

TRIDENT REFIT FACILITY, KING'S BAY USES "GOOD ERGONOMIC DECISION MAKING" TO PREVENT INJURIES AND WMSDs

The *Navy's Ergonomics Program* was established to reduce the frequency and severity of Work-related Musculoskeletal Disorders (WMSDs), a group of disabilities that results primarily from physical risk factors in the work environment. Weakness and discomfort, which are symptoms of WMSDs, may improve when early intervention leads to medical treatment and changes in work tasks that minimize or eliminate risk factors. The program introduces [ergonomic principles](#) in the redesign of work tasks, workstations, procedures and tools that have proven to minimize risk factors.

Trident Refit Facility (TRIREFFAC), Kings Bay Georgia repairs, overhauls, and refurbishes the East Coast Fleet of Trident Submarines. The facility also repairs Fast Attack Submarines, providing the highest quality work and staying within budgetary constraints.

The eight employees in the TRIREFFAC Supply Department's Ready Stores



Worker portrays use of bodily force when positioning full drums of material on a pallet.

Facility used to manually move 55-gallon drums of hazardous materials. The drums, which are used in submarine refit operations, weigh up to 850 pounds when full. Ready Stores shop workers who manage the 55-gallon drums used to maneuver the heavy drums manually onto pallets and drum dollies to ready them for transport from the Ready Stores Facility to the Refit Facility workshops. Workers typically tilted a drum onto its rim, and then rolled it along the rim to transfer the drum onto a storage pallet or dolly. Moving the drums manually required using forces and awkward postures that put workers at risk for injuries and WMSDs to the neck, back, shoulders, and arms.

Rick Basey, the Safety Specialist responsible for the TRIREFFAC Ready Stores Facility, contacted Donna Philbrick, Manager of TRIREFFAC's Ergonomics Program. Philbrick and Basey researched and evaluated various ergonomic procedures and equipment designed for safely handling 55-gallon drums. After evaluating the drum-handling equipment, Philbrook and

Workers typically tilted a drum onto its rim, and then rolled it along the rim to transfer the drum onto a storage pallet or dolly. Moving the drums manually required using forces



Drum handler attached to forklift eliminates manual lifting of heavy drums.

Basey recommended that TRIREFFAC purchase a *drum handler* as the safest method available for moving 55-gallon drums at their facility.

TRIREFFAC's continued support and funding of the Ergonomics Program allowed Ms. Philbrick to purchase the equipment necessary to transport the drums, streamlining the handling process and minimizing the potential for work-related injuries and WMSDs.

The *drum handler* purchased for the TRIREFFAC Ready Stores Facility is securely fastened to a forklift. The forklift with the attached *drum handler* lifts, transports, and sets down drums previously handled manually. A *drum handler*, which costs approximately \$1,200.00, has the capacity to lift, carry, and set down drums that weigh up to 1,000 pounds.

A Material Handling Equipment Operator drives the forklift fitted with the *drum*



Top hook of drum handler securely grasps drum frame

handler up to a drum and raises the attachment to clasp the bottom of the drum rim. The top hook (shown in photo on left) grasps the frame of the drum while the lower stabilizer (shown in photo below right) firmly secures the drum in the upright position while in transit. The *drum handler* is then used to position the drum on a four-drum storage pallet that



Stabilizer secures drum in upright position

prevents the drum from tipping over or sliding off the pallet. The performance of its *drum handler* has been so satisfactory that TRIREFFAC plans to purchase more.

TRIREFFAC safety and ergonomic departments continually evaluate its operations to ensure that effective ergonomic decision-making is implemented to prevent work-related injuries and WMSDs. Purchase of the *drum handler* has minimized the risk of on-the-job injuries and WMSDs among Ready Stores Facility workers who handle 55-gallon drums.

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