



Review of the Contractor Tool Program for the Watts Bar Nuclear Plant Unit 2 Construction Project

Inspection 2008-11911

December 11, 2008



Summary

Our objective was to assess the procedures and key control activities used to track and account for tools on the Watts Bar Nuclear Plant Unit 2 Construction Project (WBN U2 Project).

Our review of the WBN U2 Project tool program found:

- ◆ Nothing to indicate significant discrepancies in the tool inventory at this time.
- ◆ Data entry errors in the Tool Hound system.
- ◆ Opportunities exist to improve controls, based on our review of {REDACTED} Small Tools and Small Capital Equipment Procedure.
- ◆ Some non-compliances with {REDACTED} Small Tools and Small Capital Equipment Procedure.



Background

- ◆ This inspection was a planned review of the {REDACTED} tool program for the WBN U2 Project.
- ◆ The contract for the WBN U2 Project requires TVA to provide all construction equipment, small tools, consumables, safety supplies, construction aids, and construction facilities.
 - Small tools include all items used by construction forces (craft, technical personnel, etc.) to install, stage, store, test, maintain, complete, and inspect (1) permanent plant equipment, (2) temporary material and facilities, as well as (3) construction equipment.
 - An item will be considered a small tool if it costs less than \$1,500; if an item costs more than \$1,500, it will be considered construction equipment.
- ◆ As of July, 23, 2008, there were 669 items with a total value of \$834,145.95 in the {REDACTED} tool inventory system, Tool Hound.
 - However, according to {REDACTED} personnel, only approximately 60 percent of the tool inventory had been entered into the system at the time of our review.



Background (cont.)

- ◆ {REDACTED} Small Tools and Small Capital Equipment Procedure establishes the work process the contractor will use in acquiring and managing small tool inventories on the WBN U2 Project. The procedure specifies:
 - Timekeeping shall provide a list of all craft workers to upload into Tool Hound. At a minimum, the list shall include the employee's first and last name, employee number, badge bar-code number, craft class code, and supervisor bar code.
 - All shipments of tools and consumables received at the jobsite shall be bar coded, entered into the tool management system, and stored in appropriate bin/storage locations.
 - Only craft workers and supervisors with valid employee badges in-hand can check out tools and supplies from the tool cribs.
 - Only authorized employees are allowed in the tool cribs and tool storage areas.
 - Nothing is to be dispensed from the tool crib without scanning the item's barcode(s) and the employee's badge.
 - All employees who leave the project shall be required to complete a tool crib clearance as part of their final processing. A "Tools Out" report will be run against the employee's badge number, and all tools checked out to the employee should be returned to the tool crib or accounted for before their departure from site.



Objective and Scope

- ◆ Objective: Assess the procedures and key control activities used to track and account for tools on the WBN U2 Project.
- ◆ Scope: {REDACTED} WBN U2 Project tool program.



Methodology

- ◆ Methodology: To assess the procedures and key control activities used to track and account for tools, we:
 - Reviewed documentation, conducted a process walkdown with WBN U2 Project contractor personnel, observed operations, and conducted interviews necessary to identify contractor requirements, practices, and potential control gaps.
 - Reviewed {REDACTED} Small Tools and Small Capital Equipment Procedure to identify potential control gaps and improvement opportunities.
 - Assessed tool accountability and the accuracy of the tool management process by:
 - ◆ Verifying the existence and assigned user possession of selected tools.
 - ◆ Comparing the actual tool status for selected tools with the status shown in Tool Hound (e.g., Issued or Available for Issue).

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



Finding 1 – Tool Inventory

We found nothing to indicate significant discrepancies in the tool inventory at this time. However, we did note some minor discrepancies in the tracking quantities and unit cost listed in Tool Hound. Some of the discrepancies identified were low-dollar consumable items and overages due to purchase orders not yet entered into Tool Hound.

- ◆ We selected three separate samples and performed inventory for the sample items.
 - Our first sample was taken from the inventory loaded in Tool Hound, which included 669 items with a total value of \$834,145.95.
 - ◆ We selected a dollar unit sample of 73 items with a total dollar value of \$460,347.66 and verified the tools were stored in the toolroom or documentation existed to account that they were checked out to individuals in the field.
 - We identified shortages on 9 of the 73 items. The total of the missing inventory was \$1,646.01, or less than 0.5 percent of the sample inventoried.
 - Some of the missing items included 2 of 20, 3/8" drills; 3 of 9 rolling ladders; and 4 of 10 air hoses.



Finding 1 – Tool Inventory (cont.)

- ◆ While we selected a dollar unit sample in order to be able to project the total population errors, data entry errors in the Tool Hound system prevented us from doing this.
 - We identified three items in our sample with keying errors. The total cost of the keying errors was \$102,834.52, or 22 percent of the sampled inventory.



Finding 1 – Tool Inventory (cont.)

- The second sample was a judgmental sample of the inventory that had not been entered into the system, which according to {REDACTED} was approximately 40 percent of the tools inventory. We identified these items through receiving reports, purchase orders, and other documentation.
 - ◆ In summary, we selected 15 items with a total listed quantity on hand of 278 items and a cost of \$29,017 and verified the tools were stored in the toolroom or that the individuals in the field could account for the location.
 - We found 2 of the 15 items selected had shortages. The total cost of the missing items was \$120.21, or less than 1 percent of the total sample. The shortages consisted of only 1 of 15 bridge clamps and 3 of 180 sockets.
- The last sample was a judgmental sample of individuals with tools checked out in Tool Hound.
 - ◆ We selected ten individuals with tools checked out in Tool Hound and verified that the individuals in the field could account for the location of the tools. They had a total of 136 items with a value of \$17,101 checked out.
 - We were unable to locate 2 of the 136 items selected in our sample. The total cost of the missing items was \$274, or 1.6 percent of the total sample. The missing items were an oxygen regulator and an acetylene regulator that were checked out to the same contractor employee.



Finding 2 – Control Gaps

- ◆ We reviewed {REDACTED} WBN U2 Project small tools procedure, and based on audit knowledge obtained during previous reviews, we identified four controls that could potentially strengthen {REDACTED} procedure:
 - Establishing a tool issue limit to prevent excess tool checkout.
 - Including an accountability statement that individuals are responsible for the tools and equipment issued to them and will be held accountable for their return to the toolroom. The individual will be given credit for the tools he/she returns.
 - Developing guidelines for reporting loss, theft, or vandalism of tools.
 - Monitoring repeated lost, stolen, or damaged tools by individuals to identify potential abuse and theft.
- ◆ Also, while performing our walkdown of the {REDACTED} toolroom, we were told that items costing less than \$50 are considered bulk items and not individually tracked. However, there is nothing in {REDACTED} Small Tools and Small Capital Equipment Procedure defining the criteria of bulk items.



Finding 3 – Additional Observations

- ◆ There are two sea/land containers outside the toolroom that contain overflow inventory items such as electrical equipment, rope, core drills, and chainsaws. The containers were unmanned and unlocked. {REDACTED} personnel stated the containers are locked at night.
- ◆ During our review, we noted instances of non-compliance with {REDACTED} Small Tools and Small Capital Equipment Procedure. Specifically,
 - Tools are checked out using paper entries when the employee checking out the tool does not have a bar-coded badge, the tool is not bar coded, or there is a significant line of people waiting to check out tools. {REDACTED} Small Tools and Small Capital Equipment Procedure specifically states that only craft workers and supervisors with valid employee badges in-hand can check out tools, and nothing is to be dispensed from the tool crib without scanning the item's bar code and the employee's badge.
 - While {REDACTED} produced 15 of 15 impact adaptor tools during our sample testing, 8 of 15 were not given a unique Tool Hound number as required by their procedure.



Recommendations

- ◆ We recommend {REDACTED}:
 - Ensure accuracy of data entry in the Tool Hound system.
 - Consider modifying {REDACTED} WBN U2 Project small tool procedure to include (1) the additional control opportunities identified and (2) the value criteria for bulk items.
 - Ensure compliance with {REDACTED} Small Tools and Small Capital Equipment Procedure.
 - Enhance controls over the inventory in unlocked sea/land containers.

Note: Another assessment will be conducted in the future after construction work and staffing increase.

