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Reference CS/7/3

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SECRET covering TOP SECRETS of SChemical and Biological Warfare  
Field Trials

At the Army Council meeting on 9th May, 1963, when the Annual Report of your Scientific Advisory Council was discussed, you asked to be kept informed of all biological trials undertaken outside the confines of W.D. establishments.

The attached note, which has been prepared in my office, contains details of such trials which C.D. I.A. and M.R.W., are currently carrying out and is forwarded for your information.

I am convinced of the vital need for these trials which impose no hazard to the public, although clearly, knowledge of them by unauthorised persons could be politically embarrassing.

30th May, 1963.

  
Chief ScientistCopy to: P.D.S.  
M.G.O.  
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## CHEMICAL AND BIOLOGICAL WARFARE FIELD TRIALS

1. This note is intended to provide further details of the field trials which were referred to in the 1962 report of the Scientific Advisory Council. Harmless chemical and biological simulants are being used for the trials, which are being conducted outside the confines of War Department ranges and to that extent the public are, and have been, exposed to these agents. The work is directed towards determining the behaviour of clouds of chemical and biological agents which might be released during attacks on this country, and in the case of biological agents it is also directed towards solving the very difficult problem of providing early warning and eventually developing a nation wide warning and detection network.

2. The release of harmless micro-organisms in trials presents no special hazards; industrial micro-biological processes such as brewing and sewage disposal and agricultural operations such as harvesting and manuring release on a vast and frequently uncontrolled scale, without public comment, organisms which have potentially, a greater health hazard than the strictly controlled trials referred to in this note.

3. The B.W. trials are being carried out with the approval and support of the Chemical Defence and Biological Research Advisory Boards of the S.A.C. An increase in research effort on B.W. and C.W. specifically including B.W. trials was authorised at the 6th (63) meeting of the Defence Committee.

### Chemical Warfare Trials

4. Trials performed during the past five years, with the knowledge and concurrence of the Offensive Evaluation Committee of the Chemical Defence Advisory Board, have shown that aircraft flying at night or ships or submarines on off-shore courses could disseminate an aerosol cloud which, under favourable weather conditions, would reach distant parts of the U.K. The extent of the dispersion was determined from numerous sampling points located in open country, but little information was obtained on the concentration reached in large urban areas.

5. Inconclusive results were obtained from trials in Salisbury due to local topographical conditions; therefore further trials are to be carried out in Norwich, where the local conditions are more suitable. Full co-operation has been received from the Meteorological Office, the Home Office and the Norwich City Police; the work being covered by the title of air pollution tests. Arrangements have been made for about six trials to be conducted, in which fluorescent particles (of zinc cadmium sulphide) will be disseminated from an aircraft about 20 miles away from the city.

6. One exploratory trial has been performed so far and there will be further trials in the future, their timing being chosen to coincide with suitable weather conditions. When these trials were planned it was agreed that any questions raised by the public would be dealt with by the War Office.

### Long Range Biological Warfare Trials

7. For many years harmless micro-organisms have been used on the Porton ranges to simulate B.W. agents in field trials. They are no more harmful than the normal background material in the air and are at a very low concentration by the time they have cleared the range area. However, for trials on the detection of B.W. agents in aid of a means of giving early warning of B.W. attack, it is necessary to release living simulants over much greater distances to allow time for natural (viable) decay and to check whether the dead or dying organisms can still be detected by methods which have proved suitable in the laboratory.

8. Trials have therefore been planned to simulate more realistic B.W. attack from the sea and the air at distances of up to 50 miles from the south coast. Arrangements are far advanced for the installation of suitable disseminating equipment in

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H.M.S. ICEWHALE an Admiralty experimental trials vessel. Negotiations are also in hand with M.O.A. for the allocation of a suitable aircraft, which will be used to disseminate the simulants at an altitude of 400-500 ft and a speed of 400-500 knots. Samples will be taken at a number of locations in Southern England.

Ventilation Trials

9. About ten years ago, as a preliminary to testing the vulnerability of the London Underground system to covert B.W. attack, trials were carried out with B.W. simulants in ventilation and service tunnels under governmental buildings in Whitehall. These proved that there would be a wide dissemination of B.W. agents throughout such a system, but as this was not completely representative of the London Underground further trials are in hand in the railway system. In co-operation with the London Transport Board a survey has been completed of the naturally occurring micro-organisms in a section of the railway and, with the Board's agreement, trials involving the release of harmless simulants are to be undertaken. These will be done in great secrecy under the covering title of "Ventilation Trials".

28th May, 1963.