

Ship Production Symposium 2012

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Abstract for consideration

VCS SY Material Flow Processes and Technology

The VIRGINIA Class Submarine (VCS) Program has been hailed as one of the most successful defense acquisition programs to date. The US Navy has imposed increasingly stringent goals to reduce cost to \$2B per submarine and to reduce construction schedules to 60 months. In addition, the Navy has contracted a 2 ship-per-year build rate, which has been delayed from the initial start date of 2011, and will ultimately result in a 200% increase in material deliveries to the trades using traditional processes. In light of the increasingly aggressive cost and schedule challenges, it is critical to strive for 100% material availability and streamlined material flow processes to support on-time trade work order execution.

This project evaluates promising technologies identified by a previous ManTech Project: VCS Material Management. It further enhances key processes essential to providing the right material at the right location at the right time in the required quantity and quality at the lowest possible cost. The project is being executed in two phases. Phase I tasks established a performance baseline for material flow from storage to use. These tasks were carried out using the Value Stream Analysis methodology and included current state value stream maps, identifying problems and issues, envisioning streamlined future state material flow, performing a gap analysis and devising an implementation plan to achieve the future state. Phase II tasks are currently being carried out including, the piloting of technologies that include wireless hand-held computers with real-time transaction updating, RFID material tracking, automated dispensing of high use material at point of consumption and tuggers with tow carts for "milk run" material deliveries. Improvement plans are focused on material tracking, storage, delivery and consumption with a goal of reducing material handling labor cost by \$2.1M/hull and reducing material cost by \$500K/hull.