UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report Nos.: 50-390/92-13 and 50-391/92-13

Licensee: Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga, TN 37402-2801

Docket Nos.: 50-390 and 50-391 License Nos.: CPPR-91 and CPPR-92

Facility Name: Watts Bar 1 and 2

Inspection Conducted: May 29 through June 18, 1992

Inspectors: K. P. Barr 7/15/92
G. A. Walton, Senior Resident Inspector Date Signed
Construction

P. G. Humphrey, Resident Inspector, Watts Bar
K. D. Ivey, Resident Inspector, Watts Bar
J. F. Lara, Resident Inspector, Watts Bar

Approved by: K. P. Barr 7/15/92
K. P. Barr, Section Chief Date Signed
Division of Reactor Projects

SUMMARY

Scope:

This routine resident inspection was conducted in the areas of construction work activities, engineering data collection, concerns resolution, closed items review, and action on previous inspection findings. This inspection included backshift inspection coverage of site activities June 15-18, 1992.

Results:

Modification work activities were observed to be of good quality. In-process documentation of the observed work activities was determined to be well controlled.

In the areas inspected, violations or deviations were not identified.

One violation, four unresolved items, one inspector follow-up item, and one IE Bulletin response were evaluated and closed during the reporting period, paragraph 6.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*T. Arney, Senior Quality Project Manager
L. Bush, Operations Superintendent
*M. Bellamy, Startup Manager
J. Chardos, Manager of Projects
*J. Christensen, Site Quality Manager
S. Crowe, Site Quality Assurance Manager
*J. Cruise, Licensing Engineer
W. Elliott, Engineering Manager, Nuclear Engineering
R. Johnson, Modifications Manager
*N. Kazanas, Vice President Completion Assurance
A. McLemore, Modifications Engineering Manager
L. Maillet, Site Support Manager
M. Medford, Vice President, Nuclear Assurance, Licensing & Fuel
D. Moody, Plant Manager
*W. Museler, Site Vice President
C. Nelson, Maintenance Support Superintendent
P. Pace, Compliance Licensing Supervisor
*G. Pannell, Site Licensing Manager
R. Purcell, Plant Program Manager
K. Stinson, TVA Project Manager
T. Raley, Modifications Backlog Supervisor
*S. Tanner, Special Projects Manager
J. Vorees, Regulatory Licensing Manager
*H. Weber, Engineering and Modifications Manager
C. Whitehead, Project Engineer

Other licensee employees contacted included engineers, technicians, nuclear power supervisors, and construction supervisors.

NRC Personnel

*M. Glasman, Resident Inspector, Watts Bar
*K. Barr, RII, Section Chief, Watts Bar
*B. Wilson, RII, Chief, Projects Branch 4B

*Attended exit interview

Acronyms and initialisms used throughout this report are listed in the last paragraph.

2. Construction Work Activities

a. HVAC CAP - Pipe Support Modification

The inspector inspected work in progress for a pipe support being worked by workplan WPOD06119-04, located in the auxiliary building at A3 and R line, elevation 737. The work activities included welding and surface grinding to add an additional support arm to the existing support. The inspector interviewed the operator performing the grinding work and determined he was familiar with the requirements and had the workplan available at the work location. The workplan also included adding a baseplate and installing SSD anchor bolts through the baseplate into the concrete floor. The baseplate and anchor installation work was complete. The inspector verified the baseplate and SSDs were the proper materials and dimensions. The inspector found the work to be of good quality and the craftsman was performing his work activities in compliance with the workplan and applicable procedures referenced in the workplan. No violations or deviations were identified during this review.

b. Cable Issues CAP - WP D-12080-01, 02, 03, 04, 05 Provide Cable Support Using Methods Described in MAI 3.2 Appendix B

These workplans pertain to providing cable supports in 46 vertical conduits as described in DCN M-12080-A. On June 9, 1992, the inspector reviewed workplan D-12080-02 in the WP library and noted that it referenced and contained a copy of FDCN F-17992-A. The FDCN specified that some of these cables could be supported through the use of tie wraps. The inspector questioned the adequacy of the FDCN since the use of tie wraps as a means for providing cable support has been determined to be inappropriate. Further review by the inspector indicated that FDCN F-19057-A was also written against the parent DCN M-12080-A but this FDCN was not referenced in any of the workplans as an outstanding FDCN. FDCN F-19057-A provided NE justification for the as-built installation for 4 of the 5 cable support workplans (40 of 46 cable support installations). The FDCN also changed the acceptable means for support for one of the above workplans from tie wraps to Kellum grips and wedge supports. It should be noted that the FDCN was issued prior to establishing the unacceptability of the tie-wraps as a means for providing cable support. At the time of this review the 5 workplans had been issued to craft personnel for implementation but no tie wraps had been installed for support. The inspector questioned the licensee as to why the FDCN had not been included in the 5 workplans prior to being implemented. The licensee stated that the incorporation of the FDCN was in progress at the time of the NRC review. Furthermore, the licensee stated that if the FDCN had not been implemented, the DCN and FDCN closure process would have identified the oversight and corrective actions would have ensued.

The inspector verified that procedure controls for the closure of DCNs were such that, prior to the DCN being closed, all FDCNs listed within a workplan are required to be closed. However, the inspector questioned whether the closure cycle would identify the condition that a FDCN was not included in a workplan. The licensee stated that any FDCN which is issued is required to be incorporated into the affected workplans and the closure reviews would identify such omissions. The licensee performed a sample review of workplans located in the workplan library to further verify that all outstanding workplans included all required FDCNs. During this review, it was determined that all workplans included all the required FDCNs. The licensee issued a site letter to field engineers dated June 22, 1992, stressing the importance of timely inclusion of FDCNs into workplans. Pursuant to 10 CFR 50.55(e), the licensee has identified the deficiency of using tie-wraps as a means of providing cable support. This issue is being tracked as CDR/89-02 for Unit 1 and CDR/89-04 for Unit 2. The NRC will review the corrective actions associated with this deficiency following completion of field modifications. No violations or deviations were identified during this review.

c. Cable Issues CAP - WP D-12218-01 Lift/Reland Wires, Replace Ports and Abandon Wires

This workplan was reviewed in the workplan library prior to the pre-job conference being held. The workplan was written to implement the corrective actions specified in DCN D-12218-A. The DCN identified actions to be taken to repair and modify containment electrical penetration port terminations. The DCN identified 11 penetrations which required rework and was divided into several workplans.

The inspector reviewed workplan WP- D-12218-01 to determine whether appropriate corrective actions were specified and the work instructions were technically adequate. The inspector noted that the workplan description stated that the requirements of ASME Code Section III did not apply even though the electrical penetration assemblies are considered ASME Section III Class MC components. ANI review of the workplan was also determined not to be required. The penetrations serve as containment boundaries as they are considered pressure retaining components. The inspector also noted that upon completion of the scheduled work, there was no requirement to install permanent covers on the penetrations to prevent damage. The work to be performed included new terminations, repair of damaged penetration leads, and new splices.

The licensee reviewed the workplan scope and vendor manuals and concluded that the original determination was proper. Although the penetration assembly is an ASME Section III component, the workplan scope does not require that this section be invoked nor does it require ANI review. The inspector concluded that due to

the scope of the workplan, the workplan was acceptable. The licensee also stated that future work was scheduled to be performed on the same penetrations and therefore instructions for the installation of permanent covers were not included in the workplans. The inspector stated that although future work was scheduled to be performed, considerations should be given to installing permanent covers to prevent damage since there have been past instances where electrical penetration assemblies have been damaged. The licensee stated that outstanding work against the penetrations would be reviewed and efforts would be made to schedule the work for each penetration assembly in a sequential manner so as to systematically perform all the required work and ultimately install a permanent cover. No violations or deviations were identified.

The inspector had no further questions regarding this workplan.

d. Second Shift Work Activities

The NRC resident inspectors provided second shift inspection coverage June 15-18, 1992. Major work activities reviewed during these shift inspections included testing of electrical components, installation of piping hangers, and change-out of electrical conduits. These are listed as follows:

- WR C154789: This work activity involved insulation testing of the stabs on breaker 1-BKR-211-A/16. This effort was to provide data for insulation evaluation and no repair or modification efforts were performed per this work effort.

- WP D16452-13: This activity pertained to modification of hanger support, 1067-450-9-26-1. The modification consisted of replacing various members of the support and modification of some additional members.

- WP D10871-07: This effort involved the change-out of a 2-inch flex conduit where it entered panel 6 on the 6.9 kV shutdown board 1A-A.

During the review of these activities, the effort was determined to be performed in accordance with the applicable work documents and documentation was current with the work status. No violations or deviations were identified.

3. Cable Tray Support CAP - Engineering Activities

The inspector observed contractors in the process of obtaining walkdown data of cable tray supports for engineering to perform critical case evaluation of cable tray supports. Support O-CTSP-292-2541 was being evaluated and documented for critical case evaluation. It was located in the auxiliary building and supported seven cable trays. The two-man team of engineers were Ebasco employees and they were performing the

walkdowns to engineering procedure TI-2022, Revision 2. The basis for the licensee performing the walkdown was to collect additional data because the previous "walkthrough" assessment had identified this support as a potential critical case that required detailed engineering evaluation. Therefore, detailed as-built data were being obtained from the actual as-installed configuration. The inspector interviewed the data collection team and determined they were familiar with the procedure and knowledgeable of the requirements for collecting the data. They advised they did not have a copy of the original drawing because it did not represent the actual field conditions but were sketching the entire support to obtain the as-installed condition of the support. The inspector reviewed the in-process walkdown data sheet and found it adequately documented the field conditions. No violations or deviations were identified during this review.

4. Concerns Resolution Staff Investigations

An NRC inspector reviewed the following investigation conducted by the WBN CRS for an employee concern received for WBN. The review was conducted to determine whether the investigation had thoroughly addressed the employee's concern and whether the identified corrective actions were adequate to resolve the concern.

Revision 0 of ECP-91-WB-099-F1 contained a concern that an unapproved change to an instruction entitled "Inspection of Cable Installation" was being used in the performance of engineering reviews. The CRS investigation did not substantiate this concern. The CRS investigation was reviewed by the NRC in IR 50-390, 391/91-33 and no deficiencies were identified.

Since the time of the initial investigation, the CRS received new information that the unapproved instruction change was for AI-4.1. The CRS investigation (ECP-91-WB-099-F1, Revision 1), substantiated this concern and determined the following:

- A review of workplans and MRs was ongoing in February 1991 to identify and disposition documentation deficiencies.

- A draft IC to AI-4.1 was initiated on February 19, 1991. The draft IC contained detailed examples of acceptable and unacceptable methods of addressing N/As and blanks.

- The draft IC was made available for use to the document reviewers to provide additional examples on how to address blanks on the work documents.

- IC 91-208 to AI-4.1 was issued on April 8, 1991, to provide necessary clarification of the existing procedural requirements for addressing N/As and blanks.

At the time the draft IC was being used, the only reference to N/As or blanks in AI-4.1 was contained in step 3.4.1.E, which stated,

"Ensure all blanks are completed or N/A'd, as required."

The CRS investigation concluded that the draft IC clarified and did not conflict with AI-4.1, and any work performed to the proposed IC would not have been in violation of AI-4.1 requirements. The licensee concluded that this was an isolated incident where the draft IC was apparently being used to establish a consistent method of complying with existing procedural requirements.

The NRC inspector reviewed all correspondence contained in the CRS investigation file. In addition, the inspector reviewed revisions 20 and 21 to AI-4.1, the draft IC in question, and the approved IC 91-208. The inspector identified no deficiencies in the CRS investigation. The inspector determined that the draft IC did not violate the AI-4.1 requirements for completing document blanks. The inspector concluded that the CRS had thoroughly addressed the employee's concern. No violations or deviations were identified.

5. Closed Item Review

The inspector reviewed an issue identified and documented as closed in an NRC report in 1985. This item was selected to determine if it should be re-opened since later inspections have revealed that many of the pre-1985 issues involve more than was previously identified in the original concern. The following item was reviewed during this reporting period:

BU-83-01, Failure of Reactor Trip Breakers (Westinghouse DB-50) to Open On Automatic Trip Signal

This bulletin, which identified that the Westinghouse DB-50 trip breakers failed to open on an automatic trip signal, was evaluated by the licensee and determined not to be applicable to WBN. The result of the licensee's evaluation indicated the trip breakers at WBN were model DS-416, different than the bulletin addressed. The licensee's evaluation was inspected by NRC in 1985, and the issue was addressed and closed in IR 390,391/85-08, as acceptable.

Review of that closure by the inspector during this inspection period has determined the closure was adequate. The inspector reviewed the bulletin response and performed field inspections and verified from the labels attached that the breakers were model DS-416 and not affected by the problem identified in the bulletin with model DB-50 breakers.

6. Actions on Previous Inspection Findings

a. (Closed) URI 390,391/86-10-01, Demonstration of Existing Diesel Generator Units Capability During Periodic Testing

This issue resulted from discrepancies identified when comparing the requirements specified in Section 8.3.1.1 of the FSAR with the following preop tests:

- TVA-13A, Onsite AC Distribution System (6.9 kV Shutdown Boards)

- TVA 13B, Onsite AC Distribution System (Diesel Generator Loading Logic)

- TVA 13C, Onsite AC Distribution (Diesel Generator Qualification)

The FSAR described a situation that if a station blackout occurred while the diesel generators were in operation and paralleled to the offsite power, load shedding would occur without disconnecting the DG from its shutdown board and the automatic sequencing logic would reapply the required loads to the shutdown board. The inspector questioned whether these tests demonstrated that the plant met the FSAR.

The licensee responded that the FSAR was in error. Since then the FSAR has been changed (Amendment 63) to require tripping of the DG feeder breaker to the shutdown boards when a condition exists where the DGs are in operation and paralleled to the offsite power and a blackout occurs. This trip will place the diesel generator in an automatic synchronous mode of operation and create a blackout on the 6.9 kV shutdown board which will initiate load shedding logic. Once the loads are shed, the load sequencing logic will be initiated to reload the required equipment.

However, since major modifications have been made to most areas of the plant, the licensee has committed to perform the entire preop test program per the requirements specified in the FSAR and Reg. Guide 1.68, Revision 2. This action will be monitored and evaluated by the inspectors. Based on the requirement to perform the testing program, this item is closed.

b. (Closed) BU 88-03, Inadequate Latch Engagement In HFA Type Latching Relays Manufactured By General Electric Company

The licensee evaluated the bulletin which identified latching problems with specific types of GE HFA relays and required inspections to ensure that this series of GE latching-type HFA relays installed in safety-related applications have adequate latch engagement. It further required that those relays which fail to meet the specified acceptance criteria for adequate latching be repaired or replaced.

Fifty-six HFA relays were found to be installed in safety-related systems located in the 6.9 kV shutdown boards. Procedure SMI-211.B, Inspection of 1E General Electric HFA Latching Relays for

Inadequate Latch Engagement, was devised and issued to perform the initial inspection of the relays. Procedure MI-57.29, HFA Relay Maintenance, Adjustments and Installation, was revised to provide a check for latch engagement, movable contact binding, adjusting coil pickup voltage, and to include replacement relays installed in the plant. The MI also required periodic inspection and corrective actions of these relays and the scope was expanded to inspect all GE HFA latching type relays which included those installed in non-safety related systems.

The inspector reviewed the licensee's instruction and data associated with the inspection activity and determined the effort was acceptable to meet the requirement of the bulletin and all relays identified by this bulletin had been inspected. Based on this review of the documentation, this issue is closed.

c. (Closed) IFI 390,391/90-27-19, Sizing Calculations U5.3-2

This issue pertains to a generic deficiency which was first identified at SQN in 1986. The licensee determined that this issue was also applicable to WBN. This IFI was opened to track closure of this issue.

This item pertains to battery sizing calculations which did not consider sizing correction factors for temperature and aging. In addition, no sizing calculations existed for the Class 1E battery chargers or 120 Vac vital inverters. Calculation WBNEEBMSTI110003, 125 Vdc Vital Battery and Charger Capacity Evaluation, Revision 1, documents the analysis and conclusion that the 125 Vdc batteries and battery chargers are properly sized. The calculation contains appropriate correction factors for temperature and aging in accordance with IEEE-485, IEEE Recommended Practice for Sizing Large Lead Storage Batteries for Generating Stations and Substations, and the WBN FSAR. The calculation also documents that the battery chargers are adequately sized. The inspector reviewed this calculation and concluded that the analysis was adequately supported. This calculation was also reviewed during the 1990 NRC IDI team inspection as documented in 50-390/91-201. The licensee has documented the adequate sizing of the 120 Vac vital inverters in calculation WBNEEBMSTI120016, 120 Vac Vital Inverter Loading, Revision 9. The calculation documented analysis to show that the vital inverters are adequately sized to power the vital loads. The inspector noted that the calculation also concluded that circuit breakers No. 30 on boards 1-I and 1-II should be replaced to prevent inadvertent tripping during motor starts. DCN M-08703-A has been initiated to implement this action and is presently in the review process. Revisions to calculations are maintained and controlled in accordance with NEP-3.1, Calculations.

The inspector concluded that the corrective actions taken adequately address the identified concerns. This issue is closed.

d. (Closed) URI 390/90-33-03, Magne-Blast Breaker Booster Cylinder Problems

This item pertains to breaker arc extinguishing booster cylinder pistons having small holes located in the side of the cylinder. At the time of the NRC inspection, the licensee had not issued a PER to document this condition and therefore it had not been evaluated for operability, Part 21, and 10 CFR 50.55(e) reportability requirements.

The licensee initiated PER WBPER910018 to document this condition. Based on correspondence with the circuit breaker manufacturer (GE), the licensee concluded that the small hole had no adverse effect on the operation of the circuit breaker. The manufacturer inspected the booster cylinders and concluded that the breaker could be expected to operate normally. The manufacturer recommended that the affected cylinders be replaced during normal scheduled maintenance. The licensee evaluated this condition and determined that it was not reportable to the NRC under 10 CFR 21 and 10 CFR 50.55(e).

The licensee performs scheduled maintenance on the 6900 Vac circuit breakers on a five (5) year interval in accordance with procedure MI-57.1, 6900 V Circuit Breaker Inspection. Procedure requirements include physical inspection of the circuit breaker components and require documentation of any observed discrepancies. Circuit breakers which are identified with similar conditions will have the booster cylinders replaced during their scheduled maintenance. The inspector reviewed two (2) MRs which have been completed to replace such booster cylinders. The following MRs were reviewed:

- A661234 replaced the B-phase booster cylinder in ERCW motor DA

- A661235 replaced the c-phase booster cylinder in ERCW motor CA

The inspector concluded that the licensee had adequately evaluated the booster cylinder as-found condition including consideration of reportability requirements. Therefore, this item is closed.

e. (Closed) VIO 50-390/92-01-01, Failure to Specify Required Hydrostatic Testing of ASME Components During Rework

This violation identified that on February 4, 1992, hydrostatic testing requirements had been deleted on workplan D01278-01, Fire Protection Piping, by reference to ASME code case N-240. Code case N-240 exempts hydrostatic testing on piping sections that are open ended and not subject to internal pressure. Paragraph NB-6111.1 of the ASME Section III code requires that all components and appurtenances constructed and/or installed under the rules of

this section of the code shall be hydrostatically tested in the presence of the inspector. The piping section questioned by the inspector was not open-ended piping and was subject to internal pressures; therefore, it required hydrostatic testing and inspection to meet the applicable ASME Section III code requirements. The licensee acknowledged this violation and has taken the following corrective actions:

- Workplan D01278-01 was changed to require hydrostatic testing of the fire protection line referenced in the violation.

- Modification field engineers and shift managers were directed by letter not to invoke code cases in the future without design engineering approval.

- Since the workplan was reviewed and approved by Quality Assurance, a lessons learned session on the applicability of code cases was conducted with the QA reviewers.

- The licensee conducted a review of work documents implemented since the construction restart. One additional application of a code case was found and subsequently documented and approved by design engineering on Design Change Notice Q-17878.

The inspector reviewed the following documents associated with this violation:

- Violation response 50-390/92-01-01 dated April 20, 1992.

- Nonconformance report number PER WBPER920028, Revision 0.

- Revision 2 to workplan number D01278-01 that documents the requirement to perform hydrostatic testing of the fire protection piping associated with pump 1A-A and 2A-A.

- Design Change Notice Q-17878-A that documents the design engineering approval of the additional case where field engineers invoked the use of code case N-240. This application was on an open-ended system and did comply with the ASME Section III code without performing a hydrostatic test.

- Field Engineering Manager's letter to all field engineers documenting the requirement that Nuclear Engineering must approve using ASME code cases via a QDCN.

- Quality Assurance attendance record for the code case "Lessons Learned" session held March 27, 1992.

- The inspector inspected the installed fire protection piping

in the intake pumping station and verified the work was complete and the equipment was restored to its original configuration following the completion of the hydrostatic test.

- The inspector evaluated workplan D01278-01 and verified the hydrostatic test was completed (completed 2-13-92), the steps in the workplan were completed correctly, ANI witnessed the test and signed his acceptance (2-13-92), and the required pressure was achieved (251.6 psig min.- 266.6 psig max. actual 254 psig min.-265 psig max.) and held for the required specified time (2 hours).

Based on the reviews performed, the inspector concluded that the licensee's corrective actions and actions to prevent recurrence were acceptable. This item is closed.

f. (Closed) URI 390,391/88-01-05, Reportability Determination on CAQRs

This item was reviewed in detail and closure documented in IR 390,391/91-29 in paragraph 9j. However, the write-up in IR 91-29 incorrectly reported this item closed for restart only. In addition, the Unit 2 item number was inadvertently omitted from the description in IR 91-29. For record purposes only, this report documents final closure of this item for Units 1 and 2. No additional inspection of this item was necessary.

g. (Closed) URI 391/90-31-03, Implementation of Interim Corrective Measures

This item was reviewed in detail and closure documented in IR 390,391/91-29 in paragraph 9. However, the Unit 2 item number was inadvertently omitted from the description in IR 91-29. For record purposes only, this report documents final closure of this item for Unit 2. No additional inspection of this item was necessary.

7. Exit Interview

The inspection scope and findings were summarized on June 18, 1992, with those persons indicated in Paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results. Dissenting comments were not received from the licensee. Proprietary information is not contained in this report.

Item Number	Status	Description and Reference
390/86-10-01 391/86-10-01	Closed	URI - Demonstration of Existing Diesel Generator Units Capability During Periodic Testing (Paragraph 6.a)

390/88-01-05 391/88-01-05	Closed	URI - Reportability Determination on CAQRs (Paragraph 6.f)
88-03	Closed	BU - Inadequate Latch Engagement In HFA Type Latching Relays Manufactured By General Electric Company (Paragraph 6.b)
390/90-27-19 391/90-27-19	Closed	IFI - Sizing Calculations U5.3-2 (Paragraph 6.c)
391/90-31-03	Closed	URI - Implementation of Interim Corrective Measures (Paragraph 6.g)
390/90-33-03	Closed	URI - Magne-Blast Breaker Booster Cylinder Problems (Paragraph 6.d)
390/92-01-01	Closed	VIO - Failure to Specify Required Hydrostatic Testing of ASME Components During Rework (Paragraph 6.e)

9. List of Acronyms and Initialisms

AC	Alternating Current
AI	Administrative Instruction
ANI	Authorized Nuclear Inspector
ASME	American Society Mechanical Engineers
BU	Bulletin
CAP	Corrective Action Program
CAQR	Condition Adverse to Quality
CFR	Code of Federal Regulations
CRS	Concerns Resolution Staff
DCN	Design Change Notice
DG	Diesel Generator
ECP	Employee Concern Program
ERCW	Essential Raw Cooling Water
FDCN	Field Design Change Notice
FSAR	Final Safety Analysis Report
GE	General Electric
HVAC	Heating Ventilating & Air Conditioning
IC	Instruction Change
IDI	Integrated Design Inspection
IE	Inspection and Enforcement
IEEE	Institute of Electrical and Electronics Engineers
IFI	Inspector Follow-up Item
IR	Inspection Report
kV	Kilovolts

Max	Maximum
Min	Minimum
MR	Maintenance Request
N/A	Not Applicable
NE	Nuclear Engineering
NEP	Nuclear Engineering Procedure
NRC	Nuclear Regulatory Commission
PER	Problem Evaluation Report
PREOP	Preoperational
PSIG	Pounds Square Inch Gauge
QA	Quality Assurance
QDCN	Question Design Change Notice
SMI	Special Maintenance Instruction
SQN	Sequoyah Nuclear Plant
SSD	Shell Self Drilling
TVA	Tennessee Valley Authority
TI	Technical Instruction
URI	Unresolved Item
Vac	Volts (alternating current)
VIO	Violation
WB	Watts Bar
WBN	Watts Bar Nuclear Plant
WP	Workplan
WR	Work Request