

THE CHEMICAL STOCKPILE EMERGENCY PREPAREDNESS PROGRAM: MANAGEMENT CHALLENGES

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ABSTRACT

The Chemical Stockpile Disposal Program (CSDP) was initiated in response to the 1986 Congressional mandate (by Public Law 99-145) to rid the United States of the aging stocks of chemical munitions. After a thorough examination of the risks involved in the transporting and disposing of the stocks and driven by the congressional mandate to protect the public, the Army decided to build incinerators at each of the eight installations. The Final Programmatic Environmental Impact Statement for the CSDP found that emergency planning for an accident was inadequate in the communities surrounding storage sites. The Army's Record of Decision subsequently committed the Army to enhanced emergency planning. This paper discusses the evolution of the emergency preparedness program since 1986. The program has gone through two significant changes in management approaches. In 1988 a joint steering committee and 6 subcommittees were created. Recently, a new organization within the Army was created to manage CSEPP. This paper reviews origins of the committee approach in CSEPP as well as its strengths and weaknesses. Furthermore, the paper discusses how the new organization should provide more effective management of the program.

INTRODUCTION

The Chemical Stockpile Disposal Program (CSDP) was initiated in response to the 1986 Congressional mandate (by Public Law 99-145) to rid the United States of the aging stocks of chemical munitions. After a thorough examination of the risks involved in the transporting and disposing of the stocks and driven by the congressional mandate to protect the public, the Army decided to build incinerators at each of the eight installations. The Final Programmatic Environmental Impact Statement (FPEIS) for the CSDP found that emergency planning for an accident was inadequate in the communities surrounding storage sites. The Department of the Army's (DA) Record of Decision (ROD) subsequently committed the Army to enhanced emergency planning. This paper discusses the evolution of the

emergency preparedness program since 1986. The program has gone through two significant changes in management approaches. In 1988 a joint steering committee and 6 subcommittees were created. Recently, a new organization within the Army was created to manage CSEPP. This paper reviews origins of the committee approach in CSEPP as well as its strengths and weaknesses. Furthermore, the paper discusses how the new organization should provide more effective management of the program.

Chemical Stockpile Characteristics And Distribution

Although the size of the United States chemical stockpile is generally classified for national security reasons, information on distribution is available. Chemical agents, predominantly GB, VX, H, HD, and HT, are stored at eight installations: Tooele Army Depot, Utah (42.3% of the total stockpile); Pine Bluff Arsenal, Arkansas (12.0%); Umatilla Depot Activity, Oregon (11.6%); Pueblo Depot Activity, Colorado (9.9%); Anniston Army Depot, Alabama (7.1%); Aberdeen Proving Ground, Maryland (5.0%); Newport Army Ammunition Plant, Indiana (3.9%); and Blue Grass Army Depot, Kentucky (1.6%). The remaining 6.6% of the stockpile is located outside of the continental United States at Johnston Island in the Pacific Ocean. All percentage figures are based on weight.

The chemical agents are stored in three basic configurations: (1) projectiles, cartridges, mines, and rockets containing propellant and/or explosive components; (2) aircraft-delivered munitions that do not contain explosive components; and (3) steel one-ton containers. Most of the stockpile (61%) is in the latter form. All of the agents are at least 20 years old; some are more than 40 years old.

Each stockpile is stored in a chemical exclusion area at each installation. Most of the stockpile is kept on pallets, in boxes, in cans, or is stored individually in igloos specifically designed for ammunition and explosives. The igloos have lightning protection systems and steel doors, and they are covered with earth. They are equipped with multiple locking systems.

Some one-ton containers of mustard and VX agents are stored in warehouses or outside; when outside they are secured with chains. In either case, they are stored

within an exclusion area.

Extensive security precautions protect exclusion areas. Access is strictly controlled by security forces, intrusion detection devices, barricades, and perimeter lighting.

CSEPP Planning Process

The CSEPP is a joint FEMA/Army program to develop effective emergency response capabilities at each of the eight chemical agent stockpile locations. As depicted in Fig. 1, the CSEPP planning process ultimately translates the programmatic Emergency Response Concept Plan (ERCP) into site-specific emergency response plans for each location.

The emergency planning process progresses along complementary paths. One path defines the scope of necessary planning and specifies the emergency preparedness guidelines to be met. The path leads from the programmatic ERCP to this planning guidance document including the appended guidelines. The guidelines will be applied in producing the site-specific emergency response plans. Overall, this path provides federal direction in attaining maximum protection.

A second path develops the site-specific analyses that shape application of the guidelines at each stockpile location to meet local conditions and requirements. In this path, technical analyses have been used to translate the programmatic ERCP into site-specific emergency response concept plans. Each site-specific ERCP will be replaced by an Emergency Planning Guide (EPG). This path will be augmented by local officials to produce community-based emergency planning proposals which, upon approval and subsequent funding, will be made operational through the site-specific emergency preparedness programs. This path provides maximum protection of the public by applying the concepts of the ERCP to each stockpile location.

There is continual interaction among elements of the planning process (e.g., the scope of planning identified in the planning guidance document influences the technical and demographic data collected for the site-specific EPG, and vice versa). As new information is developed in either of the paths described above, it is integrated into a third path that upgrades the interim emergency response plans at each stockpile location. This integration is an iterative process that will be complete when planning guidelines have been fully specified and all relevant site-specific data have been collected and analyzed. At that point the paths converge in an emergency response plan for each location which prescribes effective responses for all foreseeable chemical agent emergencies.

Program Organization

The administrative framework within which CSEPP is being implemented is extremely complex and includes numerous interacting state, local, FEMA, and Army agencies. This section first discusses the history of the CSDP, including the Congressional mandates and the major steps that have been taken in the program. The section next describes the responsibilities of the DA and FEMA as assigned to each of the two agencies by their Memorandum of Understanding (MOU) regarding the

CSEPP. The section concludes with a brief discussion of the composition and basic responsibilities of local area planning groups.

The United States currently has chemical agents and weapons stored at eight Army installations within the continental United States (CONUS). Public Law (PL) 99-145, Title 14, Part B, Sect. 1412, directs the Department of Defense (DOD) to dispose of the lethal unitary chemical agents and munitions. The July, 1986, *Draft Programmatic Environmental Impact Statement (DPEIS)* considered four disposal alternatives for the chemical agent stockpile:

- (1) disposal at each storage location (i.e., eight sites),
- (2) disposal at two regional centers,
- (3) disposal at one national center, and
- (4) continued storage at each location.

In January 1988, the Army issued a *Final Programmatic Environmental Impact Statement (FPEIS) for the Chemical Stockpile Disposal Program (CSDP)*. The FPEIS examined critical site-specific issues in sufficient detail to compare the alternatives and to recommend one alternative. In February, 1988, the Army issued a ROD that state-of-the-art, on-post incineration was the preferred alternative at each of the eight storage locations. Final implementation of the program depends on annual funding by Congress.

In July, 1987, the Army released the *Draft Emergency Response Concept Plan (ERCP)* for the CSDP. The ERCP presented a conceptual basis for developing local emergency response programs for the CSDP and the various emergency planning alternatives. The concepts in the guidance document are based on the ERCP and other federal guidelines and criteria.

The Army then prepared and submitted to Congress a Chemical Stockpile Disposal Implementation Plan containing program schedules and budgetary requirements. The Army requested funds, based on estimates, to implement enhanced emergency preparedness both on-post and off-post at all eight installation sites. The funds were intended to help the Army carry out its responsibility for ensuring that viable on-post chemical emergency plans and off-post emergency response plans existed for each storage location. In March, 1988, the Army told Congress that implementation of emergency response concepts for each site would cost an estimated \$100 million (U.S. DA, 1988b).

The August 1988 FEMA/Army MOU delineated the Army's and FEMA's respective roles. FEMA operates under the following authorities:

- Executive Order 12148;
- Public Law (PL) 96-342; and
- The Emergency Planning and Community Right-to-Know Act of 1986 (Title III of PL 99-499).

Executive Order 12148 delegates authority to

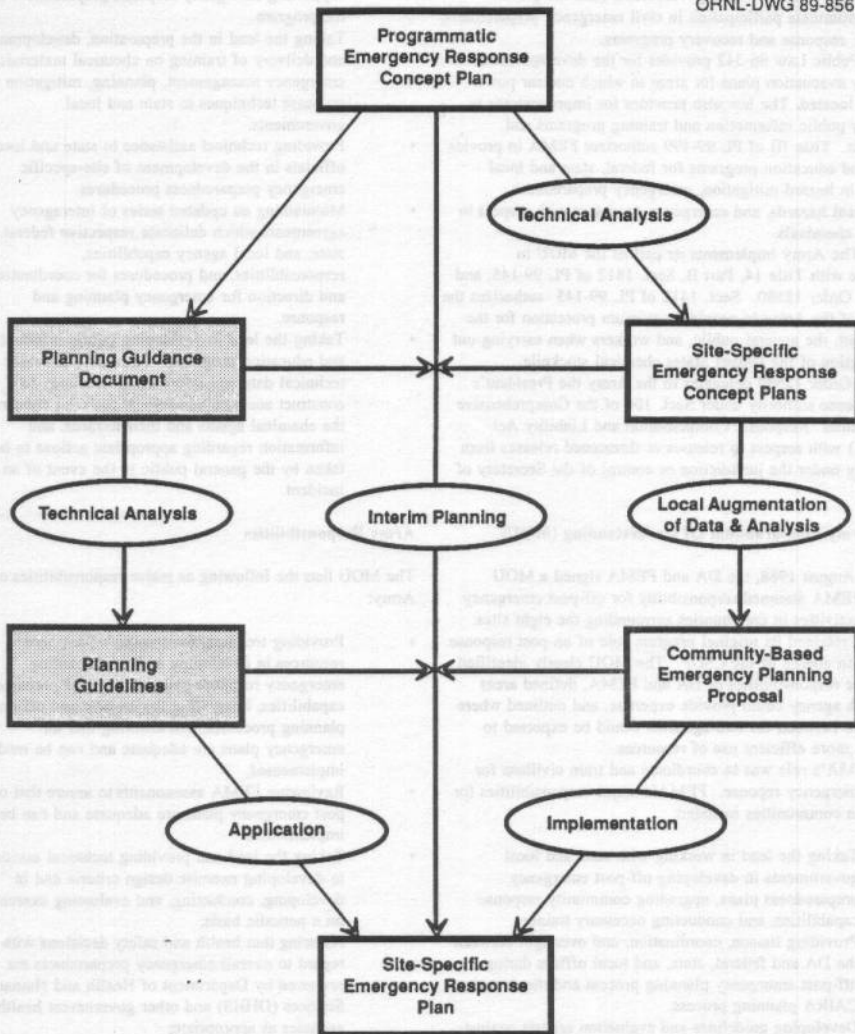


Fig. 1 The Chemical Stockpile Emergency Preparedness Program process.

FEMA to develop policies which provide that all civil defense and civil emergency functions, resources, and systems of Executive agencies are developed, tested, and utilized to prepare for, mitigate, respond to, and recover from emergencies. The Director of FEMA is also authorized to represent the President in working with state and local governments (and the private sector) to stimulate participation in civil emergency preparedness, mitigation, response and recovery programs.

Public Law 96-342 provides for the development of emergency evacuation plans for areas in which nuclear power plants are located. The law also provides for improvements in emergency public information and training programs and capabilities. Title III of PL 99-499 authorizes FEMA to provide training and education programs for federal, state and local personnel in hazard mitigation, emergency preparedness, technological hazards, and emergency processes with respect to hazardous chemicals.

The Army implements its part of the MOU in accordance with Title 14, Part B, Sect. 1412 of PL 99-145, and Executive Order 12580. Sect. 1412 of PL 99-145 authorizes the Secretary of the Army to provide maximum protection for the environment, the general public, and workers when carrying out the destruction of the United States chemical stockpile. Executive Order 12580 delegates to the Army the President's broad response authority under Sect. 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) with respect to releases or threatened releases from any facility under the jurisdiction or control of the Secretary of Defense.

FEMA/Army Memorandum Of Understanding (MOU)

In August 1988, the DA and FEMA signed a MOU whereby FEMA assumed responsibility for off-post emergency planning activities in communities surrounding the eight sites. The Army retained its original program role of on-post response and being in charge of the CSDP. The MOU clearly identified the specific responsibilities of DA and FEMA, defined areas where each agency could provide expertise, and outlined where cooperation between the two agencies would be expected to result in a more efficient use of resources.

FEMA's role was to coordinate and train civilians for off-post emergency response. FEMA's major responsibilities for the civilian communities included:

- Taking the lead in working with state and local governments in developing off-post emergency preparedness plans, upgrading community response capabilities, and conducting necessary training.
- Providing liaison, coordination, and oversight between the DA and federal, state, and local offices during the off-post emergency planning process and the Army's CAIRA planning process.
- Developing guidelines and evaluation criteria against which emergency preparedness programs can be assessed for adequacy and assurance that they can be implemented.

- Developing, scheduling, and conducting exercises to evaluate the effectiveness of emergency preparedness programs at each site.
- Serving as a conduit for providing funds available from the Army to state and local governments for supporting emergency response preparedness for the program.
- Taking the lead in the preparation, development, and delivery of training on chemical materials emergency management, planning, mitigation and response techniques to state and local governments.
- Providing technical assistance to state and local officials in the development of site-specific emergency preparedness procedures.
- Maintaining an updated series of interagency agreements which delineate respective federal, state, and local agency capabilities, responsibilities, and procedures for coordination and direction for emergency planning and response.
- Taking the lead in developing public information and education programs. The Army provides the technical data and information necessary to construct accurate educational material concerning the chemical agents and their hazards, and information regarding appropriate actions to be taken by the general public in the event of an incident.

Army Responsibilities

The MOU lists the following as major responsibilities of the Army:

- Providing technical assistance and required resources in developing and implementing emergency response plans and related preparedness capabilities, integrating the on-post and off-post planning processes, and ensuring that all emergency plans are adequate and can be readily implemented;
- Reviewing FEMA assessments to assure that off-post emergency plans are adequate and can be implemented;
- Taking the lead and providing technical assistance in developing exercise design criteria and in developing, conducting, and evaluating exercises on a periodic basis;
- Assuring that health and safety decisions with regard to overall emergency preparedness are reviewed by Department of Health and Human Services (DHHS) and other government health agencies as appropriate;
- Providing technical assistance and support to FEMA in preparing chemical emergency training materials and procedures and participating in

delivering such training to state and local emergency responders, where appropriate; and, finally,

- Taking the lead in conducting site-specific hazard analyses used for the emergency preparedness plans.

ARMY/FEMA Joint Responsibilities

In addition, the MOU identifies some areas of joint effort between FEMA and the DA:

- Determining the funding requirements by fiscal year to develop and implement emergency preparedness programs;
- Cooperating in the development and implementation of program initiatives to integrate the planning and preparedness functions of FEMA and DA related to emergencies involving chemical warfare agents;
- Establishing a FEMA/DA committee to meet on a quarterly basis, or more frequently if necessary, to review the status of joint programs, to discuss and resolve issues, to consult on major policy issues, and to provide the necessary direction to meet DA's overall goals for the program;
- Cooperating in determining exercise requirements for installations and state and local governments as well as jointly develop and evaluate such exercises;
- Developing and implementing a community relations program to include FEMA and DA personnel working with local public officials and interest groups; and
- Encouraging private sector initiatives beneficial to the state and local government agencies responsible for preparedness.

Implementing the MOU

In February 1994, the initial management structure of CSEPP was fundamentally revised. Previously, the Army and FEMA had cooperatively managed the program through a Joint Steering Committee (JSC) that had six subcommittees to oversee the functional areas of the program (Planning, Automation, Public Affairs, Exercises, Training, and 6). Efforts to enhance the preparedness of Army installations and off-post communities were pursued individually by the subcommittees subject to review and approval by the JSC. Each subcommittee was formulated to include representatives of state and/or local jurisdictions participating in CSEPP.

However, it was clear that the subcommittee approach was not working to the best interest of the program. The steering committee lacked the means to manage the day to day operations of the program, lacked a rapid and effective decision making process, and could not coordinate the efforts of the various subcommittees. Furthermore, subcommittees competed for program resources. This led at times to duplicated efforts, and at other times to important areas being ignored. For example, the automation subcommittee was developing an automation system that did not support the implementation of the planning guidance being developed by the planning

subcommittee. On the other hand, protective clothing issues for emergency workers, a topic that cut across many subcommittee interests, was not being dealt with.

This organizational structure was changed when the Army and FEMA adopted a Joint Memorandum for the Record in February, 1994. This memorandum streamlined the program and enhanced the cooperative relationship between the Army and FEMA in managing the CSEPP. Under the memorandum, the Army continued to have the lead in all affairs of CSEPP. FEMA supports the Army by working with state and local governments in developing off-post emergency preparedness plans, upgrading response capabilities, and conducting necessary training. The Army coordinates on-post preparedness plans, upgrades response capabilities, conducts necessary training, and integrates on-post and off-post emergency preparedness capabilities. FEMA and the Army will jointly develop protocols for assessing the readiness of state and local jurisdictions and Army installations. FEMA regional offices will continue to review civilian emergency plans and evaluate off-post exercises and training.

Under the 1994 Joint Memorandum, the Joint Steering Committee and its six subcommittees were replaced by an Executive Council that is co-chaired by the Principal Deputy Assistant Secretary of the Army for Installation, Logistics and Environment (I, L & E) and the Deputy Associate Director of FEMA for Preparedness, Training and Exercises. The Executive Council meets quarterly, with additional meetings as needed to resolve issues, ensure timely decisions, and provide policy guidance as appropriate. Representatives of state and local jurisdictions provide input to Executive Council deliberations as appropriate.

The 1994 Joint Memorandum also calls for establishment of a central CSEPP office at the U.S. Army Chemical and Biological Defense Command (CBDCOM). This office will provide a central focus for CSEPP within the Army, implement the program on Army installations, and coordinate and integrate on- and off-post activities. The office is staffed with both FEMA and Army personnel. Staff of the office also serve as members of Site Support Teams.

The Joint Memorandum established a CSEPP Review Panel which conducts quarterly in-progress reviews (IPRs) for each functional area of the program and for each site. At each IPR, the CBDCOM Site Support Teams will present status reports along with input obtained from state and local jurisdictions.

CONCLUSIONS

The Army has initiated a planning effort at each of the chemical stockpile disposal locations that has included state and local agency briefings, Army installation participation, and technical and financial assistance to state and local governments for initial planning activity. CSEPP strives to seek a continuing effort toward achieving a complete and

comprehensive emergency preparedness program for both continued storage operations and the eventual demilitarization activity. This process requires continued close coordination between the Army installation personnel and off-post agencies. All local and state agencies that have a role in emergency response are incorporated into the planning effort. This includes State Emergency Response Commissions (SERCs) and Local Emergency Planning Committees (LEPCs) established under the Superfund Amendment and Reauthorization Act of 1986 (SARA), Title III.

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