

**Independent Oversight
Review of
DOE Headquarters
Emergency Response Plans and Performance**



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Prepared by
Office of Independent Oversight and Performance Assurance
Office of the Secretary of Energy

**OFFICE OF INDEPENDENT OVERSIGHT AND PERFORMANCE ASSURANCE
REVIEW OF DOE HEADQUARTERS
EMERGENCY RESPONSE PLANS AND PERFORMANCE**

EXECUTIVE SUMMARY

INTRODUCTION

The Secretary of Energy's Office of Independent Oversight and Performance Assurance (OA) conducted a review of emergency response plans and performance at DOE Headquarters (HQ) in February 2003. The purpose of this review was to evaluate the readiness and effectiveness of the DOE and National Nuclear Security Administration (NNSA) emergency response teams for a postulated emergency at a field site, and the HQ Incident Command Team for an emergency affecting the Forrestal building. In addition, OA was tasked to evaluate the current status of DOE's Continuity of Operations (COOP) program plans and provide recommendations for facilitating the ongoing planning efforts.

To conduct this review, OA planned and executed three performance exercises specifically designed to test the HQ emergency response capabilities; one simulating an emergency at a DOE site and one at an NNSA site, and a third at the Forrestal building in Washington, D.C. The third exercise laid the groundwork for a follow-on workshop facilitated by OA to discuss and identify the critical elements necessary to transition from a localized emergency to a situation wherein DOE must reconstitute specified operational capabilities at an alternate location.

RESULTS

The three HQ programs evaluated during this review are in various stages of development and implementation. The Occupant Emergency Program for responding to an incident or emergency affecting a local HQ building was rekindled in the wake of September 11, 2001. Since that time, the Office of Management, Budget, and Evaluation (ME), in partnership with the Office of Security (SO), has put forth tremendous effort to establish a robust and continuously improving program that has significantly increased the safety of HQ employees and dramatically improved the response posture of the Department. This program is supported by an ongoing program of tabletop drills and response exercise that have presented numerous, challenging situations to HQ responders and off-site agencies in the metropolitan Washington D.C. area. The benefits of these drills and exercises were reflected in the overall effective response performance of the incident command team to the postulated emergency scenario presented to them. ME's success in garnering the active support and involvement of the majority of HQ elements is noteworthy in DOE and should serve as a model for developing and implementing other programs that require engagement by multiple DOE and NNSA HQ organizations.

The long-standing HQ Operations Center Watch Office and Emergency Management Team have made incremental improvements in their response capability over the past couple of years. An updated HQ Emergency Response Plan was issued in January 2002 after many years without revision. This plan describes a sound EMT concept of operations and clearly identifies the respective roles of the NNSA Office of Emergency Operations (NA-40), the cognizant program office, and essential support organizations, such as the Office of Public Affairs, in responding to the HQ Operations Center to provide support for an emergency impacting a DOE or NNSA field site. The Watch Office has also revised and improved their process for making HQ notifications in an emergency. However, the effectiveness of the EMT and Watch Office response is undermined by the lack of a defined structure for managing incoming and outgoing emergency information and an inability of responders to recognize the relative importance

of events occurring and actions taken during an emergency. As a result, the most accurate and credible information being received during the postulated emergencies was not readily available to EMT members and therefore not available for consideration in response decision-making and communication to senior Department officials. This review also identified that the DOE and NNSA public affairs offices have not established plans, procedures, or protocols for releasing public information or handling the expected onslaught of media, stakeholder, and concerned citizen inquiries during an emergency. Most importantly, the majority of Watch Office and EMT weaknesses identified in this report have been identified previously by SO and OA but have not been addressed and corrected. There is no process within HQ to assign emergency planning and response deficiencies to the cognizant program or support office for correction or resolution, or to verify that completed corrective actions are effective.

The Departmental HQ COOP program is in its initial stages of development. Extensive efforts have been taken to establish a draft Departmental COOP plan. Overall, HQ organizations have been responsive to senior management direction to develop and submit draft office specific COOP plans and, more recently, to identify and plan to reconstitute their self-identified critical essential functions at an alternate location for a short-term period. Some offices have already taken significant steps to establish those alternate locations and redundant processes or systems for continuing operation of their critical essential functions in an emergency affecting the Washington, D.C. metropolitan area. However, there is an overwhelming amount of work that remains to define and implement a comprehensive and viable Departmental COOP program. Since being assigned responsibility for developing this program, the Office of Operations Support (SO-40) has not been provided dedicated resources to execute this task and current program activities are being conducted using other SO program resources. SO-40 has not established a project management plan that fully outlines the tasks, resources, and support necessary to develop the COOP program, or milestones and measures by which to gauge the progress and success of the implementation efforts. Without such a plan, it will be difficult to focus the resources necessary to complete the project and sustain its momentum over the long term.

CONCLUSIONS

DOE Headquarters is highly prepared to respond to an incident or emergency wherein the impact is confined to a local HQ building and/or its employees. However, the Department is not prepared to mount a response effort that requires mission critical functions to be carried out at an alternate location without the availability of HQ personnel and facilities, and HQ is not fully prepared to execute its assigned functions in an emergency affecting a DOE or NNSA field site. Since responsibility for each of these three programs is assigned to a different HQ organization, program planners and responders have not had the benefit of using common resources, sharing lessons-learned, and building upon the synergism of a fully integrated program. The successful implementation and maintenance of all three programs will require sustained leadership from multiple organizations within HQ, senior management support, and clearly defined expectations to ensure that DOE and NNSA are as prepared as possible to react and respond to an event or emergency that threatens or impacts Departmental interests regardless of its origin and magnitude.

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To conduct this review, OA planned and executed three emergency exercises specifically designed to test the HQ emergency response capabilities; one simulating an emergency at an NNSA site, one at a DOE site, and a third at the Forrestal building in Washington, D.C. The NNSA exercise scenario consisted of a postulated bomb threat at Lawrence Livermore National Laboratory, discovery of a suspicious device near the Hazardous Waste Management Facilities, and a subsequent explosion that caused an offsite release of radioactive material. The DOE scenario consisted of an explosion of suspicious origin at a uranium hexafluoride cylinder storage yard at the East Tennessee Technology Park that resulted in a release of the cylinder's hazardous radioactive and chemical constituents. The Forrestal building scenario postulated a DOE employee being taken hostage by armed intruders who gain access to the building's underground parking garage and later threaten to blow up the building if their demands are not met. The third exercise laid the groundwork for a follow-on workshop facilitated by OA to discuss and identify the critical elements necessary to transition from a localized emergency to a situation wherein DOE must reconstitute specified operational capabilities at an alternate location.

The exercises were completely planned, prepared, controlled, and evaluated by OA. To plan for and evaluate the exercises, OA reviewed the current HQ documents that address the response to building and site emergencies. These included the Occupant Emergency Plan, HQ Emergency Response Plan, Operations Center notification procedures, and protective force response procedures among others. All field functions and notifications to offsite agencies were simulated by OA such that all exercise play was confined to DOE Headquarters. The exercise scenarios presented were based on site and building specific plans and procedures to ensure that they represented a fair and realistic challenge to the responders. Each exercise was followed by an exercise critique (commonly referred to as a "hot wash") to allow participants to discuss their immediate reactions to the performance observed during the exercise. Following the critique, all responders were provided an opportunity to provide anonymous written comments to OA regarding exercise plans and performance or the conduct and control of the exercise.

To provide insights on and openly discuss the current status of the HQ COOP program, OA facilitated a workshop attended by representatives from the key DOE and NNSA organizations presumed to have some critical essential functions in maintaining continuity of the Department's operations under significant adverse conditions impacting DOE HQ buildings and/or employees. The purpose of the workshop was to collectively identify those critical essential functions and build a common understanding of the range of functions, and begin defining the infrastructure needs to facilitate relocation and reconstitution of those functions at an alternate location. A variety of draft documents currently exist to support these efforts. These documents are a work in progress and supplemental guidance is being developed to advance the process.

BACKGROUND

The response to an incident or emergency affecting a Headquarters building is addressed in the DOE Headquarters Occupant Emergency Plan (OEP). When this plan is activated, an incident command team reports to a command center. In the Forrestal building, this command center is located adjacent to the Central Alarm Station (CAS). The response effort is managed by an incident commander who is typically from the Office of Management, Budget, and Evaluation (ME) but could also be from the Office of Security (SO). The incident command team response is terminated when the incident has ended or been resolved, command is transferred to another Federal agency, or the DOE Continuity of Operations (COOP) Plan is invoked.

The HQ response to an emergency that occurs at a DOE or NNSA field site is initially handled by the Headquarters Operations Center Watch Office (hereafter referred to as the Watch Office) that is managed by the Office of Operations Support (SO-40) and is operational 24 hours a day, seven days a week. The Watch Office will notify the Director, Office of Emergency Operations (NA-40) or his designee who serves as the Headquarters emergency manager. Depending upon the severity of the event, the emergency manager may decide, in conjunction with the affected Lead Program Secretarial Office (LPSO) or Cognizant Secretarial Office (CSO) whenever possible, to activate an Emergency Management Team (EMT). This team consists of a program office support team comprised of program office representatives, and an emergency management support team comprised of responders from multiple support organizations. These organizations include the Offices of Environment, Safety, and Health; Public Affairs; and Congressional and Intergovernmental Affairs. The EMT operates out of the DOE Headquarters Operations Center Executive Team Room (hereafter referred to as the Operations Center). An alternate Operations Center (AOC) is available in Germantown if the Forrestal OC becomes uninhabitable or non-operational.

If a decision is made to relocate DOE personnel to Germantown or outside of the Washington, D.C. metropolitan area to reconstitute critical Departmental functions in an alternate location, the DOE Headquarters COOP plan is activated. Individual HQ organizations have submitted initial draft office-specific COOP plans to the HQ COOP program manager in response to a November 2001 memorandum from the Deputy Secretary. Plans to use this information to establish a comprehensive and integrated department-wide COOP program are in their infancy. Most recently, recognizing the growing possibility for war and the increased threat of domestic terrorism, the Deputy Secretary issued a February 6 memorandum directing that each HQ organization plan for various emergency contingencies, including the possible need to relocate operations due to the impact of malevolent acts or elevated threat situations affecting Washington, D.C. To this end, organizations with self-identified responsibilities for maintaining critical essential functions have developed initial "short-term" COOP plans that provide for the smallest staff necessary to support the Secretary and the Department for limited duration operations at the onset of a national emergency.

The results of this review identify positive attributes and items requiring attention for the HQ Occupant Emergency, emergency management, and COOP programs. Recognizing that the Department's COOP plan is continuing to evolve, the information presented in this report pertaining to COOP reflects current program planning activities and not performance effectiveness. For each program, OA has also provided opportunities for improvement. These potential enhancements are not intended to be prescriptive. Rather, they are intended to be reviewed and evaluated by the responsible DOE and NNSA managers, and prioritized and modified as appropriate, in accordance with DOE Headquarters' emergency management, response, and continuity of operations objectives.

RESULTS

Positive Attributes

The success in developing the Occupant Emergency Program should serve as a model for establishing other HQ programs that require coordination among multiple NNSA and DOE line and support organizations. Since September 11, 2001, ME has led the development and implementation of a strong and effective Occupant Emergency Program. While the program is still maturing and continuously improving, the safety and awareness of employees in HQ buildings and the incident command team emergency response posture have greatly increased in the past year. The cooperation and active participation by the majority of HQ line and support organizations, and most notably SO, in developing this program is a noteworthy accomplishment. The response capabilities established by this program have been repeatedly tested through numerous drills and tabletop discussions presenting a wide variety of postulated emergency scenarios to responders, including non-DOE organizations in the greater Washington D.C. metropolitan area. The results of these efforts were clearly evident in the overall effective performance of the incident command team to the Forrestal building emergency scenario.

Cooperation among staff from the many DOE and NNSA organizations involved in responding to an emergency is a strength. The HQ Emergency Response Plan and Occupant Emergency Plan provide a good foundation and framework for responding to a DOE/NNSA site or local HQ building emergency. Both plans clearly define the concept of operations and roles, responsibilities, and authorities of the HQ emergency management and incident command teams, respectively. OA observed that responders are familiar with the procedures and they serve as effective tools in facilitating response. Throughout the exercises, both EMTs and the incident command team demonstrated excellent teamwork. The EMT emergency manager and program office support team, and the ME incident commander and SO, respectively, recognize the need for and established a strong partnership in working toward common emergency response objectives. While coordination among the various response elements still needs improvement, responders from all organizations were active participants in exercise play and demonstrated extreme professionalism in handling the postulated emergency events and working with the OA exercise controllers and evaluators. It was evident from the post-exercise “hot wash” critiques that the majority of responders are truly committed to improving the HQ emergency management program and response capabilities.

HQ organizations have been responsive in assigning staff and submitting office-specific COOP plans and updates as required. Each HQ organization has developed an initial draft plan outlining their needs for continuing self-defined critical operations in an alternate location during an emergency, as required by the November 2001 DOE Headquarters COOP, and has designated a COOP coordinator as a primary point-of-contact for their plan. The NNSA and Office of Environment, Safety, and Health plans are particularly comprehensive and their coordinators have taken leadership roles in helping to advance the COOP planning process. ME has taken an active role in beginning to outline transportation needs, employee communications systems, and personnel accountability processes, and identify locations and infrastructure requirements for continuing HQ operations at an alternate site besides Germantown. Most recently, each HQ organization responded promptly when directed to review existing COOP plans and provide updates to address “short-term” plan contingencies.

Some offices have already taken significant steps to establish alternate locations and redundant processes or systems to support continuing operation of their critical essential functions. For example, NNSA has worked closely with the NNSA Service Center in Albuquerque (formerly the Albuquerque Operations Office) to establish plans for Service Center staff to function in NNSA

management positions in the event of a major emergency impacting the Washington D.C. metropolitan area. Service Center staff have also developed definitive relocation plans for NNSA personnel arriving in Albuquerque. A matrix of key functions, qualified substitute personnel, and phone numbers is immediately available to facilitate communications with responsible managers in an emergency. The Office of Intelligence (IN) has established a comprehensive COOP plan using materials from the DOE Headquarters Business Continuity Plan Working Group and based on Office of Management and Budget planning assumptions. IN also drew upon the experiences of the Intelligence Community Continuity of Operations process in developing their plan. IN has established an alternate work location and backup computer network to support their critical essential functions at the Sandia National Laboratories. The backup strategy supports continued operations of several classified communications services and connectivity to additional internal and external networks in an emergency affecting the Forrestal and Germantown buildings. These plans could provide valuable insights to other HQ organizations as they continue to refine their own office plans.

Items Requiring Attention

Responders were not able to readily recognize the importance of incoming information that warranted immediate attention or priority consideration and tracking. For example, in their role as the initial HQ response element, watch officers did not:

- take note of the time that a time-specific detonation threat was received so that this information could be communicated to senior officials and considered in decision-making. (site exercise 1)
- inform SO of two calls they received from CNN (simulated) reporting that CNN had received threats and demands directly from a perpetrator in the DOE building. Instead, these calls were transferred to public affairs. (Forrestal exercise)
- inform the CAS or SO of a third call from CNN reporting that the perpetrator claimed to have a bomb in the Forrestal building garage and was threatening to detonate it. This call was transferred to public affairs where the information was repeated but not relayed to SO. The CAS and command team did not learn of this threat until 17 minutes later when the Federal Protective Service reported hearing about the bomb threat while watching CNN. (Forrestal exercise)
- immediately handle a call from a site making the initial report of a General Emergency at a DOE site. The caller was put on hold for an unreasonable period of time for an event of this magnitude. (site exercise 2)
- reevaluate their ongoing initial notification process when new information was received from the site to determine whether those notified previously should be contacted again and updated as a priority. When information about a security declaration and then an emergency declaration of the highest category were received from a site, the watch officers continued down their list of notifications without considering whether SO and/or the NA-40 emergency director, who were initially contacted before this information was received, should be notified of the new information first. (site exercise 1)

The EMT and incident command team also did not recognize and address or resolve information that warranted their attention or consideration. For example:

- One EMT did not question why the protective action recommendation distance was increased threefold 25 minutes after an explosion occurred and more than one hour after the General Emergency was declared. (site exercise 1)
- Another EMT did not determine the downwind protective action distance recommended by the site and record it as information that might be requested by senior officials. Although the relevant reference materials were available, the EMT did not recognize and question why the recommended protective action distance was one third of that contained in the applicable emergency action levels.

The EMT also did not question why the dispersion data that was generated for the event showed impact distances that were one third to one eighth of that identified in the action levels or one third to one half of the recommended protective action distance based on similar input data.

- The EMTs did not recognize that the dominant health effect from the postulated uranium release was from its chemical concentration rather than radiation dose (site exercise 1), and did not inform the Deputy Secretary designee that the health impact at the greatest distance downwind from the postulated uranium hexafluoride release could be from uranyl fluoride and not hydrogen fluoride. (site exercise 2)
- The EMT decided to raise the security condition to level 1 (SECON-1) at the Oak Ridge Reservation but never discussed this with the affected site or notified the site of their decision. (site exercise 2)
- On the first call received by the CAS from the perpetrator, the caller stated that if a specific action was not taken within 30 minutes, the hostage would be shot. This 30-minute deadline was not tracked so that it could be used in making decisions as the threatened time approached or after it had passed uneventfully. (Forrestal exercise)
- The incident command team did not consider contacting and questioning the CNN employee who had received three telephone calls directly from the perpetrator. (Forrestal exercise)
- The incident command team did not fully consider that other terrorist attacks were occurring in the metropolitan area when the decision to release employees from their assembly areas to go home was made. (Forrestal exercise)

Information management is a major weakness that is significantly degrading HQ response effectiveness. Neither the occupant emergency program nor HQ emergency response program has established an effective process for collecting, assimilating, culling, and reporting information being received during an emergency. Incoming information is not being logged in a format or structure that permits responders to readily recognize:

- critical response decisions such as significant changes in recommended protective actions,
- events threatened to occur at a particular time, such as killing of a hostage or detonating an explosive device,
- the source of information as an attribute to consider in determining the likelihood of its credibility, and
- what tasks have been assigned to individual responders and their current status at a given time.

The Watch Office and EMT use multiple mechanisms to record information including emergency intake forms, EMT activation forms, operations center emergency notification forms, an electronic chronological log, an operations center white board, situation reports, and the video projection log. There is no central collection point for all of the information being received by individual EMT members or being reported during the periodic update briefings held by the emergency manager. One of the most important and reliable sources of information that is transmitted to the Watch Office by the sites is their offsite emergency notification forms. These forms were rarely used as a source of information during the exercises. As a result of poor information management, some of the most critical emergency related information was not made available to decision-makers or provided to senior NNSA and DOE officials when they received briefings on the postulated incidents. In addition, the lack of consistent information among responders and timely, consistent information updates caused the EMT operations and communications to become largely undisciplined.

In the incident command center, CAS personnel kept a log of events reported in incoming telephone calls. When significant events occurred, this information was conveyed verbally to the incident command team by the Protective Force Commander. Although an individual in the command center was recording much of the information being reported, there is no pre-planned, structured system to record all of the events

being reported or the actions taken by responders, such as required emergency notifications. For example, ten minutes into the postulated event, the CAS was informed by the Federal Protective Service that the Federal Bureau of Investigation (FBI) would be notified and that their response time was 45 to 60 minutes. More than 15 minutes later, the Protective Force Commander recognized a need for the FBI and called them directly for assistance. Briefings to the Energy Secretary designees during the site emergencies and to the FBI officer who was to take control of the Forrestal incident were performed extemporaneously without the benefit of having the best information available at the time and without a format to ensure that all of the key response actions were communicated.

Public affairs functions have not been sufficiently planned and integrated into HQ emergency planning and response. The DOE Office of Public Affairs and NNSA Office of Congressional, Intergovernmental, and Public Affairs have not established plans, procedures, or guidance for monitoring and disseminating public information during an emergency affecting an HQ building or DOE/NNSA site. These plans are required by DOE Order 151.1A, *Comprehensive Emergency Management System*, and the HQ Emergency Response Plan. Further, the Occupant Emergency Plan and HQ Emergency Response Plan do not address public affairs functions and operations. As a result, HQ is not prepared to respond publicly and in a timely manner to a DOE/NNSA emergency that may have already received national media attention and public broadcast. A mechanism has not been established to determine what information is authorized for public release in an emergency and who is permitted to authorize release of that information. During the Forrestal exercise, the Director of Public Affairs informed SO that CNN was aware that a hostage had been taken at the Forrestal building. Despite her concerns about the credibility of the Department if such information was not confirmed, SO told her not to release that information. It is not clear whether SO possessed that authority, particularly since SO was not in command of the overall response effort. The handling of media, congressional, and concerned citizen inquiries among the Watch Office, EMT, incident command team, Office of Congressional Affairs, and Office of Public Affairs also has not been defined. In some cases, Watch Office personnel recorded such inquiries and then informed public affairs. In other cases, the Watch Officers transferred the callers to public affairs. In many cases, callers were disconnected or put on hold for extended periods of time and, in almost all cases, callers were promised a return call, which may not be a realistic expectation under emergency conditions. For the postulated site emergencies, emergency managers and senior officials were not informed about the number and nature of the numerous calls being received and their disposition. During the longest exercise of more than 2 and one half hours, there was no attempt to develop a press release from HQ or to coordinate the release of public information with the affected site despite intense media interest. At the same time, however, one (simulated) newspaper reporter was informed via telephone that a General Emergency had been declared at building 513 at Livermore due to an explosion that released radioactive material. During further inquiry, the public affairs representative incorrectly described the meaning of the term “General Emergency” to the reporter and was apparently unfamiliar with the term. Finally, plans have not been established for providing emergency public information in the event that the Forrestal building is evacuated and senior Department officials are relocated to an alternate facility.

Many of the weaknesses observed during the response to the postulated site emergencies have been previously identified but not addressed and corrected. Previous exercises involving the Watch Office and EMT have identified many of the same weaknesses observed by OA during this review. These include weaknesses associated with:

- Watch Office command and control,
- the Watch Office notification process,
- Watch Office and EMT information management and tracking,
- EMT briefings to senior managers,
- EMT prioritization, assignment, and tracking of responder tasks,

- public affairs functions,
- dispersion modeling information from the National Atmospheric Release Advisory Capability (NARAC), and
- availability of essential reference information

These weaknesses have been documented in SO-40 after action reports that were written prior to the transfer of some emergency management functions from SO-40 to NA-40, and in OA reports of exercise observations. For example, the significant weaknesses observed in the SO-40 Watch Office were previously identified by OA in May, 2001 and by SO-40 in June, 2001. There is no formal feedback and improvement process to ensure that program and performance weaknesses and suggested corrective actions are assigned to an individual or organization who is responsible and accountable for addressing them. There is no existing process to track corrective actions to completion or resolution, communicate program changes as a result of those actions to all EMT members, incorporate those changes into training, and validate the effectiveness of corrective actions through subsequent drills or exercises. The events of September 11, 2001 presented numerous opportunities to identify lessons learned in handling a major crisis situation affecting DOE Headquarters. However, no after action report was developed to identify these lessons and evaluate their applicability to the Department's overall emergency preparedness and response program.

The Watch Office has not established provisions to execute its emergency functions in the event of a complete Forrestal building evacuation occurring after normal working hours. During the postulated Forrestal building emergency, the Watch Office demonstrated the capability to evacuate the Operations Center and prepare to relocate to the AOC in Germantown using their relocation checklist. Step 3 of that checklist directs the watch officers to contact the AOC to ensure that someone is available there to answer the telephones once the emergency number is transferred to them. However, the AOC is only staffed during normal working hours (i.e., it is not staffed at night or on weekends). SO-40 has not established a plan for handling emergency calls if the Watch Office must be evacuated after hours due to an event affecting the Forrestal building or national capital region. In addition, SO-40 has not evaluated the operability of the telephone line coming into the Watch Office, which would be transferred to the AOC, in the event that major structural damage to the Forrestal building is anticipated or has occurred.

Timely and successful completion of a comprehensive and effective HQ COOP plan requires a clearly defined strategy, implementation plan, and schedule that is supported by sufficient staffing, resources, and expertise. It is generally recognized that the Department does not currently have a viable, comprehensive COOP program and that staffing is currently the greatest obstacle in achieving that objective. SO has indicated that they have not been given the resources needed to execute even a minimal COOP effort since having been assigned responsibility for this program. SO's fiscal year 2004 funding request for the COOP program was denied and the current program activities are being largely funded using other SO program resources. The Department's collective efforts to date have established a draft Departmental COOP Plan; draft office-specific plans; and Secretarial line of succession appointments. SO is leading multiple efforts to identify and prepare support for alternate location facilities. While significant effort has been applied to this complex task to date, SO has not defined and established a formal process to ensure timely completion, testing, and maintenance of the DOE HQ COOP. As a result, many of the long-standing Federal requirements promulgated by Presidential Decision Directive 67, *Enduring Constitutional Government and Continuity of Government Operations, October 1998*; and Executive Order 12656, *Assignment of Emergency Preparedness Responsibilities, November 1998, as amended*, are not being met. These include the basic requirements for a communications plan, and plans to be operational within 12 hours at a primary alternate facility. The multitude of tasks needed to accomplish this have been identified by SO, but a systematic approach to further define the tasks, schedule and assign resources, estimate costs, establish completion milestones, and garner the support needed to execute these tasks has not been established to guide and direct this effort. The current focused

efforts to develop a short-term COOP plan to address the most immediate needs during an emergency are also hindered by the absence of a systematic approach. To be fully effective, the short-term COOP plan must define a comprehensive and integrated corporate reconstitution structure with clear delineation of organizational roles and responsibilities, corporately defined and agreed upon programmatic and infrastructure requirements, and priorities for maintaining the critical essential functions. Some of the key points raised during the working group session facilitated by OA include:

- There has not been a clear distinction between what the Secretary must be able to do (e.g., understand oil supply conditions that might require the Secretary to invoke the Defense Production Act or release oil from strategic reserves) and what the Secretary must be informed of (e.g., that all field sites or all special nuclear material is secured) under COOP.
- The current status of the transfer of energy assurance related essential functions from DOE to the Department of Homeland Security (DHS) is unknown at the present time. Responsibilities for reconstituting critical essential functions related to the energy sector critical infrastructure and protocols for communicating and interfacing with DHS in an energy-related emergency have yet to be defined.
- The diverse types of communication systems used by HQ offices will be a difficult challenge to overcome in establishing a streamlined notification and communication process should relocation of any or all HQ functions be required.

CONCLUSIONS

The three HQ programs evaluated during this review are in various stages of development and implementation. Since responsibility for each of these three programs is assigned to a different HQ organization, program planners and responders have not had the benefit of using common resources, sharing lessons-learned, and building upon the synergism of a fully integrated program. The EMT and incident command team responders demonstrated excellent teamwork and generally good decision-making skills in responding to the postulated emergencies presented to them. In particular, the incident command team took swift action to protect HQ employees and fully contain the event scene. The overall effective performance of the incident command team is reflective of their efforts to develop a coordinated, thorough concept of operations and the experience gained through numerous and challenging drills and exercises.

The Watch Office and EMT that respond to and manage the HQ element for an emergency at a DOE or NNSA site have made incremental improvements over the past two years. The HQ Emergency Response Plan issued in January 2002 provides a good foundation and framework for responding to a DOE/NNSA site emergency. The plan clearly defines the concept of operations and the roles of the EMT and watch officers. However, Watch Office and EMT performance continues to be plagued by weaknesses that have been repeatedly identified in previous reports. The most significant weakness stems from the difficulty responders have in recognizing and evaluating the gravity of the information being reported during an emergency. This weakness is compounded by the lack of a centralized and structured system for recording, prioritizing, sharing, updating, and tracking the information being received and the tasks assigned to responders. As a result, EMT members are rarely made aware of the most accurate and credible information available in a timely manner to support decision-making. This includes the information that is provided to senior DOE and NNSA officials on a periodic basis during an emergency. A formal process for addressing these weaknesses and a single focal point for managing corrective actions has not been established. Further, there is no mechanism available to hold line and support organization managers accountable for establishing programs and implementing corrective measures to ensure that HQ is as prepared as possible for an event impacting a local building or DOE/NNSA site.

HQ organizations have been responsive in assigning staff and submitting office-specific COOP plans and updates as required. Some offices have already taken significant steps to establish alternate locations and redundant processes or systems to support continuing operation of their critical essential functions. However, the overwhelming multitude of tasks remaining to define, create, implement, test, and maintain a comprehensive and integrated HQ COOP program presents significant challenges. The current SO process to develop COOP plans has not been supported by sufficient staffing, expertise, and resources necessary to address and complete these tasks. A program management plan is needed to define the program elements, prioritize actions, establish milestones, and allocate sufficient resources toward achieving full implementation of the overall DOE COOP program. In the near term, it is critical that COOP planning resources be focused on the elements needed to provide for a short-term COOP response capability that covers:

- performing the Department's commonly defined and accepted minimum critical essential functions in a no-warning, time urgent emergency condition affecting the Washington, D.C. metropolitan area, and
- immediate transfer of critical essential function responsibilities and delegation of authority to individuals at secondary locations outside the Washington, D.C. metropolitan area in the event that HQ personnel are not able or not available to perform them.

Planning and preparedness for responding to an incident that is confined to an HQ building or its employees has been highly effective and is continuously improving. On the other hand, DOE and NNSA are not fully prepared to execute an HQ response to a field emergency or to an emergency that has an impact beyond local DOE buildings. In the former case, the HQ Emergency Response Plan provides an effective framework for responding to an emergency at a DOE or NNSA site. However, the plan has not been fully implemented in practice and many responders lack basic skills in recognizing the importance of emergency events, conditions, and actions being reported so that they can react accordingly and keep senior officials appropriately informed of the events in progress. In particular, significant weaknesses in information management and emergency public information are degrading the capability to mount an effective HQ response effort. In the latter case, the Department is only in the initial stages of fully defining the critical essential functions to support its national security and energy-related missions. The development and implementation of plans, procedures, and a viable operating infrastructure to support continuing DOE and NNSA operations in alternate facilities outside of the Washington, D.C. area requires additional dedicated resources and sustained management attention to achieve COOP objectives.

OPPORTUNITIES FOR IMPROVEMENT

These potential enhancements are not intended to be prescriptive. Rather, they are intended to be reviewed and evaluated by the responsible DOE and NNSA managers, and prioritized and modified as appropriate, in accordance with DOE Headquarters' emergency management, response, and continuity of operations objectives.

- The Watch Office (SO-40), EMT (NA-40), and HQ Designated Official (ME) should develop and implement structured processes for rapidly collecting, assimilating, prioritizing, and disseminating consistent information among responders.
 - Consider using a fully automated system for EMT members to enter collected information into a log or database that sorts information chronologically and/or by subject area (e.g., casualty information, protective action information, etc.) Alternatively, submit all information collected manually to one individual for rapid entry into a database. Assign another individual to continuously review this information to identify the most critical items that warrant the emergency manager's attention and to readily identify and resolve conflicting or ambiguous information.
 - The SO-40 Watch Office should establish a mechanism to collectively track what notifications have been made in real time. Consider using a simple, automated form that can be accessed by all watch officers simultaneously to record and track completed notifications.
 - Establish a process to identify, prioritize, assign, and track the completion of tasks assigned to EMT and incident command team members.
 - Consider visiting other emergency operations centers in the Washington area to evaluate possible methods for managing emergency information.
 - NA-40 and ME, with assistance from SO, should establish a pre-formatted form or template with fill in the blank spaces for use in briefing senior managers. Use of the forms would ensure that all essential information can be provided in a logical, structured format. It would also allow the EMT and incident command team to keep track of what information has been provided to senior management and what information has changed since the previous briefings. The EMT might wish to consider using a format similar to that contained in the HQ EMT SITREP form.
- Consider implementing measures to streamline Watch Office notification processes and improve critical event recognition and response actions.
 - Consider establishing a practice wherein the watch officers are assigned specific functions as soon as an emergency call is received in order to improve command, control, and information sharing. Conduct limited scope performance drills of watch officers to implement this practice and to improve their ability to recognize significant incident developments that may warrant an immediate change in the priority of the notifications.
 - Improve critical event recognition capabilities by conducting additional training in the fundamental elements of the DOE emergency management system. Perform limited scope performance drills using the widest possible variety of possible event conditions to ensure that Watch Office personnel are capable of recognizing critical changes in conditions that might warrant reconsideration of their response priorities. Consider using and building upon the scenarios already developed for the Occupant Emergency Program for use in performance testing.
 - Establish formal procedures and guidance for watch officers to use in handling calls of a varied nature including security threats and media inquiries. Conduct performance tests under a variety of conditions to hone their skills in handling such calls in an emergency.
 - Clarify and consider establishing formal protocols for required communications between the incident command team and Watch Office in an emergency. These communications protocols

- should address conditions wherein the Watch Office is evacuated and AOC personnel may or not be available to support response.
- Establish and validate the effectiveness of a mechanism to receive and make emergency notifications in the event that the Watch Office must be evacuated after normal working hours or damage to the Forrestal building results in a loss of operational capabilities.
 - Formally assign responsibility and accountability for establishing a program to train and maintain the proficiency of the EMT to a single organization.
 - To accomplish this task effectively, that organization must be provided the senior management support, designated authority, and organizational span of control to identify who is qualified to be an EMT responder.
 - Program and support offices with emergency response duties should be held accountable for ensuring that sufficient numbers of competent and qualified responders are available to respond to an emergency regardless of the time of day an event occurs.
 - HQ program and support organizations with responsibilities for responding to an emergency should establish provisions for ready access to essential emergency response reference information.
 - Each program office that might be required to respond in an emergency should develop a “go-kit” containing essential resources and information about sites under their cognizance for ready reference in an emergency. Consider including position-specific checklists, site maps, emergency preparedness hazards assessment excerpts, and office, home, and mobile contact numbers for essential office staff.
 - Support organizations should develop similar “go-kits” of information specific to their assigned EMT functions and responsibilities.
 - These go-kits should be made accessible to support a response that occurs at any time of day and on any day of the week.
 - Program offices should ensure that relevant reference information from site and facility hazards assessments is readily available to the EMT environment, safety, and health support representative to assist him or her in accurately interpreting dispersion modeling information. This should include a clear indication of all of the parameters used to conduct the dispersion analysis and the identification and limitations of the code used to generate the dispersion estimates.
 - The DOE Offices of Public Affairs and Congressional and Intergovernmental Affairs (CI), and the NNSA Office of Congressional, Intergovernmental, and Public Affairs should develop and implement formal emergency response plans and procedures and routinely test their programs during drills and exercises.
 - Consider using the guidance contained in DOE Guide 151.1-1, Volume IV to aid in developing these plans and procedures.
 - Plans and procedures should clearly define the information management and communications responsibilities among individuals who remain in their offices and those who report to the operations center or command center in an emergency.
 - The plans should be well coordinated with sites to ensure a consistent understanding of the respective roles, responsibilities, and expectations between HQ and site public affairs and congressional affairs operations and personnel. CI should also ensure a consistent understanding of roles and responsibilities concerning congressional inquiries between CI and senior DOE and NNSA officials.
 - Once response plans for these organizations have been established, NA-40 and ME should revisit their emergency response plans to ensure that public and congressional affairs functions are adequately addressed and fully integrated into the response concepts of operation.

- The HQ public affairs offices should maintain up to date fact sheets for DOE and NNSA sites, activities, and major facilities and prepare pre-formatted, fill in the blank news releases for timely issuance in an emergency.
- The public and congressional affairs offices should consider having a ready capability to put a pre-recorded message at a designated phone number or on the main public affairs contact line to provide information to the media, stakeholders, and concerned citizens should the ability to field such calls individually in an emergency become overwhelming.
- Coordination among the sites, HQ EMT, and NARAC should be improved to ensure that the best possible consequence assessment information is made available to decision-makers in a timely manner.
 - Staff from NA-40 should continue working with NARAC to ensure that NARAC output products support site needs for consequence assessment. For example, sites would benefit from an output product that identifies (1) the maximum downwind distances of the isodose contours rather than the acreage over which contamination has been deposited, (2) standardized plot map scales for easy interpretation of results, and (3) inclusion of source term information on the plots generated.
 - NA-40 should work with the sites to determine under what, if any, circumstances the HQ EMT Environment, Safety, and Health (ES&H) representative should work directly with NARAC to obtain estimates of hazardous material dispersion. While this information should come from the affected site during an emergency, the EMT may wish to intervene in the process when an incident occurs outside the normal working hours of the affected site or when local responders cannot get to an emergency operations center in a timely manner. If any such circumstances are identified, NA-40 should ensure the necessary level of automated access to NARAC is maintained in the Operations Center to support this function and that all EMT ES&H representatives are trained in and capable of accurately interpreting NARAC output information.
- The COOP Program Manager should establish a “project management plan” to guide and measure the success of plan development and implementation.
 - The project plan should establish a schedule, milestones, tasks and supporting subtasks, and organizational and individual assignments to define and measure the critical path to completion.
 - In accordance with the project management plan, SO should clearly specify the support resources and expertise needed to complete, validate, and maintain the COOP program and seek senior management buy-in to improve the chances of success. As part of this effort, SO should be prepared to clearly specify which program elements cannot or will not be able to be implemented without those resources and expertise.
 - Ensure that the focus of the program in the near-term is on completing the short-term COOP requirements for addressing the Department’s minimum critical essential functions before expending significant time and resources on the more complex and resource intensive longer-term program elements.
 - Consider obtaining expertise and resources from internal and external organizations by requesting temporary reassignments (details) to support the COOP development effort.
 - SO-1 should routinely perform critical reviews of the master list of activities, determine their relative importance in completing overall objectives, set goals and priorities, and establish firm schedules for completion.
 - Senior DOE managers should conduct periodic reviews of the COOP plan development process to ensure that sufficient progress is maintained and the efforts are adequately supported.
 - The DOE COOP Program Manager should routinely coordinate with FEMA to ensure that the developing Headquarters plan is consistent with Federal requirements and expectations; benefits from lessons learned identified by other Federal executive branch agencies; and includes a structured training and performance-testing element that ensures expectations are being met.

- SO-40 should build upon the successful framework already established by ME in developing the Occupant Emergency Program to develop and implement the DOE COOP program.