

5410 -

COMMUNICATIONS CENTER

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SANDIA SYSTEMATIC DECLASSIFICATION NUMBER

1st Review Date: 3-06-97
 Authority: ADC ADD
 Name: W Payne

2nd Review Date: 4/4/97
 Authority: ADD
 Name: [Signature]

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 5. Comments: [Signature]

RECD: 5400 DATE: MAR 30 1964

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BRIG. GENERAL DELMAR L. CROWSON, USAF
 DIRECTOR OF MILITARY APPLICATION
 U. S. ATOMIC ENERGY COMMISSION
 WASHINGTON, D. C.

INFO: JAMES E. REEVES, AEC/NVOO

3422/50139 (7 file)
 202.3

REFERENCE YOUR TWX DATED MARCH 28, S-130, WE HAVE NO FURTHER COMMENTS OTHER THAN THOSE COVERED BY OUR TWX TO JAMES E. REEVES, AEC/NVOO, DATED MARCH 27. FOR YOUR INFORMATION WE REPEAT:

"ACCORDING TO THE TREATY ENDING NUCLEAR TESTS, THE PARTIES OF THE TREATY AGREED NOT TO CAUSE, IN THE ENGLISH TEXT, 'RADIOACTIVE DEBRIS TO BE PRESENT OUTSIDE THE TERRITORIAL LIMITS'; AND IN THE RUSSIAN TEXT, THERE IS THE IMPLICATION THAT NO RADIOACTIVE FALLOUT SHOULD BE DEPOSITED ON THE GROUND OUTSIDE THE TERRITORIAL LIMITS. BOTH TEXTS ARE EQUALLY AUTHENTIC AND IT WOULD SEEM TO CLEARLY STATE THAT NO PARTICULATE MATTER SHOULD BE OBSERVABLE OUTSIDE THE CONTINENTAL LIMITS. THE STRONGER VIEW CAN BE TAKEN THAT NO SINGLE ATOM OF RADIOACTIVE MATERIAL IS TO BE PRESENT. SINCE THIS VIEW CANNOT BE EXPERIMENTALLY VERIFIED IN PRACTICE, EVEN THOUGH IT MIGHT BE IN THEORY, A REASONABLE POSITION SEEMS TO BE THAT WE SHOULD NOT CAUSE AMOUNTS OF RADIOACTIVE MATERIAL FROM TESTING TO OCCUR IF PRACTICE OF EXPERIENCE SHOWS THEM TO BE MEASURABLE.

"ON THIS BASIS, IT WOULD APPEAR WISE TO TAKE INTO ACCOUNT METEOROLOGY IN CONNECTION WITH UNDERGROUND EXPLOSIONS. SINCE THE TRACE AMOUNTS WHICH HAVE

THE DECLASSIFICATION REVIEW FOR THIS DOCUMENT IS AUTHORITY: R. B. Grier

RECORD ID: 9750942

DATE: 4/3/97

Carroll A. Haldeman

Emile J. [Signature]

ORIGINATOR S. P. SCHWARTZ	ORG. 1	REF. SYM	This document consists of _____ pages No. _____ of _____ copies, series
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D. L. CROWSON, IMA

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3/30/64

OCCURRED DO NOT CONSTITUTE A HEALTH HAZARD, IT WOULD SEEM COMPLETELY UNWISE TO IMPOSE THE SORT OF RESTRICTION OF WEATHER WHICH IS IMPOSED IN TESTING IN THE ATMOSPHERE. WIND CONDITIONS CAN BE SELECTED TO AVOID SHORT TIME CROSSINGS OF THE BORDER IN CONNECTION WITH UNDERGROUND TESTING. THIS WOULD INDEED IMPOSE SOME RESTRICTIONS BUT NOT AS SEVERE RESTRICTIONS AS ONE WOULD IMPOSE FOR ATMOSPHERIC TESTING.

"CONSIDERABLE EXPERIENCE OF SUCCESSFUL STEMMING OF TESTS WHICH HAVE YIELDS APPRECIABLY ABOVE 1 KT IS AN ITEM OF FACTUAL EXPERIENCE, AND IT WOULD SEEM UNWISE TO IMPOSE GREATER DEPTH-OF-BURIAL RESTRICTIONS. YIELDS NEAR 1 KT AND LESS HAVE RECEIVED SPECIAL ATTENTION FOR STEMMING AND SHOULD CONTINUE TO RECEIVE SPECIAL ATTENTION INCLUDING CONSIDERATION OF LARGER SCALED DEPTHS. OUR EXPERIENCE AT SANDIA WITH 250 LB UNDERGROUND HIGH EXPLOSIVE TESTS SHOWS THAT A DEPTH WHICH WOULD BE EQUIVALENT TO $500 W^{1/3}$ HAS NEVER RELEASED GASES, AND THIS MAY EVEN BE TRUE NEAR A DEPTH WHICH CORRESPONDS TO $425 W^{1/3}$. THE ACTUAL EXPERIENCE AT NEVADA HAS SHOWN THAT SCALING FROM HIGH EXPLOSIVES GIVES PESSIMISTIC RESULTS. THEREFORE, WE WOULD BE SURPRISED IF DEPTHS-OF-BURST APPRECIABLY GREATER THAN 350 OR $400 W^{1/3}$ SHOULD VENT, PROVIDING THEY WERE FULLY TAMPED.

"THUS IT WOULD APPEAR WISE TO PAY ATTENTION TO METEOROLOGY IN CONNECTION WITH TYPE B TESTS SO AS TO AVOID SHORT TIME CROSSINGS OF THE BORDER BY DEBRIS."

Copy to:
Org. 5000, Attn: T. B. Cook, 5400
G. A. Fowler, 7000
S. P. Schwartz, 1

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