

26

27

HEADQUARTERS ARMY AIR FORCES

ROUTING AND RECORD SHEET

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TALLY NO.	
FILE NO.	

AAF Interest in Radioactive Weapons

Deputy Chief of Air Staff for Research and Development  
Attn: Colonel Wilson

DATE 26 Aug 1946

COMMENT No. 2

M: Air Chemical Officer, AC/AS-4

Brig Gen E. Montgomery/mbp/  
5293

1. It is obvious that the AAF has an extreme interest in the possibilities of the use of radio-active materials as weapons, aside from the use of the atomic bomb as a specific weapon for devastation. That part of this interest which pertains to the Air Chemical Officer specifically includes the possibilities of radio-active and chemical properties of fission products, the military application of which would fall along lines similar to those of chemical, incendiary, and biological agents.

2. The field of importance of these materials divides itself naturally into two parts: (1) Radio-active materials as offensive agents and (2) countermeasures which must be developed in order to limit the effect of enemy offensive use of these materials. The interest of the Air Chemical Officer very definitely includes the latter which seems of the most extreme importance in view of the possibility of immediate production of radio-active materials by any nation.

3. In order that these matters may be assessed from the point of view, not only of offensive value, but also from the development of countermeasures and defensive means and methods, it is essential that the AAF obtain all applicable information now existing. It is suggested that the following will indicate the type of information which is now needed as a preliminary to definite action in this matter.

a. The name of each radio-active element or material which is produced, or may be produced, as a byproduct of processes involved in the manufacture of atomic bombs. This should include data on pure and impure materials or mixtures of pure or impure materials.

b. Full information as to the chemical and physical properties of the above to include: Density, volume, half-life, atomic structure, atomic weight, and other pertinent physical and chemical properties and data.

c. What is now known as to the present availability of these materials and also as to the possibility of future production? Quantitative data is needed.

d. What is the present information as to the effect on personnel of these materials? The information furnished should include the time requirements for unit quantities of unit strength to produce casualty effects and the time-quantity ratio which may be of value in this connection. What are the possibilities of controlling the factors of unit time, distance, and strength by combining two or more materials with different characteristics?

DECLASSIFIED  
By: Air Force Declassification Office  
7 May 2010

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PAGE

68

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TALLY NO.	
FILE NO.	

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AAF Interest in Radio-active Weapons

Deputy Chief of Air Staff for Research and Development  
Attn: Colonel Wilson

DATE 26 Aug 46

COMMENT No. 2, cont'd

JM: Air Chemical Officer, AC/AS-4

Brig Gen E Montgomery/mbp/5293

e. Similar information as to radio-active-effects on material.

f. What is the present information as to methods and means of protection? What are the possibilities and limitations of the development of more effective means of protection, including the feasibility of these methods from the point of view of military use.

g. What are the possibilities of decontamination from the military point of view?

h. What information is available as to safety requirements in handling fission products from the point of view of transport?

4. The question arises, when considering the military application of radio-active materials as offensive weapons and the problems of countermeasures against such weapons, as to which part of the Army organization should be charged with the responsibilities for research and development. The answer, that this responsibility properly lies with the Chemical Corps, is immediately obvious. Certain responsibilities for the development of protection against radio activity have already been given to the Chemical Corps. The vast experience of the Chemical Corps in the development of protective devices would be of extreme value. The methods and techniques which are used to apply chemical and bacteriological agents are similar to those which would be used in applying radio-active agents. While the practical principles which would be involved in protection against radio-active materials might be different than those involved in the protection of either chemical or biological agents, fundamentally they are based on the same principles. For example: Protection of the individual against chemical agents has been perfected in the form of masks (respirators) and impregnated clothing. Against radio-active materials these might be used, the materials of which they would be composed being different and developed for the purpose.

5. It is believed that the above could well be incorporated in the Agenda of the conference to be held with the Manhattan Engineer District on 3 September 1946.

*E. Montgomery*  
E. MONTGOMERY  
Brig General, USA  
Air Chemical Officer

1 Incl n/c

Coordinated by AC/AS-4 *LLB*AFDRE-1 *ZUCB* PAGE~~SECRET~~

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AUG 5 1946	
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25

ROUTING AND RECORD SHEET

SUBJECT: "AAF Interest in Radioactive Weapons"

TO: AC/AS-4, Att: Air Chemical Officer

DATE 15 August 1946

FROM: Deputy Chief of Air Staff for Research and Development

COMMENT No. 1  
 Col Wilson/fj/6742  
*new*

1. The AAF is currently pressing for a definition of its responsibilities and authority with respect to handling and delivery of the atomic bomb. I am concerned that we should not overlook, in this campaign, our possible interest in the other offensive agent made available by the work of the Manhattan District, namely, radioactive fission products.

2. The following notes on the supply, properties, and possible military applications of these materials will suggest that they might be a useful supplement to HE, incendiary, CW and BW agents in air warfare. My ideas on the matter are necessarily somewhat speculative. It seems to me that the AAF might reasonably ask for enough firm information about fission products to assess their usefulness and (if they appear promising) to plan realistically for using them.

3. This information is forwarded for your consideration as possibly suitable material for inclusion in the agenda of the conference to be held with the Manhattan Engineer District on September 3, 1946.

*Curtis E. LeMay*  
 CURTIS E. LEMAY  
 Major General, U. S. Army  
 Deputy Chief of Air Staff for  
 Research and Development

1 Incl:  
 -Notes on radioactive fission products as offensive agents.

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