

Canadian Foreign Intelligence History Project

LAC ATIP A-2017-01028

LAC RG24 Vol. 20857 File 7-26-28 Part 1

JIB Report

USSR: Heavy Bomber Production

57-02-04

IN REPLY PLEASE QUOTE

NO. CSC 7-26-28 (JIC)

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Department of National Defence

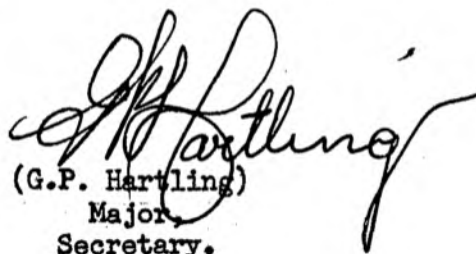
JOINT INTELLIGENCE COMMITTEE

5 Feb 57

MEMORANDUM FOR THE JIC:

Heavy Bomber Production in the USSR

1. Attached is a copy of a memorandum from JIB under file JIBS 266-2000-1 dated 4 Feb 57, which is distributed to members for information.
2. This paper will provide background for the discussions of the relevant paragraphs of ACAI 41 at the meeting of the Committee on 6 Feb.


(G.P. Hartling)
Major
Secretary.

Enc.

GPH/2-5459/ff

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Ottawa, Ontario.
February 4, 1957.

TO: J.I.C.

Heavy Bomber Production - USSR

1. In view of the wide divergence of the Canadian - USA viewpoint on the heavy bomber threat to North America by mid-1958 as indicated in ACAI 41, the following memorandum attempts to set forth the basis for the respective projected heavy bomber estimates so that the JIC may have some guidance in examining the significance of these widely differing estimates.
2. It should be stressed at the outset that the American position at mid-1958 reflects the build-up to what is deemed to be a probable Soviet optimum capability in the 1960-61 period. The USAF estimates used in ACAI 41 are those laid down in NIE 11-4-56, August 2, 1956, (Soviet Capabilities and Probable Courses of Action through 1961). There is an inherent built in inflexibility in USAF official estimates which reflect the USAF party line. Even though current evidence indicates that both USAF and ourselves have been over-estimating Soviet production of heavy bombers, there is a strong delayed re-action in USAF to changing official estimates.
3. Projecting estimates of Soviet heavy bomber production is a most hazardous occupation since one has to take into consideration a large number of variables: estimate of requirements, the production facilities available modification to aircraft, scale of production effort, the time required to attain an accepted requirement, the future introduction of new types of bombers, past production performance, technology of industry, etc. It is to be expected that on the basis of judgment factors different agencies will arrive at somewhat different projections of production and A.O.B.
4. Now with respect to the widely-different estimates between Canada and the United States for Soviet production and A.O.B. for heavy bombers by mid-1958, it is important to view mid-1958 as an interim period in the build-up of a heavy bomber force.
5. With respect to mid-1956 Canada and the United States were in general agreement as to total production of heavy bombers and heavy A.O.B. at that time.
6. USAF, however, envisages a substantially quicker rate of build-up than we do, with the net result that at mid-58 there is a wide divergence. USAF thinks that a heavy rate of bomber production will take place in 1957 and 1958, tapering off in 1959-61, while we estimate a slower build-up with a sustained high level of production in 1958-60.
7. Canada and the United States were in general agreement as to cumulative production at mid-1956.
8. With respect to mid-1958, however, the US has a cumulative production total of 640 heavies compared to our 350; while at that date the American A.O.B. estimate of 470 is almost double Canadian estimate of 240. This is explained by the fact that between mid-1956 and mid-1958, USAF credits the USSR with a production of 570 heavies in contrast to the Canadian estimate of 280.
9. We feel that for the following reasons, it is highly improbable that the USSR will achieve the level of heavy bomber production suggested by USAF in the period up to mid-1958;
 - (a) On the basis of evidence, Canada and the UK are in agreement that possibly not more than 100 heavy bombers have been built by the end of 1956.

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- (b) The Canada-UK estimate of heavy bomber production for January 1957 is of the order of 4-6.
- (c) Current evidence supports heavy bomber production at only two plants, No. 23 and No. 18.
- (d) Even if heavy bomber production is introduced before mid-1957 at plants No. 1 and 22, (still producing mediums), they will be in a build-up stage beyond mid-1958.

10. We have discussed our production estimates with DAI and find that DAI's estimate of A.O.B. for heavies to mid-1961 is consistent with them.

11. We have ascertained the thinking of JIB London and Air Ministry and find that their estimates are lower than ours.

12. We are fully aware that the Canadian and American estimates at mid-1958 represent two quite different threats, but we do not see any way to effect a reconciliation in viewpoint. It would appear that we will have to agree to disagree.

13. The following tables outline comparable U.S.-Canada-U.K. production and A.O.B. estimates to mid-1961:

Comparative Heavy Bomber Production Estimates
of USAF, JIB (Ottawa, and JIB London) in period
1956-1961

(including tankers)

	<u>U.S.A.</u>	<u>Canada</u>	<u>U.K.</u>
Mid-56	76	67	
Mid-57	290	170	140
Mid-58	640	350	300
Mid-59	880	600	500
Mid-60	1060	830	700
Mid-61	1230	1080	800

Calendar
Year

	<u>U. S. A.</u>		<u>Canada</u>	
	<u>Estimated Annual Production</u>	<u>Cumulative Production</u>	<u>Estimated Annual Production</u>	<u>Cumulative Production</u>
	(1)	(2)		
1955	31	42	45	45
1956	114	156	73	118
1957	292	448	139	257
1958	351	799	229	486
1959	188	987	235	721
1960	167	1154	238	959
1961	172	1326		

(1) NIE 11-4-56, August 2, 1956, page 72.

(2) Includes 11 prototypes.

U.K. Estimate of Heavy Bomber Production

	<u>Bison/Bear</u>	<u>Tanker</u> (which may be Bison or Bear)	<u>Total</u>
Mid-1957	125	15	140
Mid-1958	225	75	300
Mid-1959	375	125	500
Mid-1960	500	200	700
Mid-1961	500	300	800

/ Based on information received 29 Jan 57.

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Estimate of Soviet A.O.B. for Heavy Bomber

	U.S.A.F.			Canada		
	Bison	Bear	Total	Bison	Bear	Total
Mid-1956	35	30	65	20	30	50 /
Mid-1957	90	130	220	50	75	125
Mid-1958	220	250	470	-	-	240
Mid-1959	400	300	700	-	-	400
Mid-1960	500	300	800	-	-	550
Mid-1961	500	300	800	-	-	750

/ While beyond mid-1957, D.A.I. tend to think that the larger proportion of the heavy bomber A.O.B. will be Bear, it is not deemed advisable as yet to suggest any breakdown.

Comparative Canada-USA Estimates of Heavy
Bomber Production and Heavy Bomber A.O.B.
as at Mid-1957 and Mid-1958.

Data Used in ACAI 41

U.S.A. data

	Mid-1957		Mid-1958	
	Est. of Heavy Bomber Prod.	A.O.B. Heavy Bombers	Est. of Heavy Bomber Prod.	A.O.B. Heavy Bombers
Bison	105	90	300	220
Bear	<u>175</u>	<u>130</u>	<u>340</u>	<u>250</u>
	280	220	640	470

Canada

Bison	63	50	105	60 /
Bear	<u>110</u>	<u>75</u>	<u>245</u>	<u>180</u>
	173	125	350	240

According to para 74 of ACAI 41, if the USSR should decide to use only heavy bombers in an initial attack in Mid-1958, it could launch 200/360~~44~~ bombers of which about 150/280~~44~~ could arrive in target areas, not considering combat losses.

/ Highly tentative breakdown used in ACAI 41.

~~44~~ Higher figures are US estimates: Lower figures Canadian

Comparative Canada-USA position as at Mid-1956 and end-1956.

As at Mid-1956, USAF and CIA, largely on the basis of serial number analysis agreed production figures of 40 Bears and 40 Bisons. Our own estimates supported these figures.

As at Mid-1956 Canada carried 20 Bisons and 30 Bears in A.O.B.; while USAF carried 35 Bisons and 30 Bears.

From Mid-1956 on, however, USAF has carried a rate of heavy bomber substantially in excess of ours.

As at the end of 1956, the U.K. and ourselves on the basis of available evidence tend to agree that heavy bomber production was of the order of 100; of which half were Bisons and half were Bears.

Even as late as January 1957, evidence supports production of only 4-6 heavies per month at factories No. 23 and No. 18 respectively.

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Basis for USAF Estimates to Mid-1958

- (a) USAF continues production of the Bison at plant No. 23, reaching a peak of 8 per month in August 1957. An improved 1960 Bison would be phased in, in late 1958. Cumulative Bison production at plant would be 180 by mid-1958.
- (b) USAF introduces Bison production at plants No. 22 Kazan and No. 1 Kuibyshev as at Jan. 1957 with cumulative production of 120 at both plants by mid-1958.
- (c) Bear production continues at plant No. 18, rising to 16 a month by June 1957. Cumulative production of Bears by mid-1958 would be 340.
- (d) Cumulative production of heavy bombers by mid-1958 would be 640.

Basis for Canadian Estimates to Mid-1958

- (a) Bison production continues at 2 a month to mid-1957 (or possibly mid-1958), pending the introduction of a new type which may be a medium with supersonic dash characteristics and capable of use in a long-range role with two refuellings.
- (b) Heavy bomber production is introduced at plants No. 22 and No. 1 at approximately mid-1957. A joint production rate of 10 a month would be attained by mid-1957 building up to 18 a month by the end of 1958.
- (c) Bear production would continue at plant No. 18, reaching a peak of 10 a month in September, 1957.
- (d) Cumulative production of heavies (which might include tankers) as at mid-1958 would be 350.

February 4, 1957.

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