined to be adequate. The inspectors observed a few PERs where documentation was lacking, however, appropriate corrective actions were being taken for each example.

Correcting Problems

Based on a review of numerous PER corrective actions and their implementation, the team found, for the most part, that the applicant's corrective actions developed and implemented for problems were commensurate with the safety significance of the issues. The inspectors did not identify any technical issues associated with delays the inspectors noted for some procedure changes and revisions.

(2) Use of Operating Experience

The inspectors determined that the applicant's measures used to identify, evaluate and incorporate applicable industry and operating experience (I&OE) information into the CAP contained processes for including vendor recommendations and internally generated lessons learned. The I&OE information was collected, evaluated, and communicated to the affected internal stakeholders as specified in TVA and Bechtel procedures. The inspectors determined that appropriate corrective actions were developed and implemented for the sample of I&OE problem evaluation reports reviewed for the Watts Bar Unit 2 Construction Completion Project.

(3) Safety Conscious Work Environment (SCWE)

The inspectors reviewed several anonymous PERs and PERs that either referred to the employee concerns program or PERs generated as a result of employee concerns. The inspectors also interviewed senior employee concerns coordinators and construction workers out in the field for both TVA and Bechtel. The inspectors determined that TVA's and Bechtel's employee concern programs were adequate. The senior employee concerns coordinators expressed knowledge of the employee concerns program and the ability to raise safety related concerns through various available means. The inspectors noted that the construction workers that were interviewed were also knowledgeable of the employee concerns program and were comfortable raising nuclear safety concerns. The employee concerns program staff provide several training sessions. They provide employee concerns program information in newsletters, and they also walk around the site frequently, talk daily to staff, and attend several meetings to ensure that staff is aware of the employee concerns programs and know how to raise concerns if necessary.

(4) Corrective Action Program Performance Insights

The sample of audits, assessments, and surveillances reviewed by the inspectors confirmed that management and quality personnel actively conducted observations and effectiveness reviews of the CAP. These program assessments concluded that overall, the CAP was effectively implemented. The applicant continues to track and trend issues, run summary reports on the trend data, and present results to management in several meetings, such as the site status meeting, CCMRC, etc. The inspectors reviewed the implementation of trending for adverse conditions identified in PERs, Service Requests, and Test Deficiency Notices. The review was performed to determine whether reported

information provided an assessment of the health of the Corrective Action Program, and if the information compared the program performance against the program metrics. The inspectors determined that the trends showed that CAQs were being identified, and were being evaluated and dispositioned in a timely manner. No excessive backlogs or adverse trends were depicted.

(5) Corrective Action Program Effectiveness

The inspectors did observe where some PERs were lacking details which required additional questioning by the inspectors to fully understand how the PERs were dispositioned. The inspectors determined that the applicant has maintained implementation of the CAP at an effective level since the last NRC Problem Identification and Resolution inspection (April 2014).

(6) Corrective Action Program Transition Plans

Based on interviews and procedure reviews, the inspectors determined the transition of the Unit 2 CAP to the NPG CAP and associated closure activities are expected to start when hot functional testing is finished and will be completed before Unit 2 fuel load. In preparation for the transition, the licensee plans to evaluate all open Unit 2 CAP items for closure or initiation of a new item within the NPG CAP. This evaluation will include all open SRs and PERs, Watts Bar Integrated Task and Equipment List (WITEL) open items, and corrective work processes other than PERs for some non-significant CAQs. These processes would include WOs, FCRs, QC rejects, and TDNs. The applicant stated as Unit 2 testing activities increase, there will be a greater potential for activities to impact both units. If needed, a joint Corrective Action Review Board (CARB)/CCMRC may be established.

c. Conclusions

As documented above, the inspectors determined that implementation of the CAP for the Watts Bar Unit 2 construction completion project was generally adequate. The threshold for initiating PERs was appropriate, PERs were categorized in accordance with their significance, and problem evaluations were effective in identifying appropriate corrective actions.

In regards to maintaining a Safety Conscious Work Environment, the inspectors determined that TVA and Bechtel had established an acceptable program and environment for allowing employees to identify quality or safety-related concerns.

IV. OTHER ACTIVITIES

OA.1.1 Status of PERs Issued in Response to Previous NRC Unresolved Items and Violations

a. Inspection Scope

The inspectors evaluated corrective action PERs issued in response to previously identified NRC unresolved items and violations to determine whether the adverse condition identified by the inspectors had been addressed, evaluated, and dispositioned

commensurate with their safety significance. Responses to the following regulatory issues were reviewed:

Unresolved Issue (URI) 87-19-06, "Review of Cable Separation of Non-Safety Related Cables in Close Proximity to Safety Related Cables in Electrical Panels."

Non Cited Violation (NCV) 2014605-01, "Failure to Accomplish Installation in Accordance with Instructions, Procedures, or Drawings."

NCV 2014608-02, "Inadequate Storage of Safety-Related Equipment."

NCV 2014608-03, "Failure to Prescribe Accurate Instructions in WO 115834758."

In each case, the inspectors determined the PERs for the NRC issues had been closed and archived; however, corrective actions which are contained in WOs have not been implemented yet. The inspectors assessed whether the applicant had followed their CAP procedures for closing out PERs when the corrective action has not been completed.

b. Observations and Findings

No findings of significance were identified

c. Conclusions

Based on the regulatory issues reviewed above, the inspectors concluded that the proposed corrective actions were adequate to address the identified problems. The CAP process was followed for closing PERs with the corrective actions not yet performed.

V. Management Meetings

X.1 Exit Meeting Summary

On April 10, 2015, the inspectors presented the inspection results to Mr. Zeringue and other members of his staff. Proprietary information reviewed during the inspection was returned and no proprietary information was included in this inspection report.

SUPPLEMENTAL INFORMATION

Partial List of Persons Contacted

Applicant personnel

D. Charlton, Licensing, TVA, Unit 2
J. Rite, Licensing, TVA, Unit 2
T. Cheek, CAP Manager, TVA, Unit 2
B. Heinmiller, CAP Manager, Bechtel
K. Rose, CAP Coordinator, Bechtel
J. O'Dell, Regulatory Compliance, TVA, Unit 2
Y. Hink, Employee Concerns, Bechtel
L. Reaves, Employee Concerns, TVA, Unit 2
J. Martin, Quality Assurance Manager, Bechtel
J. Adair, Engineering, TVA, Unit 2
I. Zeringue, Engineering and Construction General Manager, TVA, Unit 2
R. Enis, Mechanical Engineer, TVA, Unit 2
E. Heinrich, Project Control Specialist, TVA
E. Hicks, Preop / Startup, Bechtel
D. Morgan, Field Engineering, Bechtel
R. Wigall, Engineering Manager, TVA, Unit 2
A. Love, Mechanical Engineering, Bechtel
T. Metzler, Licensing, TVA Unit 2
R. Phillips, Metallurgical Engineer, Bechtel
H. Schmidt, Preop/Startup, Bechtel

Inspection Procedure Used

IP 35007 Quality Assurance Program Implementation during Construction

List of Items Opened, Closed, and Discussed

Opened and Closed

None

Discussed

None

List of Documents Reviewed

Calculations

Model 11, Fixed Free evenly distributed load Calculation, 6/15/1986
 N3-03-18A, Summary of Piping Analysis Problem No. N3-03-18A, Rev. 5
 WCG1118, SCV Penetration Nozzle and Shell Evaluation Penetration X-12D, Rev 6
 MDQ00003020010067, Minimum ESF Cooler ERCW Flow Rates vs Entering ERCS
 Temperatures During LOCA Conditions, Rev. 2

Drawings

2-003-47W803-3-3-B2, Hydro Test Package Test Boundary Map, Rev. 0
 2-001-47W801-1-2-B1, Hydro Test Package Test Boundary Map, Rev. 2

Field Change Request

63603, X-8A: Change the acceptance criteria to accurately reflect field conditions, 5/13/14
 63815, Remove ASME Section III designation from the weld symbol, 6/24/14
 63897, Request civil engineering approval to allow for cable installation, 7/17/14
 64249, Delete I&C support 2-47A600-1734-5, 10/6/14
 64252, Request engineering approval to remove factory installed motor termination box, 10/6/14
 64344, Add a dummy cable to conduit 2VC9554A, 10/23/14
 64365, Add two needed alarm cables, 10/28/14

Over/Short/Damaged/and Discrepant

62792, Item did not come back from TVA central lab with EMI/RFI test report, 3/12/14
 62793, T5050 Traceable to Certs, 3/12/14
 63146, Missile barrier enclosure physical damage, 3/19/14
 63690, Missile barrier enclosure physical damage, 3/31/14
 63387, Impeller and impeller key documentation, 3/24/14
 63452, Heat number discrepancy, 3/25/14
 63537, Material does not match requirements, 3/27/14
 64101, Material markings could not be located, 4/8/14
 64239, Material markings could not be located, 4/11/14

Problem Evaluation Reports

803682 ASME III Hardware Non-conformance Valves welded without verification of Open
 Position
 838631 Potential Damaged Rebar and Tube Bending Tool Causing Damage to ¾ SS Tubing,
 5/14/2014
 857198 Error in DCN 60684," dated 3/10/2014
 857212 (NRC Identified) Auxiliary Feedwater Pumps Shimming Techniques,"
 dated 3/10/2014
 865656 WBN-2-RTV-063-0360A-S ASME Hardware Non-Conformance
 857667 ASME Sec III Components Assembly Quality Issues with OEM Flowserve,
 03/11/2014
 861465 Fukushima Seismic 2.1 - WBN U2, 03/20/2014
 862705 2-PT-68-0063 & 2-PT-68-0070 supplied by Westinghouse, 03/24/2014
 869834 (NRC Identified) Potential Non-Conformance identified in Non-Contact
 Reinforcement Lap Splice in FESB wall," dated 4/14/2014
 870437 ASME WO 110837075 Valves welded in incorrect position 2-DRV-003-0591 and
 0592
 872920 Damage to rigid conduit 2M3076
 873413 (NRC Identified) Existing Conduit Has a Loose Flex on the FROM End

874803 Missing documentation for previous Unit 2 containment SIT overpressure test
 875430 ASME Hardware Non-Conformance WBN003, Valve WBN-2-DRV-003-0895-B
 875442 ASME WO113764835, System 003 instrument tubing bend ovality non conformance
 876349 Procedure 25402-000-GPP-000-N1206 Non-Conformance
 881252 Warehouse Temperature Loggers Not Calibrated To Correct Range," dated 5/6/2014
 881750 Flowserve NDE procedure revision did not meet ASME III 1971-1973 addenda
 886208 ASME III WBN003 Corrosion Identified in PER 241062
 887940 NRC walk down for separation criteria to be addressed, dated 5/27/2014
 890353 (NRC Identified) Conduit separation between Train A conduit and Train S components
 893685 U2 Fukushima error," dated 6/3/2014
 897419 Eagle 21 Hardware Failure during Loop Calibrations, dated 6/11/2014
 900136 MOV Calculations did not Evaluate Worst Case Operating Conditions," dated 6/18/2014
 908502 Issues with FSAR Change Packages, 07/10/2014
 908531 Late M&TE Items for Bechtel, dated 7/10/2014
 915149 NRC Identified Incorrect Tolerances in 2-SI-3-68, 07/29/2014
 915562 NRC's Concern that Actions in a Confirmatory Order Not Completed, 07/30/2014
 911198 (NRC Identified) Splice Plate Bolt not Flush with Cable Tray Surface," dated 7/17/2014
 911200 Trend in M&TE Issues for Startup, dated 7/17/2014
 912633 Near Miss During Coredrilling Operations URS Worker struck conduit, 7/29/2014
 915149 (NRC Identified) Incorrect Tolerances in 2-SI-3-68," dated 8/5/2014
 915562 NRC Concern that Actions in a Confirmatory Order May Not Have Been Completed," dated 8/5/2014
 920312 (NRC Identified) Improper Storage of Rosemount Transmitter," dated 8/11/2014
 920788 Flex Conduit non-conformance, loose flex
 921471 Discrepancies Identified in How Records are Indexed in EDMS, 09/25/2014
 921957 U1 identified - Orifice plates were designed for schedule 40 pipe and used in standard weight pipe, 8/14/14
 923683 ASME Related: Minor Deficiencies identified in NC-PP-22, 08/19/2014
 924088 NRC identified inconsistencies with Developmental Tech Specs, 08/20/2014
 928895 NRC Rad Controls Operational Readiness Inspection, 09/02/2014
 928941 Ground found on Hand Switch 2-HS-61-192B," dated 9/2/2014
 931429 (NRC identified) Weakness in Level of Detail For Review of Surveillance Instructions," dated 9/23/2014
 933573 DCN 53413, Failure to update Fire Protection Report for Construction Modifications
 936244 NRC identified loose bolting, dated 9/30/2014
 937748 Revision Bars Missing from Part II of Fire Protection Report, 09/25/2014
 945339 Safety Injection Pump 2A was Found in Degraded Condition When Inspected at Flowserve," dated 10/14/2014
 954065 (NRC Identified) Potential Bypasses to the Data Diode," dated 11/5/2014
 955650 NRC Identified During the Unit Triennial Fire Protection Inspection, 11/10/2014
 958843 Reroute of conduits 2VC6051A and 2VC9611A
 957985 2-PMCL-30-177 and 178 low air flow Containment Spray Room Coolers
 961031 Construction WOs and processes are inadequate when performing work on turned over systems/components, 11/25/14
 961436 Near Miss, WBN UW Hotwell Pump C Expansion Bellows Disoriented, 12/02/2014
 961446 (NRC Identified) PER revision not addressing NUREG-0612 Requirements," dated 12/3/2014
 962840 2-FCV-001-75 Broke While it Was Being Manually Operated, 12/02/2014

- 965013 ASME Related; Foreign Material Exclusion not being followed on Valve 2-LCV-003-0171
- 968403 ASME Related: Hardware Non-Conformance Damage found to 757 Airlock door
- 967479 Damaged Conduit Identified Above Vital Battery IV Board Room, 12/15/2014
- 972069 Gaps Identified in WBN2 Confirmatory Order Commitments, 12/30/2014
- 986625 120v Power Found during Live-Dead-Live Pre-work Check, 02/09/2015
- 988081 System 003B documentation issues with copper plates added to 2-MTR-003-118-A and 2-MTR-003-128-B
- 992690 ASME Related: Historical concern related to WO 116575245

Procedures and Programs

- NPG-SPP-09.3.1 Section 3.4.19, Guidelines for Preparation of Design Inputs and Change Impact Screen, Rev. 4
- NPG-SPP-09.3, Section 3.2.4 and Attachment 3, Plant Modifications and Engineering Change Control, Rev. 18
- NPG-SPP-22.300, Corrective Action Program, NPG Standard Programs and Processes, Rev .0002, 12/17/2014
- NPG-SPP-22.500, Operating Experience Program, NPG Standard Programs and Processes, Rev .0001, 2/09/2015
- NC PP-8, Watts Bar Nuclear Plant Unit 2, Operating Experience/Construction Experience Plan, Rev 2, 1/16/13
- ECP-1, Conduct of Employee Concerns Program Implementation, NPG Employee Concerns Program, Rev 6, 5/5/2014
- ECP-1, Desktop Instruction 1, Employee Concerns Program, Rev 0, 1/19/2010
- NPG-SPP-01.7.1, Employee Concerns Program, NPG Standard Programs and Processes, Rev.0000, 12/3/2012
- No.25402-MGT-004, Incident Investigation and Root Cause Analysis, Watts Bar Nuclear Plant Unit 2 Construction Completion Project, Rev 4. 2/5/2013
- NC-PP-3, Watts Bar Nuclear Plant Unit 2, Corrective Action Program, Rev. 16, 3/27/2014

Quality Control Rejects

- 725065, Cable installed without QC witness point verifications, 1/28/15
- 732781, Cable pulled through three 45 degree flex conduit fittings, 3/4/15
- 729546, Design document discrepancy on cable color codes, 2/13/15
- 717399, Number of conduits attached to junction box exceeds design requirements, 12/18/14
- 724288, Less than one inch separation exists between conduits of different trains, 1/22/15
- 726852, Less than one inch separation exists between conduits of different trains, 2/4/15
- 714322, Ovality greater than 8%, 12/8/14
- 716395, Snubber is damaged and cotter pin is not bent, 12/13/14
- 716769, Plate washer missing and dimensions are out of tolerance, 12/16/14
- 717086, Arc strike on pipe next to support, 12/17/14
- 720604, Dimension out of tolerance and weld not completed as shown by weld symbol, 1/7/15
- 722503, Arc strikes on item 3, 1/18/15

Service Request

- 859082, Unit 2 RHR Flush Generating Excessive Liquid Radioactive Waste, 03/14/2014
- 859101, Hardware Non-Conformance Relating to the Pin for Paul Monroe Snubbers, 03/14/204
- 858516, Conduit separation, 3/13/14
- 858675, ASME Section III & XI - U2 Relief valve set point value procedure difference, 3/13/14
- 862493, Proper documentation for Grounding Instrument Panels, 3/24/14
- 862741, EA170 type Namco Limit Switches installed Inside Containment, 3/24/14

864646, Disposition of two PER's cannot be met. Void SR-See details, 3/28/14
 865584, PER 463361 QA Corrective Action Effectiveness Evaluation, 04/01/2014
 866347, Safety personnel performing walkdown identified broken existing conduit, 4/1/14
 869297, Disconnected / damaged mid-run flex conduit with an installed cable found, 4/8/14
 869821, Previously rotated transmitter was rotated back to its original position, 4/9/14
 903768, Rigid Support 2-63-345 is no longer dead loaded, 6/27/14
 907118, For Cause Testing, 07/07/2014
 907530, Conflict between drawings 1-47W866-1A and 2-47W866-1, 07/08/2014
 910180, PM: LPM0152 drained approximately 5 to 7 gal. of water from the cooler, 7/15/14
 913220, Justification to Close PER Related WO 113578803, 07/24/2014
 917552, Follow up to SR 868790: U2 Upper Containment to Lower Containment Electrical penetration, 8/5/14
 930282, Motor Driven Aux. Feedwater Pump 2A-A and 2B-B – Misalignment, 09/05/2014

Test Deficiencies and Notices

14-0426, Flow velocity < 7ft./sec. 6.3 downstream of 2-ISV-62-940, through welded flow orifice, 5/18/14
 14-0429, Insufficient flow velocity (<7ft./sec.) section 6.9B, 5/18/14
 14-0435, The 2A auxiliary oil pump continued to run during the operation of the 2A CCP, 5/26/14
 14-0436, The 2B auxiliary oil pump continued to run during the operation of the 2B CCP, 5/26/14
 14-0819, M&TE instruments found out of tolerance in post-test calibration, 9/10/14
 14-0965, Annunciator did not clear when expected, 10/25/14
 14-1102, The ability to flow water through two valves was previously demonstrated, 11/26/14
 14-1127, 2-TE-68-0330 is a two wire RTD. Wires terminated improperly, 12/7/14

Work Orders

09-951583, Refurbishment MD AFW Pump 2B-B, WBN-2-LCV-003-0171-B
 115748769, Steam Generator Hydrostatic Test 2-001-47W801-1-1-B1, 2/24/2015
 11565880, Replace Valve WBN-2-RTV-063-0360A-S, 7/7/2014
 114940059, ASME III Pressure Test 2-001-47W801-1-2-B4, 1/6/2015
 115339416, Terminate 2PP662B for 2-MTR-3-128-B, 1/23/2015
 116491216, Conduit 2VC9611A DCN 599164 System 2-FCV-70-156-A, 4/9/2015
 116057399, 2-JB-292-8180-E Tighten Loose Connectors, 4/10/2015
 857667, ASME Sec III Components Assembly Quality Issues with OEM Flowserve, 03/11/2014
 861465, Fukushima Seismic 2.1 - WBN U2, 03/20/2014
 862705, 2-PT-68-0063 & 2-PT-68-0070 supplied by Westinghouse, 03/24/2014
 869834, Non-contact Reinforcement Lap Splice Identified in FESB Wall, 04/09/2014
 875857, Historical: Missing Seal between Upper and Lower Compartment, 04/23/2014
 881733, PER documents U2 actions to implement U2 Cyber Security Program, 05/07/2014
 908502, Issues with FSAR Change Packages, 07/10/2014
 915562, NRC's Concern that Actions in a Confirmatory Order Not Completed, 07/30/2014
 920312, NRC inspection at WH, 08/11/2014
 921471, Discrepancies Identified in How Records are Indexed in EDMS, 09/25/2014
 923683, ASME Related: Minor Deficiencies identified in NC-PP-22, 08/19/2014
 924088, NRC identified inconsistencies with Developmental Tech Specs, 08/20/2014
 928895, NRC Rad Controls Operational Readiness Inspection, 09/02/2014
 931429, NRC identified level of detail used in review of Sis, 09/09/2014
 937748, Revision Bars Missing from Part II of Fire Protection Report, 09/25/2014
 955650, NRC Identified During the Unit Triennial Fire Protection Inspection, 11/10/2014

962840, 2-FCV-001-75 Broke While it Was Being Manually Operated, 12/02/2014
967479, Damaged Conduit Identified Above Vital Battery IV Board Room, 12/15/2014
972069, Gaps Identified in WBN2 Confirmatory Order Commitments, 12/30/2014
986625, 120v Power Found during Live-Dead-Live Pre-work Check, 02/09/2015

Miscellaneous

DCN 53413-A, System 70 Physical Work to Support Two Unit Operation, 04/01/2015
UT-742, Nondestructive Examination Report for piping associated with 2-CKV-003-0508 and 2-CKV-003-0509
NC PP-36, Watts Bar Unit 2 Procedure Review and Approval, Rev. 6
MMDP-1, Maintenance Management System, Rev. 30
25403-000-GPP-0000-N1206, Work Order Processing, Rev. 19
NPG-SPP-01.2.1, Interim Administration of Site Technical Procedures for Watts Bar Units 1 and 2, Rev. 0
NPG-SPP-012, Administration of Site Technical Procedures, Rev. 11
NC-PP-32, Dev and Issue of Operating and Technical Instructions, Rev. 6
NC-WB-14-004

List of Acronyms

CAP	Corrective Action Program
CCMRC	Construction Completion Management Review Committee
CFR	Code of Federal Regulations
EOC	Extent of Condition
I&OE	Industry and Operating Experience
IP	Inspection Procedure (NRC)
NCV	Non-Cited Violation
NRC	Nuclear Regulatory Commission
OSDD	Over, Short, Damaged, and Discrepant
PARS	Publicly Available Records
PER	Problem Evaluation Report
PI&R	Problem Identification and Resolution
PRC	Project Review Committee
QC	Quality Control
RFI	Request for Information
SCWE	Safety Conscious Work Environment
SR	Service Request
TDN	Test Deficiency Notice
TVA	Tennessee Valley Authority
URI	Unresolved Item
WBN	Watts Bar Nuclear Plant