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SEP 25 1962

MEMORANDUM FOR THE CHIEF, DEFENSE ATOMIC SUPPORT AGENCY

SUBJECT: Special Vulnerability Analysis Portion of the AEC/DOD
AWT Ecological Study on Effects of Nuclear War

I refer to your memorandum to me of 17 September 1962 in which you forwarded the immediate USSR fatal casualty analysis portion of the study now being conducted jointly by the Atomic Energy Commission and the Department of Defense on the long term ecological effects of nuclear war. You will recall that this portion of the study involved an evaluation of the number of deaths in the USSR predicted as a result of a variation of weight of nuclear attack, type of target system and burst geometry. The results of this portion of the overall study were quite interesting and they definitely reflected the effect of weapon design on the resultant fatality estimate. I am most pleased with the thoroughness with which this portion of the study was conducted by the technical personnel within the DODDAC and I wish you would express my appreciation to those persons responsible for this fine effort.

This study has indicated certain areas which merit further examination. It is my understanding that the immediate casualty analysis was predicated on a prevailing westerly wind condition. Therefore, I believe it is necessary, in the interest of complete analysis, to rerun the computations on the assumption of a prevailing adverse wind condition. Accordingly, it appears appropriate to investigate, by means of a review of available climatological records, which patterns might be adverse from a fallout view point as well as a determination of frequency of occurrence.

It is, therefore, requested that this analysis be expanded to include a mortality estimate for adverse meteorological conditions for the two target systems as defined in the initial study, as well as

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for the given attack levels as appropriate for the military and the combined target systems attacks. It is assumed that all other assumptions, with the exception of the changed meteorological conditions, will apply. The following specific mortality estimates are required:

- a. Assessment of mortalities for Western Europe and Soviet Satellites, by country.
- b. Assessment of the mortalities suffered within the Soviet Union in addition to those indicated in item a. above.

It is understood that this expansion of the immediate vulnerability estimate can be completed by October 10, 1962.

Signed: Gerald W. Johnson

Gerald W. Johnson
Assistant to the Secretary
of Defense (Atomic Energy)

GWJ/WFVB/ger/25 Sept 62
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