November 2003

Inside Oversight

Office of Independent Oversight and Performance Assurance
U.S. Department of Energy

Inside this Edition

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EMERGENCY MANAGEMENT

An Integrated Approach to Security and Emergency Management Performance Testing

A security barrier is breached, and a massive explosion takes place that may have caused the release of hazardous material. Are these problems for security, or for emergency management?

Obviously, the answer is "both."

Security situations can evolve into emergencies, and natural events and accidents often require security response. For example, the wildland fire at Los Alamos in May 2000 created a significant security concern when security personnel had to be relocated. Recognizing that DOE faces many such challenges, the Office of Emergency Management Oversight (OA-30) is teaming with the Office of Safeguards and Security Evaluations (OA-10) to conduct integrated performance tests of security and emergency management readiness and performance. The objective is to take a more holistic approach to evaluating DOE sites' ability to respond effectively to emergencies initiated by security-related events.

OA-10 and OA-30 both conduct well-developed performance testing programs that have, over the past 15 years, been effective in evaluating and promoting improvement in security and emergency management programs throughout DOE. OA-10 uses various types of performance tests; the most dramatic is force-on-force testing, which pits the site's protective force against an attack by a simulated design-basis threat group played by OA-10's Composite Adversary Team. Similarly, OA-30 evaluates sites' full-participation exercises and also conducts tabletop performance tests that assess the performance of selected emergency response personnel, typically incident commanders, crisis managers and EOC cadre, consequence assessment teams, and other initial decision-makers.

The move toward integrating these two performance testing programs is already under way. OA-30 has been conducting testing using

security-related scenarios and the participation of security personnel for nearly two years. As an example, performance test scenarios have involved hostage taking and events caused by a malevolent insider leading to a release of hazardous material. This practice is being expanded to more directly involve security functions, and OA-10 inspectors are augmenting emergency management inspection teams. Also, planning for OA-10 force-on-force tests will include additional scope and objectives to allow OA-10 and OA-30 to evaluate the interfaces between site security and emergency response organizations. In addition, while a traditional OA-10 force-on-force test normally ends when the postulated security threat is eliminated, an integrated test will continue past that point to evaluate incident command interfaces, staging of emergency equipment and personnel, and transfer of responsibilities to the emergency response organization to provide a seamless

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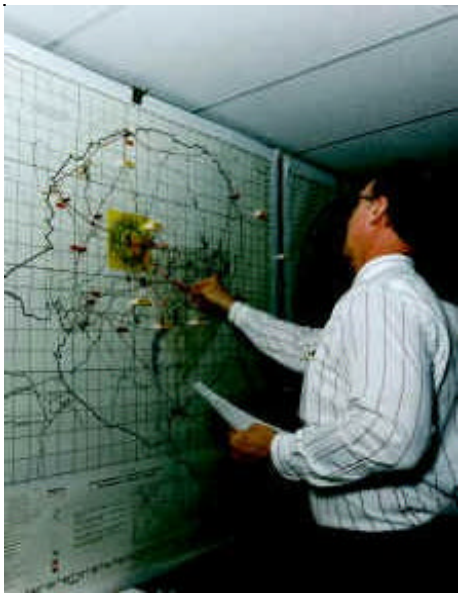
New Process Promotes Broader Communication of Common Problems—and Solutions

Every evaluation conducted by the Office of Independent Oversight and Performance Assurance (OA) yields noteworthy practices and opportunities for improvement that could be applied across the DOE complex. Getting this information to the people who can best take advantage of it is a constant challenge.



The 2003 annual meeting of the DOE Emergency Management Issues Special Interest Group focused on lessons learned, including two sessions on recent OA assessments. As valuable as these meetings are for sharing information, OA is implementing a new process to promote wider distribution of lessons-learned information and ideas resulting from OA inspections on a timelier basis.

Learning from Good Practices

A number of sites may exhibit a weakness that OA has noted during one evaluation, but the sites that were not evaluated do not take advantage of OA findings to self-identify and address common weaknesses. Equally important, sites may not take advantage of noteworthy practices identified by OA.

One noteworthy example OA has identified is the process the Y-12 site has developed to keep their emergency planning hazards assessments up to date. Maintaining current hazards assessments is an area that OA has found to be a problem at many other sites. The Y-12 process is founded on detailed procedures the site has developed for:

- Identifying hazardous materials and updating the hazards assessment when changes in the allowed quantities of hazardous materials (both increases and decreases) are proposed

- Involving the emergency management organization when proposed changes to facility design may impact the hazards assessment or hazards survey.

Y-12 has integrated this process with its processes for keeping the authorization basis and the fire hazards analysis current. Each facility has an individual assigned responsibility to identify and document hazardous materials, and through this process a maximum allowable inventory is identified. The resulting hazardous material identification documents are reviewed and approved by the facility manager and distributed as controlled documents. This document then serves as the common starting point for developing authorization basis documents for emergency management, fire protection, environmental management, and facility safety. Additionally, the event consequences used in the security vulnerability assessment are taken from the emergency management hazards assessment developed for malevolent acts. A formal change control process assures that facility and process changes are appropriately evaluated and incorporated into program documents and controls. The process used for hazards assessment development and maintenance at Y-12 is a useful model for sites trying to ensure that facility and process changes do not invalidate the basic premises of their emergency planning.

Another noteworthy practice is the identification and analysis of hazardous materials that are not included in the codified lists of hazardous materials for which threshold planning quantities (TPQs) must be derived. (The TPQ is the quantity above which DOE facilities must perform quantitative analyses to support emergency planning). For example, although high explosives are not included on the codified lists of hazardous materials, Pantex recognized that these materials exhibit hazardous toxicological properties (as well as the hazard of blast damage) and derived TPQs for these materials based on conservative release assumptions. Similarly, on finding that emergency response planning guidelines —needed to support protective action criteria—for high explosives were not

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Targeted Reviews to Speed Improvement

To accelerate improvement in site emergency management programs, the Office of Emergency Management Oversight (OA-30) plans to institute a program of targeted reviews. These reviews will focus on two critical emergency management areas:

- The performance of decision-makers in response to postulated emergencies, including incident commanders, the emergency operations center cadre, and consequence assessment teams
- The DOE field element's role in overseeing the site's emergency management program and participating in emergency response.

OA-30 expects the targeted scope of inspections to minimize the impact on the inspected site. When a tabletop performance test is scheduled, test planning would require OA-30 to visit the site in advance of data collection. Such performance tests would evaluate command and control, roles and responsibilities, and the ability of decision-makers to mitigate the consequences of the event and protect workers and the public. The objective is to provide an evaluation of performance that will reflect on the effectiveness of the individual elements of the emergency management program, defined by DOE Order 151.1A, *Comprehensive Emergency Management Program*. Since the targeted reviews will not include extensive programmatic evaluation of the emergency management elements, the size of the inspection team, length of the inspection, and impact on site activities can be minimized. The sites will be responsible for analyzing performance weaknesses to identify causes and measures to correct appropriate program elements, such as training, drills, or plans and procedures.

Well-focused OA-30 reviews will appropriately build on site efforts to yield the greatest improvements in the least time. OA-30 can easily adjust the scope of a targeted review by adding a team member to cover areas of additional interest, such as hazards assessments or feedback mechanisms, whenever appropriate. Each review will culminate in a report.

OA-30 expects to test the targeted review process during fiscal year 2004.

New Process Promotes Broader Communication of Common Problems—and Solutions (continued)

available in the published literature, Pantex derived plant-specific protective action criteria based on industry literature and standards. OA identified this noteworthy effort during an inspection in November 2002. Other sites that store high explosives could take advantage of the analysis done at Pantex to address the toxicological hazards associated with these materials in their emergency planning efforts.

Field Sites To Benefit

To promote better communication of inspection results and to improve OA's operational awareness of emergency management programs in the field, the Office of Emergency Management Oversight (OA-30) will develop a list of contacts for DOE and contractor emergency management programs. When OA issues a new emergency management inspection report, the OA-30 communications coordinator and team leader will send an email to these points of contact to advise them that the report is available, tell them how to access it on the OA web site (registration and passwords are required), and extend an invitation to discuss specific issues or clarify the inspection results.

This process improvement will serve two purposes. First, OA will take the initiative to assure that new information gets quickly to the people who can best use it, eliminating the need for site personnel to remember to check the OA web site periodically for new reports. Second, it will encourage the points of contact to review other sites' inspection reports.

This OA initiative is intended to help DOE and contractor emergency management staff remain aware of areas of concern across the DOE complex. With this information, sites can more readily identify their own possible areas of weakness and consider using the identified noteworthy practices to enhance their own programs. OA-30 will also make noteworthy practices more visible in their inspection reports, underlining the growing emphasis on program improvement.

Field organizations may wish to incorporate information from this process into their existing lessons-learned programs. Additionally, they should consider using OA inspection reports and inspector guides to help guide contractor self-assessments and DOE line management program reviews by including, in their planning, lines of inquiry related to weaknesses identified at other sites.

Upcoming OA Activities

ES&H and Emergency Management

Savannah River Site

ES&H

Pacific Northwest National Laboratory

Security and Cyber Security

Y-12 Plant

An Integrated Approach to Security and Emergency Management Performance Testing (continued)

response to deal with the consequences of the postulated event.

OA-30 has observed some common weaknesses during recent tests, many having to do with command and control issues between the security organization and other involved groups, such as fire department rescue and reconnaissance, environmental monitoring personnel gathering field data to support decision making, and medical responders. Also, incident command system training is often not provided to security incident commanders, or it is inconsistent with that given fire and rescue incident commanders. These weaknesses can be addressed by site emphasis on systematic planning, interoperable communications, and clearly defined interfaces with the many onsite and offsite organizations that would be called on in an emergency.

Some sites have recognized the need to implement an integrated and comprehensive approach to responding to emergencies initiated by security events, and OA is building on this experience. One site has improved its response posture through a phased approach, recognizing that without completing the necessary planning, the responses to exercises and actual events will be ad hoc. The process begins with reconciling design basis documents and procedures used by response organizations. Tabletop walkthroughs are then used to test procedures and clarify roles and responsibilities. Performance tests are conducted with key decision-makers to test their understanding of and ability to implement the processes, procedures, and interfaces. Finally, a full participation exercise is conducted to ensure that response efforts are seamless among all responding organizations, including security, fire fighters, and emergency managers.

The scope and approach to integrated performance testing by OA is expected to be site-specific, based not only on the risks and vulnerabilities but also on the maturity of the emergency management and security program interfaces. Performance test planning will begin with an evaluation of emergency management and security technical basis documents, such as hazards assessments and vulnerability assessments, to verify the consistency of consequence assessments for postulated events. Procedures that are untested, out of date, or simply not yet written will also be addressed.

Follow-up inspection activities will be designed to further integrate OA-10 and OA-30 performance testing to determine whether the command and coordination of all response and management elements provide for effective performance. Combining the security and emergency management elements of performance testing will reduce the burden on sites by limiting the need for multiple tests. It will also provide the Secretary of Energy, the National Nuclear Security Administrator, and other senior DOE managers more comprehensive information on DOE's ability to manage emergencies that involve security threats. ■

Solicitation of Comments, Questions, and Suggestions

OA welcomes your thoughts about our newsletter. Please send or phone comments, questions, or suggestions to:

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