



Heavy Equipment Division Tools Control Analysis

2006-505I

February 23, 2006



Objective and Scope

Objective:

- ◆ To assess the procedures and key control activities utilized by the Heavy Equipment Division (HED) Fossil Power Group (FPG), to track and account for tools and equipment used by the FPG and its contractors.

Scope:

- ◆ Tools and equipment controlled by the HED Nashville and Singleton warehouses.
 - Our review does not include tools purchased and controlled by each Fossil Power Group site.

* The HED Nashville warehouse is located in Nashville, Tennessee, and the HED Singleton warehouse is located in Louisville, Tennessee.



Methodology

Methodology:

To assess tool management processes and key control activities, we:

- ◆ Reviewed the HED tool policy (HED.GOI.07.005) to identify the procedures and key control activities prescribed to track and account for tools leased to the FPG and its contractors.
- ◆ Conducted walkthroughs of HED warehouses in Nashville and Singleton to identify actual practices.
- ◆ Compared HED.GOI.07.005 requirements with actual practices.
- ◆ Reviewed documentation, observed processes and operations, and conducted interviews necessary to verify process observations and identify/asses other potential control gaps.



Methodology (cont'd)

- ◆ Assessed the accuracy and completeness of the tool inventory system and the tool management process at both Nashville and Singleton by:
 - Randomly selecting class codes* and verifying the quantity shown in the HED tools tracking system was actually available for issuance.
 - Determining the quantity available for issuance for judgmentally selected class codes and verifying the quantity to the tools tracking system.
- ◆ Observed a tool delivery and transfer by HED to a fossil plant which included:
 - Tool counts.
 - Order verifications and reconciliations.
 - Transfer sign-offs.

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

* Class codes represent different specific types of tools in the inventory system. For example, class code 2207 is a Port-a-band saw, class code 2123 is a ½ inch electric drill, and class code 2141 is a 3/8 inch drill.



Background

- ◆ The fossil tool program began in 1991 for the purpose of providing tools for the FPG and its contractors.
 - Outside contract personnel operated the tool program from 1991 until 1995.
 - In 1995, HED assumed responsibility of the fossil tool program.
- ◆ HED maintains two tool warehouses:
 - Nashville warehouse services the western fossil plants.
 - Singleton warehouse services the eastern fossil plants.



Background (cont'd)

- ◆ HED warehouses are currently utilizing an in-house developed, automated tool tracking system.
 - HED is considering implementing the Tool Management System (TMS) utilized at other TVA sites.*
- ◆ HED's tool program operating expenses are funded by revenue generated through the lease of tools to TVA organizations and their contractors.
- ◆ FPG implemented HED.GOI.07.005 in February 2003, to provide tracking and accountability of tools by:
 - Centralizing inventory control.
 - Reporting and tracking tool costs.
 - Tool loss reporting.

* HED may consider other tool management systems depending on TVA information technology system changes/upgrades and TMS compatibility.



Summary

- ◆ HED appears to be following the policies and procedures set forth in HED.GOI.07.005 for the distribution and reclamation of tools at the fossil plants.
 - However, the computer inventory tracking system does not accurately reflect HED tools available for lease.



Observation 1: Procedures and Key Control Activities

- ◆ We found HED procedures and key control activities ensure that HED leased tools are adequately tracked and accounted for. Specifically, as required by HED's procedure (Tool Management Services--HED.GOI.07.005), HED:
 - Utilizes a standard Order/Release form for the leasing and returning of tools.
 - Utilizes a shipping list to track and maintain control of tools being delivered to the plants.
 - Tracks (1) tagged tools using unique identification numbers and (2) small/untagged tools by issuance quantity.
 - Ensures return of leased tools via the issuance of lost tool memorandum. Plant personnel and contractors are held financially accountable for any missing tools.



Observation 1: Procedures and Key Control Activities (cont'd)

- ◆ Specific HED key control activities include:
 - Requiring plant/contractor personnel to verify the actual tools delivered and having the plant/contractor personnel certify delivery using the shipping list.
 - Verifying the actual tool quantity returned and certifying receipt/pick-up using a release form.
 - Reconciling tools returned to the actual tools shipped at the end of an outage/project.
 - Requiring plant/contractor personnel to locate all tools not returned within 30 days after the end of an outage/project.
 - Issuing a lost tool memorandum at the end of the 30 days which reflects the tools unaccounted for and the amount to be charged to the TVA site or contractor.



Observation 2: Inventory Tracking System

- ◆ While HED appears to be complying with HED.GOI.07.005, the computer inventory tracking system does not accurately reflect HED tool inventory available for lease:
 - The quantity available for lease from the HED Nashville and Singleton warehouses, as shown by the computer inventory tracking system, was verified for 141 class codes.
 - ◆ For 97 class codes, the quantity in the warehouse available for lease equaled the computer inventory system quantity.
 - Our verification represented 850 tools.
 - ◆ For 44 class codes, the quantity in the warehouse available for lease did not equal the computer inventory system quantity.
 - Thirty-eight class codes had fewer tools on hand than stated. Three hundred twenty of the 694 tools pertaining to these class codes could not be located.
 - Six class codes had more tools on hand than stated. Sixty-five were actually available for lease, rather than the 43 reported quantity.



Observation 2: Inventory Tracking System (cont'd)

- ◆ Contributing factors to an inaccurate tool inventory baseline appear to include that:
 - The tool program was transitioned to HED from an outside contractor in 1995 and an accurate inventory quantity was never established for all of the class codes. According to HED:
 - ◆ The current inventory tracking system implemented in 1995 is inadequate (e.g., inadequate reporting and baseline inventory management capabilities).
 - ◆ The TMS utilized by TVA Nuclear has been considered.
 - Warehouse personnel are able to make adjustments to the computer inventory tracking system without approval, documentation, or reconciliation.
 - Conflicting inventory quantities exist within the computer inventory tracking system.
 - ◆ For example, one inventory screen listed class code 2208 (Port-A-Band Saw) as having 47 tools available for lease, while another screen showed only seven tools available for lease.
 - Disposal of scrapped or obsolete tools occurs without being documented.



Recommendations

The Vice President of Fossil Projects should consider the cost effectiveness of:

- Implementing TMS or another tool management system, taking into consideration compatibility with scheduled TVA information technology system changes/upgrades.
- Establishing an accurate baseline inventory for each class code, upon implementation of a updated tool management system.
- Implementing documentation requirements regarding (1) the disposal of scrapped or obsolete tools and (2) adjustments to the tools inventory tracking system.

