



U.S. Military Maintenance Facility

U.S. Military Maintenance Facility Improves Hazardous Materials Management

One of the U.S. military’s large maintenance facilities (IMF) is responsible for maintaining and modernizing the fleet of submarines in support of the mission of the military branch it supports. The maintenance process involves the use of many materials classified as hazardous, so effectively managing these materials is critical to worker safety and regulatory compliance. That task falls to the HazMat team, which is responsible for the inventory of approximately 1,100 types of hazardous materials – from the time they are received from the manufacturer to disposal. The team coordinates the annual distribution of \$885,000 worth of hazardous materials to approximately 90 civilian shops that perform the work on its transport vehicles.

Defense Logistics Agency (DLA) has the overall responsibility for the management of the Hazardous Material Management System (HMMS) program for the Department of Defense (DoD) and other federal government facilities. DLA requires an enterprise solution to manage Hazardous Material (HM) and Hazardous Waste (HW). Following an extensive procurement process, government officials selected the Sphera HMMS solution for hazardous materials management after determining it is the only product of its kind to meet DoD requirements for waste and material tracking. “Our goal is to be able to manage a piece of inventory from cradle to grave and know where it is at every moment. Sphera HMMS gives us the accountability we need to support our goal of maintaining a safe working environment,” said the Material Expeditor, for the maintenance facility.

Efficiently Monitoring Supply and Demand

With 13,000 containers received into inventory on an annual basis, the facility HazMat team needs an effective system for keeping track of inventory levels and demand. The system alerts users when inventory falls below pre-determined parameters and prevents the over-ordering of materials already in stock.

With the Sphera system in place, the team knows exactly how much of each material is used daily by its 90 maintenance shops. Each shop has two rotating “day boxes,” which facility workers inventory daily so that they can top off and replace used items and return unneeded items to inventory. “With Sphera software we know exactly what’s in each box and can make sure everything is accounted for,” continued the material expeditor.

By closely monitoring demand levels and projected usage, the team was able to decrease the number of times it orders the same item each year. “So, rather than ordering five containers of a product every month, we increased the amount we carry and order 30 containers twice per year. As a result, we saw a 17 percent year-over-year decrease in requisitions, which saved us money not only in administration, but also in shipping costs,” said the facility material expeditor.

CHALLENGE

- More efficiently monitor hazardous materials inventory from cradle to grave
- Reduce costs involved with requisition process and waste disposal
- Ensure the safety of workers using hazardous materials

SOLUTION

Hazardous Material Management System

- Material Management
- Waste Management

RESULTS

- Reduced requisitions by 17 percent year-over-year, resulting in cost savings
- Decreased year-over-year containers wasted by 19 percent
- Improved efficiency of materials transfer process, saving 466 to 2,800 hours
- Maintained a safe working environment

Minimizing Costly Waste

One of the HazMat team's goals is to minimize waste and the costs involved with the disposal of expired hazardous materials. "Now, we have an accurate picture of the past 12 months of usage and projected monthly demand, so I can determine whether we're carrying too much of a particular material. Making purchase and inventory decisions based on accurate data led to a 19 percent year-over-year decrease in containers wasted," recalled the facility material expeditor.

Reducing Costs by Sharing Materials among Contractors

DLA provides logistics support to operational joint and expeditionary forces for all DoD services. The Program Management Organization (PMO) establishes process efficiencies and offers better buying power through common item management and divestiture of unneeded inventory, providing savings to the overall DoD budget. By enhancing logistics support the PMO is working toward the elimination of unnecessary redundancies and duplication activities while streamlining supply and storage processes.

The new inventory management system provides the advantage of better tracking usage levels to determine which products can be split among various worksites. "This is a fantastic use case showing the ROI for the HMMS solution in DoD that aligns with the DLA vision and goal of sustainable HazMat logistics," said the HMMS program manager for the DLA.

The program manager and team decant about 90 products for their customers. "For example, by purchasing a 55GL drum and decanting it into smaller containers (usually 14oz bottles), we are able to save money on procurement, save time on receiving and barcoding, save storage space and we are creating a safer work environment for our customers by minimizing the amount of a hazardous chemicals they are exposed to and could potentially be spilled."

The system also provides better tracking of the actual cost of materials used by each shop. "With our old system, if we decanted from a 55-gallon drum, the report would show that one shop's 14-ounce bottle cost \$600. Now, we can see that the bottle only cost \$1.70. So, at the end of the year, we have much more accurate financial figures to reflect the cost of materials used by each shop," said the DLA program manager.

Efficiently Transferring Materials

This facility is one of four large bases that all moved to HMMS at the same time. In the past, each used a separate inventory management system. "Before, we might have four different stock numbers for the same product. So, if we urgently needed a specific product to complete a repair, we would have no way of knowing if one of the facilities had it in stock. Today, it's much easier to transfer materials from one facility to another. The process for transferring materials has

also been streamlined. Before, if something was being moved from one facility to another, "we would have to create the inventory and the correlating Safety Data Sheet (SDS) in our system and from scratch. Now, the materials are transferred bearing standard barcodes indicating the stock number so all we have to do is hit the receive button," continued the program manager.

The DLA program manager estimates that her team now saves nearly 1 hour per materials transfer based on having a more efficient system. Considering they processed 2,800 transferred containers (approximately 20 containers per transfer in 2015, the time savings equates to approximately 140 hours.

Maintaining a Safe Work Environment

With worker safety as a key goal, the facility HazMat team always verifies the chemical composition of a product as part of the process of receipt from the manufacturer. This process, which used to take approximately one week, can now be completed in 24-48 hours. Additionally, the system now more specifically tracks SDS versions "so I know that the chemical ingredients on the SDS number exactly match those in the can I'm holding in my hand," said the facility material expeditor

Having a complete understanding of what each product contains supports the facility's goal of creating a safe working environment for its workers and contractors. Another improvement from a worker safety perspective is that the team can now track where materials are, down to the employee level.

Hazardous materials are tightly regulated by the government, so compliance reporting is essential. This military branch's environmental team can "more easily get information from HMMS to merge with other information than in the past," explains the facility material expeditor.

The DLA program manager is confident that the inventory management system helps the team better meet the needs of her customers, and in turn, support the military's mission.

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- Material Expeditor,
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Moser also appreciates the partnership of the Sphera team and its flexibility in making sure the system meets her team's needs. "Before, there was no process for getting anything in the system changed. We've seen a complete 180 with the help of Sphera software in this respect. I feel that Sphera wants us to succeed and are willing to do what they can to make sure we are successful," concluded the facility material expeditor.