

E360

**CHEMICAL WEAPONS DEMILITARIZATION  
CONCEPT PLAN**

In his speech before the United Nations on September 25, 1989, President Bush offered several initiatives concerning chemical arms control. The current program to destroy the unitary chemical stockpile by 1997 fits well with the President's initiatives. If a bilateral agreement structured along the lines of the UNGA speech proposal is signed in 1990, the current destruction program can be continued with little change.

Acceleration of the current program schedule presents many risks. The Chemical Stockpile Disposal Program (CSDP) is primarily based on safety and does not lend itself to significant deviation. Meeting the requirements of environmental laws is necessary to ensure public safety. Funding uncertainties are a fact of governmental life. The CSDP must be flexible enough to accommodate fluctuations in funding levels, even though it is on a very cost and time constrained schedule. The technology, though proven in prototype, requires extensive live-agent testing of each munitions type. These factors make the current schedule extremely optimistic.

**BACKGROUND**

**Organization for Planning and Execution**

The Department of the Army is the Executive Agent for the chemical disposal program. A specialized organization was established to execute the program - the Program Manager for Chemical Demilitarization. This organization contains the Army's experts in chemical disposal operations and is headed by a brigadier general.

**Basic Requirements**

The CSDP was originally developed to respond to Public Laws 99-145 and 100-456. These laws require that the total unitary chemical weapon stockpile be destroyed by September 30, 1994 (later amended to April 30, 1997), subject to several conditions:

- destruction will be carried out in conjunction with acquisition of binary chemical weapons.
- date of destruction can be amended by a chemical weapons treaty ratified by the United States.
- in the event of a National emergency, or if the Secretary of Defense determines that there has been a significant delay in the acquisition of binary weapons, the Secretary may defer the

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destruction of not more than 10% of the stockpile beyond the 1997 date (consistent with future treaty requirements).

Further, the Congress directed that the Defense Department accomplish the destruction in a manner that provides: (1) maximum protection of the environment, the general public, and the personnel involved in the destruction process; (2) adequate and safe facilities designed solely for the destruction of the lethal chemical stockpile; and (3) cleanup, dismantling and disposal of the facilities when the program is completed.

#### FACTORS AFFECTING THE DISPOSAL SCHEDULE

##### Environmental Impact Statements

The National Environmental Policy Act requires environmental impact reviews for all major actions that could affect the environment. At the advice of the Council on Environmental Quality and the Environmental Protection Agency, the Army decided to develop two levels of environmental impact statements: programmatic and site-specific for the CSDP.

The Army completed the Programmatic Environmental Impact Statement (PEIS) in early 1988, and soon followed with the Record of Decision that announced the Army's intention to incinerate the chemical stockpile at the current storage sites without transporting outside the installations. This decision best meets the guidance to provide maximum protection to the environment, the general public and the personnel involved in the disposal process.

The Army must prepare site-specific environmental impact statements, tiered to the Programmatic document, for each of the eight storage sites prior to constructing disposal facilities. To initiate this second environmental study, the Congress directed the Army to conduct a "Phase I" review for the purpose of validating the programmatic decision for each of the sites. The estimated time required for both the phase I study and the site-specific EIS is between 18-24 months per site. A Record of Decision for the site-specific EIS must be completed prior to awarding a contract to construct the disposal facility.

##### Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA) requires that any facility that generates hazardous wastes be permitted prior to construction. Since the salt brines that are products of the pollution abatement systems contain minute quantities of heavy metals, they are classified by EPA as hazardous waste. This means that all chemical disposal facilities must have an approved RCRA Part B permit prior to construction. This permit

process will take at least 12-18 months and runs concurrently with the site specific EIS.

#### Air Quality

All eight states with chemical storage sites have been granted authority by EPA to administer the air quality control program. The Army will obtain air emissions source permits for the disposal facilities prior to initiating construction. Like RCRA, this normally takes 12-18 months.

#### Operational Verification Testing

Each of the CONUS disposal facilities will be patterned after the Johnston Atoll Chemical Agent Disposal System (JACADS) facility scheduled to begin operational testing in March 1990. JACADS uses the disassembly/incineration disposal process. Computer-controlled machines disassemble the chemical munitions and separate the agent, explosives and the metal parts. Separate furnaces then incinerate each of the items. Extensive pollution abatement systems will prevent any release of toxic emissions into the atmosphere.

JACADS is the first full-scale, lethal agent disposal facility constructed to use this process. The facility is currently undergoing systemization using simulant-filled munitions and will start Operational Verification Tests (OVT) with lethal agents in the March of 1990. The purpose of OVT is to demonstrate the safety, efficiency and adequacy of the JACADS process. OVT is scheduled for 16 months and will include processing of rockets, artillery projectiles and bulk containers with nerve agents GB and VX and blister agent HD.

A successful OVT is critical to the disposal program. If significant problems arise during OVT, the disposal schedule will be delayed.

#### Funding

The Department of Defense has established a special appropriation for the chemical disposal program. Because of budget constraints, the program must compete with other high priority programs for scarce resources. Reduced funding can only be accommodated by lengthening the schedule.

#### DISPOSAL PLAN SUMMARY

The Army initially developed a disposal plan in 1987 to meet the 1994 Congressional mandate. When the completion date was changed to 1997, the concept plan was revised and provided to Congress in March 1988. Since that date, some minor changes have

been made to the schedule. The FY 1989 Defense Authorization Act requires the DoD to immediately notify the Congress should safety, environmental or technical problems affect the 1997 completion date.

The Army will destroy the complete unitary chemical stockpile on-site at the eight CONUS storage sites and at Johnston Island. Nine separate disposal facilities will be required to accomplish this task. Facility construction is programmed to ensure that the lessons-learned from JACADS are applied to the rest of the facilities. None of the other facilities will be made operational until JACADS OVT is completed.

Each facility requires at least five years from the initiation of the site-specific EIS to beginning destruction operations. This includes two years for the environmental documentation and three years for constructing, equipping, testing and evaluating the facility. The process cannot be shortened without waiving environmental laws or abridging safety procedures. Neither of these actions conform to congressional guidance.

Construction of the first CONUS disposal facility began in October 1989 at Tooele Army Depot, Utah. Tooele has the largest quantity of agent tonnage of all the storage facilities. This facility will be operational in 1993, and it will require four years to destroy the its stockpile. Construction of the other facilities will begin in either 1991 or 1992, depending on their stockpile makeup and quantities. A schedule depicting the construction and operation phases of each facility is attached.

The current concept plan does not deal with verification of agent destruction which may be required by either a bilateral or multilateral treaty. Adding this process will involve additional cost and, depending on the precise verification protocol established, additional time.

Finally, we considered future demilitarization while developing our new binary weapons. The alcohol and sulphur precursors can be turned over to the Defense Logistics Agency for other uses. We can destroy the other liquid precursors in the incinerators installed at the Pine Bluff, Arkansas production plants for handling production by-products. Several simple, low technology methods exist for destroying the metal parts.

Attachment  
Chemical Stockpile Disposal Program Schedule