

OPERATIONAL RISK MANAGEMENT IMPLEMENTATION AT THE NAVAL AIR WARFARE CENTER WEAPONS DIVISION

The Naval Air Warfare Center Weapons Division (NAWCWD) with personnel at Naval Air Weapons Station China Lake and Point Mugu, California and the White Sands Missile Range, New Mexico takes seriously the high priority that the Navy places on providing a safe and healthy work environment for its



Inspection of Hazardous Material storage shed

employees. As a first step in this initiative, NAWCWD identified potential occupational hazards at the command and assessed the risk factors associated with those hazards. Once risk factors were clearly identified, they could be eliminated or managed.

The Navy uses a system called *Operational Risk Management* (ORM) to identify and manage workplace hazards. Each work task and work operation is evaluated

using ORM in a systematic manner. ORM consists of four principles:

- Accept risk *only* when the benefit outweighs the cost;
- Accept no unnecessary risks;
- Anticipate and manage risk by planning ahead; and
- Ensure decisions about risk management are approved at the appropriate supervisory level before starting a work operation.

ORM uses a five-step process to evaluate work operations so that hazards are identified in advance and effectively managed. The five steps of ORM are:

- Identify the hazards;
- Assess hazards to determine the risk factors;
- Make risk decisions and develop controls to minimize or eliminate risk factors;
- Implement control of the hazards; and
- Supervise the controls to ensure they are implemented and that they are appropriate and satisfactory.

NAWCWD began actively implementing ORM in October 1999. NAWCWD's ORM Implementation Team included safety staff members from the China Lake Occupational Safety and Health (OSH) Office, the Aviation Safety Office, the Physical Security Department, and a representative from the Admiral's office. ORM principles were introduced to the NAWCWD workforce during a *Six Month Rolling Review* of selected work operations. The Team evaluated one work site at a time, then immediately *rolled* to another site for evaluation.



Inspecting drums of hazardous material

The Review had three objectives:

- To introduce the ORM concept to the NAWCWD workforce;
- To train supervisors and employees in using ORM; and
- To evaluate the *safety culture*, or the customary attitudes and behaviors regarding safety within an organization, in the various work areas at NAWCWD.

The first step in the *Six Month Rolling Review* was to identify work areas that were considered *high risk* for occupational injuries or illnesses. A work area was considered *high risk* if the nature of the work was identified as inherently hazardous, if its mishap statistics were above average, or other hazard information was available to the OSH Office. The ORM Implementation Team visited 12 work areas targeted for the *Six Month Rolling Review*.



Auxiliary Police demonstrate safe clearing of weapon in gun barrel

Members of the ORM Implementation Team joined with employees, or process owners, chosen by their supervisors at

each of the 12 areas being evaluated. After the Team members and process owners determined which operations in their areas to review, they implemented the five-step ORM process in each of those areas.

The evaluations included looking over safety Standard Operating Procedures (SOPs), observing high risk work processes and work tasks, ORM training, and interviewing various workers selected at random. The ORM Implementation Team also developed a format for employees to use in applying ORM and documenting their findings.

The ORM Implementation Team also trained employees to conduct the ORM process independently. ORM classes were adapted to each department's specific needs and were presented by the China Lake OSH Office.



Forklift truck safely transports practice bombs

In addition, the OSH Office developed a *Supervisors' ORM Course* for all NAWCWD supervisors, whether or not they participated in the *Six Month Rolling Review*. The OSH Office presents this four-hour course to help supervisors implement ORM principles at the work unit level. The course provides information on ORM concepts and procedures and offers guidance for supervising implementation of risk management decisions.

The third and final ORM training module was provided to all workers involved in the *Review*. It focused on managing operational risk factors, including analyses of the four principles and five steps of ORM and sample ORM exercises.

During the last phase of the *Six Month Rolling Review*, the ORM Implementation Team evaluated the *safety culture* at NAWCWD. The Team asked 560 employees to complete forms rating the importance of workplace safety. Of the 560 employees questioned, 253, or approximately 45% of the employees, completed and returned their questionnaires. In addition, randomly selected employees from the *Six Month Rolling Review* work sites were invited to attend *safety focus groups* where they openly discussed safety concerns. More than 220 employees participated in these *focus groups*, which

met a total of 30 times. The questionnaire responses and the *focus group* meetings provided valuable information on the *safety culture* at NAWCWD.

The NAWCWD Executive Safety Council, a high-level steering committee of managers and safety specialists, meets monthly to review and decide on matters involving NAWCWD safety policy. The *Six Month Rolling Review* was one of the Executive Safety Council's first initiatives and its findings were briefed to the Council. Long after the *Six Month Rolling Review* was completed, the Executive Safety Council continues to ensure that ORM remains an important risk management tool. ORM training is ongoing, and OSH specialists routinely assist in hazard identification and control to protect NAWCWD's workforce.

Using the principles of ORM, NAWCWD continues to identify and manage high-risk work tasks and work operations in order to minimize workplace hazards, enhancing workplace safety and health through reduction of occupational injuries and illnesses.

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