



BROWNS FERRY NUCLEAR PLANT (BFN) TOOLS CONTROL ANALYSIS

2005-5261

October 25, 2005



Objective, Scope, and Methodology

- ◆ Objective: To assess the processes and key control activities used to track and account for tools purchased for the BFN Unit 1 Restart.
- ◆ Scope: While our scope was BFN Unit 1 Restart tools, we determined:
 - Same processes and key control activities apply to BFN Operations.
 - BFN Tool Management Program does not distinguish between Unit 1 Restart and Operations.



Objective, Scope, and Methodology (cont'd)

- ◆ Methodology: To assess tool management processes and key control activities, we:
 - Reviewed BP-226 and other information to identify the Tool Management and Equipment Accountability Program* required processes and key control activities.
 - Conducted walkthroughs with BFN tools management personnel to identify actual practices.
 - Identified potential control deficiencies by comparing BP-226 requirements with actual practices.
 - Reviewed documentation, observed processes and operations, and conducted interviews necessary to verify process owner observations and identify/assess other potential control gaps.
 - Assessed tool accountability and the accuracy of Tool Management System (TMS) by:
 - ◆ Verifying the existence and assigned user possession of selected tools.
 - ◆ Comparing the actual tool status for selected tools with the status shown in TMS (e.g., Issued, Available for Issue, Out for Repair, etc.)

This inspection was conducted in accordance with the “Quality Standards for Inspections.”

**BP-226 uses the terms “tools” and “equipment” interchangeably. However, we were told “equipment” is now used in reference to “heavy equipment.”*



Background

- ◆ The Office of the Inspector General was requested by the Vice President, BFN Unit 1 Restart, to review tool management associated with the restart project. Concerns were expressed about:
 - The amount of money being spent on tools.
 - Possible theft of tools from the BFN site.
- ◆ TVA is providing all necessary tools for the BFN Unit 1 Restart.
 - Work is primarily being completed by engineering and modification contractors.
 - 1,500 of the current 2,600 contractors on-site are craft laborers who have tool needs/requirements.
- ◆ TVAN implemented Business Practice 226 (BP-226), *Tool and Equipment Accountability*, in August 2000 to:
 - Establish and implement a plant accountability system for tools and equipment.
 - Strengthen and standardize existing tool and equipment accountability practices.
 - Provide for periodic reporting to control and minimize equipment losses.



Background (cont'd)

- ◆ BFN tools are issued and tracked using an automated system—TMS.
 - As of August 2005, TMS showed about \$169 million in tagged tools, hand tools, and other miscellaneous items.*
 - TMS has not been updated to reflect that hand tools and other miscellaneous items (e.g., cleaning supplies) are no longer tracked at BFN.

**“Hand tools” refers to items such as hammers, screwdrivers, pliers, socket wrenches, pipe wrenches, etc.*



Summary of Observations

Noncompliance with BP-226 prescribed processes and key control activities and other process/control weaknesses have resulted in a significant lack of tool accountability/tracking.



Observation 1 – Noncompliance with BP-226 (Oversight)

- ◆ BP-226 states:
 - The Site Vice President will be accountable for tagged equipment assigned to each site and will appoint a Chief Accountability Officer (CAO).
 - ◆ CAO responsibilities include ensuring proper tagging , issuing and reconciling inventory lists, and tracking and trending of inventories.
 - Each site organization will appoint a Organization Accountability Representative (OAR).
 - ◆ OAR responsibilities include (1) inventory of tools assigned to their work group, (2) marking untagged tools, and (3) “performing physical inventories periodically to ensure that all inventory assigned to their organization is accounted for.”

We found:

- **CAO or OAR positions have not been established and many of their duties are not being performed.**



Observation 1 – Noncompliance with BP-226 (Accountability)

- ◆ BP-226 mandates that:
 - Tool users are subject to pre-determined check-out limits.
 - ◆ Over limit reports are to be generated and sent to appropriate supervisors.
 - ◆ Exceptions may be granted by completing and obtaining supervisory approval– Request For Release From Tool Issue Limit form.
 - Individuals will be held accountable for the return of tools, including damaged tools.
 - ◆ An overdue tool letter is generated and sent to the section supervisor for resolution.
 - ◆ Failure to return tools will result in disciplinary action and may include termination or reimbursement.

We found:

- **Tool issue limits are not used at BFN.**
- **Overdue tool report is no longer used at BFN and tool users are not held accountable for the return of the tools.**



Observation 1 – (cont'd)

Noncompliance with BP-226 (Accountability)

- ◆ Tool users had multiple items checked-out for extended time periods, including duplicates of the same item. For example, we identified:
 - A user with 96 tools checked-out.*
 - A user with 43 tools checked-out.
 - 72 users which have between 10 and 43 tools checked-out.

- ◆ 50 tools (e.g., grinders, welders, and drills) that were shown by TMS as “issued” were selected for physical verification. We found:
 - Only 16 (32 percent) could be located by the individual they were issued to.
 - 68% of the tools could not be found and most of the users were unable to provide an explanation for the missing tool.
 - ◆ In attempting to verify the existence of a welder, the responsible Individual stated that he had originally ordered 13 welders and 11 have been lost, stolen, or misplaced.
 - Comments provided included (1) the tool was probably left in my previous work area, (2) the individual did not check-out the tool, (3) someone else now has possession, and (4) it was sent for evaluation/decontamination.

**Supervisors often check-out all tools needed for their work group. This contractor stated it would be too time consuming and difficult to identify the user and locate the tools.*



Observation 1 – (cont'd)

Noncompliance with BP-226 (Accountability)

- ◆ Employees/contractors are not being held accountable for tools upon completion of BFN work.
 - According to toolroom personnel, supervisors are signing-off for missing tools upon employment completion without requiring accountability.

- ◆ Gang boxes are used to store multiple tools:
 - A tour of four Unit 1 elevations (not including the Drywell) noted about 246 gang boxes of different sizes.
 - Gang boxes were found to contain duplicate tools of the exact same brand and size, including:
 - ◆ Sawzalls (reciprocating saws)
 - ◆ Grinders
 - ◆ Band saws
 - ◆ Impact wrenches
 - ◆ Drills



Observation 1 – Noncompliance with BP-226 (Tracking)

- ◆ BP-226 requires tracking of tools and update of TMS via the following processes:
 - Lost, theft, or vandalism of tagged tools will be reported to the CAO within 24 hours. CAO will report to the toolroom on form TVA 405B for TMS disposition update,* initiate measures to prevent reoccurrences, and determine if circumstances warrant disciplinary action.
 - Worn, broken, or otherwise unserviceable tools will be returned to the toolroom for proper TMS disposition update.
 - Contaminated tools will be bagged and tagged and returned to Radiological Controlled Area (RCA) toolroom and the toolroom attendant will give credit to the user.
 - Contaminated tools requiring disposal will be reported to toolroom on appropriate forms, TVA 405C or 405B, for proper TMS disposition.
 - Tools transferred to another person will be reported on Form TVA 405B, which is prepared to transfer responsibility to the individual assuming custody.
 - Tool losses are to be reported per TVA 4012, Retirement Notice, which is to be prepared by the CAO.

**“TMS Disposition Update” includes accurately reflecting the tool status in TMS and updating the responsible individual’s checkout list.*



Observation 1 – (cont'd)

Noncompliance with BP-226 (Tracking)

We found TMS does not accurately reflect tool status.

- 57 tools were selected from a TMS report showing all tools “available for issue” from selected toolrooms—53 (93 percent) could not be located in the specified toolroom.
- 49 tools we observed as being in-service were traced to TMS (should be shown as “issued”)—35 (71 percent) were shown as “available for use” by TMS.
- 14 tools on specific toolroom shelves were traced to TMS—TMS showed the correct status for only 7 (50 percent).
- According to toolroom personnel:
 - ◆ During on-going employment applicable disposition forms are rarely being prepared for lost, stolen, or vandalized tools—forms are prepared at employment termination.
 - ◆ TMS is not being updated to reflect damaged, worn, and broken tools because they are not returned to the toolroom on a consistent basis, with the exception of rigging.
 - ◆ Tools are being taken directly to Decontamination or to Low Level Radiation Waste with no notification being given to the toolroom.
 - Four welders and two grinders were chosen at random from the low level radiation waste area. The unique identification numbers were traced to TMS and all were shown as “Available for Issue.”
 - ◆ There is no notification of transfer of custody of a tool, including completion of Form TVA 405B.



Observation 1 – Noncompliance with BP-226 (Reporting)

- ◆ BP-226 mandates that:
 - Records on both tagged and untagged tool losses will be kept and categorized in an annual loss report.
 - Complete physical inventories of tagged/untagged equipment will be performed every two years or at periodic intervals.

We found:

- **The Periodic Lost Property Report is not being prepared.**
- **Physical inventories of tagged equipment are not being performed.***
- **Toolroom personnel periodically do a ‘bin check’ to maintain inventory levels for issue to users.**
 - ◆ **No reconciling inventories to TMS are performed.**

**Toolroom cited that annual safety inspections of electrical tools and rigging are performed.*



Observation 2 – Other Process/Control Weaknesses

- ◆ We observed or had other process/control weaknesses brought to our attention, including:
 - Security does not routinely perform checks for tools leaving BFN.
 - ◆ Vehicles are not inspected for tools upon departure from controlled access.
 - ◆ Employees are not checked for tools upon departure from controlled access.
 - Toolrooms are not manned 24 hours a day/7 days a week (24/7).
 - ◆ Toolroom personnel stated that tools are removed during unmanned hours without proper notification (i.e., tools are often returned that have never been checked-out).
 - BFN grand master keys which also provide access to the toolrooms are widely distributed.
 - TMS has system problems with badge scanning.
 - ◆ Badge scan did not show any tools issued to the subject individual--but upon entering the unique tool number, TMS showed the tool as issued to that individual.



Recommendations

- ◆ The BFN Site Vice President should:
 - Take actions to ensure compliance with BP-226, including:
 - ◆ Requiring TVA/contractor accountability and taking disciplinary actions where warranted.
 - ◆ Performing required physical inventories and updates of TMS.
 - ◆ Requiring procedural compliance to ensure accurate tracking.
 - Consider manning toolrooms 24/7 and limiting access (keys) to the toolrooms.
 - Ensure TMS badge scanning issues are corrected.
 - Consider requiring security monitor tools leaving BFN.

