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T.S. Cont. #
D.L.-Hq. USAFAFOAI-AE
ColSturdivant:la:6043
w/2 February 1948MEMORANDUM FOR RECORDPROBLEM

1. To furnish information as to the number and type of Soviet aircraft which may be capable of reaching our AEC Installations and the alert time available to the Ground Forces by virtue of existing and future early warning systems; and to evaluate basic assumptions made by the Hq, AGF, Fort Monroe, Va., that: (a) the U.S.S.R. can construct in extreme northeastern Siberia or Murmansk area a base from which 40% of the long-range aircraft available at any given time can be launched; (b) that on missions involving flights of less than 300 miles over Canadian-held or U.S. territory only 8% of total aircraft available can arrive over the target area; (c) that on missions involving flights of over 300 miles over Canadian or U.S. territory only 4% can arrive over the target area; and, (d) that the Soviet Union's plan for B-29 type aircraft construction will include 25% transports.

FACTS AND DISCUSSION

2. By letter, 29 December 1947, Hq, AGF, Fort Monroe, Va., requested Director of Intelligence, CSGID to furnish certain information. This letter was forwarded to the Deputy Chief of Staff for Plans and Operations from the Director of Intelligence, GSUSA, on 6 January 1948 for necessary air intelligence and comment. It was then forwarded to the Directorate of Intelligence for necessary action.

3. The Air Intelligence Division, Air Estimates Branch, Colonel Sturdivant, received the request on 13 January 1948. A directive was forwarded to Chiefs of Offensive Air Branch and Air Facilities Branch on 14 January 1948 for necessary information and comment.

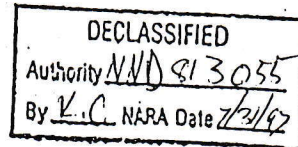
4. 19 January 1948 - Comment and Information received from Offensive Air Branch.

5. 21 January 1948 - Contacted Lt. Col Berkeley, office of the Director of Plans and Operations for additional information required which was not available in the Directorate of Intelligence. Colonel Berkely referred the problem to Colonel Tacon, Operations Division.

6. 28 January 1948 - Information requested from Colonel Tacon, received from Mr. Giesler, Operations Analysis Branch and Colonel D. D. Martin, Air Defense Division.

7. 29 January - 2 February 1948 - Memorandum to the Director of Intelligence, GSUSA, prepared furnishing the information and comments requested.

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ACTION

8. Recommend approval and transmittal to Deputy Chief of Staff, Operations for signature, and forwarding to Director of Intelligence, GSUSA.

Coordination:

Colonel A. P. Tacon, Jr., Z.I. Branch, Operations Div, Ext. 6089
Colonel D. D. Martin, Air Defense Div., Guided Missiles Gp., Dir.
of Training and Requirements - Ext. 74674
Mr. M.A. Geisler, Operations Analysis Br., Requirements Division,
Director of Training and Requirements - Ext. 72335.
Lt Colonel Gould - Air Facilities Branch, AFOAI - Ext. 71909
Major Sykes - Offensive Air Branch, AFOAI - Ext. 6625
Lt Colonel Jack Thomas, Offensive Air Branch - AFOAI - Ext. 6625
Colonel Sturdivant, AFOAI, Air Estimates Branch - Ext. 6043

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 By V.C. NARA Date 7/21/97

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 U.S. Cont. #
 DD-114, UBAF

AFOAI-AE
 ColSturdivant:la:6043
 w/2 February 1948

MEMORANDUM FOR DIRECTOR OF INTELLIGENCE, GSUSA

SUBJECT: Planning for Defense of Vital Installations

1. Reference is made to letter, Headquarters Army Ground Forces, dated 29 December 1947, subject as above, file GNGBI-2 373.24 (TS).

2. In regard to Paragraph 2.a., basic letter, it was estimated that as of 1 January 1948 the Soviet Long Range Force (ADD) was composed of 1,600 bombers. Three of the fifty regiments are estimated to be operational with B-29 type aircraft for a total of 100 operational B-29 type aircraft. The remaining bombers of this 1,600 total consist of World War II twin-engine bomber aircraft including the B-4.

The Soviet Union is capable of producing B-29 type (and the B-50 type) in numbers sufficient to equip their entire ADD by the end of 1949.

It is estimated that they can produce aircraft with characteristics of range and bomb load similar to our B-36, however, it is believed that their production capabilities will be devoted to the development, on a long-term basis, of a 4,000 to 5,000 mile jet bomber.

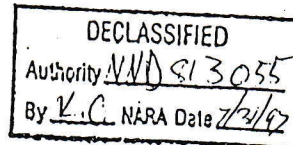
Based on an assumed global war within the next few years it is estimated that the Soviet Union could on "M-Day" have 1,750 bombers in their ADD. A logical disposition for these aircraft would (seem to) place 100 long range aircraft in the Uelen area and another 100 long range aircraft in the Murmansk area. The remaining Russian long range aircraft would be disposed at other bases with the capability for staging them through these areas. By M plus 150 over-all operational strength of the ADD could be 2,000 long range bombers.

The following table presents the estimate of Soviet capabilities in 1948:

Aircraft Type	Total Force	No. Dispatched First Attack	No. Aircraft Aborting	Operational Losses	No. Reaching Target Area	%
4 Engine	500	200	50	10	140	70.0
2 Engine	1,500	500	150	40	310	62.0
TOTAL	2,000	700	200	50	450	64.3

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These estimates assume virtually no USAF fighter opposition with non-effective aircraft representing aborted aircraft and operational losses arising from engine or other aircraft part failures, navigational difficulties, and weather accidents.

Inclosure Number 1, attached hereto, shows distances to AEC installations from critical areas and ranges of presently available aircraft.

3. In regard to Paragraph 2.b., there is no early-warning system in existence in the United States at the present time and therefore no alert time would be available to ACF units. It is planned that by 1953 an early warning system will be in effect at which time we will have early warning coverage extending approximately 100 miles from the boundary of continental United States and complete coverage within 100 miles of the coast in the Alaskan area.

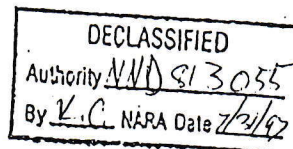
4. Reference Paragraph 3.a., it is believed that the estimate of a capability for preparation to launch 40% of the long range aircraft available at any one time is definitely generous, at least with the information presently available. It is conceivable that this is a possibility but with the ability rapidly to stage aircraft through these areas it is considered more likely that this capability will not be exploited.

5. Reference Paragraphs 3.b., and 3.c., there is no information available which adequately substantiates these assumptions. The table in Paragraph 2., above, indicates a figure of 60% to 70% of aircraft launched against installations in the United States would be more likely. This figure is based on there being no early warning system in effect at the present time.

Assuming an effective early warning net is in operation at some future time it may be expected that the percentage of Soviet aircraft which may reach the target area will be somewhat decreased. This decrease, however, will not be as marked as might be expected due to a probable increase in operational efficiency as the Soviet Long Range Force becomes more experienced in this type of operation.

6. Reference Paragraph 3.d., it is believed that a more satisfactory comment can be made if the wording were changed to "4-engine type" aircraft rather than "B-29 type." The Soviet Union is definitely

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expanding its civil air transport capabilities. Both the IL-18 and the TU-29, modern Russian 4-engine transports, are believed to have a maximum range of 3,000 nautical miles. The assumption of 25% of the "4-engine type" aircraft construction being devoted to transports seems plausible.

2 Incls:

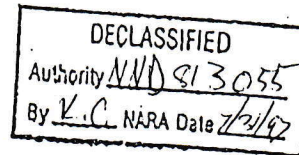
- Incl 1 - Distances to
AEC Installations
- Incl 2 - Memo to DI,
CSGID, dtd 29 Dec 47,
frm Hq, ACF w/Estimate
and Appendices 1, 2 & 3

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**TOP SECRET**Incl. 2-750aT.S. Cont. #
D.L. - 11q, USAFINCLOSURE 1DISTANCES TO AEC INSTALLATIONS FROM CRITICAL AREASAND NAMES OF PRESENTLY AVAILABLE AIRCRAFT

1. Ranges in statute miles (and nautical miles) from Uelen, the easternmost point of Siberia, to AEC installations in the following areas are approximately as indicated:

Hanford . . .	2415	(2090)
Los Alamos . .	3450	(3000)
Oak Ridge . . .	4000	(3470)
Dayton	3795	(3290)

2. Ranges from Murmansk to the same target areas are as follows:

Hanford . . .	4458	(3870)
Los Alamos . .	5175	(4500)
Oak Ridge . . .	4692	(4070)
Dayton	4458	(3870)

3. The best Soviet long range bombers known to be available are the B-29 type aircraft. The U.S. B-29 has a maximum range of 3,730 nautical miles, (10,000 pound bomb load) and it is estimated that the Soviet prototype could have a range 10 to 15 per cent greater considering their trend toward elimination of armor, armament, self-sealing gasoline tanks and other equipment which they may consider non-essential. Improvements to the B-29 type now in possession of the Russians could give an aircraft with performance similar to the B-50, i.e., range 4,400 to 4,800 nautical miles with a 10,000 pound bomb load, (U.S. B-50B.) The Soviet ER-4 has a maximum range of 2,600 nautical miles (4,400 pound bomb load.)

4. It is apparent from the above that Hanford is within range of one-way missions by obsolescent ER-4's operating from the Uelen-Anadyr area, and one-way trips could be made by B-29 to all four installations. The B-50 type would be capable of round trips to Hanford. In northeastern Siberia, east of 150 degrees, there are only six identified airfields reasonably capable of being prepared for operations by B-29 type bombers. Cognizance must be taken of the fact that it is feasible to conduct operations from the fast ice of sheltered bays and inlets. This utilization would greatly increase Soviet capabilities for launching aircraft from the Uelen-Anadyr area.

5. From Murmansk a lightly loaded B-29 type aircraft might be able to reach Hanford, Dayton, and Oak Ridge on a one-way flight. A B-50 type could fly one-way missions to all four installations. In the Murmansk area approximately ten airfields are suitable for year round use which are capable of being enlarged to handle take-off

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requirements of the D-29. New bases could be built in this area if required.

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