

HISTORY OF THE
JOINT STRATEGIC TARGET PLANNING STAFF
SIOP - 4 J/K, JULY 1971 - JUNE 1972
(Unclassified Title)

*Redacted
version
Unclassified*

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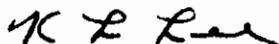
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FOREWORD

This is the tenth history of the Joint Strategic Target Planning Staff (JSTPS) since its establishment on 16 August 1960. It covers the period of July 1971 through June 1972, the term of Revisions J and K of SIOP-4. It has been prepared in accordance with Joint Administrative Instruction 210-1, 15 March 1967.

The classification of Top Secret/Restricted Data and the exemption from the General Declassification Schedule are established to conform with the classification of the source documents.

This history was prepared for the JSTPS by Dr. Walton S. Moody of the Strategic Air Command historical staff.



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Vice Admiral, USN
Deputy Director

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Introduction

(U) Created in 1960, the Joint Strategic Target Planning Staff (JSTPS) was a compromise between two opposing ideas of how the United States should organize for nuclear war. Until the mid-1950's it had seemed simple enough: the Strategic Air Command (SAC) had an effective monopoly of the nation's nuclear-armed delivery vehicles. But as other commands, and notably naval forces, acquired the means to make significant nuclear strikes, coordination became necessary to insure the most effective use of all resources available. This was done for a few years by means of coordination conferences among representatives of the concerned commands. However, these conferences failed to satisfy everyone, and proposals began to appear for a single US Strategic Command that would include all forces assigned to prepare for strategic offensive warfare. Secretary of Defense Thomas S. Gates, Jr., decided instead to establish a planning staff as a separate agency of the Joint Chiefs of Staff (JCS), to consolidate all U.S. strategic targeting and to leave the job of hitting the assigned targets in time of war to the commands that had the weapons.¹

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computer resources and its experience in nuclear targeting. The staff would draw upon SAC's trained manpower.

Mission and Organization

~~(TS-FRO)~~ The most important product of the JSTPS was the Single Integrated Operational Plan (SIOP). One of the annexes to this plan, the National Strategic Target List (NSTL), was a major supporting document essential to the preparation of the SIOP itself. Therefore the JSTPS was organized into two divisions: one to prepare the NSTL and related materials and the other to work out the actual plan. The Director and a Deputy Director, who was a Navy flag officer, supervised these divisions and worked with representatives of the services and the concerned CINCs. ~~F~~

| Besides these, the staff prepared the
Coordinated Reconnaissance Plan (CRP) to coordinate the plans of the CINCs for reconnaissance during nuclear war.⁴

Personnel

(U) During the period from July 1971 to June 1972, the CINCSAC remained, as in the past, the Director of Strategic Target Planning (DSTP). The Deputy Director conducted the day-to-day work of the JSTPS, reporting regularly to the DSTP. The Director's Office included four officers in the rank of colonel or equivalent from the four services. These Senior Service Members were an integral part of the JSTPS, assisting the Director and Deputy Director as needed. The JSTPS also had a staff secretary to handle administrative matters. The commands involved in nuclear planning also had liaison

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staffs detailed for duty with the JSTPS. There was a specific CINCSAC Representative, as well as groups representing the Commander-in-Chief, Pacific (CINCPAC), Atlantic (CINCLANT), and Europe (CINCEUR), and the NATO Allied Commands: Supreme Allied Commander, Atlantic (SACLANT) and Europe (SACEUR).⁵ In the last group were officers of certain foreign military services in NATO. In 1972, these representatives were from the United Kingdom, Belgium, Italy, and the Federal Republic of Germany.⁶

(U) The bulk of the planning naturally took place in the two divisions, and the Deputy Director had the assistance of groups that coordinated these activities. One of these groups, the Policy Committee, consisting of the Deputy Director, the Senior Service Members, and the CINC Representatives, had not met since July 1967.⁷ On the other hand, the Strategy Panel, made up of the Deputy Director and the two Division Chiefs, together with its subordinate Working Group, continued to provide guidelines for SIOP development during the July 1971 - June 1972 period. *⁸

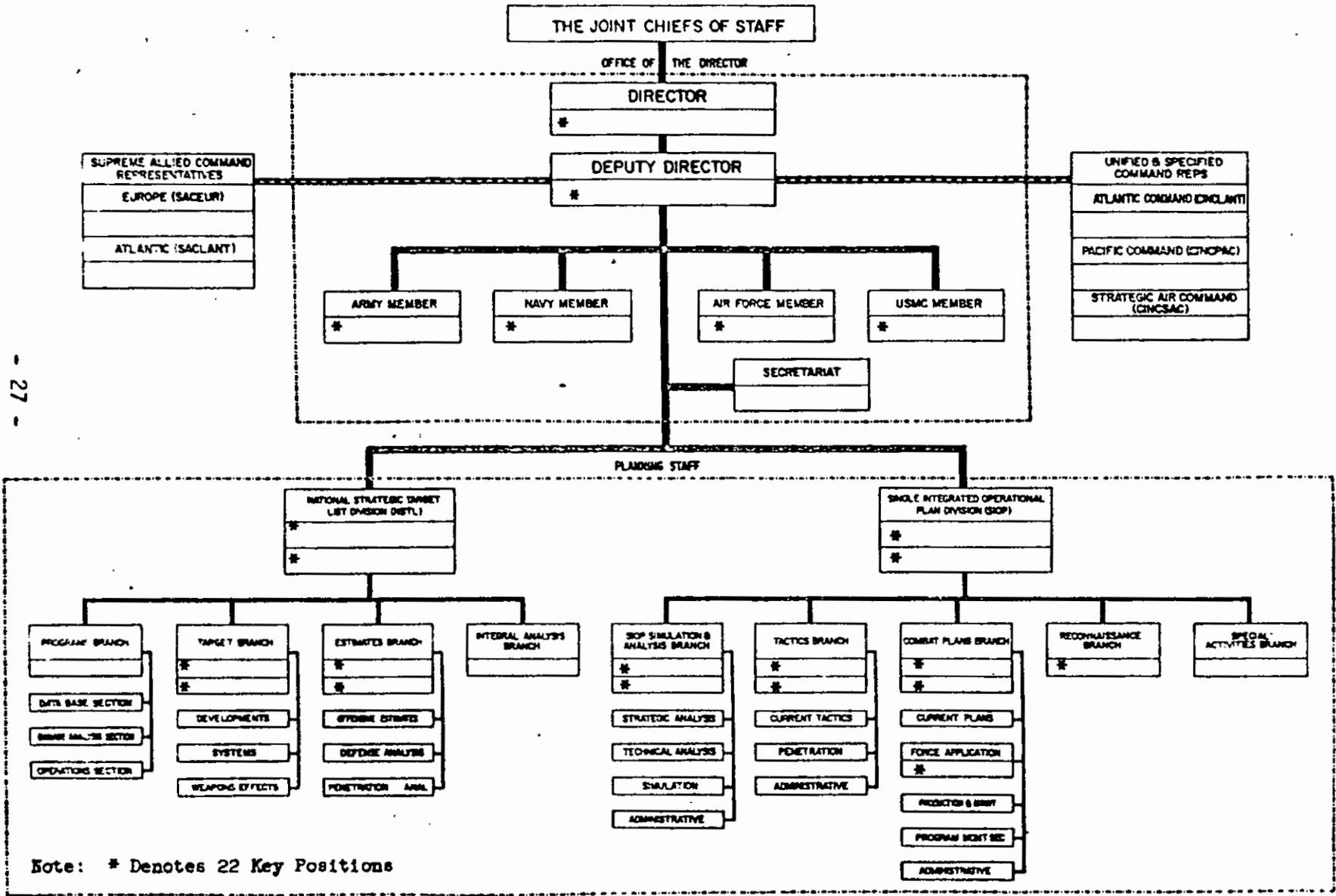
(U) High-level personnel changes were numerous in Fiscal Year 1972. General Bruce K. Holloway, the CINCSAC, was also DSTP until 30 April 1972, being succeeded in both posts by General John C. Meyer. The Deputy Director, Vice Admiral Frederick H. Michaelis, had been succeeded in February by Vice Admiral Kent L. Lee. Both division chiefs also changed. For most of the period Brigadier General Robert L. Cardenas was Chief of the NSTL Division, having taken the place of Major General William R. MacDonald. Both were Air Force officers although no service was specified for that position.⁹

* (U) An organizational chart is provided on the following page.

CHART 1

JOINT STRATEGIC TARGET PLANNING STAFF as of 1 July 1971

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The SAC Director of Operations Plans served during this period as Chief of the SIOP Division with Major General Robert E. Huyser holding the post until the end of May, when Brigadier General Eugene Q. Steffes succeeded him. Each division had a Deputy Chief, who was usually, during this period, a Navy Captain.¹⁰

Manpower

(U) Continuing the pattern established in 1960, the JSTPS consisted of 73% Air Force officers, 18% Navy and Marine Corps (1%) and 6% Army officers with enlisted and civilian personnel for clerical and technical support. Of the Air Force officers 65% were assigned for primary duty to SAC but perform some or most of their duties in support of JSTPS - these officers are called "dual-hat." A few positions were filled by the most qualified officer available, regardless of service; these officers were employed largely in the intelligence field.¹¹

(U) The JSTPS manpower authorization for Fiscal Year 1972 (1 July 1971 to 30 June 1972) provided for a net increase of eight persons over the Fiscal Year 1971 level.¹²

JSTPS Personnel Authorization Changes, FY 72

Service	<u>FY 71</u>	<u>FY 72</u>	<u>Change</u>
Air Force			
Single Status	79	85	+ 6
SAC Dual Status	157	157	0
Army	22	22	0
Navy	56	58	+ 2
Marine Corps	4	4	0
Service Not Specified	6	6	0
Total	<u>324</u>	<u>332</u>	<u>+ 8</u>
Officers	219	225	+ 6
Enlisted	80	81	+ 1
Civilians	25	26	+ 1

(U) In March 1972 a JCS Manpower Survey Team consisting of personnel from the office of the JCS, the services, and the Defense Intelligence Agency, visited Offutt AFB to study the needs of the JSTPS. The team's findings coupled with recommendations by the DSTP would provide the basis for future manpower decisions.¹³

(U) Among the team's observations were remarks on the basic organizational concept of the JSTPS. The team chief stated that inter-service balance did not have to follow arbitrary rules (such as equality of representation for the services, or proportioning by the number of SIOP weapons). He further stated that the objective of the JSTPS was efficient targeting of the forces, and the success of the existing organization in doing that spoke for itself. The dual status arrangement did not require change either.¹⁴

(U) The team proposed a number of revisions to the organization. One of these was to abolish the positions of the Senior Service Members. Their functions as members of the Policy Committee were non-existent as the committee no longer met. The team chief indicated they did not act primarily as liaison channels for their own services. The only major function the team chief could see for them was as heads of their services' staff elements. This, he argued, could be done as well by others as an additional duty. At the time, an Air Force lieutenant colonel served as Staff Secretary. The team chief proposed that an Army colonel should hold the position, with the Air Force officer serving as his assistant. These two would take over the remaining administrative tasks of the Senior Service Members.¹⁵ The DSTP concurred with this proposal. The staffs of the service departments themselves, in particular the Departments of the Army and the Navy, considered these officers essential to provide adequate service representation. Furthermore, although there was no longer a formal Policy Committee, the members frequently provided valuable service as a high-level advisory group for the Director and Deputy Director.¹⁶

(U) In the divisions several changes were proposed. The team favored abolishing the Integral Analysis Branch of the NSTL Division as the useful analysis that it was providing could be done in other offices of the JSTPS. In the Tactics Branch of the SIOP Division the team called for a reshuffling of sections. In place of the Penetration and Current Tactics Sections, the reshuffle would create a Penetration Assessment Section, a Missile Section,

and an Aircraft Section. Another proposal was to do away with the Reconnaissance Branch in the SIOP Division and let the Force Application Section do its work. While the DSTP favored the changes to the Integral Analysis Branch and the Tactics Branch, he was opposed to abolishing the Reconnaissance Branch altogether. Although he agreed that the branch could be reduced to a section, he recommended that a separate office was still needed to handle the frequent revisions to the Coordinated Reconnaissance Plan. The Survey Team proposed a net reduction of 14 manpower spaces. Noting that the CINC Representatives' staffs had a total of 18 officers and 8 enlisted men, it also suggested that the DSTP might ask the CINCs about the need for these spaces. The JSTPS was also urged to conclude a formal agreement with Headquarters SAC on the use of computers. The team concluded by noting that there were needless delays in completing security clearances for staff members.¹⁷

(U) By the end of Fiscal Year 1972 the JCS had not acted upon any of the recommendations of the Manpower Survey Team. These proposed changes, including the elimination of the Integral Analysis Branch and the Senior Service Members, were still under discussion at the end of June.¹⁸

Command Relationships

~~(TS)~~ Physically located in the SAC headquarters building, the JSTPS drew heavily on the command's resources. Some personnel assigned to SAC's Deputy Chief of Staff for Intelligence provided the dual status portion of the NSTL Division, while the Directorate of Operations Plans (under the Deputy Chief of Staff for Operations) did the same thing for the SIOP Division.

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Both divisions made extensive use of SAC computers. The development of damage expectancies, application of the force, war gaming, and many other activities would have been unacceptably prolonged without automation. The JSTPS had to revise its computer programs continually both because of the increasing number of weapons that had to be targeted and because SAC itself was continually modernizing the computer hardware on which the programs were run.¹⁹

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(U) The JCS provided guidance for the JSTPS mainly in the form of the National Strategic Targeting and Attack Policy (NSTAP). The JCS also reviewed the SIOP and approved it. Once the plan was published, the CINCs prepared their own plans for carrying it out. Thus the national command authority would have courses of action open to it should the President order the use of nuclear weapons. The JSTPS would update the SIOP every six months, but its functions would cease once the plan was ordered executed.²¹

The Scientific Advisory Group

~~(C)~~ The JSTPS had obtained approval in 1968 to set up a Scientific Advisory Group (SAG) to consist of persons qualified to provide "timely technical and scientific advice" on such matters as penetration, the reduction of exploitation of system vulnerabilities, and new areas of scientific interest. The DSTP was to nominate the members, subject to approval by the Secretary of Defense. The SAG would follow an agenda set up by the JSTPS.²² Approval was given in March of 1972 to continue the SAG's existence for another year at least.²³ Dr. Arthur Biehl, Jr., of R&D Associates, remained the Chairman until he was succeeded by Mr. Fred A. Payne of the Martin-Marietta Corporation.²⁴

~~(TS)~~ On 4 and 5 October the SAG met at Offutt AFB for its 12th meeting.]

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~~(TS)~~ The vital question concerning the []
was discussed on 14, 15 and 16 March 1972, when the SAG again met at Offutt.
The discussion centered on the []
not fully agreed on an answer. No evidence had been found that []
considered it "prudent" to attribute such a role to it. While some members
of the committee believed the

* (U) See "The Developing Plan", this history.

This too might one day enable the JSTPS to develop new tactics with a fair degree of technical confidence in them.²⁷

Preparing and Maintaining the SIOP

Procedures

(U) Revising the SIOP. Since mid-1966 the basic plan in effect had been SIOP-4. Due to changes in the composition of US strategic forces and the target systems, the JSTPS made major revisions in the SIOP every six months, with minor interim and mid-period changes as needed. On 1 July 1971 Revision J went into effect, with Revision K following on 1 January 1972. Besides the revision actually in effect, the JSTPS always had two others in preparation due to the need for advanced planning.

~~(S)~~ A year before a revision went into effect, the JSTPS would be busy acquiring intelligence data and developing strategic concepts. The Defense Intelligence Agency and other intelligence groups supplied target data. Desired Ground Zeros (DGZs)* were selected so as to produce the damage levels called for in the NSTAP.²⁸ At the same time, the CINCs committed sorties to the future revision, designating their alert forces,

* (U) Desired Ground Zero (DGZ) - - a point on the earth's surface below, at, or above the center of a desired nuclear burst. Manual (TS), JSTPS, "Planning Manual for SIOP-4J (U)," 1 Jun 71 (71-J-0550)

the rate at which additional forces could be generated, and the performance factors to be used in planning. However, the pre-launch survivability for all weapon systems and the reliability and accuracy of ICBMs and submarine-launched ballistic missiles (SLBMs) were first submitted to the JCS for their approval. Other factors went directly to the JSTPS.²⁹ The NSTL Division, using the data on the committed forces, together with established guidance and priorities and the prescribed operational concept, computed a pre-planned damage expectancy* (PPDE). This determined the weight of effort to be used against each type of target.³⁰

~~(TS)~~ Commencing with Revision J, the force application process was started nine months prior to each revision's effective date instead of the six month lead time that had been previously required. The additional planning time was necessary in order to accommodate the Poseidon missile's entry into the SIOP inventory.]

* (U) Damage Expectancy (DE)--the average damage to a target that would be achieved assuming the attack were to be repeated many times. It is computed as the product of the attacking sortie's probability of arrival (PA) and the weapon's probability of damage to the target (PD). The DE is compounded to get the average when several weapons are programmed against a target. Manual (TS), JSTPS, "Planning Manual for SIOP-4J (U)," 1 Jun 71. (71-J-0550)

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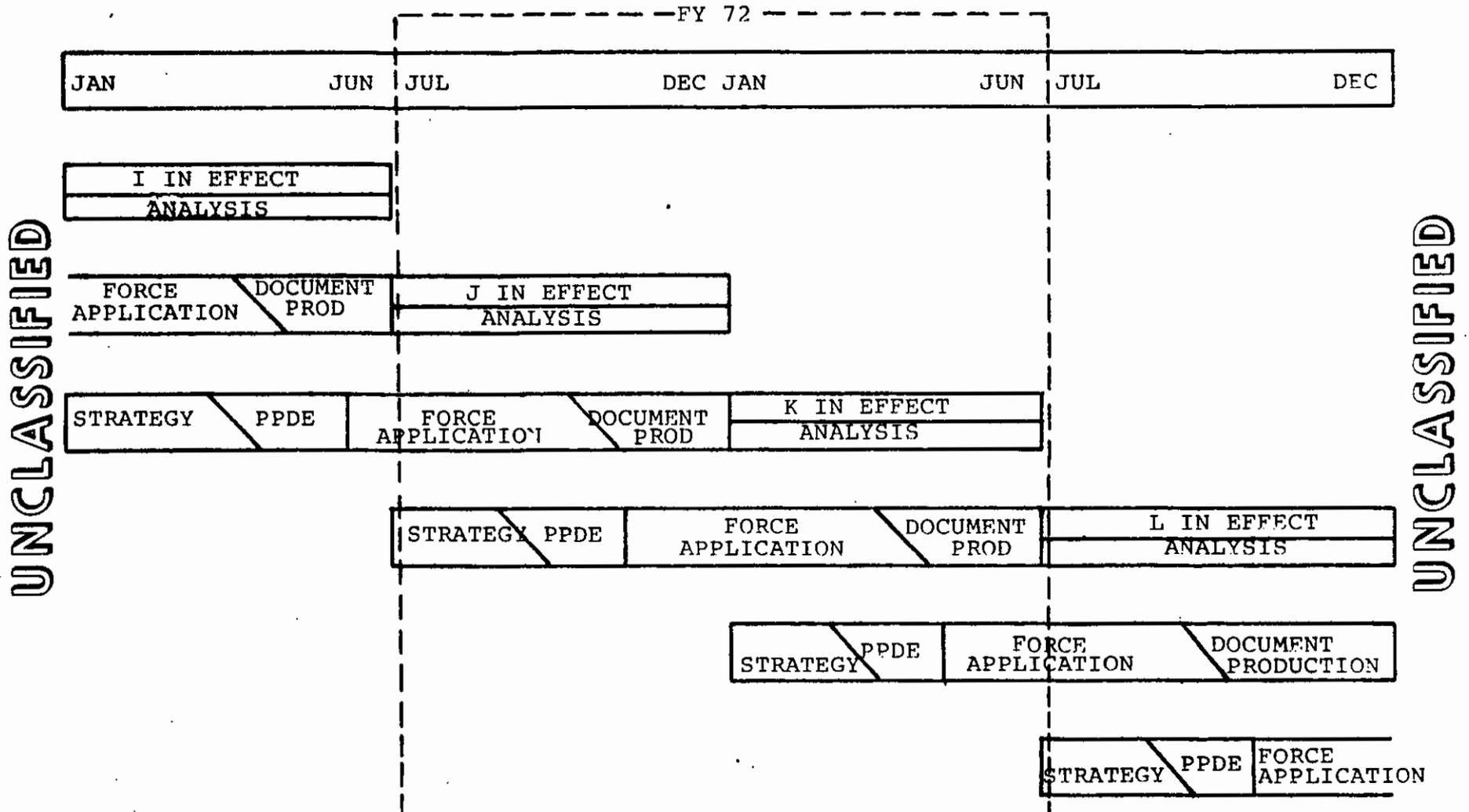
constraints were met.³² Once the force had been targeted, the plan was produced and distributed. The JSTPS made changes as needed, while analysis and gaming took place to evaluate the probable effectiveness of the SIOP. Thus the work of the JSTPS ran in six-month cycles. The chart on the following page shows the activities during 1971 and 1972.

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* See Appendix E, this History.

CHART 2

JSTPS SIOF 4 PLANNING CYCLE, 1971-1972



This generally represents how planning proceeded during the period covered. It leaves out a great deal, including such things as mid-revision changes and preliminary discussions. See Capt. Mark D. Mariska, "The Single Integrated Operational Plan," Military Review, III (Mar 72), 38.

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* (U) See discussion of Revision K under "Developments in the SIOP," this history.



*** (U) See "The Developing Plan," this history.

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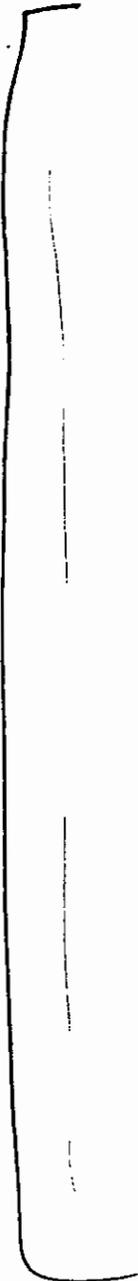
The SIOP Revisions

[~~(TS)~~ The Threat. Revisions J and K of SIOP 4 were designed to meet

The
agreements, concluded at Moscow on 26 May 1972, halted expansion of ICBM forces and of US missile launching submarine forces, set the limit on ABM forces at two 100-missile complexes per country, and established an eventual limit to the Soviet SLBM force. Nothing was said about MIRV or bombers, and in numerous ways the Soviets could still improve the force with which

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the US was threatened. 40/



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~~(TS)~~ The Developing Plan. In facing the growing number of targets this threat presented, the US forces deployed an increasing number of smaller yield weapons. Whereas in Revision I there had been a total of 4,130 SIOP weapons, Revision J brought the total to 4,571 and Revision K to 5,390.*⁴² This spectacular growth was expected to continue as more MIRV-equipped Minuteman and Poseidon missiles were deployed and the air-launched Short Range Attack Missile (SRAM) entered the SAC inventory.⁴³

~~(TS)~~ The increase in weapons was most significant in SAC and in the US Atlantic Command.⁴⁵ This was due to the deployment of the MIRV on the Minuteman III ICBM (usually three reentry vehicles per missile) and the Poseidon SLBM (10 RVs per missile). From July 1971 to June 1972 the Minuteman III force rose from 99 missiles with 265 weapons to 211 missiles with 609 weapons.⁴⁶ Conversion of missile-launching submarines from the Polaris

* (U) See Appendixes A, B, C this History.

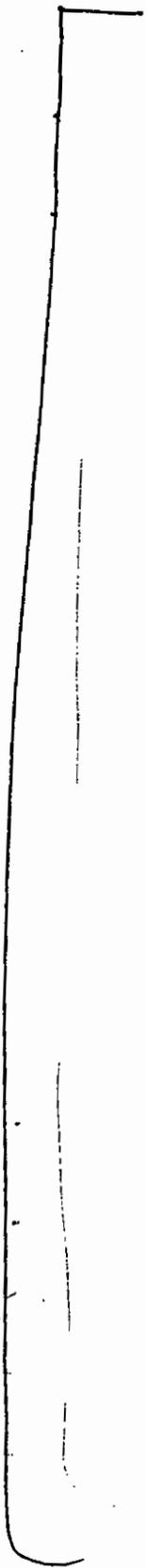
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TABLE 1

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PERCENT DAMAGE EXPECTANCY⁴⁷
SIOP-4 Revision I to K (U)

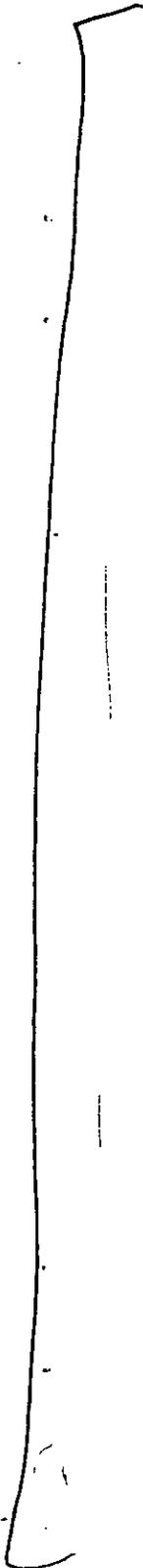


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missile to the Poseidon continued. Four ships, each carrying 16 missiles and 160 weapons, had completed the program at the beginning of Revision J, and 10 were scheduled to be deployed by the end of Revision K, for a total of 1,600 weapons. Other developments in SIOP-committed and coordinated forces included the appearance of the FB-111 medium bomber in SAC's inventory]

* (U) See Appendixes A, B, C this History.

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8 (U) See "Revising the SIOP," this History

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- * (U) Circular Error Probable (CEP) is the radius of a circle, whose center is at the DGZ, within which 50 percent of the weapon detonations can be expected to occur. Manual (TS), JSTPS, Planning Manual for SIOP-4J (U), 1 Jun 71, p. 38 (71-J-0550)
 - ** (U) See Appendixes A, B, C, this History

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Consequences of Execution

~~(TS)~~ For each revision of the SIOP the NSTL Division prepared data on the "Consequences of Execution" of the SIOP. The NSTL conclusions were based on weapons effects and the expected number of weapons that would arrive in a particular situation.]

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(TS) During the period of each SIOP revision the JSTPS Simulation Branch conducted a series of games using the SIOP against the Red Integrated Strategic Offensive Plan (RISOP). The latter was a product of the Joint Staff. Programs were developed for the game and run on computers, and various "excursions" were developed for the basic situations.

* (U) The population of Europe outside the Warsaw Pact may be estimated at about 350 million (The World Almanac and Book of Facts, 1971).

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(TS) Each year the results of "gaming" one of the revisions were reported to the JCS. In 1972 the JSTPS briefed Revision K and RISOP-72. The forces used for the games were those available on/

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Preparation of Future Revisions

(S) The JSTPS continued its planning cycle for future revisions. The trend remained, as General Meyer noted, an increase in the number of weapons, and thus:⁶⁷ "Some improvements are that we have moved in the direction of hitting more targets, and in the future we intend to do more of this."

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~~(TS)~~ One of the developments contributing to these improvements was the continuing deployment of the Poseidon SLBM. By the end of Revision K there were to be 10 submarines modified for the new missile, with another two by the end of Revision L and four more during Revision M. Destined for service in the Atlantic area, the Poseidon force offered []
[] an increase in flex-
ibility.]

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~~(TS)~~ With Poseidon entering the Atlantic in large numbers, and because of basing and logistical considerations, an all-Poseidon force was planned for the area. In July 1970 the Chief of Naval Operations (CNO) had recommended a change in the US commitment to NATO in order to facilitate deployment of the new weapon system. The CNO's proposal was revised in

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March of 1971, in its final form,]

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- * (U) As the JCS study noted, the Poseidon logistical concept called for chains of five subs, with three on patrol in rotation.

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~~(TS)~~

General Holloway in July 1971 that his command had instituted procedures to do this. /

It appeared that further discussion might be necessary.⁷⁶ Furthermore, CINCEUR staff wanted to be consulted on such an arrangement.⁷⁷ The matter remained unresolved in mid-1972.⁷⁸

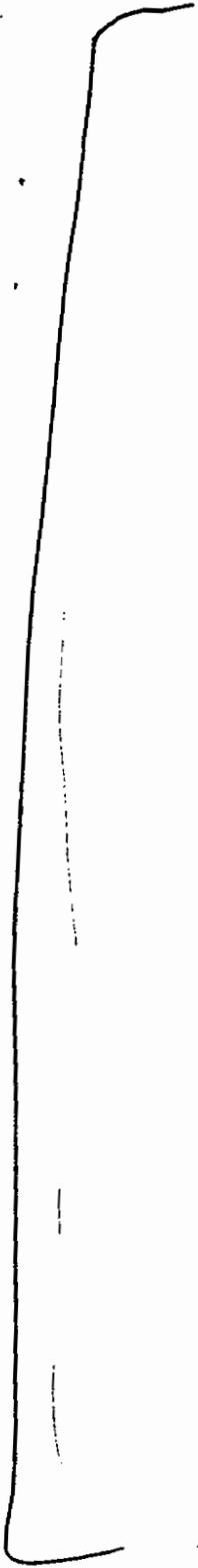
* (U) See "Scientific Advisory Group", this History.

(TS) Revision L was to involve a number of planning factor changes. In July 1971 Headquarters SAC submitted a recommendation to the JCS to change the pre-launch survivability (PLS) factors/

(TS) Other changes in forces planned for Revision L included the entry of the Short Range Attack Missile (SRAM) into SAC's arsenal. This missile could be launched from the B-52 and the FB-111. Also, a new method was introduced for computing Minuteman III reliability, while an improved accuracy was recorded for the same weapon system.⁸¹

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~~(TS-RD)~~ The JSTPS expected improvements in Minuteman II reliability and accuracy and in Poseidon PLS for Revision M.⁸⁴ The still-increasing number of Poseidon weapons available to cover targets]

~~(TS-RD)~~ Brigadier General Robert L. Cardenas, Chief of the NSTL Division, reported that the pre-planned damage expectancy had been developed using the normal procedures. As usual,]

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The NSTAP and Policy Guidance

~~(TS)~~ In the nuclear annex to the Joint Strategic Capabilities Plan and in the National Strategic Targeting and Attack Policy (NSTAP), the JCS provided the JSTPS with guidance for its activities. The NSTAP defined the scope of the SIOP as extending to the "integration and coordination" of those forces that the CINCs had committed. It defined the Tasks and Options and specified the levels of damage that were required for various types of targets.]

required gaming and analysis to evaluate the probable effectiveness of the SIOP. On the basis of these instructions, the JSTPS developed the SIOP and the NSTL.⁸⁹ Since early 1969 there had been no change in the NSTAP, although JSTPS had submitted some proposals in the fall of 1970.⁹⁰ In the early months of 1972, however, the JSTPS learned that the JCS were discussing some major revisions to the guidance for strategic war planning.⁹¹

~~(TS)~~]



* (U) See "Executing the Plan", this History.

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Conclusion

~~(TS)~~ From July 1971 to June 1972 the JSTPS continued to maintain and revise SIOP-4, with Revision J and K being in effect during the period.

* (U) See Appendix H, this History.

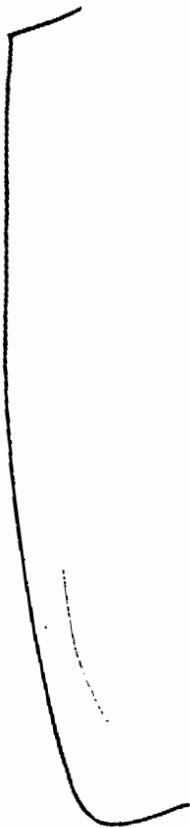
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General Meyer, the new Director, and Admiral Lee, the new Deputy Director, commenced study of a reorganization of JSTPS in May of 1972. The strategic situation continued to develop, however, and the JSTPS had the job of planning to meet that situation.]

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Footnotes

1. Capt. Mark D. Mariska, "The Single Integrated Operational Plan," Military Review, LII (Mar 72), 32-39.
2. Ibid.; JCSM-710-71 (TS), "Joint Strategic Capabilities Plan, FY 72-73," Annex C ("Nuclear"), 15 Nov 71 (71-J-1420).
3. Capt. Mark D. Mariska, "The Single Integrated Operational Plan," Military Review, LII (Mar 72), 32-35; JMP (C), JSTPS, "Joint Manpower Program 1972, FY 72-FY 77, JTD-12," 1 Jul 71.
4. JCSM-710-71 (TS), "Joint Strategic Capabilities Plan, FY 72-73," Annex C ("Nuclear"), 15 Nov 71 (71-J-1420); Manual (TS), JSTPS, "Coordinated Reconnaissance Planning Manual (U)," 1 Aug 69 (69-J-1022)
5. JMP (C), JSTPS, "Joint Manpower Program 1972, FY 72-FY 77, JTD-12," 1 Jul 71.
6. Organizational Chart (U), "Joint Strategic Target Planning Staff," 1 Apr 72.
7. Rpt (U), "JCS Manpower Survey of Joint Strategic Target Planning Staff, 6-17 Mar 72.
8. Capt. Mark D. Mariska, "The Single Integrated Operational Plan," Military Review, LII (Mar 72), 37; Memo for Record (TS), Gen B. K. Holloway, DSTP, "Revision M Strategy Panel Meeting," n.d., w/2 Atchs (72-J-0141).
9. Chart (U) "Roster of Key Personnel, JSTPS, July 1971 - June 1972," Appendix I, this history; JMP (C), JSTPS, "Joint Manpower Program 1972, FY 72-FY 77, JTD-12," 1 Jul 71.
10. Chart (U), "Roster of Key Personnel, JSTPS, July 1971 - June 1972," Appendix I, this history.
11. Capt. Mark D. Mariska, "The Single Integrated Operational Plan," Military Review, LII (Mar 72), 32-35; JMP (C), JSTPS, "Joint Manpower Program 1972, FY 72-FY 77, JTD-12," 1 Jul 71.
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APPENDIX "A"

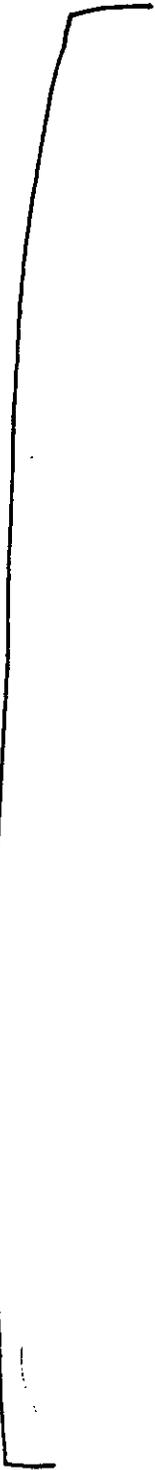


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~~(TS-RR)~~

SUBJECT: WEAPON SYSTEM RELIABILITY (WSR)
SIOP-4, Revisions I, J, K (U)



OPR: JPR
DATE: 29 Dec 71

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APPENDIX "C"



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APPENDIX "D"

~~(TS-RD)~~

SIOP-4 DELIVERY VEHICLES AND WEAPONS, Revision J (U)



Source: Memo (TS), Capt L. C. Dittmar, USN, JSTPS(DIP), to JS, "Information for SAC Historian to Use in Preparation of the SIOP-4 History (U)," 28 Feb 73.(73-J-0158)'

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THE JOINT CHIEFS OF STAFF
JOINT STRATEGIC TARGET PLANNING STAFF
OFFUTT AIR FORCE BASE
NEBRASKA
68113

JP

28 FEB 1972

MEMORANDUM FOR: JS

SUBJECT: Information for the SAC Historian to Use in Preparation of SIOP-4 History (u)

Reference: JS Memo 0068 (S), same subject, dtd 11 Feb 1972

1. (U) In response to your request the following delivery vehicle and weapons information is provided as of 1 Jan 72. The computer history covers the previous six months update of computer support in the SIOP Division.



[Handwritten signature and date]

3. ~~(TS)~~ JP - JSTPS Computer Support (Rev J-K)

a. General - Computer support for force application, analysis, production and maintenance of Revision J and K of the Single Integrated Operational Plan (SIOP) was provided on three primary systems.

(1) IBM Q-31 (DPC) - This support approximates 9700 hours of computer time and was utilized for program development, data base support, force application, analysis and plan production/maintenance.

(2) IBM 360/44H (SACOPS) - Approximately 4000 hours were utilized for program development, aircraft input file preparation and missile support. Consolidation of missile application activities on the 360/44 will be reflected in increased computer time in subsequent revisions.

(3) IBM 7090 - Total hours approximates 5000 and provided support for simulation and analysis plus development and production of Annex E to the SIOP.

b. Software - Growing missile software capability for support of the SIOP on the IBM 360/44H includes:

(1) MINUTEMAN Domain Display Module (G115.XX) which gives the force planners a means of quickly and easily generating domain filtered target sets for final accessibility testing.

(2) Accessibility/Damage Evaluation Module (G114.XX) provides mission specified flight parameters and determines the damage expectancy (DE) or compounded damage expectancy (CDE) for a MINUTEMAN III launcher/DGZ set.

(3) Early Mutual Identification Module (216.XX) provides the planner with early identification of potential mutual sortie conflicts.

(4) Timing and Resolution (211.XX) is used to resolve land and sea based missile forces.



RICHARD H. MILLS
Capt. In, USAF
Dep. Chief, STDP Div.

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THE JOINT CHIEFS OF STAFF
 JOINT STRATEGIC TARGET PLANNING STAFF
 OFFUTT AIR FORCE BASE
 NEBRASKA
 68113

18 August 1971

JL

MEMORANDUM FOR: JS

SUBJECT: Information for the SAC Historian to Use in
 Preparation of the SIOP-4 History (U)

Reference: JS 0489, subject as above, 12 Jul 71

1. Information requested in reference is forwarded as attachments 1 and 2.
2. This memorandum will be downgraded to Unclassified when attachments have been removed.

M. S. BLAIR
 Captain
 Department of Defense
 10/1/71

2 Atch

1. Cy #1 of TS Document,
 Subj: SIOP-4J Historical Data
 for SAC Historian Damage
 Expectancies (1Jul71) (U), 18Aug71
2. Secret Document, 1 cy,
 Subj: Computer Info for the
 SAC Historian (U), 17 Aug71

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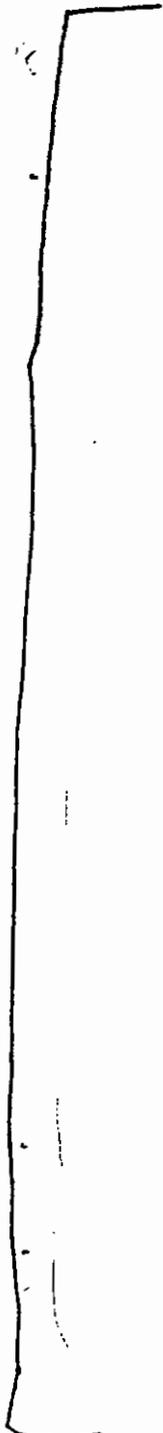
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71-5-1073

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SIOP-4J HISTORICAL DATA FOR SAC HISTORIAN
DAMAGE EXPECTANCIES (1 JUL 1971) (U)



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OPR: JLTS
18Aug71

CY # 1

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SIOP 4J HISTORICAL DATA FOR SAC HISTORIAN (Cont'd)



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71-T-1073

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COMPUTER INFORMATION FOR THE
SAC HISTORIAN IN PREPARATION OF THE SIOP-4 HISTORY (U)

1. ~~(S)~~ Computers continued to play a very important role in the development and analysis of the Single Integrated Operational Plan (SIOP), Revisions H and I. The introduction of Multiple Independently Targeted Reentry Vehicles (MIRVs) in the inventory has resulted in an increase in the number of weapons as well as an increase in the number of DGZs required to efficiently utilize these new weapons. New equipment (hardware) was installed as well as new computer programs (software) were developed to provide responsive support in the development of the SIOP.
2. ~~(S)~~ (U) In the area of hardware:
 - a. ~~(S)~~ The IBM 1410 computer was replaced with a newer, faster, third generation system, the IBM 360/50. As a result, more complex mathematical programs were executed on the system thereby increasing the sophistication and efficiency of the plan. The installation of the new system allowed for an increase in the number of revisions that could be maintained on-line at any one time from two to four. In addition, the greater amount of storage available enabled JLP to implement the previously initiated restructuring of the Weapon/DGZ Files to include the additional fields necessary to support MIRV applications.
 - b. (U) At the start of Revision I, the IBM 7094 computer was removed from the premises and all processing relegated to the fully operational IBM 360/85. As a consequence, the bulk of the damage analysis processing was transferred to the newer, faster computer system. Increased sophistication in the existing damage assessment computer programs as well as the adaptation of MIRV supporting programs for use in the preplanning, application, and analysis phases of the development of the SIOP were made possible.

OPR: JLP
Date: 17 Aug 71

GROUP-3

Downgraded at 12 year intervals;
Not automatically declassified.

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Atch #2

~~SECRET~~3. ~~(S)~~ (U) In the area of software:

a. (U) All IBM 1410 and 7094 programs had to be rewritten to efficiently utilize the new systems. At the end of Revision I approximately 75% of this task was completed and work is progressing most satisfactorily. Several old software packages were combined during the rewrite phase to provide more powerful programs, eliminating possible costly duplications and redundancies of automated intelligence output.

b. ~~(C)~~ A new Visual Analysis Sub-System (VASS) program, the Batch Processor, provided JL planners with increased DGZ optimization capabilities. Prior to this only one DGZ at a time could be optimized. Now as many as 74 can be serially processed without analyst intervention.

c. ~~(C)~~ An updated production program, the Compounder, continued to compute related target damage within the SIOP as well as to support studies concerning preplanned damage expectancy. It also was updated to reflect current philosophies of MIRV applications. Its output provides the Force Application Team with increased capabilities in detailed options and alternatives. The program can accommodate any weapon in the inventory.

d. ~~(C)~~ A new Probability of Damage (POD) routine, central to numerous assessment programs (SABER, COBRA, CRUSADER, ADEM, OPTIMIZER), was written and incorporated in the subject programs to reflect the latest changes in the DIA Physical Vulnerability Handbook published in June 1969.

e. ~~(C)~~ A new aiming point selection program (CRUSADER) was developed to reflect a new targeting philosophy. This program was used to develop aiming points for Revision I.

f. ~~(S)~~ Numerous and extensive modifications to SABER, the primary JSTPS assessment model, were required to reflect new methodologies in computing damage required because of the introduction of MIRVs in the weapons inventory. Prominent among these modifications were the Interdependent Compound Damage Expectancy (ICDE) fix and the

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g. ~~(S)~~ The contractor-developed MIRV supporting computer programs were adapted and used in the analysis of Revision I. These include the Minuteman G and Poseidon series of the MAP programs. Basically, these programs are: G102, PS102, G114, and PS114. The 102 series of programs were used to support preplanning. These MIRV supporting programs were used to determine the allocation of a given number of Minuteman or Poseidon systems against a specified DGZ base. In addition to performing an allocation, these programs insure that

to perform the analysis of damage. These programs determine whether a

In addition, the programs compute damage expectancy at the installation level.

h. ~~(S)~~ In expectation of greater computer support required for Revisions J and K, due to the anticipated increase in the number of MIRVs in the weapons inventory, an automated Preplanned Damage Expectancy (PPDE) system was devised and was operational for Revision J and will be used extensively for Revision K.

4. ~~(S)~~ War Games. Processing was provided for the Revision I war games. Approximately 300 computer hours of support were provided.

~~SECRET~~

~~TOP SECRET~~

THE JOINT CHIEFS OF STAFF
 JOINT STRATEGIC TARGET PLANNING STAFF
 OFFUTT AIR FORCE BASE
 NEBRASKA
 68113

2 MAR 1972

JL

MEMORANDUM FOR: JS

SUBJECT: Information for the SAC Historian to Use in
 Preparation of the SIOP-4 History (U)

References: a. JAI 210-1.
 b. JS Memo 0068, same subject, dated 11 Feb 1972.

1. The following information is submitted IAW with
 reference b above:

a. Attachment #1 provides information requested in
 para 3 of basic letter.

b. Attachments #2, #3 and #4 provide information requested
 in para 4 of basic letter.

2. This memorandum will be downgraded to Unclassified when
 attachments are withdrawn or not attached.

M. S. Blair
 M. S. BLAIR, CAPT, USN
 Deputy Chief, NSTL Division

4 Atchs

1. Cy 1 of TS Historical
 Data, Subj: SIOP-4K Historical
 Data for SAC Historian, Damage
 Expectancies (1Jan72), (U), dtd
 Feb17, 1972
2. Appendix I, para 1. (C)
3. Appendix I, para 2a & 2b. (C)
4. Appendix I, para 3a, 3b & 3c. (C)

~~TOP SECRET~~

72-J-0178

~~TOP SECRET~~

FEB 17 1972

SIOP-4K HISTORICAL DATA FOR SAC HISTORIAN
DAMAGE EXPECTANCIES (1 Jan 1972) (U)



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Atch 1

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FEB 17 1972

SIOP 4K HISTORICAL DATA FOR SAC HISTORIAN (Cont'd)



~~TOP SECRET~~

73-0-016

~~TOP SECRET~~

SIOP 4K HISTORICAL DATA FOR SAC HISTORIAN (Cont'd)

FEB 17 1972



~~TOP SECRET~~

APPENDIX "I"

~~CONFIDENTIAL~~
Change paragraph 1 to read:

1. ~~(C)~~ Computers continued to play a very important role in the development and analysis of the Single Integrated Operational Plan (SIOP), Revisions J and K. The continued introduction of Multiple Independent Reentry Vehicles (MIRVs) in the inventory has resulted in an increase in the number of DGZs required to efficiently utilize these new weapons. The future use and the introduction of SRAM are also being accommodated by existing computer programs.

GROUP 4

Downgrade List 3 year Interval
Declassify on: 1998-01-01
GROUP 4~~CONFIDENTIAL~~

Atch 2

~~CONFIDENTIAL~~APPENDIX "I"

Change Paragraph 2 a & b to read:

2. ~~(C)~~ (U) In the area of hardware:

a. ~~(C)~~ All SIOP processing continues to be done on the 360/50 and the 360/85. However, the 544th ARTW (SAC) recently doubled the 360/85 core capacity to 2000K bytes. This significantly increased total system throughput. Computational programs that are run on this system can now be expanded to meet the increased weapon and DGZ requirements of MIRVs and SRAM.

b. ~~(C)~~ On the 360/50 system, the last of the necessary program rewrites to computer languages compatible to native IBM 360 operation has been completed. As a result, Feature 4478 (1410 compatibility) was removed from our hardware configuration.

GROUP 4
Downgraded at 3 year intervals;
Excluded from automatic
DOWNGRADING

Atch 3

~~CONFIDENTIAL~~

APPENDIX "I"

Change Paragraphs 3a, 3b, and 3c to read:

a. (U) Conversion of all programs written in the COBOL F programming language is on schedule. A DoD requirement exists to convert programs from COBOL F to American National Standards (ANS) COBOL.

b. (U) At the end of Rev K approximately 95% of damage analysis programs were rewritten from 7094 emulator mode to 360 native mode. All 1410 programs have now been converted to the 360/50.

c. (C) Work has begun to achieve selected on-line capabilities for weapon accessibility testing and damage analysis excursions using the ADEM program on the VASS and 360/50. This will help planners in reducing the time required for such applications as PPDE.

GROUP 4
Declassified at 3 year intervals
but not after 10 years.
EX-100-22-110

~~CONFIDENTIAL~~

Atch 4

~~TOP SECRET~~

SUBJ: COORDINATED RECONNAISSANCE PLAN (CRP) DATA (u)



OPR: JPR:
DATE: 29 Dec 78
Classification:

~~TOP SECRET~~

71-40-0018

[REDACTED]

[REDACTED] CY 1 OF 1 (01)

ROSTER OF KEY PERSONNEL, JSTPS

July 1971-June 1972

<u>Position</u>	<u>Name</u>	<u>Service</u>	<u>Dates</u>	
			<u>From</u>	<u>To</u>
Director	Gen. Bruce K. Holloway	USAF	1 Aug 68	30 Apr 72
	Gen. John C. Meyer	USAF	1 May 72	
Deputy Director	VADM Frederick H. Michaelis	USN	1 Sep 69	1 Feb 72
	VADM Kent L. Lee	USN	1 Feb 72	
NSTL Division	Maj Gen William R. MacDonald	USAF	30 Jul 69	15 Jul 71
	Brig Gen Robert L. Cardenas	USAF	15 Jul 71	
SIOP Division	Maj Gen* Robert E. Huyser	USAF	1 Feb 70	31 May 72
	Brig Gen Eugene Q. Steffes	USAF	1 Jun 72	
<u>Senior Service Members</u>				
Army	Col Charles R. Supplee	USA	29 Jun 69	
Navy	Capt Will M. Adams, Jr.	USN	11 Sep 70	
Marine Corps	Col William Biehl, Jr.	USMC	2 Sep 69	16 Aug 71
	Col Donald L. May	USMC	16 Aug 71	
Air Force	Col Sherwin G. Desens	USAF	1 Feb 70	
<u>Command Representatives</u>				
CINCLANT	Capt Robert E. Crispin	USN	18 Aug 69	Aug 71
	Capt Frank A. Thurtell	USN	8 Nov 71	
CINCPAC	Capt Lester B. Lampman	USN	21 May 70	19 May 72
CINCSAC	Maj Gen Paul N. Bacalis	USAF	9 Apr 70	

<u>Position.</u>	<u>Name</u>	<u>Service</u>	<u>Dates</u>	
			<u>From</u>	<u>To</u>
SACEUR	Brig Gen David L. Carter	USAF	15 Sep 70	22 Oct 71
	Col Don Carlos LaMoine	USAF	10 Dec 71	
SACLANT	Capt Robert E. Crispin	USN	18 Aug 69	Aug 71
	Capt Frank A. Thurtell	USN	8 Nov 71	
<u>NATO Representatives</u>				
Germany	Col Fritz Schroter	Air Force	10 Jan 69	UNK
	Col Lothar Knitta	Air Force	30 May 72	
Italy	Col Sergio Mazzerelli	Air Force	2 Dec 69	
United Kingdom	Gp Capt Richard Hampton	Air Force	7 Jan 71	
Belgium	Lt Col Louis V. Peeters	Air Force	3 Apr 70	

*Maj Gen Huyser promoted to that rank 1 Oct 71



BIOGRAPHY

UNITED STATES AIR FORCE

HEADQUARTERS STRATEGIC AIR COMMAND

DIRECTORATE OF INFORMATION, OFFUTT AFB, NEB., 68113

(402) 294-2284/4432

Commander in Chief
Strategic Air Command &
Director, Joint Strategic Target Planning Staff

GENERAL JOHN C. MEYER

General John C. Meyer is Commander in Chief of the Strategic Air Command and Director, Joint Strategic Target Planning Staff, Offutt Air Force Base, Nebr. SAC is the United States' long-range strike force comprised of a mixture of combat aircraft and intercontinental ballistic missiles.

General Meyer, born in Brooklyn, N. Y., attended schools in the New York City area and graduated from Dartmouth College with a bachelor of arts degree in political geography. He enlisted in the Air Corps in November 1939. In July 1940 he was commissioned a second lieutenant and awarded his pilot wings.

After several flying assignments, he commanded the 487th Fighter Squadron in the 352d Fighter Group, a part of the Eighth Air Force. He led the squadron into combat during World War II in the European Theater of Operations and participated in several of the major campaigns, including Ardennes-Alsace, North France, and Rhineland. By November 1944, while serving as Deputy Commander, 352d Fighter Group, he had become the leading American Ace in Europe with a total of 37½ aircraft destroyed in the air or on the ground. He completed 200 combat missions and 462 combat flying hours.

Following World War II, General Meyer served in a variety of assignments which led to his selection in 1948 as the Secretary of the Air Force's principal point of contact with the U. S. House of Representatives. General Meyer then returned to a tactical unit in August 1950 when he assumed command of the 4th Fighter Group at New Castle, Del. He deployed his F-86 group to Korea and participated in the First United Nations Counteroffensive and Chinese Communist Forces Spring Offensive campaigns. He completed 31 combat sorties and destroyed two communist MIG-15 aircraft, bringing his total of enemy aircraft destroyed to 39½.

General Meyer, after a tour of duty as Director of Operations for Air Defense Command and Continental Air Defense Command, graduated from the Air

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PEACE IS OUR PROFESSION

(Current as of May 11, 1972)

War College, Maxwell Air Force Base, Ala., in June 1956, and was retained as an instructor at the College. He was then assigned to the Strategic Air Command where he commanded air divisions in the northeast United States. In July 1962 he was assigned to the Headquarters of the Strategic Air Command (SAC) at Offutt Air Force Base, Nebr., as the Deputy Director of Plans. While assigned to SAC, he also served as the Commander's representative to the Joint Strategic Target Planning Staff, a specialized joint staff which develops and maintains key war plans for the Joint Chiefs of Staff.

In November 1963 General Meyer became the Commander of the Tactical Air Command's Twelfth Air Force with headquarters at Waco, Tex. Twelfth Air Force provided forces for joint logistic and close air support training with Army forces stationed in the western half of the United States.

In February 1966 he was assigned to the Organization of the Joint Chiefs of Staff where he served first as Deputy Director then Vice Director of the Joint Staff. In May 1967 he became the Director of Operations on the Joint Staff.

He was then selected to be the Vice Chief of Staff of the United States Air Force, and assumed those duties in August 1969. He served as the Vice Chief of Staff through April 1972. On May 1, 1972, he became the seventh Commander in Chief of the Strategic Air Command.

General Meyer's military career has included a broad variety of assignments. He has held operational jobs in air defense interceptors, tactical fighters and strategic bombers. He has also been a key member of the Joint Staff, the Headquarters U. S. Air Force staff, and the Strategic Air Command staff. He has been called upon to command major tactical and strategic units, and is now the Commander of the Strategic Air Command.

His military decorations include the Distinguished Service Cross with two oak leaf clusters, Distinguished Service Medal with one oak leaf cluster, Silver Star with one oak leaf cluster, Legion of Merit, Distinguished Flying Cross with six oak leaf clusters, Air Medal with 14 oak leaf clusters, Croix de Guerre with palm (France), and Croix de Guerre with palm (Belgium).

General Meyer is married to the former Mary Moore of Fort Lee, N. J. He and Mrs. Meyer have five children: M. Christine Mesh, John C. Jr., Michael A., Margaret D., and Martha.

PERSONAL FACT SHEET

A. Personal Data

1. Born - Apr. 3, 1919, Brooklyn, N. Y.; father - August H. Meyer (deceased); mother - Florence G. Meyer.
2. Married - Apr. 4, 1945; wife - Mary Moore Meyer; children - M. Christine, John C. Jr., Michael A., Margaret D. and Martha.

B. Education

1. Graduate, Mercersburg Academy, Mercersburg, Pa., 1937.
2. Graduate, Flying Schools, Randolph & Kelly Flds., Tex., 1940.
3. Graduate, Dartmouth College, Hanover, N. H., B.A., 1948.
4. Air War College, Maxwell AFB, Ala., 1956.

C. Service

1. Nov 1939 - July 1940 Student, Primary, Basic & Advanced Flying Schools, Randolph & Kelly Flds., Tex.
2. Aug 1940 - June 1941 Instr., Basic Flying School, Randolph Fld., Tex., and Gunter Fld., Ala.
3. July 1941 - Jan 1942 Ftr. cont. & plt., 33d Pursuit Sq., Iceland.
4. Jan 1942 - Sept 1942 Flt. Comdr., 33d Ftr. Wg., ETO.
5. Sept 1942 - Nov 1942 Instr. Flt., 98th Ftr. Sq., Tampa, Fla.
6. Dec 1942 - June 1943 Comdr., 34th Ftr. Sq., Westover Fld., Mass., & later La Guardia Fld. and Mitchel Fld., N. Y.
7. July 1943 - Nov 1944 Comdr., 487th Ftr. Sq., ETO.
8. Nov 1944 - Feb 1945 Dep. Comdr., 352d Ftr. Gp., ETO.
9. Feb 1945 - July 1945 Dir., 1st Ftr. Comd., Gunnery School, Suffolk County AAF, N. Y.
10. July 1945 - Dec 1945 Dep. Air Base Comdr., 135th AAFBU, Millville, N. J.
11. Dec 1945 - Apr 1946 Dep. Asst. CofS, A-4, 102d AAFBU & later Asst. to Asst. CofS, A-2, 100th AAFBU, Mitchel Fld., N. Y.
12. Apr 1946 - May 1946 Asst. CofS, A-3, 300th AAFBU, Tampa, Fla.
13. May 1946 - Sept 1946 Ops. Ofcr., 312th AAFBU, March Fld., Calif.
14. Sept 1946 - Feb 1948 Student, Dartmouth College, Hanover, N. H.
15. Feb 1948 - July 1950 USAF Liaison Ofcr., House of Representatives, & later Asst. House Liaison Ofcr., OSAF, Washington, D. C.
16. Aug 1950 - June 1951 Comdr., 4th Ftr. Int. Gp., New Castle Co. Appt., Del., later Korea & Japan.
17. June 1951 - Dec 1951 Exec. Ofcr. & later Dep. Comdr., 101st Ftr. Int. Wg., Grenier AFB, N. H., later Larson AFB, Wash.
18. Jan 1952 - Mar 1952 Dep. Comdr., 4703d Def. Wg., Larson AFB, Wash.
19. Mar 1952 - June 1955 Dir. of Ops. & Tng., DCS/Operations, ADC, Ent AFB, Colo.
20. June 1955 - June 1956 Student, Air War College, Maxwell AFB, Ala.
21. July 1956 - June 1959 Faculty Member, Air War College, Maxwell AFB, Ala.

-more-

22. June 1959 - Sept 1961 Comdr., 57th Air Div., Westover AFB,
Mass.

23. Sept 1961 - July 1962 Comdr., 45th Air Div., Loring AFB,
Maine.

24. July 1962 - Oct 1963 Dep. Dir. of Plans, Directorate of Plans,
SAC, Offutt AFB, Nebr.

25. Nov 1963 - Jan 1966 Comdr., 12th Air Force, Waco, Tex.

26. Feb 1966 - Dec 1966 Dep. Dir., The Joint Staff, OJCS,
Washington, D. C.

27. Jan 1967 - May 1967 Vice Dir., The Joint Staff, OJCS,
Washington, D. C.

28. May 1967 - Aug 1969 Dir. for Operations, J-3, The Joint
Staff, OJCS, Washington, D. C.

29. Aug 1969 - Apr 1972 Vice CofS, USAF, Washington, D. C.

30. May 1972 - Present Commander in Chief, Strategic Air Command
and Dir. Joint Strategic Target Planning Staff, Offutt AFB, Nebr.

D. Decorations and Service Awards

Distinguished Service Cross w/2 oak leaf clusters	European-African-Middle Eastern Campaign Medal w/5 service stars
Distinguished Service Medal w/1 oak leaf cluster	World War II Victory Medal
Silver Star w/1 oak leaf cluster	National Defense Service Medal w/1 service star
Legion of Merit	Korean Service Medal w/3 service stars
Distinguished Flying Cross w/6 oak leaf clusters	Air Force Longevity Service Award Ribbon w/5 oak leaf clusters
Air Medal w/14 oak leaf clusters	Croix de Guerre w/palm (France)
Army Commendation Medal	Croix de Guerre w/palm (Belgium)
Purple Heart	United Nations Service Medal
American Defense Service Medal w/1 service star	Small Arms Expert Marksmanship Ribbon
American Campaign Medal	
Distinguished Unit Citation Emblem w/4 oak leaf clusters	

E. Effective Dates of Promotions

<u>Grade</u>	<u>Temporary</u>	<u>Permanent</u>
2d Lt		July 26, 1940
1st Lt	Oct 24, 1941	July 5, 1946
Capt	Jan 21, 1943	
Maj	Sept 2, 1943	Sept 3, 1948
Lt Col	Apr 18, 1944	July 12, 1951
Col	Jan 19, 1951	July 1, 1958
Brig Gen	Aug 1, 1959	Jan 30, 1962
Maj Gen	Apr 1, 1963	Feb 27, 1964
Lt Gen	June 12, 1967	
Gen	Aug 1, 1969	

(Date of Rank July 31, 1969)



BIOGRAPHY

UNITED STATES NAVY

RELEASED BY HEADQUARTERS STRATEGIC AIR COMMAND, USAF

DIRECTORATE OF INFORMATION, OFFUTT AFB, NEB., 68113

(402) 294-4433/2284

Deputy Director
Joint Strategic Target Planning Staff

VICE ADMIRAL KENT L. LEE

Vice Admiral Kent L. Lee, USN, is the Deputy Director, Joint Strategic Target Planning Staff. This staff, located at Offutt Air Force Base, Neb., is responsible to the Joint Chiefs of Staff for development of the United States national strategic deterrence plans.

Admiral Lee was born in Florence County, S. C., on July 28, 1922. Enlisting in the U. S. Navy in 1940, he applied for the Aviation Cadet Program and entered flight training in 1942. Upon completion of flight training, he was commissioned Ensign and designated a Naval Aviator on Aug. 7, 1943.

From 1944 to 1959, Admiral Lee deployed with various carrier bombing and attack squadrons, seeing combat in the Western Pacific and Korea. During this period, he destroyed an enemy aircraft near Formosa while attached to Fighting Squadron FIFTEEN. He later commanded Attack Squadron FORTY-SIX.

Admiral Lee has also served as Commander, Attack Carrier Air Wing SIX, and as Commanding Officer of USS ALAMO (LSD 33) and USS ENTERPRISE (CVAN 65).

Following his appointment as Rear Admiral in August 1969, Admiral Lee served as Assistant Commander for Logistics and Fleet Support, Naval Air Systems Command, and as Director, Office of Program Appraisal, Navy Department. In November 1971, he was ordered to his present billet, and promoted to Vice Admiral effective Jan. 29, 1972.

Admiral Lee holds the degree of Master of Science in Physics, from the U. S. Naval Postgraduate School, and is also a graduate of the General Line School and of Nuclear Propulsion Training.

In addition to the Legion of Merit, the Air Medal with two Gold Stars, and the Navy Commendation Medal, Admiral Lee has received various unit, campaign, and service awards.

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(Current as of March 21, 1972)

He is married to the former Mary Edith Buckley of Piedmont, Calif.
They have three daughters: Nancy, Barbara, and Marion.

Twelve Members for Reappointment
to the
JSTPS
Scientific Advisory Group

- | | |
|--|---|
| 1. Dr. Arthur T. Biehl | Physicist
R&D Associates
Santa Monica, Calif |
| 2. Dr. Thomas B. Cook, Jr. | Vice President, Sandia Laboratories
Livermore, California |
| 3. Mr. Jerome Freedman | Assistant Director
M.I.T. Lincoln Laboratory |
| 4. Mr. Peter H. Haas, PL 313 | Scientific Assistant to the Deputy
Director (Science & Technology) |
| 5. Dr. Charles M. Johnson | Deputy SAFEGUARD System Manager
Science and Technology
U.S. Army SAFEGUARD System |
| 6. Maj Gen Glenn A. Kent, USAF | Assistant Chief of Staff
Studies and Analysis
Hq USAF |
| 7. Dr. Albert L. Latter | President
R&D Associates
Santa Monica, California |
| 8. Dr. Robert Ernest LeLevier | Program Manager
R&D Associates
Santa Monica, California |
| 9. Dr. Charles Alexander McDonald, Jr. | Associate Director for Military
Applications
University of California
Lawrence Livermore Laboratory
Livermore, California |
| 10. Mr. Fred A. Payne | Vice President - Technical Operations
Martin Marietta Corporation
Orlando Division
Orlando, Florida |

11. Dr. Richard Wagner

Physicist, Lawrence Livermore
Laboratory, Livermore, California

12. Captain Robert H. Wertheim,
USN

Technical Director
Navy Strategic Systems Project
Office (SSPO)
Washington, D. C.

13. Dr. N. F. Wikner

Special Assistant,
Net Technical Assessment
OSD/DDR&E