

17 November 1989

REPORT ON PLANS FOR MODERNIZING A SUBSTANTIALLY REDUCED
BINARY STOCKPILE

I. (U) Purpose.

~~(S)~~ In National Security Directive 24 (NSD 24), President Bush asked for a report on plans for modernizing the binary chemical weapons stockpile at significantly reduced levels. Additionally, the President directed that this report address ways to substantially increase the percentage of the stockpile devoted to filled munitions and ensure that air-delivered weapons are included.

II. (U) Background.

~~(S)~~ The U.S. maintains a chemical retaliatory capability to deter the use of chemical weapons against U.S. or allied forces. Should deterrence fail, the US reserves the right to respond in kind to an enemy's use of chemical weapons. The published retaliatory guidance for U.S. chemical weapons use is to respond as soon as possible, impose equal or greater operational restrictions on enemy forces, and be of sufficient scope to halt chemical warfare as quickly as possible. Until publication of NSD 24, the objective had been to stockpile sufficient U.S. forces-only chemical weapons for 30-days of global conflict.

~~(S)~~ The United States is committed ultimately to eliminating chemical weapons. While talks proceed on a multilateral CW convention, the U.S. will reduce to 20% of current levels (5,000 agent tons) provided the Soviet Union agrees to reduce to the same level. The U.S. will further reduce to a 500 agent ton stockpile within eight years after a CW convention enters into force, provided that the the Soviet Union is a party. Within two years after all CW-capable states have acceded to the treaty, the U.S. will destroy the remainder of its stockpile.

III. (U) Stockpile Requirements.

~~(S)~~ A reduced stockpile of binary chemical weapons should provide for:

- (U) An effective retaliatory capability considering [both] the reduction in the threat imposed by treaty constraints [and alternative means of retaliation]

~~Classified by Multiple Sources
Declassify on OADR~~

(U) Technical expertise and an maintenance of an industrial base in line with our obligations under international agreements [and our negotiating positions].

(S) An effective retaliatory capability provides sufficient weapons and agents to deter enemy use. The stockpile should provide a mixture of weapons and agents to offset any advantages an enemy could accrue and provide U.S. commanders with a flexible capability to respond. Our weapons and agents should complicate his CW defensive regimes. Air-delivered weapons are deemed essential for global deterrence, especially in regions without continuous U.S. presence. Studies and analysis support three systems to optimize operational capability: cannon artillery, medium range rockets, and air-delivered weapons.

(U) In addition to weapons, an effective retaliatory capability includes the operational aspects to use the weapons. The critical aspects include employment procedures, weaponering data, delivery systems, qualified and certified personnel, command and control systems, and training regimes which exercise CW retaliatory operations. A sufficient logistical system must be available to store, maintain, transport, and secure CW weapons during both peacetime and crisis. The CW retaliatory capability should include a viable doctrinal base with procedures and techniques integrated into current military art. Training and combat development regimes are required to keep pace with changing requirements.

(U) A retaliatory capability must contain an ability to sustain chemical warfare if necessary. Thus, an on-going weapons program, in keeping with our treaty obligations [and negotiating positions], ensures a technical and industrial base consisting of research, development, and testing capabilities with laboratories, test/proving grounds, and the technical expertise needed to provide both retaliatory and defensive products. Production facilities are required which provide the industrial aspect. The production of weapons requires a wholesale logistics apparatus to store, maintain, and transport the weapons systems.

IV. (U) Current Binary Program.

(S) The Joint Chiefs of Staff established a requirement for binary chemical weapons in October 1985. Based on a global war scenario, the required 90-day, US-only chemical weapons stockpile was quantified as 8,238 agent tons. This stockpile level was derived from analysis of CW operations in European, Korean, and Southwest Asia scenarios and supported by unified command requirements.

(S) The programmed binary production schedule delivers [redacted] agent tons by the year 2000 and the full requirement of [redacted] tons by 2005 (Appendix A). By 2000, the delivery schedule provides for [redacted] 155mm artillery projectiles, [redacted] binary (b)(1)

chemical warheads for the multiple-launched rocket system, and binary chemical bombs.

(b)(1)

(U) Only one system is currently in production--the 155mm artillery projectile. This system is a non-persistent nerve agent weapon designed for short range, tactical retaliation. Production facilities for this system are fully operational.

(U) The Multiple Launched Rocket System is a combination non-persistent and semi-persistent agent weapon designed for medium range, tactical retaliation. The warhead is currently in full-scale engineering development with a scheduled production decision in 1992, production contract in 1992, and delivery in 1994. At this time, it is deemed impractical to accelerate this program. Critical developmental testing is to be conducted in 1990 and 1991. Production facilities at Pine Bluff Arsenal, Arkansas, are under construction and scheduled for completion in 1991.

~~(S)~~ Unified commanders consider the Binary Chemical Bomb (BIGEYE) the most flexible and lethal binary system in the context of global deterrence. The bomb has a persistent nerve agent fill, provides deep strike capability, and is compatible with fielded and planned aircraft. DoD has twice recommended moving the program from operational testing into low-rate initial production. In both instances, Congress has denied funding due to operational testing issues and mandated additional testing. Operational testing (OT-IIC) is planned May-December 1990. Production contracting is planned for June 1991 with initial deliveries in 1992.

V. (U) Additional Considerations.

(U) Binary weapons data:

Cost per round:*

155mm artillery projectile	\$852/round
Binary chemical warhead for the Multiple Launched Rocket System	\$21,000/rocket
Binary chemical bomb (BIGEYE)	\$65,000/bomb

* Only approximate, the actual cost is based on production rates and quantities.

~~(S)~~ Future program costs of three weapons:

Fiscal Year (\$'s in Millions)

	FY 90	FY 91	FY 92	FY 93	FY 94-FY 00
155MM	47.8	71.4	35.0	--	--
MLRS	31.4*	28.5*	36.8	107.6	883.
BIGEYE	6.9*	67.6	71.7	71.0	1,350.
Total Future Cost:					\$2,741.

* = RDT&E funds (All others are procurement funds)

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Delivery systems:

155MM howitzer is widely available in US and allied forces to include NATO and South Korea

MLRS is currently a US-only system with plans for NATO and South Korean production of US specification launchers and rockets

BIGEYE bomb is compatible with F-16, F-111, A-8, and most other state-of-the-art air to ground capable fighter aircraft.

Accelerated Production of the BIGEYE Bomb

(U) The BIGEYE bomb program is controversial. The General Accounting Office has reported negatively on the bomb's reliability and the overall test program, and has influenced Congress's decision to continue with testing prior to production approval. The technical problems addressed by the GAO in test findings have either been resolved or can be, in the same manner as most weapons, during initial production. Low-rate initial production is a viable option; however, congressional opposition and DoD's differences with the GAO interpreting the test findings remain critical issues.

~~(S)~~ To meet the President's goal of fielding air-delivered munitions, consideration must be given to accelerating BIGEYE production. Low-rate initial production (LRIP) could commence in lieu of test weapons production. The Administration could request congressional approval to enter LRIP, convert the OT-IIC to a normal Follow-on Test and Evaluation, and full scale production after successful testing. Sufficient binary precursors are currently available to begin filling between [redacted] (b)(1) [redacted] Chemical production facilities at Pine Bluff Arsenal, Arkansas, will be on-line by December 1990 to support full rate production.

Alternative Air-Delivered Systems

~~(S)~~ NSD 24 directed that air-delivered weapons be included in the planned binary program. Currently no alternative system is in development for near term fielding. The Air Force and Navy had programs that were potential candidates for a CW delivery system, but these were halted due to budgetary considerations in FY 89. The Joint Staff has a draft requirements document for a Standoff Chemical Weapon System. Such a weapon would require seven to ten years of RDT&E before production. The only system that can provide this capability is the BIGEYE.

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Validation of Technical Data and Facilitization

~~(S)~~ If a one or two system weapons mix option is selected, completion of research, development, testing, and facilitization of the binary system is essential. Completion of the RDT&E and the production facility serves as an effective treaty safeguard in the event of a breakout. At the negotiated time, CW facilities would be disabled.

Unitary Munitions

~~(S)~~ Currently, approximately [redacted] agent tons of unitary weapons are considered useful. Air-delivered unitary weapons are approaching obsolescence and are not as effective militarily as the BIGEYE. Retention of unitary munitions may require revision of the chemical destruction program schedule. (b)(1)

VI. (U) Weapons Mix for Reduced Stockpiles.

Three System Scheme

~~(S)~~ The current binary modernization program provides for three different weapon systems with a capability for short, intermediate, and long range delivery. Additionally, these weapon systems represent a mix of different agent types from non-persistent to persistent. Production of the three binary systems provide each of the desired requirements and provides the most effective retaliatory capability.

Two System Scheme

~~(S)~~ A two system combination, while reducing overall tactical flexibility, could still provide sufficient versatility to meet the President's guidance of enhancing the percentage of filled munitions and providing air-delivered weapons. The selection of a stockpile option containing only two of the binary weapon systems would necessitate, as a minimum, the completion of a validated technical data package for the non-selected system and the equipping and prove out of a corresponding production facility. Thus production could be initiated rapidly if required.

One System Scheme

~~(S)~~ At the stockpile levels called for in NSD-24, a single system stockpile is military ineffective and should not be considered as a deterrence option. The 155MM munition currently in production would not, by itself, provide sufficient deterrent capability on a global scale. Although, the BIGEYE bomb provides a commander with the most flexibility in employment, the persistent nature of the agent fill could be inappropriate in close support of ground forces. As the President has directed that air-delivered weapons be included in the

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stockpile, and the planned system, by itself, will not meet military requirements. Adoption of a single system weapons stockpile is not considered a viable planning scheme.

VII. (U) Options for Fielding a Reduced Stockpile.

Option 1

~~(S)~~ Assume a bilateral agreement with the Soviets and field the current funded portions of the binary modernization program as follows:

155MM
MLRS
BIGEYE

(b)(1)

~~(S)~~ After a multilateral agreement, reduce to a 500 agent tons stockpile at the same relative percentage levels for all three systems.

155MM
MLRS
BIGEYE

(b)(1)

Option 2

~~(S)~~ Upon entry into a bilateral agreement with the Soviet Union, field a two system scheme which includes the programmed procurement of 155MM and the BIGEYE bomb. The composition is:

155MM
BIGEYE*

(b)(1)

~~(S)~~ Reduce to 500 agent tons at the same percentage levels:

155MM
BIGEYE

(b)(1)

* Accelerate production of the BIGEYE into Low Rate Initial Production by November 1990 and change the operational test to a follow-on test and evaluation.

~~(S)~~ To minimize any undue military risks due to a treaty breakout, this option requires that the MLRS binary chemical warhead system complete RDT&E and that production facilities are completed at Pine Bluff Arsenal.

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Option 3

~~(S)~~ Field a two system scheme which does not request procurement funding for the 155MM program after FY 90 and completes prior year obligations. The BIGEYE bomb is included in this option. The composition is:

155MM
BIGEYE*

(b)(1)

~~(S)~~ Reduce this to 500 agent tons at the same percentage levels:

155MM
BIGEYE

(b)(1)

~~(S)~~ Accelerate production of the BIGEYE into Low Rate Initial Production by November 1990 and change the operational test to a follow-on test and evaluation.

~~(S)~~ To minimize any undue military risks due to a treaty breakout, this option requires that the MLRS binary chemical warhead system complete RDT&E and that production facilities are completed at Pine Bluff Arsenal.

Option 4

~~(S)~~ Field a two system scheme which does not request procurement funding for the 155MM program after FY 90 and completes prior year obligations. The BIGEYE bomb is included in this option, but only to a the 500 agent ton level. The composition is:

155MM
BIGEYE*

(b)(1)

~~(S)~~ Reduce this to 500 agent tons by demilitarizing 155MM binary munitions only:

155MM
BIGEYE

(b)(1)

~~(S)~~ Accelerate production of the BIGEYE into Low Rate Initial Production by November 1990 and change the operational test to a follow-on test and evaluation. Procure 384 agent tons of bombs not later than October 1992.

~~(S)~~ To minimize any undue military risks due to a treaty breakout, this option requires that the MLRS binary chemical warhead system complete RDT&E and that production facilities are completed at Pine Bluff Arsenal.

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Option 5

~~(S)~~ Field a two system scheme which does not request procurement funding for the 155MM program after FY 90 and completes prior year obligations. The BIGEYE bomb is included in this option, but only to a the 500 agent ton level. The composition is:

155MM
BIGEYE*

(b)(1)

~~(S)~~ Reduce this to 500 agent tons by demilitarizing 155MM binary munitions only:

BIGEYE

(b)(1)

~~(S)~~ Accelerate production of the BIGEYE into Low Rate Initial Production by November 1990 and change the operational test to a follow-on test and evaluation.

~~(S)~~ To minimize any undue military risks due to a treaty breakout, this option requires that the MLRS binary chemical warhead system complete RDT&E and that production facilities are completed at Pine Bluff Arsenal.

IX. (U) Conclusions.

~~(S)~~ A three system binary stockpile is the most desirable from the operational aspects.

~~(S)~~ A two system binary stockpile with bombs meets the President's directive.

~~(S)~~ A one system binary stockpile is not preferred at the 5,000 agent ton level; however, bombs provide limited deterrence and tactical flexibility at the 500 stockpile level.

~~(S)~~ Alternatives of less than 5,000 agent ton stockpiles are possible with augmentation with current unitary weapons. While meeting the requirement, retention of unitary munitions is not a preferred option due to weapon system aging and incompatibility, and the resulting changes to the destruction schedule.

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