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1958

REPORT

OF THE

NET EVALUATION SUBCOMMITTEE NATIONAL SECURITY COUNCIL

10 November 1953

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#### II. SUMMARY AND CONCLUSIONS

A. GENERAL. This Net Evaluation is based upon analysis of world-wide operations in a general war initiated by the USSR in mid-1961 with strategic surprise. Military actions resulting from implementation of a single hypothetical SOVIET war plan countered by implementation of a single hypothetical U.S. war plan were considered in this analysis. The implementing actions and counteractions, governed by meticulously prepared operational factors, were inter-played only once. Carefully predetermined assessment factors remained constant during the analysis. The analysis procedure provided for each side a single list of Actual Ground Zeros (AGZ's) of weapons detonated against the enemy country and these in turn served as the basis for the assessment of damage to the UNITED STATES and the USSR as summarized below.

### B. EFFECT OF SOVIET ATTACK

- 1. Description of Attack
- a. Measures to Attain Strategic Surprise. Minimum essential SOVIET forces were alerted prior to H-hour, the time of penetration of ALLIED warning nets, world-wide. Only 500 Long Range Air Force (LRAF) aircraft were allowed away from home bases prior to H 15 minutes and not more than 50 submarines were allowed to deploy on the high seas prior to H-hour. SOVIET SATELLITES were not informed of the attack until H-hour.
- b. The Initial Attack. Maximum forces consistent with reasonable restrictions to preserve strategic surprise struck with concerted effort at H-hour, 0400Z, Tuesday, 15 May 1961; midnight Eastern Daylight Saving Time, 14-15 May 1961. At that moment, two clandestine eight megaton devices

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were detonated, one in SOVIET diplomatic premises in WASHINGTON, D. C., and one in offices of the SOVIET United Nations Delegation in NEW YORK CITY. At the same time, the first of 42 "end-run" bombers neared bomb release lines (BRL's). Eight of these bombers had sneaked into contiguous radar coverage disguised as BRITISH airliners on established airways. Also, the first wave of 140 (250 scheduled) intercontinental ballistic missiles (ICBM's) penetrated the Ballistic Missile Early Warning (BMEW) Line, the first main wave of 354 (450 scheduled) LRAF aircraft penetrated the Distant Early Warning (DEW) Line, and ll missile-launching submarines attacked the continental UNITED STATES, while 16 others attacked U.S. bases overseas. SOVIET intermediate range ballistic missiles (IRBM's) attacked U.S. and ALLIED atomic-capable forces overseas. Alerted at H-hour, SOVIET tactical air, Navy, and Army forces, augmented by BULGARIAN and NORTH KOREAN forces, implemented emergency plans to attack U.S. and ALLIED forces with nuclear weapons, and to launch planned campaigns to seize WESTERN EUROPE including ENGLAND, the MIDDLE EAST, and SOUTH KOREA. Sacrificing earlier alerting of tactical forces, and thus delaying nuclear attack on U.S. and ALLIED tactical alert forces, was deemed necessary to avoid premature alerting of U.S. and ALLIED strategic alert forces. This delay proved costly, as U.S. and ALLIED alert forces were not seriously degraded prior to take-off.

c. Damage in First 30 Minutes. In the first 30 minutes, the initial strategic attacks destroyed, in addition to WASHINGTON and NEW YORK CITY, some 50 per cent of SAC bases world-wide, along with 1,255 SAC aircraft of all types (including some 14 per cent of the ALERT FORCE). Also, three out of five ICBM sites, 30 per cent of U.S. and ALLIED IREM sites, and nuclear weapons were destroyed and denied.

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- Continued Attack to H / 30:00 Hours. The attack on CONUS continued with a second wave of 115 of 250 scheduled ICBM's, targeted largely against Air Defense installations. The entire ICBM attack (500 scheduled) resulted in detonation of 234 weapons (187 MT) on U.S. targets. In addition there were 37 detonations off-target and 17 duds. The SOVIETS also continued the attack with second, third, and fourth waves of IRAF bombers, and with submarine-launched missiles. By H / 30:00 hours the IRAF had a residual of only 139 nuclear weapons, suitable for employment against CONUS. It had operational less than seven per cent of its initial bomber force, with no LRAF home bases usable. The nuclear exchange was therefore declared terminated at H / 30:00 hours. During the entire attack, 750 IRAF manned bombers penetrated U.S. contiguous radar. About 61 per cent were attrited by defense forces, with surface-to-air missile (SAM) defenses accounting for somewhat over 50 per cent of the kills. All strategic actions against CONUS resulted in 909 enemy nuclear weapons (4,215 MT) penetrating contiguous radar coverage. Of this number, 274 weapons (2,007 MT) were "killed" by nuclear air defense weapons. In addition, 150 of the weapons were detonated off target, many in off-shore coastal waters and having no direct effect on CONUS, when carriers were destroyed without a weapon "kill," or ICBM's fell down-range from target. SOVIET Army, Navy, and tactical air forces also had virtually exhausted their nuclear capabilities without defeating U.S. and ALLIED forces with their superior nuclear support.
  - 2. Weights of SOVIET Attacks. The above described attacks succeeded in detonating 553 weapons of varying size in or near and affecting the CONUS. Total yield of these weapons was 2,186 MT. Of the weapons detonated, 398 (1,092 MT) were on military targets; 87 (476 MT) struck non-military targets; and 68 (618 MT) were misses which contributed little to the blast effect but significantly to the thermal and fallout effect.

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Strategic actions detonated weapons of 146 megatons equivalent yield on other areas of the WESTERN HEMISPHERE (CANADA, ALASKA, GREENLAND, ICELAND, AZORES, BERMUDA, PUERTO RICO). SOVIET tactical air and tactical ballistic missile (TBM) attacks detonated 232 megatons on ALLIED ocean island and overseas bases, and 481 megatons on WESTERN EUROPE, NORTH AFRICA, and the MIDDLE EAST. SOVIET naval attacks delivered 12 MT on CONUS, 39 MT on ALLIED ocean island and overseas bases, and 123 MT on WESTERN EUROPE, NORTH AFRICA, and the MIDDLE EAST. USSR ground-delivered weapons aggregated 3.85 MT in WESTERN EUROPE and 0.8 MT in the MIDDLE EAST.

## 3. Damage by SOVIET Attacks

Military Forces, Damage and Residuals. five of SAC's initial 56 operational bomber bases were out of action by H / 30:00 hours. Lost or denied by fallout were over 1,700 aircraft of all types and nuclear weapons

Though 313 B-47's, 106 B-52's, 22 B-58's and 678 tankers remained operational, with a total residual of

loss of five

of the initial nine major SAC operational headquarters and serious degradation of bases, support facilities, and maintenance capabilities, as well as the cumulative effects of fallout, would delay for several days the regrouping and preparations necessary to launch further major strikes. Air Defense forces had been degraded by loss of Continental Air Defense Command (CONAD) Headquarters, 50 per cent of their manned interceptors and more than 50 per cent of SAM units. Loss of control centers and seriously degraded communications had lowered defense effectiveness even more than is indicated by numbers of defense units out of action. The U.S. Navy lost 25 per cent of its surface ship operating bases and 50 per cent of its submarine bases. Naval aircraft losses were 23 per cent, while Navy combat ship losses were only 20 per cent. The Navy

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conus Army combat capability was degraded only about 15 per cent. However, difficulty of control, transportation, and communications would delay mobilization to a serious degree. The five U.S. divisions in EUROPE suffered 26 per cent casualties, but ALLIED divisions lost only ten per cent. The ground forces in EUROPE retained

thers temporarily denied
by fallout. Army forces in the PACIFIC remained virtually
intact, with some residual. Tactical air
forces in EUROPE though losing much of their base structure,
retained 299 nuclear carriers, 617 non-nuclear carriers, 989
Air Defense interceptors, and a nuclear weapons residual of
others temporarily

denied. PACIFIC Theater Air forces retained temporarily denied, and adequate bases

and aircraft for delivery.

## b. Damage to CONUS

- (1) General. The SOVIET attack on the UNITED STATES resulted in the detonation of 553 nuclear weapons with a total yield of 2,186 megatons. The damage caused by these weapons was such that the UNITED STATES would not fully return to pre-attack status for years. The direct effects of the attack were:
- (a) Blast overpressure sufficient to cause structural damage over four per cent of the land area of the nation, most of which was urban.
- (b) Widespread fires which ultimately burned out 169,000 square miles, or 5.7 per cent of the land area.

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- (c) A lethal blanket of radiation which covered at its maximum one-half the nation, and persisted in small areas for over two years.
- (2) Effect on Population. Twelve million people were killed outright and casualties (largely from radiation) continued to increase for a year after the attack. By this time there were 50 million dead and nine million sick or injured, out of a pre-attack population of 179 million.
- (3) Effect on Survival Needs. The needs of the nation to exist were generally available. Where housing and food supplies were lost, the population also perished. In many areas there were surpluses, but in the northeast section of the country there were severe shortages causing famine until supplies could be brought in. The complete inadequacy of remaining medical resources constituted one of the gravest problems facing the nation.
- (4) Effect on Communications and Transportation. The nationwide system of radio and telecommunication facilities suffered severe disruptions. In the early post-attack period only local communication was possible, but by D / 30, nation-wide service was restored on an emergency basis. Transportation systems were paralyzed by the attack to the extent that complete effectiveness could not be restored within a year. Due to the large areas denied by radiation, the distribution of the most urgent survival needs could be accomplished only by airlift.
- (5) Effect on Industry. Roughly 20 per cent of the nation's industrial resources were destroyed, and an additional 60 per cent were denied by radiation for periods varying from two weeks to one year. With the exception of medical supplies, the remaining resources were capable of meeting the needs of the nation with severe rationing of some commodities. The war-producing capabilities of the country were immediately reduced by 80 per cent, and although the majority of these resources were recovered within three months, the peculiar

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shortage of certain critical items would keep war production to a small fraction of pre-attack volume for at least one year.

- (6) Effect on Labor. The nation's ability to produce goods was most seriously affected by the immediate loss of one-third of the labor force. Although the survivors could be augmented by people previously unemployed, the over-all effectiveness of labor would barely reach 50 per cent of pre-attack efficiency within one year.
- (7) Finance. As a result of the heavy loss of banking facilities and general disruption of the complex domestic financial system, large segments of the population would be dependent on a barter system for six to 12 months. after the attack.
- (8) Government. The Federal Government, with the exception of the Vice-President and the Secretary of the Interior, was virtually wiped out. However, the majority of State governments survived, and Congress could be reconstituted by appointment. In the initial phase of recovery, state and local governments would be the principal sources of authority. until the Federal Government could be re-instituted, re-located, and effectively begin to deal with its overwhelming task.
- (9) Summary. Looking ahead to the years after the SOVIET attack, the survival of the UNITED STATES as a nation appears highly probable. There will be drastic changes but with the material available the remaining population is capable of eventually attaining pre-attack standards under determined leadership.

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## C. EFFECT OF U.S. ATTACK

1. Description of Attack. Receiving warning of hostile attack at H / 1 minute, SAC immediately ordered the alert force to launch. The first planes were off the runway at H / 6 minutes. By H / 30 minutes, 449 bomber and electronic countermeasures (ECM) aircraft and 311 supporting tanker aircraft were airborne. This force delivered against 341 target areas, 253 of which were population-industrial complexes and 88 were military targets.

Due to losses on the ground and aborts on launchers, only five of the ten alert force ICBM's were launched. Only three hit targets. Fifty-three of 90 programmed IRBM's were launched, 41 arriving on target. SAC began launching the follow-on strike at about H / 01:00 hour; and launched as fast as aircraft could be generated. As a result, the timing of the SAC assault shows no clear delineation between waves. Beginning at about H / 06:30 and continuing until H / 16:00, there was an almost continuous penetration of SOVIET defenses by attacking aircraft. All available SAC aircraft and missiles were launched by about H / 17:30 hours. Eight hundred five SAC carriers with

other weapons detonated off-target. SOVIET interceptors, SAM's, and antiaircraft artillery (AAA) guns destroyed 367 SAC aircraft. The guns accounted for slightly less than 10 per cent of the kills, with the remainder

penetrated SOVIET defenses, delivering

split approximately equally between SAM's and interceptors. Only eight ICBM's were on target, with three others detonating down-

range from their targets.

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Theater Air forces reacted rapidly after receipt of warning, and launched large numbers of strikes against airfields, radar and control sites, missile sites, and military complexes. These forces scheduled 1,076 aircraft and 264 missile strikes, equivalent yield placing on SOVIET BLOC targets. Naval forces in the east ATLANTIC and MEDITERRANEAN struck at targets in the EUROPEAN SATELLITES and the USSR, while PACIFIC naval forces attacked targets in COMMUNIST CHINA and the USSR. The Navy's P6M multiple bombdelivery capability enabled the small force of 24 seaplanes deployed forward to deliver on SOVIET targets. From submarines deployed forward at H-hour, missiles were launched at strategic targets in the USSR, impacting on target. Naval forces launched a total of 401 strikes during the period of hostilities, giving impacts in the target areas. U.S. and ALLIED ground forces were given valuable time to occupy emergency combat positions, as SOVIET ground and tactical air forces were not alerted until H-hour. This prevented unacceptable casualties prior to dispersal in combat formations. With superior ground-delivered atomic support, U.S. and ALLIED ground forces stabilized the SOVIET advance some 25 miles inside WEST GERMANY. forces contained the BULGARIAN and SOVIET advances near the TURKISH borders, and U.S. and SOUTH KOREAN forces halted the advance of the NORTH KOREANS. DANISH troops contained and were eliminating at H / 30:00 hours the one SOVIET airhead established.

2. Weights of U.S. Attacks. SAC delivered weapons aggregating yield on the USSR, and on CHINA.

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## 3. Damage by U.S. Attack

a. Military Forces, Damage and Residuals. LRAF command and control facilities were virtually eliminated by H / 30:00 hours. Thirty-one (of 33 initial) higher headquarters had been destroyed, along with all home bases of the LRAF bomber units. Of the initial force of 1,500 heavy and medium bomber-type aircraft, about 95 per cent were destroyed, expended, or denied by fallout. Some 97 per cent of the ICBM inventory and 93 per cent of the IRBM inventory had been lost, expended or denied. Sixty-seven heavy and medium bombers remained operational, with 84 others denied by fallout. One hundred thirty-nine nuclear weapons suitable for employment against CONUS were operational with 37 others denied by fallout. However, general disorganization and lack of control would inevitably delay any effort to launch further strikes.

Air Defense forces retained 5,972 interceptors of an initial 15,724. However, only 18 of 81 initial bases were usable, and only 47 per cent of the ground controlled intercept (GCI) sites were operational. Only 37 per cent of SAM installations remained operational, with greatly reduced communications. Personnel effectiveness in all Air Defense installations averaged only 35 per cent.

Tactical air forces retained 974 aircraft (with 549 of them denied) of 3,848 initial inventory. Only six

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nuclear weapons remained available, with 23 others denied. All naval operating bases were lost, and only 10 per cent of naval support personnel remained effective. Six hundred twenty-one of 897 initial ships survived at H / 30:00, including 330 of 532 submarines. Eighty of these ships, including 55 submarines, were denied by fallout. Naval air had a residual of 303 air-craft, but only of which were denied by fallout. The SOVIET Navy was not capable of sustained operations, since re-supply and services were not available.

SOVIET Army forces in WESTERN EUROPE had suffered some 35 per cent personnel casualties in the 24 divisions which were in action. Badly outclassed in numbers of grounddelivered nuclear weapons at the outset, the SOVIET forces at H / 30:00 retained only nine (of 200 initial) nuclear weapons for close support. One hundred fifty divisions inside the USSR, of unestimated residual strength, might eventually reinforce the depleted divisions on the Western Front. However, 16 of 18 military district headquarters had been destroyed, and communications and transportation were so badly disrupted as to delay and weaken any such effort. Logistic support capabilities were very limited, with only 12 per cent of the depots and supply centers remaining. Low residual capability to handle and move stocks further reduced logistic capabilities. Movement of large tonnages of supplies into or within the USSR appeared impossible for several months. A limited capability remained for air transport of troops and supplies, as 301 (of an initial 1,130) troop carrier aircraft were residual, with 46 of them denied by fallout and further fallout denial anticipated.

### b. Damage to SOVIET Resources.

(1) General. Damage to physical production facilities, communications networks, and transportation

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facilities was extensive. However, the most damaging loss was in population. Combined effects of physical damage and personnel losses are estimated in the summary hereto.

- (2) Population. The SOVIET pre-attack population of 206 million was depleted by 44 million immediate casualties, 41 million of them fatalities. By D ≠ 30 days there were nearly 127 million casualties in the USSR, with 106 million fatalities, and by D / 6 months there were nearly 120 million casualties, with 114 million fatalities. The total pre-attack population of 952 million people in the SINO-SOVIET BLOC suffered 75 million immediate casualties, 71 million of them fatalities. There were 249 million casualties at D / 30 days, including 196 million fatalities. At D / 6 months, there were over 229 million casualties, including 215 million fatalities. These figures include extremely high proportions of population of the larger cities and industrial complexes.
- (3) Government Control and Communications. Control facilities in the national capital cities of MOSCOW, PEIPING, and PYENGYONG were completely destroyed. In 14 of the 15 UNION REPUBLICS of the USSR, capital cities suffered serious damage and casualties of over 90 per cent among the control force. It is extremely doubtful that central control could be established throughout the SINO-SOVIET BLOC within the period of one year.
- (4) Survival Potential. Food and housing losses were compensated by greater percentage population losses, and so quantitatively presented no great problem. Control and distribution of food, however, presented a grave problem. Medical supply shortages were acute and could not be alleviated. Substantial new casualties and fatalities were the inevitable result.

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- (5) Economic Disruption. The economy of the USSR was reduced to localized operations during the first postattack year. Transport capability within the USSR was reduced by 88 per cent during the first year. The SOVIET Gross National Product (GNP) was reduced by some 75 per cent for the year following attack. Total SINO-SOVIET BLOC GNP was decreased by about 56 per cent.
- (6) War Supporting Industry. SOVIET production was reduced by 85 per cent, that of the FAR EAST BLOC by 64 per cent, but that of the EUROPEAN SATELLITES by only 35 per cent, for the first year after attack.
- USSR and CHINA would survive as nations, but with governments and economies in greatly modified form. CHINA would revert to an agrarian economy and remain in that status for some years, as its modern industrial plant was virtually eliminated. The USSR might, by shifting to its industry those labor forces available in rural areas, the SATELLITE countries, and CHINA, regain eventually some 50 per cent of pre-attack industrial capacity.

### D. LONG TERM EFFECTS OF RADIOACTIVE FALLOUT

The Atomic Energy Commission estimates effects on the approximately 130 million survivors in the UNITED STATES as follows:

- 1. Genetic effects of some degree on 2 million pregnancies and on 800,000 live births.
  - 2. Average life expectancy reduced by 800 to 1600 days.
- 3. Nearly 2 million cases of leukemia, and between 2.6 and 5.2 million cases of bone cancer.

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#### E. CONCLUSIONS

Any evaluation of net capabilities at a time three years in the future is necessarily speculative. We have had to make definite assumptions regarding a number of factors with respect to which our knowledge is limited. We are unable to determine with assurance of accuracy the composition, strength, and equipment of our own forces in 1961. We are uncertain of the low altitude capability of Air Defense Weapons Systems, the impact of offensive Electronic Countermeasures on those systems, and the operational status of the Ballistic Missile Early Warning System.

The effect of radiation clouds on communication and warning systems is worthy of particular mention. Preliminary reports from the recent "Hardtack" series of nuclear tests indicate that radiation clouds of nuclear explosions above 100,000 feet can cause communications blackouts and seriously degrade such systems over a wide area. Insufficient data exists at present to justify a conclusion as to the possible impact of this development, but the NESC Staff will closely review the evaluation of the "Hardtack" tests.

Our estimates of the strength, composition, equipment, and state of tactical development of SOVIET forces, are of necessity, even more conjectural than those of our own forces. Although our assumptions are based on National Intelligence Estimates for the 1961 time period, there are many critical areas not adequately treated by these estimates upon which specific assumptions were necessary. Among these were:

The composition of the SOVIET Nuclear Weapons Stockpile.

The organization and disposition of the SOVIET Long Range Air Force.

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The state of development of tactics, equipment and techniques of the SOVIET Forces.

The operational characteristics of SOVIET missiles and aircraft.

Despite the deficiencies which we have recognized, our studies have convinced us that the hypothetical nuclear exchange which has been summarized is within realistic limits and that the results indicated are sufficiently valid to justify the following conclusions:

- 1. In 1961, a nuclear war initiated by the USSR under condition of strategic surprise would result in devastation of vast areas of both the UNITED STATES and the USSR, but the balance of strength would be on the side of the UNITED STATES at the termination of the nuclear exchange.
- 2. In 1961, the USSR will have the net capability of delivering a surprise nuclear attack on the UNITED STATES which could result in the loss of one-third of the population and one-fifth of the resources, and the disruption of the political, social, and economic structure of the nation. Additionally, the long range effects of radiation would adversely affect millions more of the surviving population in years to follow.
- 3. A general nuclear war initiated by the SOVIETS in 1961 would result in devastation within the USSR which would virtually eliminate that nation as a world power, unless the USSR can substantially degrade the U.S. alert retaliatory forces prior to launch.
- 4. In 1961 the SAC Alert Force can be successfully launched providing a minimum of 15 minutes tactical warning can be obtained against surprise attack by ICBM, submarine launched missiles and end-run bombers. Unless such warning is provided, or some tactical means such as an airborne alert

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bomber force is developed, the UNITED STATES must accept the probability that its massive nuclear retaliatory capability will be substantially degraded in the event of surprise attack. In these circumstances the balance of strength could be on the side of the USSR at the termination of the nuclear exchange.

- 5. In 1961, the estimated SOVIET ICBM capability alone could heavily damage the UNITED STATES, and, without the critical 15 minute warning provided by Ballistic Missile Early Warning System, could seriously degrade the nuclear retaliatory capability.
- 6. The possible damage resulting from unopposed ICBM attacks in the 1961 time period again points up the need for urgent development of an anti-ICBM system.
- 7. In 1961, a well conceived and coordinated clandestine nuclear attack against SAC bases could, if risked by the USSR and if preparations therefor were undetected, result in serious degradation of the SAC Alert Force nuclear retaliatory capability.
- 3. The unrestricted employment of nuclear air defense weapons at all altitudes in the highly integrated U. S. air defense system planned for 1961 could significantly degrade the capability of the USSR to inflict damage upon the UNITED STATES by massive nuclear attack, but some U. S. casualties must be accepted from these nuclear air defense weapons.
- 9. The concentration of the U. S. retaliatory effort against a combined military-urban industrial target system as opposed to a strictly military target system would destroy the SOVIET nuclear offensive capability, and at the same time inflict increased casualties on the order of 50 per cent, thereby substantially reducing the capability of the USSR to recover.

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- 10. The effects of radioactive fallout will more than double the number of casualties resulting from the blast, thermal, and direct radiation effects of a nuclear attack.
- 11. Casualties from radioactive fallout could be significantly reduced by a comprehensive fallout shelter program and by a forcefully conducted national education program to insure complete understanding by every citizen of actions required for survival during and following a nuclear attack.
- 12. A re-examination of the National Strategic Stockpile should be made with a view to the incorporation of finished products (e.g., food, medical supplies, tools, radiation detection and decontamination equipment) stocked at dispersed locations throughout the nation to assist in recovery following nuclear attack.
- 13. Chaotic conditions which can be expected as a result of massive nuclear attack require comprehensive, integrated Federal and State plans, supported by legislation, to insure the continuance or early re-establishment of organized civil government under the Constitution. These plans should provide for the utilization of available military forces, including National Guard and Reserve Forces, to prevent interference with the military defense of the nation and to assist the civil government in the maintenance or restoration of order and recovery.

## F. RECURRENT CONCLUSIONS

Studies of the net capabilities of the USSR to inflict damage on the UNITED STATES by massive nuclear attack have been conducted on an annual basis since 1953 by the Net Evaluation Subcommittee and its predecessors. During the preparation of the report of this year it was considered appropriate that the Net Evaluation Subcommittee Staff examine

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past reports and study their conclusions for comparison purposes. This examination revealed that conclusions of past reports are comparable and mutually supporting in many respects. Similar findings in critical areas, although differing somewhat in phraseology, have recurred with persistent frequency.

- 1. Beginning with 1954, each report has contained a conclusion that a surprise nuclear attack on the UNITED STATES would result in the disruption of the political, social, and economic structure of the nation.
- 2. Each report beginning with 1955 has contained a conclusion that a nuclear general war, initiated by the USSR, would result in devastation of both the UNITED STATES and the USSR.
- 3. Beginning with the 1956 report each has contained one or more conclusions in critical military areas regarding:
- a. The indispensable requirement to maintain an adequately protected nuclear retaliatory capability.
- b. The actions required to insure the employment of the SAC alert force in the light of the drastically reduced warning time caused by the development of the SOVIET ICEM capability.
- c. The requirement for a highly effective air defense system.
- 4. Two of the reports contained conclusions concerning the necessity for integrated plans to insure continuance of the government, the re-examination of the Strategic Stockpile and the reduction of casualties by a comprehensive shelter program.

We consider that the persistent recurrence of these conclusions tends to support their validity and to substantiate the conclusions reached in the 1958 Net Evaluation.

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