SURNAME DATE

12-10-51

December 10, 1751

Dr. Walter D. Claus

L. Joe Deal

IMPORTATION FOR GABRIST.

Over the weekend I made some elementary calculations as to the effects of an underground weapon on our European friends. Since time is short, I have not had time to recheck any of these calculations, but I'm passing them on to you for whatever they may be worth.

We know the following: (1) Jangle "Sugar" produced a "hot-spot" of roughly 50 square miles, with radiation levels ranging from 7 r to 14 r. (2) This was a low yield weapon. (3) Trinity produced a similar "hot-spot". (4) Iosages in the Trinity "hot-spot" were sufficient to produce burns on cattle. (5) LA-626 gives measured dosages of 5.5 r at 3.3 hours after shot, 17 miles from zero, and estimated dosages to the cows of 138 r.

For purposes of scaling, let's assume that the size of the "hot-spot" following the detonation of a 20 KT weapon at the surface will go as the cube root of the KT. Thus for a 20 KT weapon we have an area of 2.7 x 50 \pm 135 square miles. Let's assume that the radiation level will increase directly with the KT, giving us dosages ranging from 140 r to 250 r.

To carry the argument one step further, if one looks at the population density of some of the western European countries, one can easily see that a relatively small number of wespons could subject a relatively large number of people to radiation desages exceeding those recommended for EM, namely 30 r/day. As an example, if one takes Great Britain, whose population density is roughly 500 people per square mile, and one assumes 5 bombs are exploded on the surface, some 3.4 x 10° persons would be subjected to radiation desages considered significant from the standpoint of EM.

CLASSIFICATION CANCELLED

Att. 1 (Table of European populations)

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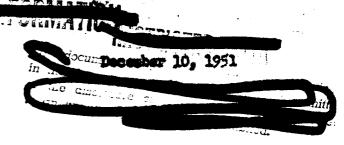


TABLE I

Mation	Square Wiles	Population	Approx. Population/W12
Great Britain	33,715	山。795,357	500
France	212,736	40,502,513	200
Belgium	11,775	8,314,534	800
Luxenburg	929	290,992	300
Germany	142,200	65,910,999	500
Denmark	16,556	4,015,232	300
Ne therlands	12,883	9,121,871	700
Italy	116,000	15,600,000	400
Switzerland	15,9hh	4,265,703	300
Horway	124,560	3,123,338	25
Sweden	173,394	6,371,132	30

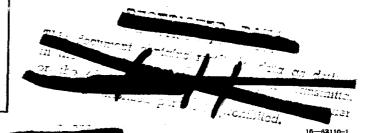
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