DECLASSIFIED
Authority MD964050
By M3 1/2 NARA Date 8/2/10

CONFIDENTIAL CONFIDENTIAL

Reproduced at the National Archiv

Minutes of the Meeting of the Chemical Corps Technical Committee 9 February 1961

Meeting No. 272

Items 3770-3822

Regrading Depends on Classification of Separate Items

GROUP 3

DOWNGRADED AT 12 YEAR INTERVALS;

NOT AUTOMATICALLY DECLASSIFIED,

DOD DIR 5200.10

CONFIDENTIAL CONFIDENTIAL

5010-63

WH12302

reproduced at the tradicital Archives

pulse a construction of the construction of th

Minutes of the 272d Meeting of the Chemical Corps Technical Committee held at 1400 hours, 9 February 1961, in Room 4E-442 The Pentagon, Washington 25, D. C.

The meeting was called to order by the Chairman, Colonel A. W. Meetze, with the following in attendance:

Members or Alternates (*)	<u>Service</u> Represented	
Colonel A. W. Meetze, Chairman Colonel J. R. Pritchard, GS (Arty) * Captain W. W. Taylor, Jr., MSC, USN Lt Colonel J. M. Kusiak, USMC	CmlC USCONARC BuMed&Surg USMC	
Lt Colonel L. J. Stefani, CmlC Major R. L. Andreoli, GS	CmlC GSUSA CAS	
Major R. R. Doddridge, RCE * Captain W. S. Vargovick, CmlC	CmlC	
* MSgt Grant Thornbury, USMC	USMC CmlC	
Dr. T. S. Eckert Mr. R. C. Cornett	CofE	
* Mr. Irving Cort	CmlC	
* Mr. E. J. Hargis	TC	
Mr. Ronald Holmes	UK	
* Mr. C. G. Jones	CmlC	
* Mr. K. P. Moseley	CmlC	
* Mr. F. H. Purdy	TC	
Mr. Henry Rackowski	OrdC	
* Mr. A. L. Russell	BuYds&Dks	
* Mr. Edward Schauf	QMC	
Mr. J. L. Traub	CmlC	
Mr. L. F. Walsh	CmlC	
Observers		
Colonel Joseph I. Martin, CmlC-USAR	CmlC	
Mr. M. Guarenheim	CmlC	

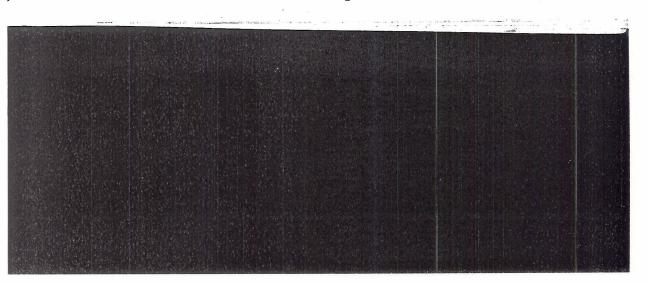
Colonel Joseph I. Martin, CmlC-USAR	CmlC
Mr. M. Guggenheim	CmlC
Mrs. Betty W. Murphy	ASA
Mrs. Bonnie N. Helton, Steno	
Mrs. Phyllis A. Helton, Asst	
Miss Emily M. Jones, Asst	

The Secretary then announced the following changes in membership of the Committee that had occurred since the last meeting:

Colonel William Hinternhoff, GS, now represents USCONARC, Development & Test Section, vice Colonel Harrison, relieved.

Lt Colonel Louis J. Stefani, Cml C, now represents the Director/Military Operations, OCCmlO, vice Lt Colonel Gaston. This

CONFIDENTIAL



4 November 1960

DECLASSIFIED
Authority MD964050
By M312 NARA Date 1/2

n para-

HEADQUARTERS
DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF CHEMICAL OFFICER
WASHINGTON 25, D. C.

s and CONARC, the the

nce

oordiepart-

ce, and

fense f lb).

ll be

ile

uipment.

CILWS.

SUBJECT: Liaison with Air Research and Development Command

TO: See Distribution

- 1. The Air Research and Development Command has recently established a BW/CW Project Office within the ARDC, Wright Air Development Division at Wright-Patterson Air Force Base, Ohio. This office will have the responsibility for translating Air Force military requirements (i.e., individual and collective BW/CW agent detection, warning, identification and protection systems; lethal and non-lethal biological and chemical offensive systems) into technical requirements and the establishment of the R&D programs necessary to attain a military operational capability. Direct contact between all Chemical Corps Commands and agencies is authorized with this office; however, policy agreements will be handled by the appropriate staff element of my office.
- 2. The ARDC Aberdeen Proving Ground Liaison Office will provide liaison between the EW/CW Project Office at Wright-Patterson Air Force Base and the Chemical Corps Commands and agencies. All echelons should cooperate and assist this office in the performance of its mission. The Scientific Activities Office will be the central Chemical Corps point of contact for this office and will assist in establishing contacts as required and providing coordinated Chemical Corps position in any policy matter to the ARDC in the R&D area.

/s/ MARSHALL STUBBS
Major General, USA
Chief Chemical Officer

DISTRIBUTION: A

WH12076

Item 3806

DEPARTMENT OF THE ARMY OFFICE OF THE CHIEF OF RESEARCH AND DEVELOPMENT Washington 25, D. C.

CRD/D 4833

7 April 1960

SUBJECT: Technical Obejctives 1960-65 for Anti-Personnel Chemical and

TO: Chief Chemical Officer Department of the Army Washington 25, D. C.

1. (U) References:

- a. Summary Sheet, CRD/D 1407, OCRD, dated 15 February 1960, subject: Technical Objectives (U).
- b. JCS 1837/107, dated 21 December 1959.
- Change Order Nr 1, R&D Program, dated 13 January 1960.
- (U) By the referenced Summary Sheet, the Director of Research and Development, Department of the Army, approved the subject Technical Objectives, copies of which are attached. These Technical Objectives are based on the stated obejctives of the Director of Defense Research and Engineering and on the Qualitative Operational Requirements of the Military Services as contained in reference lb.
- 3. (U) These Technical Objectives, together with references 1b and lc and the stated objectives of DDRE, will provide the basis for the development of the Chemical and Biological R&D program.
- 4. (C) In addition, reference 1b contains Qualitative Operational Requirements in the field of Anti-Materiel and Anti-Food Agents and Weapons. To date, formal Technical Objectives have not been drafted for these
- 5. (C) The Chief Chemical Officer is requested to submit, for the Department of the Army approval, technical objectives to cover the anti-

BY DIRECTION OF THE CHIEF OF RESEARCH AND DEVELOPMENT:

1 Incl Tech Objectives (dupe)

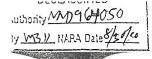
/s/ MICHAEL S. DAVISON Colonel, GS Chief, Combat Materiel Division

Copy furnished: (w/Incl) CofEngrs, CofOrd TSG, TQMG DCSLOG, DCSOPS

REGRADED UNCLASSIFIED 6 APRIL 1963

1554-C WH12214

CONFIDENTIAL



Item 3806

TECHNICAL OBJECTIVES 1960-65 FOR ANTI-PERSONNEL CHEMICAL AND BIOLOGICAL WARFARE

1960

and

60,

arch ical 35 cch

the

b and de-

onal Weap-· these

r the inti-

554-C 12214 OFFENSIVE

A. Biological Agents

- 1. To perform research and development to obtain a highly lethal anti-personnel agent with sufficient stability, infectivity and predictability to permit effective dissemination over target areas under a variety of environmental conditions by appropriate delivery systems.
- 2. To perform research and development to obtain an incapacitating anti-personnel agent with sufficient stability, infectivity and predictability to permit effective dissemination over target areas under a variety of environmental conditions by appropriate delivery systems.
- 3. To devise methods and techniques which will circumvent individual field protective systems.
- 4. To attain agent storage stability with minimal special storage and supply requirements.
- 5. To conduct the essential laboratory process research and prepilot plant work necessary to establish agent production feasibility and to produce the quantities of agent required to support the Agent, Munitions and Defense Programs.
- 6. To conduct pilot plant, production engineering, or production plant studies only after agent-munition capabilities have been satisfactorily demonstrated.
- To maintain a nucleus of research effort in anti-food warfare to prevent technological surprise and to permit exploitation of future technological advances.
- 8. To establish, prior to type classification, dose-response data for each developed agent by applicable routes of effect required for the determination of the relative effectiveness of agents under operational conditions.

B. Biological Munitions

- 1. To develop a series of munitions suitable for support of military operations compatible with delivery systems expected to be available by 1965 which will disseminate efficiently and effectively lethal and incapacitating biological agents.
- 2. To devise suitable techniques and materiel for the use of biological agents in unconventional warfare.

Incl

CONFIDENTIAL

Item 3806

C. Chemical Agents

- l. To obtain a rapid-acting lethal agent with predictable effects, capable of circumventing respiratory protective devices, without creating a militarily significant contamination hazard.
- 2. To obtain a rapid-acting lethal agent with predictable effects, capable of circumventing respiratory protective devices, which will result in a militarily significant contamination hazard.
- 3. To obtain a series of rapid-acting non-lethal incapacitating agents with predictable effects capable of producing temporary effects of such a nature that individuals affected are unable to accomplish effectively their normally assigned duties and/or offer effective resistance.
- 4. To obtain an agent(s) for training and maneuvers capable of simulating the field characteristics of actual agents without serious deleterious effects.
- 5. To attain agent storage stability with minimal special storage and supply requirements.
- 6. To conduct the essential laboratory process research and pre-pilot plant work necessary to establish agent production feasibility and to produce the quantities of agent required to support the Agent, Munitions, and Defense Programs.
- 7. To conduct pilot plant, production engineering, or production plant studies only after agent-munition capabilities have been satisfactorily demonstrated.
- 8. To establish, prior to type classification, dose/response data for each developed agent, in appropriate physical states by applicable routes of effect, required for the determination of the relative effectiveness of agents under operational conditions.

D. Chemical Munitions

- 1. To develop a series of munitions suitable for support of military operations compatible with delivery systems expected to be available by 1965 which will disseminate efficiently and effectively lethal and incapacitating chemical agents.
- 2. To devise suitable techniques and materiel for the use of chemical agents in unconventional warfare operations.

II. Defensive

A. To perform research and development to obtain individual and collective physical protection systems against chemical and biological attacks which will permit military operations for extended periods of time with a minimal degradation of combat effectiveness.

CONFIDENTIAL

Item 3806

Reproduced at the National Archives in

able effects, ut creating

able effects, will result

effects of the effect

pable of erious

ial

and sibility lgent,

roduction atisfac-

ponse applilative

; of be rely

e of

and gical s of

3

4

B. To determine the degradation of combat efficiency when protective measures must be employed in anticipation of, during, and after chemical and/or biological attacks.

C. To emphasize research leading to the development of detection and warning systems which will detect rapidly biological agents in militarily significant concentrations.

D. To emphasize research leading to the development of rapid identification techniques which will identify chemical and/or biological agents which have been employed.

E. To perform research and development to obtain a warning and detection system suitable for use in combat operations which will detect rapidly chemical agents in militarily significant concentrations.

F. To emphasize research leading to prophylactic and therapeutic measures to minimize casualties resulting from chemical and biological attack.

G. To develop materials and techniques for mass immunization and/or treatment of personnel for protection against chemical and biological attack.

H. To obtain an integrated environmental protective ensemble with helmet-type mask which will provide chemical, biological, nuclear, ballistic, and environmental protection.

By MB / NARA Date 8/20/20

Item 3807

HEADQUARTERS DEPARTMENT OF THE ARMY Office of the Chief of Research & Development Washington 25, D. C.

CRD/D 14707

d

u

A

7

SUBJECT: Technical Objectives 1960-65 for Anti-Materiel and Anti-Food 20 October 1960

TO:

Chief Chemical Officer Department of the Army Washington 25, D. C.

1. References:

a. Letter, CRD to Chief Chemical Officer, subject: Technical Objectives 1960-1965 for Anti-Personnel Chemical and Biological Warfare, dated 7 April 1960 and reply thereto (CMLWS, 1 Jun 60, w/Incl).

b. Summary Sheet, CRD/D 11734, OCRD, dated 2 September 1960, subject: Technical Objectives.

- c. JCS 1837/107, dated 21 December 1959.
- d. Change Order Nr 1, R&D Program, dated 13 January 1960.
- 2. By the referenced Summary Sheet, the Director of Research and Development, Department of the Army, approved the subject Technical Objectives, copies of which are attached. These Technical Objectives are based on the stated objectives of the Director of Defense Research and Engineering and on the Qualitative Operational Requirements of the Mili-
- 3. These Technical Objectives, together with references lc and ld and the stated objectives of DDRE, will provide the guidance in the execution of currently approved programs and will be used for planning purposes should additional funds become available.

BY DIRECTION OF THE CHIEF OF RESEARCH AND DEVELOPMENT:

1 Incl (dupe) Tech Objectives

/s/ RAYMOND B. FIREHOCK Colonel, GS Deputy Director of Developments

Cy furn:

w/Incl W/o Incl CofEngrs CofOrd DCSOPS TSG

TOMG

CONFIDENTIAL

WH12215

Item 3807

TECHNICAL OBJECTIVES 1960-65 FOR ANTI-MATERIEL AND ANTI-FOOD WEAPONS SYSTEMS

ober 1960

ti-Food

echnical Warfare,

1960,

h and

50.

1 Obs are and Mili-

nd ld execuurposes 1. (C) Agents.

a. Anti-Materiel.

- (1) To perform research and development to obtain a family of chemical and biological agents that, when delivered on target, will be capable of destroying or rendering unusable material common to battlefield situations. The agents should be producible at reasonable cost in desired quantities, be stable for required storage periods, and be effective within a militarily useful period of time.
- (2) To perform research and development to obtain agents useful to military operations by killing, defoliating or marking foliage. These agents should be effective regardless of climatic conditions. Agents should be producible at reasonable cost in desired quantities, stable in storage, and take effect in as short a time as possible.

b. Anti-Food.

- (1) To perform research and development to obtain agents capable of destroying crops or causing significant crop yield reduction. These agents should be effective in a predictable, controllable manner, with effects confined to one crop season. These agents should possess long shelf life and be producible at reasonable cost in required quantities.
- (2) To perform research and development to obtain agents capable of reducing the total animal products and draft-animal power of an enemy by a factor sufficient to degrade the national economy. These agents should possess a long shelf life and be producible at reasonable cost in required quantities.

2. (C) Munitions.

- a. To develop a series of munitions suitable for support of military operations, compatible with delivery systems and producible at reasonable cost, which will disseminate efficiently and effectively chemical and biological anti-materiel and anti-food agents.
- b. To devise suitable techniques and materiel for use of anti-materiel and anti-food agents in unconventional warfare.

Incl

CONFIDENTIAL

ems 3811 3812

CONFIDENTIAL

READ FOR ABOUND

Item 3815

1093 ec 1960

HEADQUARTERS——
UNITED STATES CONTINENTAL ARMY COMMAND
Fort Monroe, Virginia

ATDEV-3 400.114

30 September 1960

riven,

SUBJECT: USCONARC-Approved Military Characteristics for Incapacitating Agent(s) - Nonlethal (U)

TO:

Chief of Research and Development Department of the Army

Washington 25, D. C.

ing No.

1. References:

llows:-

dards List.

ov 60.

JS

tee

a. Letter, ATSWD-S 470/18(C)(30 Jun 59), HQ, USCONARC, 30 June 1959, subject: "Qualitative Materiel Requirement - Incapacitating Agent - Nonlethal (U)."

b. Letter, CRD/A 12422, Chief of Research and Development, DA, 11 September 1959, subject: "Qualitative Materiel Requirement for Incapacitating Agent - Nonlethal (U)."

 Inclosed are USCONARC-Approved Military Characteristics for Incapacitating Agents(s) - Nonlethal in accordance with reference la above.

3. Recommend the inclosed military characteristics be approved.

FOR THE COMMANDER:

1 Incl (5 cys) a/s

/s/ T. J. MARNANE Colonel, AGC Adjutant General

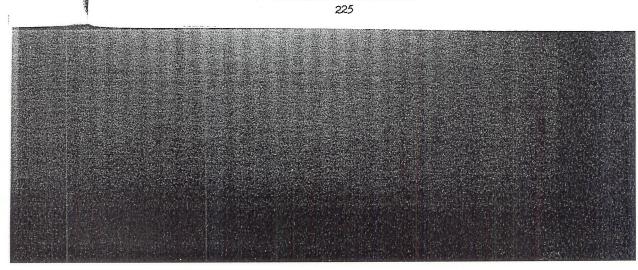
Copies furnished:

AOCCmlO
CG, ACC
Comdt
USA CGSC
USAARMS
USAAMS
USAAMS
USAIS
Pres
USAIB
USA ATB
CO, USA BW Lab

REGRADED UNCLASSIFIED WHEN SEPARATED FROM CLASSIFIED INCLOSURE

WH12240

CONFIDENTIAL



1thority MM964050 1 M3 1/ NARA Date 8/20/co

Item 3815

14025 (C) (30 Sep 60) 1st Ind (C) SUBJECT: USCONARC-Approved Military Characteristics for Incapacitating Agent(s) - Nonlethal

Office, Chief of Research and Development, Department of the Army, Washington 25, D. C., 17 January 1961

TO: Chief Chemical Officer, Department of the Army, Washington 25, D. C.

- 1. (C) Recommendation contained in paragraph 3 of basic letter is approved with the following exceptions:
 - a. Section I General: Paragraph 5a of inclosure delete second sentence.
 - b. Section II Operational Characteristics: Paragraph lb, Essential, of inclosure - change to:

"The agent(s) shall produce readily apparent and immediate incapacitation (within 10 minutes) and have a lasting effect on the individual from 1 to 3 hours."

2. (U) Request the Chief Chemical Officer take necessary technical committee action on the approved Military Characteristics.

BY DIRECTION OF THE CHIEF OF RESEARCH AND DEVELOPMENT:

1 Incl (4 cys) n/c

/s/ R. B. FIREHOCK

Copy furnished: USCONARC Ln O (dupe) (w/o Incl)

Colonel, GS Deputy Director of Developments

CONFIDENTIAL 226

2

th gi n€ sy ur wi mέ Cc

> iı M: 11 i. C S.

C C

po ac

It

af th

de

ho

in

re an

Ι

Charles and the same of the same of the same

CONFIDENTIAL

Item 3815

USCONARC-Approved Military Characteristics for Incapacitating Agent(s)—Nonlethal (U)

Section I - General

1. (C) Statement of requirement. Incapacitating Agent(s) - Nonlethal.

(CONFIDENTIAL) A nonlethal agent(s) capable of producing temporary effects of such a nature that individuals affected are unable to accomplish their normally assigned duties or offer effective resistance. It is desirable, but not essential, that the incapacitated personnel, affected by the agent(s) should remain ambulatory thereby facilitating their capture and subsequent evacuation. The agent(s) must produce the desired effects almost instantaneously and last from 1 to 6 hours (1 to 3 hours acceptable). (MR) CDOG subparagraph number is 1238a(10).

- 2. (C) Operational concept. The agent(s) will be employed to incapacitate the enemy and hostile elements both in the combat zone and rear areas. As a tactical weapon it will be delivered by close support and individual weapons currently available or which will be available in the 1960 to 1965 time frame. It can be used also in tactical and strategical airborne operations. In rear areas, it will be employed in connection with antiquerilla activities and in riot control. Tactical utilization of this agent should receive primary consideration in development.
- 3. (U) Organizational concept. The agent(s) and the disseminating system will be employed by infantry, artillery, engineer, airborne, armor units, military police, and special forces as required, utilizing weapons with which these units are normally equipped.
- 4. (U) $\underline{\text{Maintenance concept}}$. The agent(s) shall require no special maintenance procedures.
- 5. (C) <u>Consideration of Tripartite, Navy, Air Force, and Marine Corps interests</u>.
- a. The Army and the Marine Corps have primary interest in the incapacitating agent(s). However, there is no report of basic research on such an agent(s) by the Marine Corps. The Marine Corps concurs in these Military Characteristics. The comments of the United Kingdom are "that in view of the state of the art in this field, the draft Military Characteristics seem ambitious, and in certain respects, somewhat unrealistic." The Canadian Army concurred in the Military Characteristics. (Note: The 2d sentence above is deleted by 1st Ind, OCRD, 17 Jan 61).
- b. An agent (British T792) has been effectively used in riot control devices by the British Army. In this connection an agent-munitions combination was developed and employed operationally in Cyprus. A quantity of the British agent has been made available, on standardization loan from

Army.

n 25, D. C.

pacitating

letter is

delete

ιph lb,

mmediate effect on

:echni-

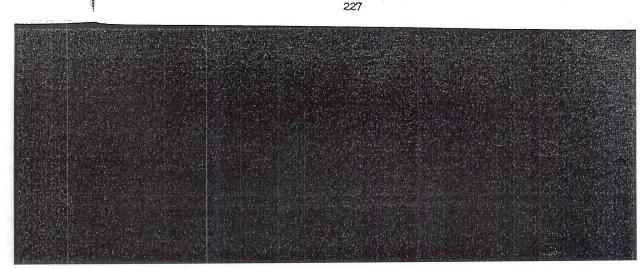
ts

Incl

2

CONFIDENTIAL

3



Item 3815

the United Kingdom, for testing by the Canadian Army. The Canadian Government's testing is primarily concerned with determining the agent's adaptability as a nonlethal chemical warfare agent for training of personnel and testing of CW defense equipment.

6. (C) Background information.

- a. There has existed a requirement for a nonlethal agent capable of producing total incapacitation instantaneously without significant risk of causing death or permanent injury. With the increased emphasis on the concept of less than general war, the requirement for such an agent(s) becomes even more apparent. The Chemical Corps has stated that it is technically feasible to develop an incapacitating agent(s), nonlethal. However, within the present "state-of-the-art", time and cost estimated and logistical implications have not been determined.
- b. The agent(s) will have a wide application and may be employed in all environments, i.e., atomic, nonatomic, CBR, non-CBR. It is envisioned that in situations where sheer numerical numbers exist in favor of an enemy, such a weapon system could act as an equalizer and provide temporary advantage, enabling the units to either successfully attack or defend, whichever may be appropriate. From a morale standpoint, it is envisioned that an incapacitating agent(s) may have an effect equal to the physical effects. In rear areas, delivery may be by non-fragmentation or nonlethal type delivery devices such as thermal generators, burning type grenades, spray devices, etc. In tactical use, the delivery of incapacitating agents may produce lethalities and/or permanent disabilities.
- c. The Chemical Corps has conducted studies on nonlethal agents capable of incapacitating an individual. Particular emphasis has been given to the British Agent T792, used alone or in conjunction with other agents for additive effects. Reference material available indicates that recent technological advances now make it possible to develop such an agent(s) in the required time frame.
- d. There is currently no existing agent in the supply system that will fulfill the requirements of these military characteristics.
- e. Quantities required have not been determined. Indications are that the agent or agents selected will be producible in required amounts.
- f. Maintenance efforts and costs are considered to be normal for items of this type.
 - g. No adverse transportation implications are anticipated.
- h. If, during the development phase, it appears to the development agency that any of the characteristics listed herein require the incorporation of certain impractical features or unnecessarily expensive

CONFIDENTIAL

4

and

prc

as

th∈ Chi

mar fir

na

as

ma

ar

ir

CC

OC

ir †}

mo

m

b.

d

Item 3815

ian agent's of per-

it capable cant phasis an ed that nonlethal.

employed s enn favor covide tack or it is il to mentation ning of inilities.

agents been other es that an

stem

:ions

mal for

velophe asive and complicated components or devices, costly manufacturing methods and processes, critical materials or restrictive specifications which serve as a detriment to the military value or unduly delay the availability of the item, such matters will be brought to the immediate attention of the Chief of Research and Development, Department of the Army, and the Commanding General, USCONARC, for consideration before incorporation in a final design.

7. (U) Personnel implications. - None

Section II - Operational Characteristics

- 1. (C) Performance.
 - a. Degree of incapacitation.

<u>Essential</u>. The agent(s) shall produce effects of such a nature that individuals affected are unable to accomplish their normal assigned duties or offer effective resistance.

<u>Desirable</u>. Personnel affected by the agent(s) should remain ambulatory.

b. Length of incapacitation.

Essential. The agent(s) shall produce a readily apparent and almost instantaneous incapacitation and have a lasting effect on the individual from 1 to 3 hours. ("almost instantaneous" is defined as the comparable reaction time for current riot control agents). By 1st Ind, OCRD, 17 Jan 1961, this characteristic was changed to read:

"Essential. The agent(s) shall produce readily apparent and immediate incapacitation (within:10 minutes) and have a lasting effect on the individual from 1 to 3 hours."

<u>Desirable</u>. Ultimately, it would be desirable to have one or more incapacitating agents whose effects would cease to exist after 30 minutes and one or more whose effects would continue on a predictable basis from 30 minutes to a period of days.

c. Dissipation of effects.

Essential. The effects of the agent(s) on individuals shall dissipate without the need for administering medical aid.

 $\underline{\text{Desirable}}.$ An antidote should be available for speeding the dissipation of effects when necessary.

d. Deleterious effects.

CONFIDENTIAL 229

<u>Item 3815</u>

Essential. A single exposure to the agent(s) shall not cause permanent disability or death to personnel in normal state of health.

Desirable.

- Repeated exposures to the agent(s) should not cause permanent disability or death.
- (2) The agent(s) should be capable of being used in areas where the local population may be intermingled with either the enemy or friendly forces. Hence, to eliminate any restrictions on its use, the risk of permanent disability or death must be minimized.
 - e. Persistency.

Essential. The agent(s) shall be nonpersistent.

f. Potency.

<u>Essential</u>. The potency of the agent(s) shall be at least equal to that of the nerve gases.

g. Effect upon protective equipment.

<u>Desirable</u>. The agent(s) should be capable of defeating the protective equipment of potential enemies.

h. Invulnerability to individual countermeasures.

Desirable. After exposure to the agent(s), no self-administered aids should be able to delay or prevent incapacitation.

i. Induced immunity.

 $\frac{\text{Desirable}.}{\text{not induce a resistance to subsequent contact.}} \text{ An initial contact with the agent(s) should}$

- 2. (C) <u>Description and Operation</u>.
 - a. Delivery.

Essential. The agent(s) shall be adaptable for delivery by appropriate close support and individual weapons currently available or expected to be available in the same time frame as the agent(s).

b. <u>Detectability</u>.

 $\underline{\text{Essential}}$. The agent(s) shall, upon dissemination, be colorless, odorless, and tasteless.

c. Durability and Reliability.

CONFIDENTIAL 230

,

un

C

and the same of the same of the same

CONFIDENTIAL

Item 3815

health.

Essential. Stability of the agent(s) shall be satisfactory under all conditions of storage and use .-

d. Packaging.

Essential. Packaging weight shall be kept to a minimum.

e. Preparation and handling.

Desired. Preparation for dissemination and handling of disseminating means should be generally similar to standard Chemical dissemination. The disseminating equipment should be capable of being rapidly and easily employed.

f. Transportability.

Essential. The agent(s), in appropriate munitions or other containers, shall be capable of being safely handled or transported by air, water, rail, or on the individual, provided reasonable precautions are observed.

3. (U) Application of special regulations.

Environmental and Terrain Requirements.

a. Operating conditions.

Desirable. The agent(s) should retain its full incapacitating effects under the basic operating conditions specified in par 7a, AR 705-15.

Desirable. The agent(s) should retain its full incapacitating effects under the extreme operating conditions specified in par 7b anc c, AR 705-15.

b. Storage and transportation conditions.

Essential. The agent(s) shall be capable of safe storage and transportation without permanent inpairment of its capabilities from the effects of extreme conditions specified in par 7d, AR 705-15.

4. (U) $\underline{\text{Maintenance requirement}}$. No special maintenance shall be required.

Section III - Associate Considerations

1. (U) Associated equipment.

Essential.

a. Training literature. Appropriate training literature shall be prepared and made available for issue to units as required.

b. Training equipment and training devices. No requirement exists for special training equipment or devices and are not foreseen.

CONFIDENTIAL

7

ll not cause

in areas e enemy or use, the

t cause

at least

eating the

.f-admin-

hould

livery by lable or

6

be



Authority MM964050 By M311 NARA Date 8/20/00

<u>Item 3815</u>

- (U) Atomic Energy Commission consideration. Not applicable.
- 3. (U) <u>Safety Criteria</u>. The agent(s) shall be capable of being safely handled and disseminated without our own troops being subjected to its effects, provided reasonable precautionary measures are observed.
 - 4. (U) Recommended priority of development.

Priority 1; 1-A Project

- 5. (C) Availability time. The agent(s) should be available to troops in the field during fiscal year 1964 (fiscal year 1965 acceptable).
- 6. (C) Existing items to be replaced. It is possible these new incapacitating agents could replace current standard riot agents CS and CSl, but this cannot be determined until development is further along. CS and CSl act quickly, but recovery is quick. The new agents will act quickly also, but recovery may take as long as 6 hours.
 - 7. (U) Coordination. There are no unresolved coordination comments.

Section IV

- 1. (C) Order of Priority of Major Characteristics.
 - a. Essential.
 - (1) Potency and Persistency
 - (2) Degree of Incapacitation
 - (3) Deleterious Effects
 - (4) Delivery
 - (5) Length of Incapacitation
 - (6) Durability and Reliability
 - b. Desirable.
 - (1) Effect upon Protective Equipment
 - (2) Preparation and Handling
 - (3) Invulnerability to Individual Countermeasures
 - (4) Induced Immunity
 - (5) Operating Conditions

CONFIDENTIAL 232

_

nev cor end loc

mac

Item 3815

cable.

f being bjected observed. 2. (U) Unit production cost. ~ No estimate of cost can be made at this time. No prediction can be made as to the time when a new potential incapacitating agent will be selected. The variety of compounds being screened and the variety of physical characteristics encountered among Chemical compounds also preclude an estimate of the logistical implications.

ole to ceptable).

CS and along. ill act

1 comments.

CONFIDENTIAL 233

DISPOSITION FORM

FILE NO. CMLWH

SUBJECT: Chemical Corps FY 60 BW R&D Program (U)

TO: CofR&D

FROM: CCmlO

DATE: 21 Oct 1960 COMMENT NO. 1

- 1. Reference is made to CCTC Item 3758, subject as above, copy inclosed, which was presented for discussion and approval at the CCTC meeting held 30 Sep 1960. At that time, all members concurred in Item 3758 except your representative who stated that Staff approval was withheld pending further justification of the proposed change in priority from 1-B to 1-A for 42 projects and tasks so indicated.
- 2. It is to be noted that project priorities are based on definitions in AR 705-5, and that paragraph 12.d(1)(a) thereof states that 1-A projects
 - "...produce items, techniques, or technical knowledge which provide a completely new and essential advancement in combat, intelligence, or logistical capabilities."

On the other hand 1-B projects are those that

"...produce items or technical knowledge which will provide items which are of major improvement over similar items currently in the Army Inventory."

Review of the current BW program in CCTC Item 3758 indicated that the 42 projects and tasks recommended for the 1-A priority, would in fact, meet the definition noted above and consequently, were so recommended. In this connection it is pertinent to note that the current 1-A priority definition noted above relaxed the criteria for a 1-A project included in the previous edition of AR 705-5, dated 10 September 1958. In this older edition paragraph 12.b(1)(a) specified that a 1-A project was one that

"...produce items, techniques, or technical knowledge necessary to achieve a national position of strength which would preclude national destruction or disaster in the event of war."

Under this more restrictive definition relatively few 1-A projects were authorized.

3. In view of the acceptance of the reference paper by all agencies at the meeting of the Chemical Corps Technical Committee noted above, it

REGRADED UNCLASSIFIED WHEN SEPARATED FROM CLASSIFIED INCLOSURES

WH1 2005

Item 3819

Reproduced at the National Archive

SUBJECT: Chemical Corps FY 60 BW R&D Program (U)

21 Oct 1960

um (U)

is requested that this action be concurred in and the recommendations of

FOR THE CHIEF CHEMICAL OFFICER:

opy in-IC meeting

NT NO. 1

58 except ending to 1-A

fini-

ch bat,

at 1-A

le Ir-

he 42 meet In this finithe er

sary

lat

lude

ere

ncies , it

Incl Item 3758 (S) Cy No. 140 (Not attached)

/s/ A. W. MEETZE Colonel, Cml C Chairman, CCTC

CRD/D 14907

TO: Chief Chemical Officer FROM: C/R&D DATE: 11 Jan 61 COMMENT NO. 2

CCTC Item 3758, subject as above, is concurred in and the recommendations approved with the following exceptions:

a. Although the criteria quoted in preceding comment for priorities 1A and 1B from AR 705-5 are correct, a literal application, as in this case, defeats the spirit and intent of the regulation and negates the priority system. Therefore it is requested that the priority of the following projects and tasks be reviewed:

> 4B04-14-030, -01, -02, -03 4B11-02-065-03 4B11-02-066-03 4B11-02-068-04 4B11-05-15-01, -02, -03, -04, -05 4B92-02-034-01

b. Inclosure 2, P7 - Not favorably considered as a task under project Nr 4B04-14-031, BW Munitions Development. Conduct work as task under project Nr 4B04-14-030, BW Munitions Research.

c. Inclosure 3, Pll - Add CDOG QMR paragraph 1237b(2) to paragraph 20 and rewrite paragraphs 21a and b to conform to the above QMR.

BY DIRECTION OF THE CHIEF OF RESEARCH AND DEVELOPMENT:

1 Incl n/c

/s/ L. R. PATRICK Lt Colonel, GS Actg Chief, Combat Materiel Division

H12005 1

t