"A Smoking Radiating Ruin at the End Of Two Hours"

Documents on American Plans for Nuclear War with the Soviet Union, 1954–1955

David Alan Rosenberg

The question of how the United States would employ its stockpile of nuclear weapons in the event of war with the Soviet Union has been a subject surrounded by considerable mystery, speculation, and controversy for more than three decades. Despite tidbits of information provided by Defense Department reports, testimony to Congress, and news leaks, the basic policy guidance, courses of action, and prospective points of attack contained in, respectively, the Nuclear Weapons Employment Policy (NUWEP), Single Integrated Operational Plan (SIOP), and National Strategic Target List (NSTL) remain among the nation's most closely guarded secrets. Earlier war plans and target lists from as far back as the 1940s have been kept classified as well, in part because they provide clues to current target selection criteria, strategy, nuclear weapons' effects, and intelligence sources and methods.

This continuing classification of past and present nuclear planning endeavors makes evaluation of recent developments in nuclear strategy difficult. The ongoing controversy over the implications of President Jimmy Carter's July 1980 approval of Presidential Directive 59 provides a good illustration. According to official sources, PD-59 endorsed a "countervailing strategy" toward the Soviet Union, designed to deter the Soviet leadership from starting a nuclear war by countering what American strategic planners believe to be the objectives of current Soviet nuclear doctrine. To convince the Soviets that no use of nuclear weapons, "on any scale of attack and at any stage of conflict, could lead to victory," the countervailing strategy mandated increased flexibility in war planning, including "the controlled use of nuclear weapons" in hopes of restraining escalation, as well as increased

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director of Op-36, Rear Admiral George C Wright Moore was a 1930 Naval Academy graduate who had special training in ordnance engineering and had commanded destroyers during World War II He provided a detailed report on both the formal SAC briefing and the follow-up question and answer period with General Curtis E LeMay, the SAC Commander His account is notable not only for the subject matter it contains, but for the manner in which it is presented Like many other naval officers involved in war planning and nuclear weapons matters during the early post-war period, Moore was clearly skeptical regarding the wisdom of SAC's priorities and plans, as well as its claims about its capabilities [7] Despite this bias, his recounting of the briefing is careful and accurate No major misstatements were found in Moore's memorandum by either General LeMay or John Bohn, SAC's official historian, both of whom recently reviewed it at the request of this author [8] The memorandum contains detailed information about SAC which is publicly available nowhere else, since Air Force war planning and Strategic Air Command files from the late 1940s on remain classified

The second document is a summary of the findings contained in a Defense Department Weapons Systems Evaluation Group (WSEG) report of February 1955, WSEG 12, "Evaluation of an Atomic Offensive in Support of the Joint Strategic Capabilities Plan" [9] The document is in the form of a briefing by Lieutenant General Samuel E Anderson, USAF, the WSEG Director, to the Joint Chiefs of Staff (JCS) on April 6, 1955 The report itself was commissioned by the Joint Chiefs in July 1954, in order to assess the probable impact of the currently planned combined atomic offensives against the Soviet Union, which would be carried out by SAC and the tactical nuclear forces allocated to American commanders in Europe and the Middle East Two previous studies of aspects of the atomic offensive had been completed by WSEG in 1950 and 1953 The first analyzed SAC's capability to penetrate Soviet air defenses and attack assigned targets, the second examined the expected results of attacks on fixed industrial targets in the Soviet bloc [10] The 1955 report is especially valuable because it not only outlines the anticipated effects of the atomic offensives, but provides hitherto unavailable information on the number and nature of U S nuclear targets

The Moore memorandum and the WSEG 12 briefing constitute a significant slice of American nuclear planning. The Fiscal Year 1954 SAC offensive described by Moore is fundamentally the same as the Fiscal Year 1956 offensive analyzed by WSEG. The two were organized around the same set of military objectives and targeting priorities and categories, despite changes in U S nuclear strength in the intervening year During that period, SAC achieved a significant increase in capability with the phasing out of propeller-driven B-29 and B-50 bombers and the assignment of the first giant eight-jet B-52s to operational squadrons.[11] The U S nuclear stockpile also expanded dramatically Although the exact numbers of weapons remain classified, a graph released by the Department of Energy suggests that the size of the stockpile approximately doubled between July 1953 and July 1955 [12]

The documents presented here contain some interesting evidence relating to stockpile size. Both describe planned offensives which could be mounted immediately if necessary, based on then-currently available forces, weapons, and delivery systems They thus provide a realistic guide to operational capabilities of that time The SAC optimum strike plan described by Moore called for 750 bombs, suggesting a stockpile of approximately 1000 weapons in 1953–1954 The WSEG 12 briefing is less precise with regard to bomb numbers, but identifies a large number of targets, including 645 airfields and 118 cities, which were suitable for multiple strikes. Given SAC's require-

7 The background to Navy concerns about Air Force atomic strategy may be found in Paolo E Coletta, *The United States Navy and Defense Unification* (Newark, Del University of Delaware Press, 1981), and David Alan Rosenberg, "American Postwar Air Doctrine and Organization The Navy Experience" in Alfred F Hurley and Robert C Ehrhart (editor), *Air Power and Warfare, The Proceedings of the 8th Military History Symposium, U S Air Force Academy, October 1978* (Washington, D C Government Printing Office, 1979), pp 245–276

8 Letters, General Curtis E LeMay USAF (Ret) to the author, October 29, 1980, and John T Bohn, Command Historian, Strategic Air Command, to the author, April 2 and June 25, 1981

9 The WSEG 12 briefing is appended to Memorandum, Colonel James E Miller USAF to Vice Admiral M B Gardner, Deputy Chief of Naval Operations, Operations, *et al*, Subject Transcript of Remarks of Director, WSEG, to JCS on WSEG Report No 12, April 8, 1955, in folder A16–10, "Atomic Warfare Operations" in the files of the Strategic Plans Division (now designated Op-60) for 1955 The paper was declassified by the Joint Chiefs of Staff Declassification Branch October 20, 1980

10 These were WSEG Report No 1, Evaluation of Effectiveness of Strategic Air Operations, completed February 8, 1950, and WSEG Report No 10, Evaluation of the Effects of the Mid-1954 First Phase Atomic Offensive Against Fixed Industrial Targets in the Soviet Bloc The WSEG 1 paper is declassified and may be found, along with Enclosures C-H, in JCS 1952/11, February 10, 1950, CCS 373 (10-23-48), Sec 6, Bulky Package, Papers of the United States Joint Chiefs of Staff, Record Group 218, National Archives (hereafter cited as JCS Papers) WSEG 10 remains classified but is referred to in correspondence in Secs 6, 7, and 8, of *ibid*

11 Office of the Historian, Headquarters, Strategic Air Command, *Development of Strategic Air Command, 1946–1976* (Omaha, Neb Office of the Historian, Headquarters, Strategic Air Command, 1976), pp 43–50

12 Graph, Combined Strategic Offensive and Defensive Warheads, 1944–1972, appended to letter, John A Griffin, Division of Classification, U S Energy Research and Development Administration, to the author, October 15, 1975 These calculations are based on measurements of a 50 percent enlargement of the original graph

Although these code names dated from early 1952, the three objectives had been formally established by the JCS in August 1950 The DELTA mission—destruction of the Soviet urban-industrial base—had been the focus of U S planning estimates and approved war plans since 1945 The retardation objective was assigned to SAC, in the absence of any tactical nuclear capability, following the signing of the North Atlantic Treaty in 1949 Estimates of the weapons needed to blunt initial Soviet atomic capability had been developed even prior to the Soviet atomic explosion of 1949 The blunting mission was formally assigned to SAC in 1950 Because of considerations of time urgency, the JCS assigned highest priority to the blunting mission and second priority to retardation of Soviet advances into Western Eurasia [19]

Moore noted in his memorandum that the SAC officers giving the briefing he attended repeatedly pointed out that their plans were designed to implement military objectives and priorities assigned to them by the Joint Chiefs Nevertheless the SAC planners exercised considerable discretion in interpreting that guidance According to Moore, SAC had prepared its own nuclear annex (SAC-NNEX) which went "well beyond" the target list assigned by the JCS The SAC target list included 1700 Designated Ground Zeros (DGZs), including 409 airfields

The SAC optimum plan also gave less attention to retardation than the Joint Chiefs may have intended The great bulk of the planned offensive was intended for a combination of DELTA and BRAVO targets, with the former outnumbering the latter In fact, General LeMay had never believed that SAC forces should be utilized for attacks on battlefield targets From 1949 on, the retardation targets identified for attack by the strategic air offensive were apparently primarily fixed industrial sites such as petroleum refineries in Eastern Europe which could be used to fuel Soviet motorized forces LeMay thus did not object when responsibility for retardation was progressively transferred to the American tactical nuclear forces assigned to NATO beginning in 1952, although SAC continued to claim a role in implementing the retardation objective through 1956, in order to maximize its allocation of nuclear weapons [20]

19 *Ibid*, for a description of earlier atomic war planning, see David Alan Rosenberg, "American Atomic Strategy and the Hydrogen Bomb Decision," *Journal of American History* Vol 66 (June 1979), pp 62-87

20 Lemmer *The Air Force and Strategic Deterrence*, pp 55-56, Robert Frank Futrell, *Ideas, Concepts, Doctrine, A History of Basic Thinking in the U S Air Force, 1904-1964* (Maxwell Field, Ala

The most significant aspect of the SAC optimum plan is the way in which operational considerations blurred the distinctions between different types of targets The optimum plan described by Moore was designed to maximize the efficiency and effectiveness of the nuclear offensive, and to reduce U S losses to a minimum The best way to achieve this, SAC planners believed, was to strike the entire target list in a single massive blow, thus enabling all the bombers to enter and leave Soviet air space as rapidly as possible The plan called for an intensive, tightly coordinated operation which would, in Moore's words, leave the Soviet Union "a smoking, radiating ruin at the end of two hours" The rationale for this approach is described in an official Air Force history, which deals with SAC plans of the late 1950s, but is equally applicable here

> Such an all-out attack would provide the largest degree of protection to SAC crews By a predominant use of large nuclear weapons, moreover, one crew could be counted upon to destroy many individual targets with single weapons, thus achieving a "bonus effect" that was thought to be quite important in view of the many targets requiring destruction and the limited size of the Strategic Air Command [21]

Thus while it was possible to separate out BRAVO and DELTA objectives in war plans and strategic analyses, these distinctions all but disappeared at the operational level If individual weapons were to be used against multiple targets, and if the entire offensive was to be delivered within a matter of hours, the time priority assigned by the JCS to blunting and retardation, as well as the differentiation between classes of targets, became somewhat irrelevant The air offensive was essentially homogenized by what Moore described as SAC's "bomb as you go" system

It was the JSCP nuclear annex, not SAC's operational plan, which was the subject of the WSEG 12 analysis Under assignment from the JCS, WSEG utilized a refined and restated version of the BRAVO, ROMEO, and DELTA missions The goal of the atomic offensives, the JCS stated, was to support ground, sea, and air operations to achieve the following specific objectives

Aerospace Studies Institute, 1971), pp 278, 390 By the end of 1954, there were over 300 nuclear-capable tactical air weapons systems in the U S Air Forces in Europe, more than enough to deliver the 175 weapons allocated to European defense in WSEG 12 These included B-45 light bombers, F-84 fighter-bombers, and 114 Matador missiles Staff Sergeant Martin E James, *Historical Highlights, United States Air Forces in Europe* 1945-1979 (Office of History, U S Air Forces in Europe, November 1980), pp 34

21 Futrell, *ibid* pp 551-552

atomic weapons, no more specific guidance was provided to war planners [25] The Eisenhower Administration was similarly vague about criteria for when and whether the nation's atomic arsenal would be employed The policy of massive retaliation laid out in the October 1953 national security policy paper NSC 162/2, and in Secretary of State John Foster Dulles' famous speech of January 1954, left open the question of what Soviet actions would bring about a nuclear response

The 1953 "New Look" at American military strength was predicated on the proposition that the U S could substantially reduce the size of its conventional military forces by placing primary reliance on nuclear weapons in the event of war But this proposition was not explicitly included in formal statements of national security policy for several years Following an extensive debate within the JCS over the wisdom and necessity of planning for conventional as well as nuclear strategies in general war, President Eisenhower ruled in February 1956 that in the event of a conflict where Soviet forces attacked either the United States or U S forces, there was no doubt that the United States would use atomic weapons [26] This was reflected in a revision of the approved Basic National Security Policy (BNSP) for that year which now stated,

that it is the policy of the United States to integrate atomic weapons with other weapons in the arsenal of the United States, that atomic weapons will be used in general war and in military operations short of general war as authorized by the President, and that such authorization as may be given in advance will be determined by the President [27]

Significantly, the concept of "preventive" war was rejected in the new BNSP, as it had been in all previous ones since 1954, but the question of preemption

25 Truman Administration policy actions on the possible use of nuclear weapons are best summarized in Memorandum, Everett Gleason to the President, October 23, 1952, with June 11, 1952, study appended, NSC–Atomic Weapons–Procedures for Use Folder, and Memorandum, James S Lay, Jr , to the President, September 10, 1952 (approved by the President the same date) with paper "Agreed Concepts Regarding Atomic Weapons" appended, in NSC–Atomic Weapons–Agreed Concepts Folder, both in NSC Atomic File, President's Secretary's File, Harry S Truman Library

26 The JCS deliberations are extensively documented in the CJCS (381 Military Strategy and Posture) folders for 1955–1956 in the "Chairman's File" of Admiral Arthur W Radford, and in JCS 2143/56, April 12, 1956, and Decision on, April 17, 1956, and subsequent papers in CCS 381 (11-29-49) Sec 30, both JCS Papers Eisenhower's decision is noted in Lemmer, *The Air Force and Strategic Deterrence*, pp 26–27

27 This statement is excised from the declassified version of NSC 5602/1, March 15, 1956, in NSC Papers File, MMB, but it is contained, in this form, in JCS 2143/56, *ibid*

was not addressed [28] The distinction between the two concepts was well understood by military planners, as reflected in the LeMay comment on preventive war cited above Preventive war is waged in the belief that war is inevitable, although not imminent, and that delay would be a disadvantage Preemption occurs in the expectation of an imminent enemy attack Under Eisenhower as under Truman the decision as to whether a preemptive first strike was called for was left entirely to the President

President Eisenhower had never doubted that use of nuclear weapons would be appropriate in the event of general war with the Soviet Union In a June 1954 NSC meeting, he stated that the U S could "under no circumstances hold back punches because of some feeling that total victory might bring greater problems than if victory were obtained through limited war" [29] He was certainly aware of the blunting objective assigned to the atomic air offensive, as well as the operational considerations which made it desirable to plan for a single massive strike [30] He was furthermore aware, as stated in the strategic estimate of the 1956 BNSP, that the time was apparently approaching when the U S would have the ability to deliver a "decisive" nuclear strike against the Soviet Union one which would require only a matter of hours or days to complete, and which would essentially eliminate Soviet ability to strike back, or reduce civil, political, and social life in the Soviet Union to "a condition of chaos" [31] Nevertheless, Eisenhower may never have considered preemption a serious policy option He noted in his diary in January 1956 that there would be seemingly insurmountable problems associated with launching a surprise preemptive attack against the Soviet Union, even if such an attack seemed necessary to prevent totally unacceptable levels of damage to the United States Such an attack, he wrote,

would be not only against our traditions, but it would appear to be impossible unless the Congress would meet in a highly secret session and vote a declaration of war which would be implemented before the session was terminated It would appear impossible that any such thing would occur [32]

28 NSC 5602/1, March 15, 1956, paragraph 17, NSC 5501, January 6, 1955, paragraph 35, NSC 5440/1, December 28, 1954, paragraph 35, all in NSC Papers file MMB

29 Richard Nixon, *RN, The Memoirs of Richard Nixon* (N Y Grosset & Dunlap, 1978), pp 376–377

30 Samuel F Wells, Jr , "The Origins of Massive Retaliation," *Political Science Quarterly*, Vol 96, (Spring 1981), p 39, William Bragg Ewald, Jr , *Eisenhower the President, Crucial Days, 1951–1960* (Englewood Cliffs, N J Prentice Hall, 1981), pp 96

31 NSC 5602/1, March 15, 1956, NSC Papers File, MMB

32 Robert E Ferrell (editor) *The Eisenhower Diaries* (N Y W W Norton, 1981), pp 311–312

Document One

Memorandum
Op-36C/jm
18 March 1954

From Op 36C[1]
To Op-36[2]
Via Op-36B[3]
Subj *Briefing given to the representatives of all services at SAC Headquarters,* Offutt Air Force Base, Omaha, on 15 March, 1954

1 On 15 March SAC gave a briefing understood to be the same one given to the new JCS last July, to about 30 officers of all Services, including several from OPNAV [4] The briefing lasted from 0830 until about 1500 It was given by MAJGEN A J Old, the Director of SAC Operations General LeMay, COMSAC, conducted a question-and-answer period for about 30 minutes at the end

2 The briefing was done in an excellent and skillful manner utilizing many charts, diagrams, projector slides, etc The rapidity with which it was given made it difficult to take more than highlight notes The gist of these follows, using the same breakdown of major topics as was used by General Old

Background

The first strategic air mission was conducted in August 1942 when a group of B-17s sorties from U K to attack targets in France

The first B-29 strategic air mission occurred on the same day Guam was invaded and consisted of 50 B-20s attacking Japan from bases in India

Resume of World War II

During 49 months of World War II 22,000 bombers were lost in strategic air attacks against Germany (10,000 U S and 12,000 RAF) Similarly during a 14-month period 485 B-29s were lost in strategic air attacks against Japan

The above data were intended to indicate the great difference between the scale of strategic air warfare against Germany as compared with Japan in World War II

Mission

General Old showed a chart listing the BRAVO, ROMEO, and DELTA objectives and stated that the JCS had established these as having priority in that order He stated that although SAC has been "assigned" only a certain number of targets by the JCS their planning has gone well beyond this number A current plan, indicated on a chart as SAC-NNEX, covers up to 1700 DGZs which includes 409 air fields General

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The two documents presented here are quoted in their entirety, with minor editorial changes made for the sake of consistency Sequential number of paragraphs in Document Two has been deleted

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Captain William B Moore USN, Executive Assistant to the Director of Op-36, the Atomic Energy Division, Office of the Chief of Naval Operations
Rear Admiral George C Wright USN, Director of Op-36
Captain Courtney Shands USN, Deputy Director of Op-36
The official Navy acronym for Office of the Chief of Naval Operations

Old stated that SAC is not much concerned over current or prospective JCS allocations of weapons "because we know we will get the weapons when the bell rings," or words to that effect He stressed, however, that their primary concern is *'Where are these weapons* which they expect to be allocated?" That is, in what sites are they located so that SAC can plan his pick-up schedules accordingly This aspect of SAC's philosophy, indifference to JCS allocations, was repeated later by General LeMay

Organization

Charts flipped by quickly which showed that the SAC consists of 3 "Air Forces" in the United States as follows Second Air Force based at Barksdale AFB, Louisiana, Eighth Air Force at Carswell AFB, Fort Worth, and Fifteenth Air Force at March AFB, Riverdale, California SAC has 5 deputy Commanders overseas designated as follows

X-Ray—Deputy Commander Far East
Victor—Deputy Commander Alaska
Yoke—Deputy Commander French Morocco
Zebra—Deputy Commander U K
Oboe—Deputy Commander Northeast

Yoke and Zebra are intended for the support of *SACEUR* (a NATO commander)

Other units overseas were shown, however I did not have time to take any notes on these

Resources

AIRCRAFT

SAC now consists of

—5 Heavy bomber wings (30 B-36s per wing)
—13 Medium bomber wings (all composed of 45 B-47s per wing, except one wing of B-29s)
—4 Wings of heavy strategic reconnaissance B-36s
—2 Wings of medium strategic reconnaissance B-47s
—14 Wings of aircraft refueling tanker planes (42 squadrons) [5]
—5 Strategic fighter wings,
—and a couple of more types

As of 15 March SAC consisted of 2,131 combat planes of which 835 are bombers, 315 reconnaissance, 540 tankers, 325 fighters, 50 strategic support, 35 air-rescue and a few others Of the total of 2,131 planes 2,095 were "combat capable" on 15 March [6]

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5 A naval officer in Op-30, the Strategic Plans Division, commented on this figure with three exclamation points (!!!) in pencil on the original document
6 John T Bohn, Command Historian of SAC, noted that this data is not borne out by figures in SAC files in letters to David A Rosenberg, April 2, and June 25, 1981 According to *Development of Strategic Air Command 1946–1976*, pp 38, 43, SAC contained the following aircraft in December 1953 1 830 total, including 762 bombers (185 B-36s, 329 B 47s 138 B-50s, 110 B 29s),

removed from their commands because of their poor leadership qualities revealed by this unusual test

BASES

SAC now has 31 operational and staging bases for 2,005 aircraft in the U S and overseas In 1950 SAC had 18 such bases for 850 aircraft The ultimate plan is to have one heavy bomber wing per operational base, or two medium wings I did not get the breakdown between operational and staging bases Later General LeMay remarked that he will be happier when he has a few more bases [9]

COMMUNICATIONS

SAC has an elaborate teletype system by which direct communication to many places is possible By relay over networks of other agencies still more of his outposts can be reached The Communication Control Center is in the basement of the building in which we were briefed In addition SAC uses the RCA telephoto system by which pictures can be flashed to Omaha very quickly directly from U K , Japan, Guam, and North Africa Security for this circuit is under development It is presumed these are intended primarily for intelligence purposes A sample of such a picture transmitted in quite a short time was very clear

Capabilities

RANGE

Considerable data on combat ranges were presented General Old remarked that the Air Force will be delighted when jet tankers are available so that heavy bombers will not have to slow and come down to lower altitudes to take a drink This, of course, cuts down their overall range Jet tankers will be required to refuel B-52s due to their high speed Their range will be increased 1,000 miles with one refueling or 2,500 miles with 2 refuelings when the fueling is done at 30,000 feet Designs of jet tankers are being developed [10]

In-flight refueling of all plane types is now a routine and easy operation, day or night SAC now makes a wet hook-up every 5 minutes some place in the world Wet hook-ups are 99 percent successful Refueling is usually done at 18–20,000 feet at 600 gallons per minute

MOBILITY

General Old stressed that the performance of the B-47 is not limited by the plane itself but by the crew's endurance Various studies are going on to determine just how much the crews can stand and also how their proficiency in bombing, navigation, etc falls off after prolonged operation Similar studies are conducted for the crews of other SAC types Examples of a few long-range mass flights of SAC planes were cited including the famous round-the-world flight by the B-50 "Lucky Lady," which

9 According to *ibid* , p 38, there were 29 active continental U S bases and 10 active overseas bases (in North Africa, Puerto Rico, and England) available to SAC in December 1953

10 The first KC-135 jet tanker (a converted Boeing 707) was delivered to SAC in June 1957 *Ibid* , 60

passed over Washington at the height of the B-36 controversy Later General LeMay remarked that SAC can go anywhere in the world and hit any target designated by the JCS [11]

NAVIGATION

SAC bombers use the "K" system which apparently is quite wonderful and reliable General Old did not elaborate on just what this system is and I hope to find out more about it Apparently it is tied in with the bombing equipment itself and actually releases the bomb at the proper moment without the touch of human hands General Old stated that SAC can "bomb within 2 percent of the distance run blind (I presume this means by dead reckoning) by the 'Sharkey' system " A question was asked as to how the fighters navigate when they are not accompanying larger planes He said they use a very rapid system of celestial navigation for which pre-computed data is provided for each flight

BOMBING ACCURACY

General Old stated that if the target can be seen their bombing errors will be 800–100 feet less than if radar bombing has to be used The current CEPs [Circular Error Probable, the radius within which 50 percent of all bombs dropped will fall] for all bomber crews using simulated radar bombing from 25,000 feet is Industrial targets is about 1,400 feet For visual bombing this drops to 600 feet Tests were run on their Lead and Select crews only to see how much better they were than the average The measurements of 202 simulated drops from 25,000 ft gave an average CEP of 1,390 feet for radar bombing and 352 feet for visual It is presumed that these tests were conducted using the RBS ground equipment previously mentioned

SAC's "radar prediction technique" was described at some length This consists of making "plates" using old intelligence data on Russian targets These plates consist of square pieces of clear lucite about one-quarter inch thick on which have been etched, or built up with a metallic substance, outlines and solid block-in areas of topographical features by technicians in such a manner that when this plate is viewed in a special training device it shows up exactly as would the radar scope of a bomber flying over the actual target This technique has been developed to a fine art, largely by using old data on U.S cities to prepare such plates and then checking them with pictures of the radar scope of the actual cities today In other words, lakes, rivers, etc never change, industrial areas do not move but normally just change size and shape slightly SAC has prepared such plates for 90 percent of the "assigned Russian targets " It was illustrated how these plates can be used to establish "offset aiming points " In this system some prominent point on the plate such as a bend in a river or other easily identifiable point within 10 miles of the DGZ, is selected as the actual

11 The flight of the B-50A "Lucky Lady II," the first non-stop, air-refueled, aerial circumnavigation of the globe occurred between February 26 and March 2, 1949 The 23,452 mile flight took 94 hours James N Eastman, Jr , "Flight of the Lucky Lady II," *Aerospace Historian*, 16, (Winter 1969), 9–11, 33–35 LeMay's comment that the United States now could "deliver an atom bomb to any spot on earth where it may be required" was reported in *The New York Times*, March 3, 1949, p 1

Survival

This part of the briefing was an effort to answer the question, "How well could SAC survive a Pearl Harbor type of attack?" SAC presumes that Russia has the BRAVO (blunting) objective as top priority just as we have Familiar charts were shown to indicate the depth into the United States that Soviet planes could penetrate on one-way missions from different starting points Some of these overlap the entire United States

In making attacks on the U S SAC estimates that USSR would have to plan on the following operational factors

a) 10–30 percent aborts
b) 0–30 percent losses from U S defenses
c) 5–20 percent gross errors
d) 5–15 percent duds
e) 1000–10,000 feet CEPs
f) 30–100 KT bomb yields
g) 25–75 weapons allocated to their BRAVO objective
h) 0–36 hours alert time in the U S

General Old then displayed a whole family of charted data to show the estimated effects on SAC of various combinations of the above items Assuming conditions among the items above *most favorable, least favorable,* and *averagely favorable* to the Russians the following estimates were given [see Figure 1]

[Figure 1] Amount of Alert Time in U S

	0 hrs	2 hrs	6 hrs	36 hrs
	(percentage of SAC Destroyed)			
Most favorable	90%	35%	15%	5%
Least favorable	8 9%	2 4%	1 2%	0 3%
Averagely favorable	69%	23%	10%	3 4%

All of this points up that the amount of alert time is the most important factor as far as SAC is concerned It is believed that these survival data are based on Rand studies

General LeMay has pulled several surprise exercises at various off-times, such as late Saturday afternoon, in which the idea was to see how quickly all SAC planes can get in the air and go to certain orbit points or to other fields Some of these drills were done under one of two assumptions, either the planes should take off fully manned and equipped and ready to go on a strike mission, or simply take off with skeleton crews as soon as possible to get away from the threatened home fields

This concluded the briefing by General Old

Question and Answer Period Conducted by General LeMay

Some of the interesting questions asked [of] General LeMay included

This concluded the briefing by General Old

Q What period of time do you consider we should plan for to fight a "short war"? (Asked by a Navy Captain)

A About 30 days SAC has been compiling continuous data on critical parts required to keep the planes operational These parts are kept in "flying kits," one for each plane which are taken with the plane when it departs for a mission I consider these critical parts so important that I have never allowed them to be taken out of flying kits for local use Necessary parts have to be gotten from somewhere else other than the flying kits or else the plane stays on the ground until the part is obtained (Note It is understood that General LeMay has in the past indicated a 60-day period, later dropped to 45 days, and still later to 30 days This question was apparently an effort to see if he had reached any lower estimate by now It seemed apparent from General LeMay's answer that he is firmly convinced that 30 days is long enough to conclude World War III)

Q Is SAC prepared to conduct strategic air warfare in case the use of atomic weapons is outlawed? (Asked by a Navy Captain)

A You "sailor boys" are always asking this foolish question (or words to that effect) It is inconceivable to me that this situation will ever arise

Q How do SAC's plans fit in with the stated national policy that the U S will never strike the first blow?

A. I have heard this thought stated many times and it sounds very fine. However, it is not in keeping with United States history Just look back and note who started the Revolutionary War, the War of 1812, the Indian Wars, and the Spanish–American War I want to make it clear that I am not advocating a preventive war, however, I believe that if the U S. is pushed in the corner far enough we would not hesitate to strike first (or words to this effect)

Q Could you say a few words as to your thoughts on how to fight a war in Indo-China?

A I could talk for 2 or 3 weeks on this In fact, I wouldn't fight a war in Indo-China because this is a squabble that could be settled by political action This may necessitate offering independence to those people ultimately.

Q What would you advocate in case hostilities are renewed in Korea?

A There are no suitable strategic air targets in Korea However, I would drop a few bombs in proper places in China, Manchuria and Southeastern Russia In those "poker games," such as Korea and Indo-China, we (U N , I presume) have never raised the ante—we have always just called the bet We ought to try raising sometime

Q We have heard a lot of optimistic statements today about SAC's capabilities Do you have any reservations about these capabilities? (Asked by a Navy Captain)

A. No, I would like to have a few more bases, however

Additional Interesting Statements Made by General LeMay

SAC's mission is to conduct strategic air warfare against the targets "assigned by the JCS " I hope that someday all the atomic weapon targets in the Soviet complex will

Additional Interesting Statements Made by General LeMay

DOE FACTS

DECLASSIFICATION OF CERTAIN CHARACTERISTICS OF THE UNITED STATES NUCLEAR WEAPON STOCKPILE

The Department of Energy and the Department of Defense have jointly declassified certain characteristics of the Nation's nuclear weapon stockpile.

SPECIFICALLY:

- The Department of Energy and the Department of Defense have jointly declassified the total megatonnage of the nuclear weapon stockpile for the years 1945 to the present.
- The Department of Energy and the Department of Defense have jointly declassified the total number of nuclear weapons in the stockpile for the years 1949 to 1961.
- The Department of Energy and the Department of Defense have jointly declassified the total number of weapon builds by year for weapon systems fully retired.
- The Department of Energy and the Department of Defense have jointly declassified the total number of weapon retirements for the years 1945 to 1989. Disassembly of weapons for disposal from 1980 to the present is also provided.
- See attached charts for detailed descriptions of the declassified stockpile characteristics.

BACKGROUND:

- The size of the stockpile has changed dramatically over the past 50 years. In recent years, a large number of weapons have been retired in response to treaty obligations and unilateral commitments.

(More)

U.S. Department of Energy
Office of Public Affairs
Contact: Sam Grizzle
(202) 586-5806

YEAR	TOTAL	MEGATONNAGE	BUILDS	RETIREMENTS	DISASSEMBLIES
1945	2	0.04	2	0	
1946	9	0.18	7	0	
1947	13	0.26	4	0	
1948	50	1.25	43	6	
1949	170	4.19	123	3	
1950	299	9.53	264	135	
1951	438	35.25	284	145	
1952	841	49.95	644	241	
1953	1169	72.80	345	17	
1954	1703	339.01	535	1	
1955	2422	2879.99	806	87	
1956	3692	9188.65	1379	109	
1957	5543	17545.86	2232	381	
1958	7345	17303.54	2619	817	
1959	12298	19054.62	7088	2135	
1960	18638	20491.17	7178	838	
1961	22229	10947.71	5162	1571	
1962		12825.02	4529	766	
1963		15977.17	3185	830	
1964		16943.97	3493	2534	
1965		15152.50	3519	1936	
1966		14037.46	2429	2357	
1967		12786.17	1693	1649	
1968		11837.65	536	2194	
1969		11714.44	684	3045	
1970		9695.20	219	1936	
1971		8584.40	1073	1347	
1972		8531.51	1546	1541	
1973		8452.00	1171	544	
1974		8325.22	959	807	
1975		7368.38	748	2240	
1976		5935.51	427	2181	
1977		5845.00	221	998	
1978		5721.16	50	1148	
1979		5696.34	170	730	
1980		5618.86	0	904	732
1981		5382.91	30	1887	1577

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THE STRATEGIC AIR COMMAND

by

General Curtis LeMay

casualties — remarkably similar in both countries; transportation and military forces — equally knocked out or immobilized. Today we have the capability of inflicting more damage in one mission than was done against Germany and Japan during the entire course of the war. So much for the background on strategic air warfare.

Next, the mission. The Strategic Air Command's mission and targets are designated by the Joint Chiefs of Staff. Briefly stated, the mission is to conduct the strategic air offensive utilizing atomic weapons. The mission embraces three principal tasks: the blunting or Bravo task, which is to destroy the Soviet atomic force on the ground; the retardation task, to prevent the massing and launching of Soviet military forces; the destruction task, to systematically destroy the Soviet war-sustaining resources. The Joint Chiefs of Staff have assigned the blunting task the highest priority. I might add this is our most difficult task. Retardation targets have not been designated as yet. These targets are being nominated for destruction by other JCS commanders. The bulk of the targets are in the destruction category. Although blunting has the first priority in point of time, we are prepared and capable to carry out operations against all three categories of targets simultaneously.

This is SAC's mission as previously defined. However, I feel our real mission goes far beyond the mere delineation of this wartime task. We think we must remain sufficiently strong to convince any enemy it will not be to his advantage to start a universal war. As things stand now, with our present capability, I think there is certainly a

stand now, with our present capability, I think there is certainly a

question as to whether there is any profit in anybody starting a war.

Next, a quick look at the present organization of the command. Headquarters is located at Omaha. We have two overseas air divisions and three combat air forces. The 5th Air Division is in French Morocco; the 7th Air Division in England. The 2nd Air Force with headquarters at Shreveport, commands ten bases generally in the southeastern part of the United States and Puerto Rico. The 8th Air Force, with headquarters at Forth Worth, commands ten bases generally situated in the central part of the United States. The 15th Air Force, with headquarters at Riverside, California, commands eleven bases, generally in the western part of the United States.

Each air force has a composite array of aircraft, making it more or less tactically self-sufficient. For example, the 15th Air Force has heavy bombers at Spokane, medium bombers at March and reconnaissance at Travis Air Force Base. Each medium bomb wing has its own tankers as part of the wing.

In connection with the retardation task in support of the theater commanders, it is necessary to maintain overseas command elements to facilitate and expedite lateral coordination with the theater commanders. The overseas command arrangements are shown on the next chart. Shown here is the commander of the Strategic Air Command operating under Joint Chiefs of Staff control with the three combat air forces. I have designated five deputy commanders of the Strategic Air Command and have named them Oboe, Victor, X-ray, Yoke and Zebra, to operate in the areas indicated on the chart. The offices of these deputy commanders

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THE OPERATIONAL SIDE

OF

AIR OFFENSE

Remarks By

GENERAL CURTIS E. LeMAY

TO

THE USAF SCIENTIFIC ADVISORY BOARD

AT

PATRICK AIR FORCE BASE, FLORIDA

21 MAY 1957

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the enemy may take against them, our forces are not a genuine deterrent. By "Winning" is meant achieving a condition wherein the enemy cannot impose his will on us, but we can impose our will on him.

The Joint Chiefs of Staff have directed SAC to destroy, as a matter of first priority, "the Soviet capability to launch weapons of mass destruction against areas or forces vital to the United States and allied war effort." In my view, our deterrent strength resides primarily in our recognized capability to win the Air Power Battle. Unless and until the Air Power Battle is won, there is no hope of successful operation by major surface forces. This requires, of course, a successful strategic air offensive. No presently known defensive weapon systems can prevent the success of a properly planned and executed air offensive. This is not to say that air defense systems are worthless; but at the present state of the art, the most important contribution of air defense systems is provision of warning to enable the air offense forces to get underway before they are destroyed at base.

Within the total Soviet target system delineated by the JCS to its commanders, SAC has identified a list of targets which we call the "Air Power Battle Target System." This system includes the Soviet long range air armies (their SAC in being), their bases, their supporting POL and materiel resources, governmental and military control centers with their allied communication networks, and nuclear weapon stockpile and production facilities. Destruction of this Air Power Battle Target System is currently based on 1539 desired ground zeroes, of which 954 require immediate attack in order to minimize the enemy's capability for initial strike. I anticipate a substantial increase in the number of DGZ's during the next five years, inasmuch as our national intelligence estimates indicate that the Soviets are pointing toward a peak in their air offense and defense capability in 1962.

In addition to the number of targets, a primary concern of the operational commander is the toughness of the target -- that is, its resistance

to the effects of the weapons under his control. As you can well realize, the targets mentioned above lie in the category of targets requiring high over-pressures for reasonable probabilities of destruction. This means that weapons must be delivered with either very high accuracy or very high yield, or both.

III.

ATTRIBUTES OF AIR OFFENSE WEAPON SYSTEMS

Keeping in mind the job to be done as detailed in the Air Power Battle Target System just discussed, what are the characteristics of air offense weapon systems which would afford the operational commander the highest assurance of being able to do his job? They are:

A. Adequate range

B. Penetration capability

C. Accuracy/yield relationships

D. Speed of reaction

E. Reliability

F. Confidence

I will discuss each of these in turn.

Adequate range. In view of the possiblity that overseas bases could eventually become untenable through either military or political action, the ideal air offense weapon system should have range adequate to strike all targets from its secure day-to-day location in the continental United States.

Penetration capability. This is the ability of the air offense vehicle to cope with the enemy's air defense system. It is the product of such attributes as speed, high or extremely low altitude performance, all-weather operation, electronic countermeasures, and compatibility with other penetration aids.

Accuracy/yield. As I mentioned earlier, the probability of achieving the desired level of target destruction depends not only on the probability of the weapon reaching detonation point, but also on the accuracy with which

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November 25, 1958

MEMORANDUM FOR THE SECRETARY

Subject: Oral Presentation of the Annual Report of the Net Evaluation Subcommittee

1. I understand that you will receive the same briefing given last week to the President and to the NSC.

2. I submit the following observations based on my hearing this briefing and asking a few questions last week in the Pentagon.

a. The claim that SAC plans to over-destroy targets seems to be borne out. For example, I understand that the assumptions used in this study in regard to target Moscow called for weapons having a total explosive yield of 100 megatons, of which some 66 megatons are assumed to have actually reached the target. For comparison, 100 megatons is the explosive equivalent of 5,000 Hiroshima-type bombs. I was advised that the study assumed that Moscow would be hit by IRBMs, fleet ballistic missiles, air-to-surface missiles, and ICBMs before being hit by SAC airplane delivered bombs. You may wish to address some questions to this point.

b. You will note that the study assumes a destruction of targets throughout China. I believe that this was based on an assumption that the North Koreans had attacked the South Koreans.

3. You will note the heavy fatalities from fall-out. This will not be limited to the Soviet Union and China. Leaving aside the question of the

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AUTHORIZATION FOR THE EXPENDITURE OF NUCLEAR WEAPONS

1. It is the policy of the United States to integrate nuclear weapons with other weapons in the arsenal of the United States. Nuclear weapons will be used in general war, and in military operations short of general war, as authorized by the President. Such authorization as may be given in advance will be determined by the President.

2. Pursuant thereto, and in order to provide for immediate defensive readiness of US forces against hostile assault of such character that time or damage factors preclude normal Presidential consideration and decision to expend nuclear weapons, I hereby authorize the armed forces of the United States, in conformity with implementing instructions established under paragraph 3 hereof, to expend nuclear weapons in the following cases:

a. For the defense of the United States, its Territories and possessions:

(1) In the United States, its Territories and possessions and in coastal air defense identification zones, against attack by air;

(2) In

territory, to existing or future agreements or understandings with the countries concerned.

3. To give effect to the foregoing authorizations, implementing instructions relative to the defensive and retaliatory uses specified herein will be worked out by the Department of Defense, subject to the concurrence of the Department of State in such instructions as apply to operations outside the sovereign boundaries of the United States, its Territories and possessions, and will be submitted to the President.

4. The following definitions, operational limitations and procedures for implementation apply to the authorizations contained in paragraph 2 above:

a. Definitions:

(1) "U.S. forces" refers to those major organized units of U.S. military forces comprising the essential operational military strength of the United States, including the numbered field armies, fleets, and air forces.

(2) "Attack" refers to a major hostile assault or attack of such magnitude and against such areas and forces as to constitute an immediate and vital military threat to the security of the United States or to the major U.S. military forces.

b. Operational

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G 325.4, Military Liaison Policy

April 24, 1958

TO: The Secretary

THROUGH S/S

FROM: G - Mr. Murphy

It is not my understanding that you subscribe to the "strategic concept" mentioned by Mr. Smith in his attached memorandum of April 23, 1958, as including the doctrine that any significant overt engagement between the United States and Soviet forces will bring about all-out nuclear war. This question would seem to be basic in the attached instructions, but whether the instructions are for the use of nuclear weapons in starting an all-out nuclear war or merely for limited-type warfare, leakage to the press of the nature of the proposed instructions would make for a major commotion. Certainly, in the European area the understanding that the President retains control of the use of nuclear weapons is of great political advantage to us. It provides an excellent argument against Soviet charges concerning the dangers to populations of reckless decision at the military level.

I agree with Mr. Smith that it would be desirable to postpone a grant of advance authorization awaiting a more favorable period.

Attachment:
S/AE file re: Instructions with Tabs A through E, 4/22/58; Memo from S/P to the Secretary, 4/23/58 regarding same.

G:RM/vh

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(V)

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April 23, 1958

MEMORANDUM FOR THE SECRETARY

Subject: Instructions for the Expenditure of Nuclear Weapons in Accordance with Presidential Advance Authorization dated May 22, 1957

1. In considering these instructions, one should keep in mind the "strategic concept" which includes the doctrine that any significant overt engagement between the US and Soviet forces will bring about all-out nuclear war.

The attacks referred to in the "instructions" are defined in paragraph 3 in such a way as apparently to fit well within the "strategic concept". On their face, therefore, these instructions are for the use of nuclear weapons to start an all-out nuclear war.

If this analysis is valid, I am concerned about the example given on page 12, paragraph 3a, where it is pointed out that a situation warranting emergency use of nuclear weapons might be as limited as an attempted penetration by a single submarine into a harbor of a US possession.

2. In view of demonstrated lack of ability in the US Government to keep secrets from the press, one should assume a high degree of likelihood that the fact of Presidential advance authorization for the use of nuclear weapons will become known to the public. Such a leak in the present circumstances, when the Soviets are trying to give the impression that the US military is engaged in provocative acts, would be very unfortunate. It may be desirable to postpone any grant of advance authorization for a few months.

Gerard C. Smith

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