



MAINTAINING THE SAFETY, SECURITY AND RELIABILITY OF AMERICA'S NUCLEAR WEAPONS STOCKPILE

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B&W Pantex Demonstrates Magnetic Auto-ID Technology to Track Material in Secure Areas of Plant

Automated system "sees" material movement

When it comes to tracking the nearly 50,000 custom tools, 11,500 shipping containers and millions of records, parts and components at Pantex, barcodes and physical inventories may be making way for a more modern way to manage material.

B&W Pantex recently piloted magnetic auto-ID technology to identify, track and inventory the plant's material assets in even the most restrictive security areas. The technology demonstrates the ability to remove direct human interaction from the great majority of the asset management process, improving accuracy and efficiency.

The project, called the Advanced Inventory and Materials Management (AIMM) pilot, launched in February following an extensive evaluation and intense collaboration with the vendor. The AIMM pilot project concluded in May.

When RuBee™ tags were affixed to such items as tooling and chemicals, RuBee antennas enabled users to view their movement on a computer screen, via Oracle software, as they migrated throughout the pilot test areas. The antennas provide the greatest degree of weapons compatibility available today while ensuring transmitted information is controlled within the bounds of Pantex facilities.

"My experience is that most people think the labs are noted for innovation, but I feel the plants have a lot to offer," said John Doggett, Pantex Site Office authorization official. "I believe our ability to demonstrate the use of RuBee shows innovative thought by Pantexans, but also a dedication to the overall improvement of operations locally that can have a broader impact to improve operations in the enterprise."

Pantex is the first site in the U.S. Department of Energy/National Nuclear Security Administration enterprise to install RuBee technology in a secure area, called the Limited Area. Because of success in the first two pilot phases, Pantex was also the first to install and evaluate RuBee in a Material Access Area – the most restrictive security area.

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Project findings are being published in the Institute of Nuclear Materials Management Conference Journal, and the project plan has been shared with other facilities in the nuclear security enterprise eager to find a materials management solution.

“Pursuing RuBee exemplifies Pantex’s pursuit of becoming a High Reliability Organization,” said John Woolery, B&W Pantex general manager. “We strive to be an HRO by purposefully and continuously looking for ways to improve our systems and processes through redesign or deployment of new technologies and capabilities. We are constantly striving to improve our accuracy, efficiency and reliability.”

“Pantex, like other facilities across the nuclear security enterprise, has been searching for better solutions to the issues with property management for years,” said Leesa Duckworth, AIMM project lead for Pantex. “The problem has been finding a solution that could pass the high levels of scrutiny required for operation in Pantex work environments.”

RuBee is now employed at the Pantex Armory for gun issuance and receipt, and a related RuBee project is under way to demonstrate a fully synchronized RuBee-enabled building at the Pantex Medical Facility. Future applications could include environmental and radiological sampling and special nuclear materials container management.

Results of the RuBee magnetic auto-ID technology pilot at Pantex are available at <http://www.rubee.com/Work/WhitePapers/PantexReport/Auto-ID-RuBeeReport.pdf>.

B&W Pantex manages and operates the Pantex Plant near Amarillo, Texas, for the U.S. Department of Energy’s National Nuclear Security Administration. B&W Pantex is also the proud recipient of the DOE’s Voluntary Protection Program STAR status for safety excellence. The company was also named one of America’s safest companies by Occupational Hazards magazine and has received numerous awards from the National Safety Council.