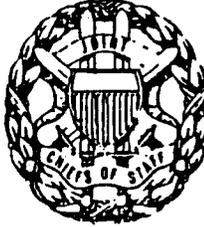


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JOINT STRATEGIC OBJECTIVES PLAN (JSOP)

ANNEX F (CHEMICAL, BIOLOGICAL, AND RADIOLOGICAL WARFARE) TO THE JOINT STRATEGIC OBJECTIVES PLAN FOR FY 1970-1974 (JSOP-70) (U)

The provisions of JCS Memorandum of Policy No. 74 are applicable to this document. Accordingly, a semi-annual report as of 1 January and 1 July, of the sighting of this document is required and will be forwarded within 30 days after the "as of" date to the Secretary, Joint Chiefs of Staff (ATTENTION: Chief, Documents Division)

THE JOINT CHIEFS OF STAFF
WASHINGTON 20301, D.C.

Annex F to
JSOP-70

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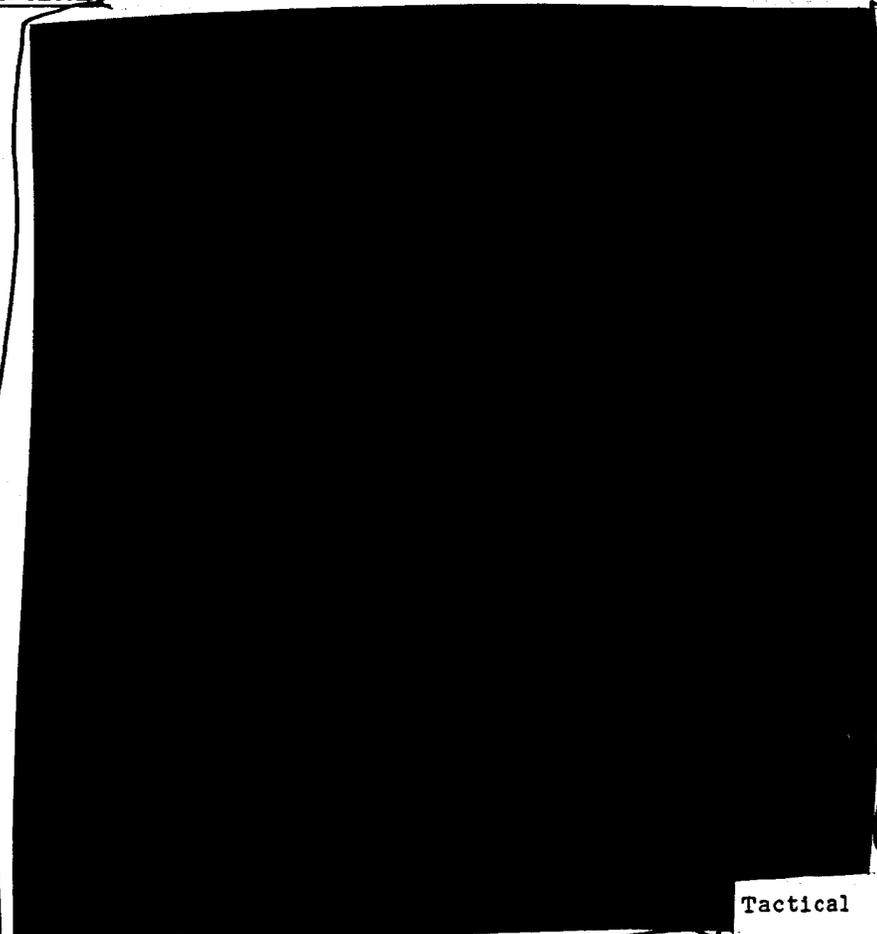
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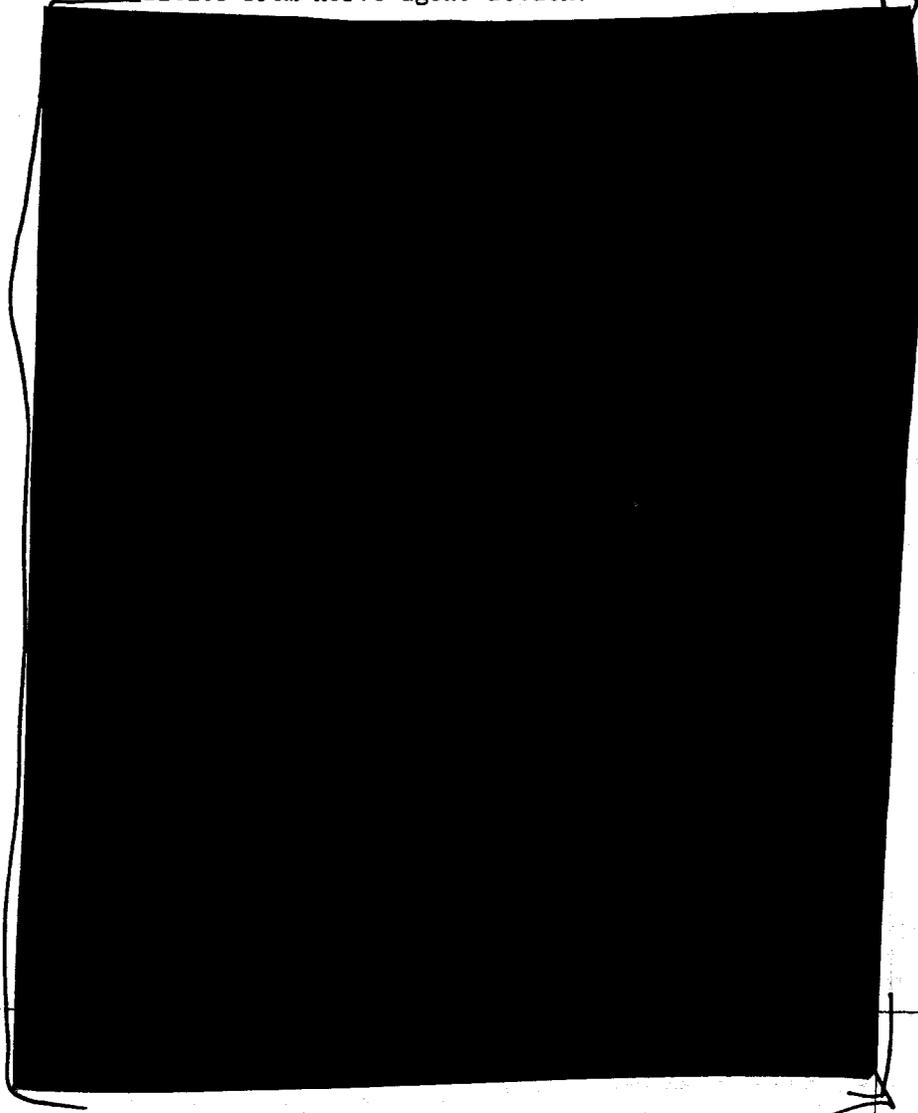
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Tactical 18

collective protection systems should be available which 19
would permit rest, recuperation, and sustenance for 20
troops exposed to toxic environments for prolonged 21
periods. Shipboard and tactical air base collective 22
protection systems performing similar functions 23
should also be developed. The ability to detect 24
nerve gases, which are the most likely CB threat 25
because of the known Soviet capability to employ 26
lethal chemical nerve gases tactically, should have 27
been improved substantially. Reliable automatic 28

warning devices should be developed which will permit 1
 our forces to live and fight in this toxic environment. 2
 Improved individual protective clothing should be avail- 3
 able to provide more effective body protection while 4
 permitting freedom of movement. Simple self-aid 5
 treatments also should be available for nerve gas 6
 casualties, including the agent [redacted] which will 7
 ameliorate the medical support problem and reduce 8
 fatalities from nerve agent attack. 9



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* NIE 4-64; on file in Joint Secretariat

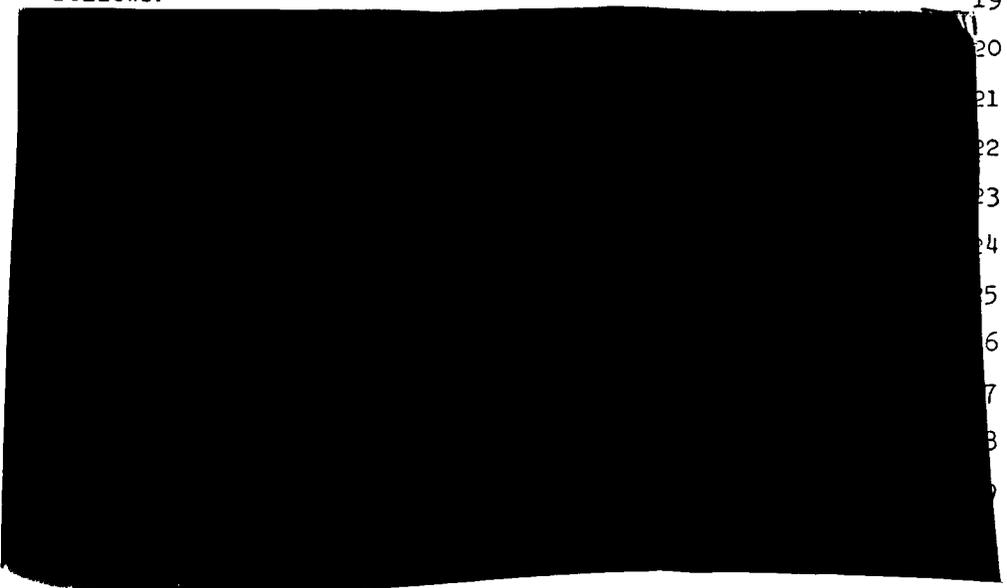
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should have been attained in radiological survey 1
 techniques, in developing prestrike information on 2
 fallout hazards, and in timely communication of both 3
 prestrike predictions and poststrike fallout informa- 4
 tion to forces affected. An increased capability for 5
 individual and collective protection should have been 6
 developed. Automatic detection and alarm systems should 7
 be available to provide warning of radioactive fallout. 8

(3) Other Free World Nations. Other Free World 9
 nations should have improved their defensive postures. 10

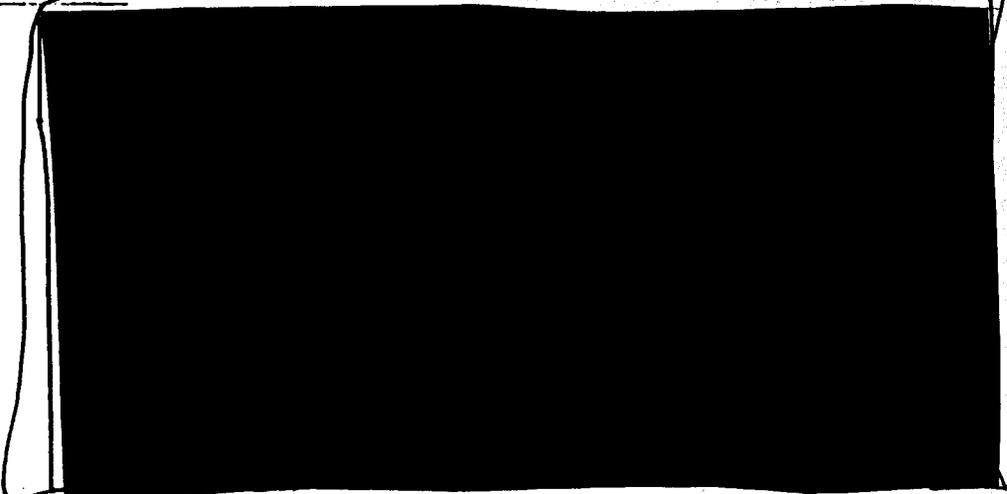
5. Capabilities. Programmed United States' capabilities 11
 listed in the TAB to this Annex will be used in planning by 12
 the military services, and as information to the commanders 13
 of the unified and specified commands in the development, 14
 planning, and preparation for the conduct of CBR operations. 15

6. Basic Undertakings. Basic undertakings envisioned for 16
 unified and specified commands and guidance for the military 17
 services in carrying out their responsibilities are as 18
 follows: 19



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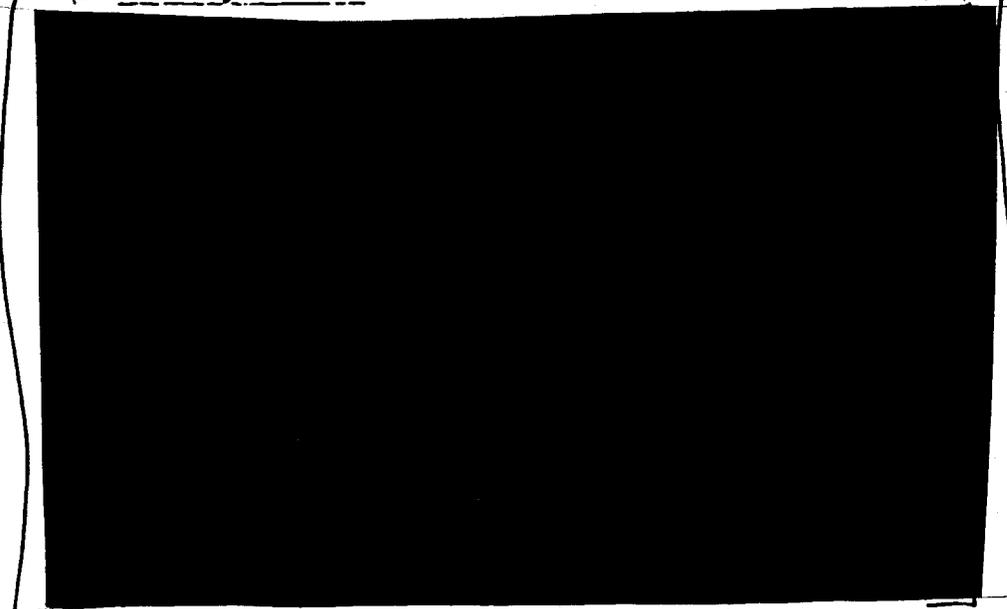


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b. Military Services

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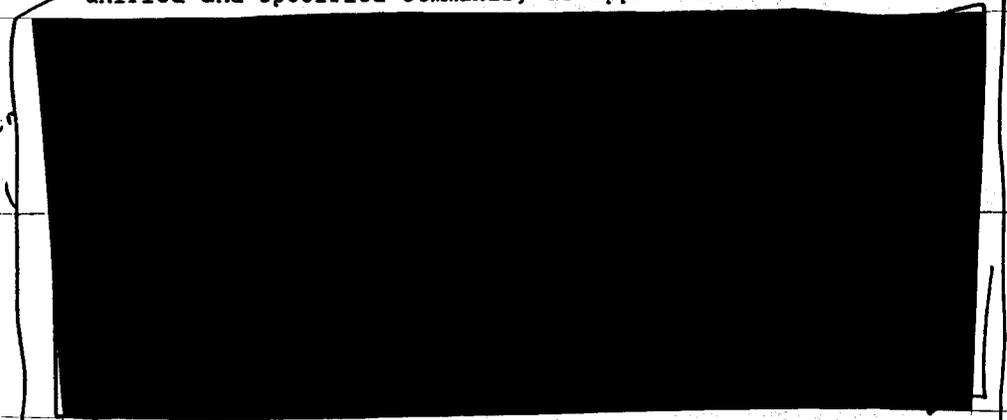
(3) Organize, train, and equip forces to support the CBR plans and requirements of the commanders of the unified and specified commands, as approved.

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TAB TO ANNEX F

TO

JOINT STRATEGIC OBJECTIVES PLAN 1 JULY 1969 - 30 JUNE 1974

CHEMICAL AND BIOLOGICAL AGENTS AND WEAPONS AND THEIR CHARACTERISTICS

<u>Chemical Agents</u>	<u>Effects</u>	<u>Rapidity of Action</u>	<u>Duration of Effects</u>
GB - Nerve Agent	Lethal and nonpersistent nerve agent.	30 sec to 1 min thru respiratory system.	3-4 days for survivors
VX - Nerve Agent	Lethal and persistent nerve agent.	1-3 hrs through skin	6-24 hrs for survivors
HD - Mustard	Incapacitating and persistent blister agent.	6-12 hrs through skin	Up to 6 mos.
BZ - Psycho-chemical	Incapacitating agent.	1½-2 hrs through respiratory system	3-5 days
XR - Food Poison (Botulism)	Approaching 100% fatalities.	4 hours	36-72 hrs for survivors
UC - Food Poison (Staphylococcal)	Incapacitating Agent	1-6 hrs	1-16 hrs
SS - Shellfish Poison	Lethal Agent	Less than 5 minutes	No known survivors
<u>Riot Control Agents</u>			
CS - New tear gas	Incapacitating; strong effect on eyes and lungs.	Almost immediately through lungs	Recovery complete in 15 min in clear air
DM - Adamsite (Vomiting agent)	Acute pain, nausea, and vomiting.	Approximately 1 min through lungs	½-2 hrs

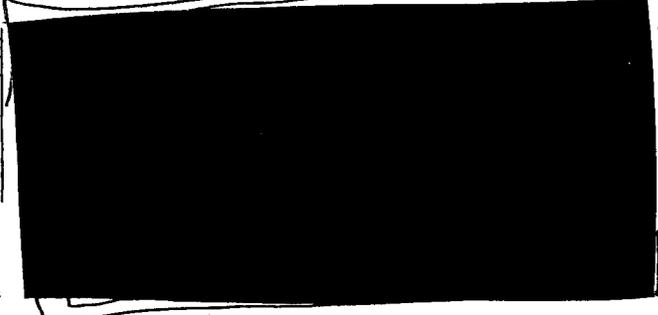
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Effects

Less than 1% fatalities, recovery complete

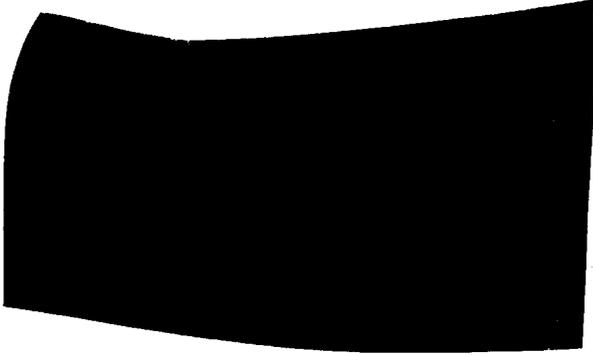
Less than 2% fatalities, recovery complete

Less than 2% fatalities, may have chronic effects

30-40% fatalities, recovery complete

Approaching 100% fatalities

5-100% lethal in non-endemic areas; 5-10% lethal in endemic areas



Duration of Effects

Approximately 7 days

Approximately 7 days

Estimated at 3 mos.

2-5 wks for survivors

30 days for survivors

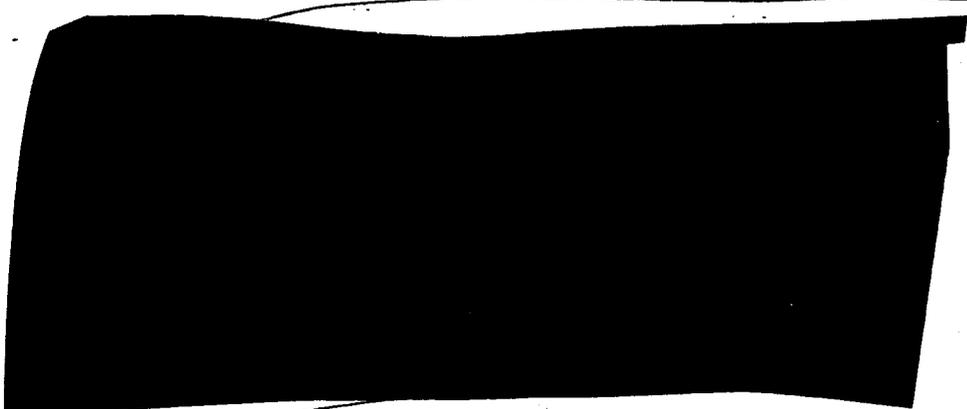
7-14 days for survivors



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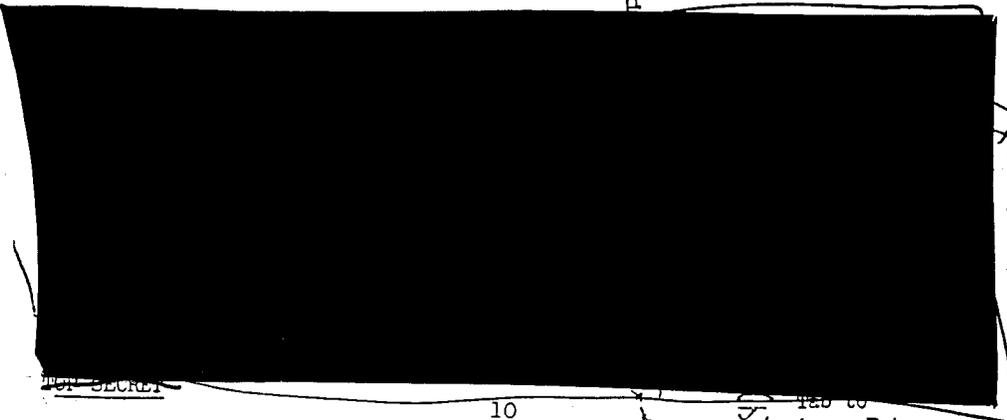
* The subdesignation "-1" in conjunction with a biological agent symbol denotes a wet suspension of the agent, e.g., [redacted] is a wet suspension of [redacted] and the subdesignation "-2" in conjunction with a biological agent symbol indicates dried agent, e.g., [redacted] would denote dry [redacted]

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<u>Effects</u>	<u>Rapidity of Action</u>	<u>Duration of Effects</u>
Kills most broad leaf plants	1-2 weeks, dependent on time in growing season and plant species	2-19 weeks in soil
Most effective on potatoes, soy beans, and manioc.	Same as for [redacted]	2-19 weeks in soil
Kills trees and plants in active growth stage	3-60 days for defoliation; 3-7 days for crop destruction	In operational concentrations of 3 gallons/acre, approximately 30-60 days
Kills or reduces yields of wheat	Dependent upon time in growing season	One season if an alternate host (barberry plant) is not present
Kills rice and desiccates most plants	Hours to 3 days dependent upon time in growing season	One growing season
Kills or reduces yields of rice	Dependent upon time in growing season	One growing season
Kills or reduces yields of rye	Dependent upon time in growing season	One season if an alternate host (barberry plant) is not present

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