January 18, 1939.

MEMORANDUM FOR

THE ASSISTANT SECRETARY OF WAR

Please speak to me about this and bring the Chief of the Air Corps with you.

I am not satisfied with the limit of $170,000,000 provided for airplanes themselves. This item should be increased and the other items reduced.

F. D. R.

Memorandum - Supplemental Budget Army Air Corps, 1940.

DECLASSIFIED
By Deputy Archivist of the U.S.

By W. J. Stewart Date JUN 6 1972
February 3, 1942.

MEMORANDUM FOR

GEN. H. H. ARNOLD
Chief, Army Air Force

FOR PREPARATION OF REPLY FOR ME TO SEND.

F.D.R.

Halifax encloses copy of telegram from the Prime Minister 1/29/42 (secret) re the danger that fighter squadrons of Amer. volunteers in the defence of Rangoon may be withdrawn by Chiang Kai-shek after 1/31/42
MEMORANDUM FOR MR. HOPKINS: - (The White House)

Subject: Japanese Air Strength.

Hereewith is a breakdown of Japanese air strength covering the latest information we have been able to get. I will not guarantee its accuracy but I believe that it is probably more accurate than anything we have received to date. This information came from Major General Whang. You will note that this gives the Chinese a total of about 1100 airplanes in the South Pacific area. That is very close to the number which I estimated sometime ago. It is probable that this South Pacific operating force may have increased or decreased from time to time.

Note that the total number of airplanes credited to the Japanese by General Whang is 6249.

/s/ H. H. ARNOLD

H. H. Arnold
Lieutenant General, U.S.A.
Deputy Chief of Staff for Air

Incl: Strength & Dist.
Air Forces, rptd.
from Chungking, 2/7/42
STRENGTH AND DISTRIBUTION OF JAPANESE
ARMY AND NAVY AIR FORCES
Reported from Chungking, February 7, 1942

I. ARMY AIR FORCE

The Japanese Army Air Corps consists of five Air Fleets, which are divided into eighteen groups, and subdivided into fifty-nine technical wings, eleven training squadrons and six independent squadrons. The total number of Army planes is ................. 3,450

II. NAVY AIR FORCE

There are forty two land based squadrons with
2,268 planes................................................. 2,268
Nine aircraft carriers
Five seaplane carriers
Number of planes on Carriers............................. 432
Number of planes on heavy cruisers.................... 98

TOTAL NUMBER OF NAVY PLANES 2,798

DISTRIBUTION

I. Japan Proper - 1st Air Fleet
Land based planes........................................... 960
Navy Planes.................................................. 2,407

II. Manchuria and Korea - 2nd and 5th Air Fleets
Land based planes......................................... 1,296
III. China Proper - 3rd Air Fleet

Land based planes.......................... 510
Navy Scouts on Cruiser...................... 41

IV. South Pacific - 4th Air Fleet

Land based planes.......................... 828
Carrier planes.............................. 350
March 7, 1942

MEMORANDUM FOR THE PRESIDENT:

Here is Hap Arnold's estimate of the number of Jap combat planes lost.

You can see he puts it at about 2000, because you will note there are excluded from this list the Jap planes lost at Pearl Harbor and the bombers destroyed by the Navy recently.

H.L.H.
MEMORANDUM FOR GENERAL ARNOLD:

Subject: Japanese Plane Losses to Date.

The following report is submitted for your information:

<table>
<thead>
<tr>
<th>Category</th>
<th>Figure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total losses reported</td>
<td>875</td>
</tr>
<tr>
<td>Total losses by actual count, our records</td>
<td>675</td>
</tr>
<tr>
<td>Estimated additional by British</td>
<td></td>
</tr>
<tr>
<td>in Burma and Malaya areas</td>
<td>200</td>
</tr>
<tr>
<td>Jap planes by anti-aircraft action</td>
<td>150</td>
</tr>
<tr>
<td>(Majority in Philippines)</td>
<td></td>
</tr>
<tr>
<td>Jap planes lost on ground</td>
<td>9</td>
</tr>
<tr>
<td>Jap planes lost in combat</td>
<td>516</td>
</tr>
<tr>
<td>Jap combat plane production estimated per month</td>
<td>350</td>
</tr>
<tr>
<td>Jap overall losses estimated, combat planes</td>
<td>1800</td>
</tr>
<tr>
<td>since Dec 7 (a low)</td>
<td></td>
</tr>
</tbody>
</table>

R. L. WALSH,
Lt. Col., Air Corps,
Assistant Chief of Air Staff, A-2.

In addition, there are operational losses of about 50 per cent of the minimum if they can keep the losses done to our semi-time standard.
MEMORANDUM FOR THE PRESIDENT:

Subject: Personal experiences of Air Force Officers in Combat Zone.

It is thought that the attached might be of interest to you.

H. H. ARNOLD
Lieutenant General, U.S.A.
Commanding General, Army Air Forces

Incl: 6 pages on the above subject.
The following comments resulted from an informal discussion between Colonel Karl Truedell, Major Paul Davis, Captain Hutchison, Lieutenant John Wagner, Lieutenant C. J. Cain and Lieutenant R. A. Trenkle at the Headquarters, Pacific Sector, Air Corps Ferrying Command, Hamilton Field, California, on March 17, 1942:

Lieutenant Kester and his co-pilot, Ragedale, were shot down in flames on a take-off from Broome, Australia, while evacuating refugees and military personnel from Java. Among the passengers in the plane were Captain Markee, of the Air Corps, and Captain Stratford, of the Medical Corps. Altogether, there were 32 individuals aboard.

The plane was attacked by three "Zero" fighters shortly after the take-off, when the craft was at an altitude of between 150 and 200 feet. Witnesses at the airdrome last saw the plane headed out to sea, wrapped in smoke, and apparently no one actually saw it go down.

A sergeant was the only survivor. Held in the bomb bay, he escaped serious burns by flattening himself on the floor. He said the ship was completely in flames before it struck the water. He recalled that he suddenly found himself swimming near the craft, and that three or four bodies were also in the sea, either swimming or floating. The sergeant said he swam for 36 hours with nothing on but a life vest.

The attack by a Japanese pursuit plane on the above-mentioned craft was observed by those aboard a B-24, which was being loaded with passengers. Motors were cut on the B-24 and everyone ran away from the ship. It was recalled that the one Japanese plane pursued the other craft and fired at it only briefly, but witnesses said the latter was in flames in less than ten minutes.

Captain Funk's old ship, with Matthews as pilot, had 35 or 36 people aboard when the take-off was attempted. The right wheel kept breaking through the runway, which was a little soft. Barely clearing the runway, the ship struck a stack of gasoline drums and tore off the right wheel. Although no one was injured the right wing tip and the motor were damaged. The plane was burned when Broome was evacuated. Its engines had served 540 hours. Major Davis' ship had over 600 hours on all four motors and was still functioning perfectly before it crashed and burned.
The Japanese, during the attack at Broome, destroyed 1\(\frac{1}{4}\) PBY boats (4-motor Dutch) and sank all the flying boats that were on the water. Many were already loaded with passengers and had their engines ready for the take-off. Only a few passengers were able to get out when the ships were shot full of holes and sunk. Sixty bodies, mostly of women and children, were taken from the water. The attack also resulted in the destruction of two B-17's, one LB-13, two Lockheeds, one Dutch DC-3, and the three B-24's piloted by Davis, Kester and Matthews.

* * *

The Japanese Zero fighter is a very successful combat airplane up to altitudes of about 22,000 to 23,000 feet. Above that altitude, around 27,000 to 28,000 feet, it is indicated that the Zero fighter cannot keep contact with the B-17. The Zero fighter can turn inside of the P-40 in individual combat. It resembles the P-40, except that it has a radial motor. It can climb almost twice as fast as the P-40. It is much lighter in construction and is very maneuverable. It has a longer, slim appearance, more like the P-36. It is a low-wing monoplane. The most effective method of attack with a P-40 is to dive, and then keep on going after completing an attack on a Zero fighter.

The land-based fighters carry three small-calibre machine guns in each wing and a 20 mm. cannon in the nose. The carrier-based fighter has a maximum of four machine-guns in the wings, with a cannon in the nose. It is believed that the land-based fighters carry more defense armament. They have armor around the pilot.

It is difficult to say how many airplanes were being used by the Japanese against Java. The largest formation seen was 74, the complete complement of a carrier. It is generally believed that they are working from carriers.

Their attacks are mainly strafing attacks. They use both incendiary and explosive bullets. It is estimated that every other bullet in the belts is a tracer.

* * *

The route, airdromes, and supply facilities between the United States and Australia and Java are good.

* * *
After 45 days of operations there were not more than six effective planes left in the group from three complete squadrons, or about 24 planes. In other words, two-thirds of the planes were lost in that period. Of those lost five were shot down in aerial combat and the rest destroyed on the ground.

* * *

Major Robinson was leading a flight of nine B-17's on a bombardment mission to BALIKPAPAN. It was planned to bomb from an altitude of 26,000 feet, in salvo, timed on the release from the lead ship. When the bomb line was reached the bomb release mechanism in Major Robinson's plane failed to function, necessitating a 180-degree turn. During this turn they were intercepted by an undetermined number of "Zero" fighters. In the ensuing fight Major Robinson's plane was damaged. He asked the formation to slow down so he could stay with them. He soon pulled out of the formation, however, stating to Captain Struthers that he was going to "zero his controls." The meaning of this phrase was never known. Major Robinson continued to lose altitude and apparently was trying to negotiate a forced landing on a small island in the ocean. From a gradual, right turn the ship started a slow left turn and plunged into the sea. No other plane was lost.

Major Strauble took command after the loss of Major Robinson. While on a reconnaissance flight in a B-18 over SORABAJA he was intercepted by Japanese planes, which shot him down. Major Hobson then took command and is still in command of the remnants of the Seventh Group.

* * *

Sometime between the 10th and 15th of February our intelligence reported a Japanese convoy in the middle Celebes Sea, headed south. Our flight of three LB-30's was ordered on a night mission to intercept and destroy any targets we might encounter. We took off at 11 p.m. in order to arrive over the reported enemy position when the moon would best favor bombing operations.

At about 2 a.m., while flying at about 8,000 feet, we arrived over a large number of anchored ships. Anti-aircraft fire drove us up to 12,000 feet, where we started dropping our 600-pound bombs. The explosion of our first bomb illuminated a large ship which we believed to be an airplane.
carrier. We turned and flew into the moon, dropping five bombs on this ship, which burst into flame and appeared to be sinking. Two nights later the TOKYO radio admitted the sinking of this aircraft carrier.

The Japanese appear to be effectively camouflaging ships anchored among small islands by spreading crude oil around them, in an effort to deceive our pilots into confusing them with the islands.

* * *

The remaining eight planes of the Seventh Group were evacuated from Java to Australia when their fighter protection was lost.

* * *

Japanese anti-aircraft fire seems quite ineffective. Pilots have experienced this fire from 2 to 13,000 feet, without being hit. Not a single United States plane is known to have been hit by Japanese anti-aircraft fire. Japanese pilots are very skillful and are fairly good shots, but are not so effective with 20 mm. cannon. The 20 mm. shell does considerable damage when it strikes an airplane.

* * *

In the raid of the 7th Group at Manado, one Messerschmitt 109 was observed in the attacking formation. It was reported that German flying officers were with the Japanese forces, specifically at Darwin. In the raid on Rangoon, the pilot of the leading ship of the Japanese bomber formation was definitely identified as a "white man."

* * *

It is believed that all of the four-engine pilots were evacuated from the Philippine Islands and Java. On Java a large number of B-17's were destroyed on the ground, and many B-17's awaiting parts had to be burned prior to evacuation of the airfield. From personal observation and confirmation by the squadron operations officer it is believed that a total of 53 (see note below) four-motored United States airplanes were lost in Java. It is believed that there were 8 four-engine airplanes left on March 10th, and the 88th Reconnaissance Squadron had just reported in with 6 B-17 airplanes.
NOTE: (There was a total of 65 four-engine bombers of all types sent to the Far East. Twelve of these never reached Java. It is known that 29 are in Australia now. Accordingly, the total destroyed on the ground was about 24. This applies to all of our operations south of the Philippines.)

* * *

Maps of Australia are very inadequate and quite unsuitable for navigation. The supply of maps is very short and many sections of the island are uncharted. The continent is very well shown, but there are so many islands along the coast line not represented on the maps that it is difficult to locate them by observation.

* * *

Japanese bombardment formations are often accompanied by Zero fighters, which carry a "belly-tank", constructed of plywood and canvas. This materially increases their range. On going into action they drop these "belly-tanks" in order to improve their maneuverability in combat. It is reported that Zero fighters with the "belly-tanks" and probably without bombs can accompany their bomber formations during their entire flights.

No four-motored Japanese bombers were observed, with the exception of their four-motored flying boats. The majority of their bombing is done with a slow, two-motored bomber with an estimated speed of not over 110 knots. The Japanese are using small bombs of 100 and 500 pounds. These weights are estimates, comparing their damage with similar weight bombs of our own. No incendiary bombs were known to be used. One officer stated that some machine-gun bullets which had been taken out of a B-17 looked as if they had been manufactured by machine tools. There were tool marks on the bullets.

* * *

It was stated that the Navy was very accommodating in bringing the pilots back to Hawaii. An opinion was stated that due to the slowness of the four-motored flying boats, the best use they could be put to would be ferrying between Hawaii and Australia. This opinion was confirmed by the Navy pilots flying the boats.

* * *

- 5 -
It was stated that Palmyro was the best defended island seen en route from Copper to Plum. Canton Island in the Phoenix group is defended by only about a battalion of coast artillery. None of the islands has any aircraft permanently stationed. Canton Island has radio detecting devices, not yet operating.

* * *

No camouflage has been observed on any Japanese airplane. They are all natural metal color.

* * *

It is believed that if we could maintain 20 B-17's operating out of Java, the Japanese could never have taken Java. This is the opinion of a number of pilots who served there.

When asked how long it might take the Japanese to take Australia with the present equipment now there, the opinion was given that if the Japanese should use up to 75 transports for an invasion fleet, the present air force of Australia is wholly inadequate to cope with such a situation. It is believed that they could occupy Australia almost any time they desire.

It is believed that the daily operation of 50 heavy bombers and 25 dive bombers (see note below) would probably deny Australia to occupation by the Japanese forces. This Air Force must be protected by fighter-type aircraft.

NOTE: (Strength in Australia is being built up to eighty heavy bombers, 50 light bombers, 117 medium bombers and 240 fighters, all operative.)

Ninety percent of Japanese aerial operations have been conducted during the day time.

The morale of the American troops is very good. Naturally they are disappointed at having to stand by and watch Japanese bombers carry out their operations, due to lack of fighter planes to intercept them.

(END)
MEMORANDUM FOR THE PRESIDENT:

Subject: Introduction of R.O.T.C., Trucks, Guns, etc. into the Army.

In regard to the letter written by Colonel Robert McCormick on February 20th to Mr. J. H. Sawyer of Chicago, which you forwarded to me, research discloses that the most probable answers to the questions stated are as follows:

Question - Who introduced R.O.T.C. into the schools?
Answer - The Act of Congress, approved June 3, 1916, as amended by the Act of June 1, 1920, established for the United States the system of military education in the schools and colleges, known today as R.O.T.C. A military man by the name of Captain Alden Partridge had the idea first.

Question - Who introduced machine guns into the Army? Was it "Gatling Gun" Parker or Colonel McCormick?
Answer - Neither "Gatling Gun" Parker nor Colonel McCormick. Credit for the Manual type should be given to Major General H. G. Wright who made the original recommendation on this gun on March 11th, 1863. Credit for the Automatic type may be given to John Browning who invented the gun about 1895.

Question - Who was the first man to visualize motor trucks?
Answer - Brigadier General Tasker H. Bliss in 1911.

Question - Who introduced the automatic rifle?
Answer - It was invented in 1916 by John Browning and adopted by a board of officers for the Army.

Question - Am I right in stating that the first observation of artillery fire was conducted by the then 2nd Lt. H. H. Arnold and 2nd Lt. T. D. Milling at Ft. Riley, Kansas in October and November, 1912?
Answer - 2nd Lt. H. H. Arnold made the first observation from an airplane of a battery actually firing at a target on November 5, 1912, at Ft. Riley, Kansas.

Perhaps Colonel McCormick had a dream.

H. H. ARNOLD,
Lieutenant General, U.S.A.,
Commanding General, Army Air Forces.
THE WHITE HOUSE
WASHINGTON

PERSONAL

March 26, 1942.

MEMORANDUM FOR

GENERAL ARNOLD

This is the most magnificent record of any Officer of the United States Army from Washington down to date. I think that we should give Colonel Robert R. McCormick the next higher title than Field Marshal -- I do not remember what that would be but I think it would be unique in military annals.

If you can find someone with nothing better to do, have him verify McCormick's claims of having introduced the R.O.T.C. into the schools, machine guns into the Army, mechanization of the Army, automatic rifles for the Army, and the allegation that he was the first ground officer to introduce observation of artillery fire from the air. I personally can take care of the other allegations.

I think he must be a little touched in the head but this letter of his might be given credence one hundred years from now if we did not produce the antidote at this time.

F. D. R.
MEMORANDUM TO THE PRESIDENT:

From: Wayne Coy

The attached clipping from the Chicago Daily News of Thursday, March 19, speaks for itself.

Attachment
THE WHITE HOUSE
WASHINGTON

MEMORANDUM
March 25, 1942

TO: THE PRESIDENT
FROM: MR. LUBIN

The attached copy of a letter from Robert McCormick will, I am sure, delight you. Evidently some of us have not appreciated what a great man he is.

This is really a wonderful example of mania grandiosa.
THE CHICAGO TRIBUNE

February 20, 1942.

Dear Mr. Sawyer:

Thank you for your very temperate letter.

What the most powerful propaganda organization in the world has misled you into believing was a campaign of hatred, has really been a constructive campaign without which this country would be lost.

You do not know it, but the fact is that I introduced the R.O.T.C. into the schools; that I introduced machine guns into the army; that I introduced mechanization; I introduced automatic rifles; I was the first ground officer to go up in the air and observe artillery fire. Now I have succeeded in making that the regular practice in the army. I was the first to advocate an alliance with Canada. I forced the acquiring of the bases in the Atlantic Ocean.

On the other hand I was unsuccessful in obtaining the fortification of Guan; in preventing the division of the navy into two oceans. I was unable to persuade the navy and the administration that airplanes could destroy battleships.

I did get the marines out of Shanghai, but was unsuccessful in trying to get the army out of the Philippines.

Campaigns such as I have carried on inevitably meet resistance, and great persistence is necessary to achieve results. The opposition resorts to such tactics as charging me with hatred and so forth but in view of the accomplishment I can bear up under it.

Yours sincerely,

ROBERT McCORMICK (signed)

Mr. J. H. Sawyer, Jr.
555 North Michigan Avenue
Chicago, Illinois
THE WHITE HOUSE
WASHINGTON

CONFIDENTIAL
April 7, 1942.

MEMORANDUM FOR
GENERAL ARNOLD

I do not know whether you have seen this -- nor do I quite know whether this calls for a reply on my part or not. What do you think?

F. D. R.

Dispatch from Louis Johnson from New Delhi, dated April 6th, transmitting message from Wavell in need of aircraft to hold India. Also message from Louis Johnson, dated April 7th, reporting on his talk with Sir Stafford Cripps.

DECLASSIFIED
By Deputy Archivist of the U.S.

By W. J. Stewart Date JUN 6 1972
MEMORANDUM FOR THE PRESIDENT:

Subject: Summary of activities and accomplishments of the Ferry Service.

1. It is thought that you might be interested in a summary of the activities and accomplishments of the Ferry Service which, as you know, now extends practically around the world.
   a. The Ferry Service is now operating a total of 144 transport airplanes with 1,732 pilots.
   b. Last year a total of 1,548 planes were ferried from factories to destinations. Last month that number was 2,552. Since January 1, 1942, the number is 5,641. Last month the total flown across the South Atlantic was about 80.
   c. A total of 235,000 pounds of freight and express were ferried across the South Atlantic for delivery in Europe, Asia and Africa. During 1941 there was a total of 1,369 passengers flown eastward to Africa and Asia. There were 160 trans-Atlantic passengers last month.
   d. On April 8th the North Atlantic Ferry Route was reopened with an exploratory flight from Labrador to Greenland to Iceland. This flight will give us much information as to when we may expect to open up our trans-Atlantic pursuit ferrying.

2. On April 2nd our first trans-Pacific route was opened by a B-24 which finished a very remarkable flight, making the trip from San Diego to Australia and returned in less than six days.

H. H. ARNOLD,
Lieutenant General, U. S. A.
Commanding General, Army Air Forces.
THE WHITE HOUSE
WASHINGTON

May 18, 1942.

MEMORANDUM FOR

GENERAL H. H. ARNOLD

For your information and return.

F.D.R.

Cable for the President from Grady May 16 from Bombay re development of all-weather road from Lagos to Khartoum.
THE WHITE HOUSE
WASHINGTON

May 22, 1942.

MEMORANDUM FOR

GENERAL ARNOLD:

FOR YOUR INFORMATION.

F.D.R.

John Franklin Carter Report on suggestion for bombing Japanese volcanoes 5/21/42
THE WHITE HOUSE
WASHINGTON

SECRET

June 2, 1942.

MEMORANDUM FOR CAPTAIN McCREA:

To send this report to McCormack.

F.D.R.
MEMORANDUM FOR

GENERAL ARNOLD:

Will you let me have a report on this?

F.D.R.

DECLASSIFIED
By Deputy Archivist of the U.S.
By W. J. Stewart Date JUN 6 1972
June 11, 1942

MEMORANDUM FOR THE PRESIDENT  (The White House)

Reference the attached note from Mr. John Franklin Carter. I do not feel that his suggestion can be dismissed without serious consideration. The results obtained in Hawaii in diverting lava flows in 1936 as well as within the last month lend some weight to this idea.

At this time, however, when our opportunities for bombing Japan are very limited and can be accomplished only at considerable expense, I believe that definitely military objectives, because of their number and importance, demand our first consideration.

This subject is being investigated and will be given every consideration at such time as the extent of our bombardment effort against Japan warrants directing our efforts toward anything but the most critical military objectives.

1 Incl. 
Note—J.F. Carter.


Original in John F. Carter Folder 5-42

DECLASSIFIED
OSD Letter, 5-3-72
June 15, 1942

MEMORANDUM FOR GENERAL ARNOLD:

Apropos of General Brereton's cable that no more transports are needed into China, do you know whether this message was seen by General Stilwell and whether or not it has Stilwell's approval?

I can't quite understand Brereton's message in the light of the small tonnage which has been taken in each month.

Are you satisfied that we can continue to run the 2-engine planes from India into China?

F.D.R.

X China

DECLASSIFIED
By Deputy Archivist of the U.S.
By W. J. Stewart Date JUN 6 1972
THE WHITE HOUSE
WASHINGTON

June 15, 1942.

MEMORANDUM FOR
GENERAL ARNOLD

I enclose copy of a letter in regard to bombing Rumanian oil fields.

F. D. R.
Why don't the English bomb the refineries at Ploesti, the refining center of Rumania, and the barge loading facilities at Girgu on the Danube?

If pumping stations, compressor stations or power plants were bombed at Ploesti Germany would be forced to transport Rumanian crude oil to other refinery centers, perhaps in Germany, and if the transportation center at Girgu were bombed this would make it more difficult for them to do that because this Danube port is connected to the refinery center at Ploesti by two nine inch pipe lines and from this port oil is shipped up the Danube by barge to Germany.

The excuse the British gave in Istanbul and Cairo last fall was lack of planes which situation must be changed by now.

In October, 1941, stocks of refined products in Rumania were almost nil and the demands Germany has made on the Rumanian oil supply for the Russian winter campaign would not allow a large excess stock of refined products at the present time.

The present people in power in Rumania are in accord with the Nazis but not the Rumanian people and the people would not object to bombing if it hindered the Nazi war plans although they are not necessarily pro-British.

Long range bombers operating from the North coast of Egypt could easily handle such a job.

I wanted to talk to you about the war but didn't have the opportunity, therefore I want to unburden myself on one thing that I think is very important. While in Roumania all the Americans connected with our company could never understand why the British had made no attempt to bomb the oil refineries at Ploesti, the refining center of Roumania. Bombing the oil fields would be of little value unless vital installations are hit like pump stations, compressor stations or power plants of any description. By effectively bombing the refineries, Germany would be forced to transport all the Rumanian crude to other refinery centers perhaps in Germany. This would cause considerable confusion because of transportation facilities which could be further confused by bombing transportation centers. At the same time barge loading facilities at Girgu on the Danube should be bombed. This Danube port is connected to the Refinery center at Ploesti by two nine inch pipe lines and from this port oil is shipped up the Danube by barge to Germany.
When we came through Istanbul and Cairo on our way home we talked with the British Intelligence Service at both places and their only excuse for not bombing the above places was lack of planes. That condition must surely be changed now and sufficient planes should be available for bombing the above places, which if done would in my estimation retard the Nazi war effort to a great extent, as Roumanian is an important oil supply for the Nazi mechanized war machine.

During the winter of 1941 and 1942 Roumanian had no excess storage and every company was stocked to capacity with refined products and raw crude. We all anticipated bombing at that time but nothing happened and the campaign against Greece followed by that against Russia in June depleted the stocks of all companies. During the first part of the Russian campaign we were shipping 150 to 200 cars (11,250 - 15000 bbls.) of refined products per day to the Russian front. Other companies were doing the same and when we left there in October 1941 stocks of refined products in Roumanian were almost nil. Germany at that time was forcing the oil companies into an exploration program in order to develop a greater supply of oil since proven production in Roumanian (120,000 bbls. daily plus or minus) was not sufficient to meet her maximum war demands. I doubt if conditions in Roumanian during the winter of 1941-1942 were the same as 1940-41 as the Russian winter campaign would not allow large excess stocks of refined products to build up, and any new oil discoveries after we left could not have been sufficiently developed to assist to any great extent the Nazi war effort.

The present people in power in Roumanian are in accord with Nazi plans but not so the Roumanian people. I know that the majority of the people are anti-Nazi but not necessarily pro-British. They would not object to bombing if it would in any way hinder the Nazi war plans. I was asked when leaving, if our leaving was a prelude to English bombing. I could only answer in the negative. I could give many instances in which Roumanian people of all classes have expressed their disgust for the Nazis.

There are many ramifications to the question of bombing but with the possibility of the results being so high I see no legal, moral, or financial reason why it should not be done. Effective bombing of these refineries might so cripple the Nazi war plans as to be a deciding factor in the final results. Who can tell? We should therefore not overlook any possibility that will bring victory to the Democracies.
Long range bombers operating from the North coast of Egypt could easily handle such a job. There are in the English Army in Cairo numerous oil engineers, formerly connected with British oil interests in Roumania, who are familiar with the entire petroleum area and also the most vital spots of attack. I might add that Russian bombing while we were there was not effective.

What do you think about this? Do you think it is of sufficient importance to put it before some one who might carry it further and eventually get some action. Personally I think it would do a lot of good. If you decide to carry it further please do not mention my name or the company and my connection with the company.
June 4, 1942

Why don't the English bomb the refineries at Ploesti, the refining center of Rumania, and the barge loading facilities at Girgu on the Danube?

If pumping stations, compressor stations or power plants were bombed at Ploesti Germany would be forced to transport Rumanian crude oil to other refinery centers, perhaps in Germany, and if the transportation center at Girgu were bombed this would make it more difficult for them to do that because this Danube port is connected to the refinery center at Ploesti by two nine inch pipe lines and from this port oil is shipped up the Danube by barge to Germany.

The excuse the British gave in Istanbul and Cairo last fall was lack of planes which situation must be changed by now.

In October, 1941, stocks of refined products in Rumania were almost nil and the demands Germany has made on the Rumanian oil supply for the Russian winter campaign would not allow a large excess stock of refined products, at the present time.

The present people in power in Rumania are in accord with the Nazis but not the Rumanian people and the people would not object to bombing if it hindered the Nazi war plans although they are not necessarily pro-British.

Long range bombers operating from the North coast of Egypt could easily handle such a job.
JUSEPIN
May 4th, 1942

Mrs. Mabel Walker Willebrandt
Shorham Bldg.
Washington D.C.

Dear Mabel:

I hope and trust that Margaret has sent you the roll of films taken at the ranch so that you may make your choice as to further enlargements. Your compliments on the quality of the pictures were very much appreciated but I can't claim all the credit. The first requisite of good photography is a good camera with a good lens, to which must be added a light meter. Having these and the knowledge of operating them, the taking of pictures is reduced to an almost fool proof state.

I wanted to talk to you about the war but didn't have the opportunity, therefore I want to unburden myself on one thing that I think is very important. While in Roumania all the Americans connected with our company could never understand why the British had made no attempt to bomb the oil refineries at Ploesti, the refining center of Roumania. Bombing the oil fields would be of little value unless vital installations are hit like pump stations, compressor stations or power plants of any description. By effectively bombing the refineries, Germany would be forced to transport all the Roumanian crude to other refinery centers perhaps in Germany. This would cause considerable confusion because of transportation facilities which could be further confused by bombing transportation centers. At the same time barge loading facilities at Girgu on the Danube should be bombed. This Danube port is connected to the Refinery center at Ploesti by two nine inch pipes and from this port oil is shipped up the Danube by barge to Germany.

When we came through Istanbul and Cairo on our way home we talked with the British intelligence service at both places and their only excuse for not bombing the above places was lack of planes. That condition must surely be changed now and sufficient planes should be available for bombing the above places, which if done would in my estimation retard the Nazi war effort to a great extent, as Roumania is an important oil supply for the Nazi mechanized war machine.

During the winter of 1941 and 1942 Roumania had no excess storage and every company was stocked to capacity with refined products and raw crude. We all anticipated bombing
at that time but nothing happened and the campaign against Greece followed by that against Russia in June depleted the stocks of all companies. During the first part of the Russian campaign we were shipping 150 to 200 cars (11,250 - 15000 bbls.) of refined products per day to the Russian front. Other companies were doing the same and when we left there in October 1941 stocks of refined products in Roumania were almost nil. Germany at that time was forcing the oil companies into an exploration program in order to develop a greater supply of oil since proven production in Roumania (120,000 bbls. daily plus or minus) was not sufficient to meet her maximum war demands. I doubt if conditions in Roumania during the winter of 1941-1942 were the same as 1940-1941 as the Russian winter campaign would not allow large excess stocks of refined products to build up, and any new oil discoveries after we left could not have been sufficiently developed to assist to any great extent the Nazi war effort.

The present people in power in Roumania are in accord with Nazi plans but not so the Roumanian people. I know that the majority of the people are anti-Nazi but not necessarily pro-British. They would not object to bombing if it would in any way hinder the Nazi war plans. I was asked when leaving, if our leaving was a prelude to English bombing. I could only answer in the negative. I could give many instances in which Roumanian people of all classes have expressed their disgust for the Nazis.

There are many ramifications to the question of bombing but with the possibility of the results being so high I see no legal, moral, or financial reason why it should not be done. Effective bombing of these refineries might so cripple the Nazi war plans as to be a deciding factor in the final results. Who can tell? We should therefore not overlook any possibility that will bring victory to the Democracies.

Long range bombers operating from the North coast of Egypt could easily handle such a job. There are in the English Army in Cario numerous oil engineers, formally connected with British oil interests in Roumania, who are familiar with the entire petroleum area and also the most vital spots of attack. I might add that Russian bombing while we were there was not effective.

What do you think about this? Do you think it is of sufficient importance to put it before some one who might carry it further and eventually get some action. Personally I think it would do a lot of good. If you decide to carry it further please do not mention my name or the company and my connections with the company.

Margaret is making plans to join me and will fly down via Mexico City and Panama. She will bring Regie with her if possible. Give my regards to every one and love to yourself.

Sincerely, [Signature]

C. R. Swarts -
Coripito - Venezuela.
MEMORANDUM FOR CAPTAIN McCREA:

The President wants you to take this up at the Pacific War Council tomorrow.

G.G.T.
MEMORANDUM FOR THE PRESIDENT:

Subject: Dr. Soong's Proposal re Shanghai.

1. Reference is made to Dr. Soong's proposal that the Shanghai power plant be bombed, by airplanes operating from India, for the purpose of slowing up Japan's war industrial production.

2. A completed study of this project made in my office, coordinated with Operations Division, General Staff, indicates that while Shanghai is a city of relatively great industrial importance in China, particularly because of its textile mills, our sources of information do not indicate that Japan has concentrated there industries vital to its war effort.

3. Shanghai does appear to be important to Japan as a transshipment and storage center. Japan is known to have there ship repairing docks and small metal works. Areas in Southern Japan (Kyushu) and Taiwan may afford war industries targets of a higher priority than Shanghai.

4. Dr. Soong's proposal with a study of the project has been referred to General Stillwell for his decision, in the light of such additional information as may be available to him.

H. H. ARNOLD
Lieut. General, U. S. A.
Commanding General, Army Air Forces.

SECRET

June 15, 1942
THE WHITE HOUSE
WASHINGTON

June 16, 1942.

MEMORANDUM FOR
H. L. H.

FOR YOUR INFORMATION
AND PLEASE RETURN FOR MY FILES.

F. D. R.

Memorandum to the President from General Arnold, dated June 16th, re Transports for China.

Corres. filed in China folder.
SECRET

WAR DEPARTMENT
HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

JUN 20 1942

MEMORANDUM FOR THE PRESIDENT

1. According to the information received from Stilwell and Brereton, our two-motored transport planes are not satisfying the requirements for the India-China route. Of course, the weather conditions during the monsoon season are contributing materially to this deficiency. However, no C-54 airplanes would be available for use in China before the end of the monsoon season since the first several of these aircraft must be flown for a month or two in an area where there are adequate landing fields and maintenance facilities in the event that trouble should develop, as is quite possible, with a new type of equipment.

2. There will be a total of only 18 C-54 airplanes produced up until the end of October and these will be most urgently needed on operations across the North Atlantic to support our forces in the U.K.

H. H. Arnold
Lieutenant General, U.S.A.
Commanding General, Army Air Forces

X China Folder

DECLASSIFIED
OSD Letter, 5-3-72
MEMORANDUM FOR THE PRESIDENT:

Subject: Airplanes moving across North Atlantic.

Due to bad weather there has been no change in the movement of airplanes across the North Atlantic.

H. H. ARNOLD,
Lieutenant General, U.S.A.
Commanding General, Army Air Forces.
MEMORANDUM FOR THE PRESIDENT:

Subject: Airplanes moving across North Atlantic.

There is a bad stretch of weather extending over the North Atlantic which has prevented airplanes from moving for the past few days. Weather prognosticators state that it will continue for the next few days.

No further reports of movements in this theater therefore, will be made until the weather changes and movement actually takes place.

H. H. ARNOLD,
Lieutenant General, U. S. A.,
Commanding General, Army Air Forces.
WAR DEPARTMENT  
HEADQUARTERS OF THE ARMY AIR-FORCES  
WASHINGTON  

July 4, 1942

SECRET

MEMORANDUM FOR THE PRESIDENT:

Subject: Airplanes moving across North Atlantic

The following is status of airplanes moving across the North Atlantic:

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<tr>
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<td>At Indigo</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>At Bluie 1</td>
<td>15</td>
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<tr>
<td></td>
<td>At Bluie 8</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>At Goose</td>
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<tr>
<td></td>
<td>At Newfoundland</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>At Presque Isle</td>
<td>14</td>
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</tbody>
</table>

|     | At Bluie 1      | 24       |
|     | At Goose        | 4        |
|     | At Presque Isle | 52       |

| Transports | At Indigo | 1 |
|            | At Bluie 1 | 12 |
|            | At Goose | 12 |
|            | At Presque Isle | 5 |
|            | At Westover | 22 |

Franklin D. Roosevelt Library  
DECLASSIFIED  
DOD DIR. 5200.9 (9/27/58)  

Date - 3-19-59  
Signature - Carl I. Speier  

H. H. ARNOLD  
Lieutenant General, U.S.A.  
Commanding General, Army Air Forces
MEMORANDUM FOR THE PRESIDENT: (The White House)

Subject: Howard Hughes' Twin-Motored Bomber.

The United States Army Air Forces has been in close touch with Howard Hughes during the development of his twin-motored bomber. It will be made of plastic, and is of the light bomber type with a gross weight of somewhere from 20,000 to 25,000 pounds.

Mr. Hughes volunteered to build this at his own expense, because he felt that he could build a vastly superior bomber if he received an outline of our desires and went ahead with his own ideas.

He claims, and our engineers do not challenge the figures, that his airplane will make about 430 miles an hour fully loaded.

At present he is trying to sell it to the United States Army Air Forces and we are negotiating to see if we can arrive at a price agreeable to both parties.

H. H. ARNOLD
Lieutenant General, U. S. A.
Commanding General, Army Air Forces

Incls:
Memo. for Gen. Arnold, 7/7/42, frm The President, incl.
Rpt. concerning the above subj.
July 7, 1942.

MEMORANDUM FOR

GENERAL ARNOLD

What is there in this?

F. D. R.

REGRADED UNCLASSIFIED
Howard Hughes, airplane designer, builder and holder of most of the world's speed records, will send into the sky at an early date his twin-motored plastic bomber which will fly faster than any pursuit ship in the world. - 485 miles an hour. 

Mr. Hughes has put $6,000,000 of his private funds and several years of intensive work and study into the development of this plane, the Hughes Design No. 2. Hughes Design No. 1, which inspired his fast bomber, was the plane in which seven years ago he flew non-stop from Los Angeles to New York in seven hours, twenty-nine minutes. This record still stands and is by far the fastest long cross country flight ever made. Nowhere in the world has anyone yet approached Hughes' record of 2500 miles at a sustained speed of 333 miles per hour.
THE WHITE HOUSE
WASHINGTON

PRIVATE AND CONFIDENTIAL

July 7, 1942.

MEMORANDUM FOR

GENERAL ARNOLD

What is there in this?

F. D. R.

Memo unsigned 6/27/42 stating that Howard Hughes will send into the sky at an early date his twin-motored plastic bomber which will fly faster than any pursuit ship in the world -- 485 miles an hour, etc.

REGRADED UNCLASSIFIED
WASHINGTON
JULY 17, 1942

MEMORANDUM FOR THE PRESIDENT: (The White House)

Subject: Howard Hughes' Twin-Motored Bomber.

With further reference to my memorandum of July 8, 1942, subject as above, the following is the result of telephonic conferences with him this week:

Mr. Hughes suggested the following procedure, which we have agreed to; that when the airplane is completed and ready to be submitted to the Government, which is now estimated to be August or September, we will inspect and test the airplane; and, if the Government is sufficiently interested to give him an order for additional airplanes, that we undertake to absorb his development costs. He estimates that he has invested in this airplane, which as yet contains many unproven features from the viewpoint of construction, about three million dollars. If the airplane is of no interest to the Government, he states that he, Mr. Hughes, will expect to take the loss.

H. H. ARNOLD,
Lieutenant General, U.S. Army
Commanding General, Army Air Forces.

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DECLASSIFIED
DOD DIR. 5200.9 (9/27/58)

Date- 3-10-59
Signature- Carl D. Speer

CONFIDENTIAL
Office of the Majority Leader  
House of Representatives U.S.  
Washington, D.C.  

July 18, 1942.

Colonel Marvin McIntyre,  
The White House,  
Washington, D.C.

Dear Marvin:-

I am herewith returning a report sent to me by the President,  
Marked SECRET, and which I have kept confidential.  

With kind personal regards, I am

Sincerely,

[Signature]
MEMORANDUM FOR THE PRESIDENT.

SUBJECT: Impulse Reaction Aircraft Engine of Mr. E. B. Myers

1. In the absence of General Arnold, who is not in Washington at the present time, I am acknowledging your memorandum, dated May 20, 1942, together with attached descriptive data, subject: "Air Supremacy - Impulse Reaction Aircraft Engine", from Mr. E. B. Myers.

2. Mr. Myers has been in contact with the Army Air Forces for the past few years regarding the furtherance of this invention. The Myers reaction device, consisting of fuel cylinders, fuel lines, ignition apparatus and combustion chamber, was tested at Wright Field in April, 1941. Results of this test, while indicating that the thrust available appeared to be sufficient so as to offer an attractive means for assisted take-off, and, possibly, aircraft propulsion, revealed no practical solution for handling the fuel, igniting the fuel in the combustion chamber, providing for continuous operation or converting of the reaction to a usable thrust.

   In general, the invention as set forth represented an elementary device extremely unsatisfactory and dangerous to handle because of the unstable condition of the fuel components used after the mixing process. Moreover, no method was proposed for successfully converting the reaction to a usable thrust for aircraft propulsion.

3. The last contact with Mr. Myers by the Army Air Forces was on January 3, 1942, at which time a letter was written to him setting forth views and opinions based upon a conference held at Wright Field, Dayton, Ohio, on December 22, 1941, between Mr. Myers and Army Air Forces' engineers. The above conference was held expressly at the request of Mr. Myers and an examination of available data and plans indicated nothing of advancement over previously submitted information and under the circumstances, it was decided that the device held no further interest in its state of development at that time.

4. At present the Army Air Forces, the Ordnance Department and the Bureau of Aeronautics have all under consideration and development.
accelerated take-off and jet propulsion projects that are believed to
be much farther advanced, less complicated, and less dangerous from the
viewpoint of practical employment than the device proposed by Mr. Myers.

FOR THE COMMANDING GENERAL, ARMY AIR FORCES:

MILLARD F. HARMON,
Major General, U.S.A.,
Chief of the Air Staff.
SUBJECT: Air Supremacy

Impulse Reaction Aircraft Engine

From E. B. Myers

THE PRINCIPLE:

The principle of the Myers engine is frequently miscalled "The rocket type." It differs in the essential detail of having controlled power thrust regulated to the speed of the aircraft propelled, altitude, and service desired.

THE ENGINE:

There is available now an engine ready for test.

FACILITY:

There is available now complete test equipment at the Anacostia Naval Research Laboratory.

RESULTS:

The results of tests will establish the following:

1. An engine weight of one twentieth of a pound per thrust horsepower. (Installed)
2. Completely controlled power thrust. (0 to 5000 horsepower)
3. Speed available - 100% increase above full throttle at sea level - 1500 miles per hour at 40,000 ft.
4. Increase in fuel load or bomb load up to the aerodynamic limit of aircraft.
5. Fuel, safe; volume available adequate and inexpensive.

MILITARY USES:

Speed burst in combat.
Assisted take off.
Stratosphere operation.
Inexpensive prime mover for torpedoes.

REMARKS:

Technical experts have stated "Little effective help can be
hoped for from consultants or authorities on the art, as the principles
used are so few that neither consultants nor authorities have been
developed."

CONCLUSIONS:

"The inventors experience and six years of exhaustive research,
his complete knowledge of the subject coupled with the facility and
honestly anxious technical interest of the physicists at Anacostia Naval
Research Laboratory assure prompt results."

Technical and mathematical statements concerning this invention
are unacceptable in the face of available demonstrated proof.

Professor Alexander Klemin, Dean of the Daniel Guggenheim
School of Aeronautics, after six months study has stated "This is the
most important contribution to aviation since the Wright Brothers Aileron."

COST:

It is recommended that the Navy appropriate a fund of $10,000
for complete test of this engine at the Naval Research Laboratory
immediately. Results of this test will verify for the Government facts
which are stated above which have been privately tested.

Respectfully submitted

[Signature]

E. B. Myott
Hotel Abbey
New York City
MEMORANDUM FOR THE PRESIDENT:

Subject: Reply to Cable from Mr. Currie

In connection with the cable to me from Mr. Currie at Chungking for transmittal to you (copy attached) the following reply has been sent:

ESSENTIAL THAT YOU CONFER WITH STILWELL RELATIVE TO THIS MATTER PERIOD REUR ONE ZERO ZERO FOUR AMMISCA PERIOD EVERY EFFORT IS BEING MADE TO PROVIDE THE MOST SATISFACTORY AND EFFICIENT SERVICE POSSIBLE WITH AVAILABLE CARGO PLANES PERIOD TO STILWELL FOR CURRIE FROM ARNOLD PERIOD DOCTOR SOONG COMMA PAN AMERICAN AIRWAYS AND OUR OWN FERRYING COMMAND ARE ALL IN ACCORD WITH PLAN AS OUTLINED TO STILWELL FOR SUBMISSION TO CHINESE FOR THEIR CONCURRENCE

H. H. ARNOLD,
Lieutenant General, U.S.A.,
Commanding General, Army Air Forces.

Incl: Cpy of cable frm Mr. Currie to Gen. Arnold, 8/1/42.
THE WHITE HOUSE
WASHINGTON

August 12, 1942.

MEMORANDUM FOR
HARRY HOPKINS:

To read and hold until we hear from Churchill.

F.D.R.

Secret memo from Gen. Arnold Aug. 3
Subject: Airplanes for Russia and the Middle East.
August 25, 1942.

Dear Hap:-

I am delighted that the Ascension Island route is in operation. This is a real achievement, carried through in jig time.

Ever so many thanks for that envelope of the first flight. I am delighted to have it.

As ever yours,

Lieutenant General H. H. Arnold,
Commanding General, Army Air Forces,
War Department,
Washington, D. C.
The President,

The White House.

Dear Mr. President:

On July 10 a Ferrying Command airplane, B-24A type, Serial No. 40-2372, landed on the new airport on Ascension Island in the South Atlantic Ocean. This plane had been sent out to discover the condition of the runway and the facilities available on the island in order that a conclusion might be reached as to how soon twin-engine planes could be routed via Ascension when flying from Natal to the west coast of Africa.

The runway was in perfect condition. A large supply of gasoline arrived later on the same day, and a communication system was set up for use as an aid to navigation during the afternoon. The plane departed from Ascension Island on the morning of July 11 and returned with a definite recommendation that the Island be used as soon as the gasoline could be unloaded from the ship. Since that time, it has been used as a refueling station for a large number of two-motor planes being flown to the combat zone in the Middle East.

While on the Island, local stamps were purchased for each officer riding on the plane in order that he might have a souvenir of the flight. In each case, the stamp was attached to a self-addressed envelope and the stamp was cancelled by Captain Vickers, First Pilot of the plane, as a legal symbol of the first air mail to leave Ascension Island.

A two-shilling, six-pence stamp was also purchased and attached to an envelope addressed to you with the knowledge of your interest in stamp collecting and the thought that you might find some place for it in your collection.

Respectfully,

THE WHITE HOUSE
WASHINGTON

September 14, 1942.

MEMORANDUM FOR

GENERAL ARNOLD:

I have had one or two outsiders tell me that our Aleutian pilots have been rather overlooked on promotions. Don't bother to answer this, but you might look it up.

F.D.R.
THE WHITE HOUSE
WASHINGTON

November 10, 1942

MEMORANDUM FOR

GENERAL ARNOLD

I am told by an American friend returning from England that the British are very keen about the P-51 and feel they could use Rolls Royce engines in them. Do you know anything about it?

They tell me it is essentially similar in design to the Focke-Wulf Fw 190A3. Can you give me a tip?

F. D. R.

No papers accompanied the original of this memorandum to General Arnold.
MEMORANDUM FOR THE PRESIDENT:

Subject: P-51

The Royal Air Force is very keen about the P-51, and we have installed Rolls Royce engines in two of them - one in England and one in the United States. Tests indicate that they will be a highly satisfactory pursuit plane for 1943. We think so much of them that we have already given orders for approximately 2200.

They are similar in design to the Focke Wulf 190 but we believe them to be a very much better airplane on account of their ruggedness, superior armament and equal, if not better, performance.

H. H. ARNOLD,
Lieutenant General, U.S.A.,
Commanding General, Army Air Forces.
EQUIPMENT INSTALLATIONS
The Focke-Wulf Fw 190A3

1 - Armour (protecting oil tanks).
2 - Operating mechanism for twin 7.9 mm. guns.
3 - Exhaust deflector and cooling-air exit.
4 - Blistter over air trunk to supercharger.
5 - Reflector sight.
6 - Bulletproof wind-screen.
7 - Fuel tanks.
8 - Press button controls.
9 - Armour plate (headrest, pilot's seat, bulkhead).
10 - Kit stowage bag.
11 - Battery.
12 - Explosive charge for jettisoning hood.
13 - Wireless equipment.
14 - Panel for electrical connections.
15 - Oxygen bottles.
16 - First-aid outfit.
17 - Starter handle stowage.
18 - Ground charging plug.
19 - Remote-reading compass.
20 - Canvas bulkhead.
21 - Hatch for access to tailwheel gear.
22 - 20 mm. cannon (port and starboard).
THE WHITE HOUSE
WASHINGTON

November 10, 1942

MEMORANDUM FOR

GENERAL ARNOLD

I am told by an American friend returning from England that the British are very keen about the P-51 and feel they could use Rolls Royce engines in them. Do you know anything about it?

They tell me it is essentially similar in design to the Focke-Wulf Fw 190A3. Can you give me a tip?

F. D. R.

Office, C G., A.A.F.
NOV 11 1942
Received
# Production of the P-51 Mustang

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Office of the Secretary of the Treasury,  
Division of Research and Statistics.  
November 3, 1942

* Designed as a dive bomber in October, November, and December 1942.

Source: War Production Board.
SILHOUETTE Handbook of UNITED STATES ARMY AIR FORCES Airplanes

NOTICE: This document contains information affecting the National Defense of the United States within the meaning of the Espionage Act (U. S. C. 50:31:32). The transmission of this document or the revelation of its contents in any manner to an unauthorized person is prohibited.

PUBLISHED BY AUTHORITY OF THE COMMANDING GENERAL, ARMY AIR FORCES, BY THE CHIEF, FIELD SERVICES, AIR SERVICE COMMAND, WRIGHT FIELD, DAYTON, OHIO

SEPTEMBER, 1942
The silhouettes and photographs in this book are primarily intended for identification and reference purposes. The silhouettes have been reduced to approximately a common size and are therefore not to a consistent scale. In view of the large reduction in scale, the silhouettes should not be used for determining accurate dimensions.

Views are Arranged as Follows

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The airplanes are grouped in the following order:

**Bombardment, Heavy**
- B-17E
- XB-19
- B-24D & E

**Bombardment, Medium**
- B-10B
- B-18
- B-18A
- B-23
- B-25C & D
- B-26B & C

**Bombardment, Light**
- A-17
- A-20B & C
- A-24
- A-29 & A
- A-30
- A-31

**Fighter**
- P-35
- P-36C
- P-38D & E
- P-39C & D
- P-40E
- P-43A
- P-47B
- P-51

**C-45 (F-2)**
- C-46
- C-47
- C-54A
- C-60A

**Bombardment, Medium**
- B-10B
- B-18
- B-18A
- B-23
- B-25C & D
- B-26B & C

**Bombardment, Light**
- A-17
- A-20B & C
- A-24
- A-29 & A
- A-30
- A-31

**Observation & Liaison**
- O-46A
- O-47A & B
- O-52
- L-1
- OA-9
- OA-10

**Training (Primary, Basic, Advanced)**
- PT-17 & 18
- PT-19
- PT-22
- BT-13
- BT-15
- AT-6A
- AT-7
- AT-8
- AT-9
- AT-10
- AT-11
- AT-12

**Cargo (Transport)**
- C-39
- C-40A
Boeing B-17E
Douglas XB-19
Martin B-26B&C
Lockheed A-29&A
Bell P-39C&D
Republic P-43A
North American P-51
Douglas 0-46A
Vultee L-1
Douglas C-39
Lockheed C-40A
Douglas C-47

95' 6"

64' 6"
Douglas C-54A
Fairchild PT-19
Vultee BT-13
North American AT-6A
Beech AT-7
THE WHITE HOUSE
WASHINGTON

April 8, 1943.

MEMORANDUM FOR
GENERAL ARNOLD:

To prepare reply in conjunction with the Secretary of State.

F.D.R.

Cable from Canberra (Johnson) 4/6/43 No. 77 to the Secretary of State and the President re getting of sufficient planes to that area.

DECLASSIFIED
By Deputy Archivist of the U.S.
By W. J. Stupart Date JUN 6 1972
THE WHITE HOUSE
WASHINGTON

May 1, 1943.

MEMORANDUM FOR
GENERAL ARNOLD

FOR REPORT

F. D. R.

Report on alleged scandal in airplane engines (Allison) from John Franklin Carter, dated April 30, 1943, together with memo from Allison in Carter's office.
MEMORANDUM FOR THE PRESIDENT:

Subject: Performance of Allison Engines.

Charges that defective Allison engines have cost the lives of 5,000 American pilot trainees are so contrary to fact that I do not anticipate any serious discussion of this subject. As a matter of fact, pilot trainees do not fly in Allison equipped planes in our schools.

During the period July 1, 1942, to January 31, 1943, the use of Allison-powered planes aggregated 283,763 flying hours, indicating .051 fatal accidents per 1,000 flying hours. This accident rate is not excessive and is in line with the general rate in the Air Corps.

In May 1940, production of this engine was 12 per month. Since that date over 26,000 have been produced and the present rate is 1700 engines per month.

Average service life of this engine in 1940 was 55 hours between overhauls; average now is 200 hours between overhauls.

During the three year period horsepower has been increased from 1,000 to 1,452.

Reports from theater commanders indicate very satisfactory performance by this engine and full pilot confidence in it.

H. H. ARNOLD
General, U. S. Army
Commanding General, Army Air Forces
THE WHITE HOUSE
WASHINGTON

May 1, 1943.

MEMORANDUM FOR
GENERAL ARNOLD

FOR REPORT

F. D. R.
JOHN FRANKLIN CARTER
1210 NATIONAL PRESS BUILDING
WASHINGTON, D. C.

April 30, 1943.

REPORT ON ALLEGED SCANDAL IN AIRPLANE ENGINES (ALLISON)

The attached memo from Gillan, in my office, indicates that there is an alleged scandal in the supply of airplane engines, particularly from the Allison Division of General Motors, and that the story is already known both to the Truman Committee, the Opposition and to the Chief of Staff. According to the allegations, defective motors have already cost the lives of 5,000 American air force men in training. I am not in a position to check the facts but believe that I should report the circumstances to you, in case this particular rumor has not reached you.

J.F.C.
JFC
Aircraft Scandal

The hottest story within the Truman Committee or within the Capital is the growing revelation of what is taking place in the manufacturing of airplane motors.

My information is that Senator O'Mahoney has seen General Marshall. Marshall knows and is worried about the whole thing. The dangers in the story are greater than the exposures in the cases of U.S. Steel and Anaconda Copper because this could affect every mother in the nation as well as every young man who flies a ship.

It has been estimated that between five and six thousand fliers have already lost their lives through faulty mechanical construction. There has been a part of this in the Congressional Record, placed there by Congressman Morrison of Louisiana.

Joseph Leob, who has proven no friend of the Administration, has been busy for months on this stuff. His friends around the Hill are Bridges and some others. But he has a tremendous story. The only other newsman who has some of it is Sam O'Neal of the St. Louis Star-Times.

Now, on next Monday Morrison will give another speech in connection with the air accidents.

In the meantime the accident board of CAA has been taken into the Army but the personnel remains the same. It is held as not good.

Joseph Loeb has enlisted twice in the Army. He has been turned down twice because of a rheumatic hip and bad eyes. But on the Sunday following the publishing of some of this story in the Congressional Record Loeb received another draft notice, from his local board, mailed on Sunday evening. On the Saturday morning preceding the Sunday he was called at 8:15 AM to appear before an investigator of the Bureau of Internal Revenue to explain his return. He was
cleared promptly.

He called the Colonel who is liaison between the Army and the local Selective Boards about his induction notice and the Colonel told him he was familiar with the case—in fact had just had his file cut.

Into these goings-on Senator Bridges is on the trail.

Senator Truman is reported to have said the stink is much greater than anything else.

**********

The John Monroe, mentioned in the story yesterday about the house on R Street is a friend of Congressman Morrison. They profess to see a link between the investigation of Mr. Monroe and Mrs. Smith, by the House Military Affairs Committee, as a chance to silence Congressman Morrison.

In any event Loeb has taken care to have all the proceedings and information placed in proper political hands—regardless of what happens to him.

**********

It is said that the most trouble is traced to the Allison Motors of General Motors.
June 10, 1943

MEMORANDUM FOR

GENERAL H.H. ARNOLD

I wish you would give careful consideration to giving some more P-39 planes to Russia, over and above the Protocol.

It seems to me that from the point of view of carrying out our strategic concept of the war we should do everything possible to strengthen Russia this summer. Airplanes is the quickest and best way.

I understand that we are giving something like 150 P-39s to the British each month. Would it not be possible to postpone the British allotment and give the Russians those 150 planes each month for a few months; or, if that is not possible, replace the P-39s for the British with another type of fighter?

It is possible the Russians would take P-40s if they are available.

I hope you can give them some more B-25s.

F.D.R.

No papers accompanied the original of this memorandum to General Arnold.
(Carbon of this memorandum, together with papers regarding the case, returned to Hon. Harry L. Hopkins)
MEMORANDUM FOR MR. HOPKINS:

Subject: Cable from General Stilwell.

The following quotation from General Stilwell is furnished you for your information:

"Reference changes in 10th Air Force. Very sorry to lose Bissell. He is loyal and efficient, good soldier, and a man of high character. Regrettable that he must go for the reasons involved. I understand your position and accept the situation, but must again express my concern over any policy of concession and appeasal and it can only lead to more demands and loss of control."

H. H. ARNOLD,
General, U. S. Army,
Commanding General, Army Air Forces.

Franklin D. Roosevelt Library
DECLASSIFIED
DOD DIR. 5200.9 (9/27/58)
Date- 3-13-59
Signature- Carl S. Spencer
December 27, 1943

MEMORANDUM FOR THE PRESIDENT:

General Arnold informed me that at 2:00 P.M. Christmas Day the ten thousandth ton for the month of December went over the Hump into China.
Miss Turner
for your files.
gen. showed to the Pres.
R B
THE WHITE HOUSE
WASHINGTON

January 6, 1944.

MEMORANDUM FOR
GENERAL ARNOLD:

That December record of tonnage carried over the Hump is splendid. It constitutes the only real answer we can give the Generalissimo to make up for the reduction of other operations in Burma. I hope we can keep it up.

P.D.R.

Confidential memorandum for the President 1-5-44, from Gen. H.H. Arnold, giving the tonnage carried over the hump from India to China in December, which broke the former record.
THE WHITE HOUSE
WASHINGTON

February 15, 1944.

MEMORANDUM FOR
GENERAL WATSON

I want to see General Arnold, off the record, and before he comes in will you give the attached to me to read?

F. D. R.

THE WHITE HOUSE
WASHINGTON

MEMORANDUM FOR THE PRESIDENT:

These appointments have been approved:

1. General Arnold, you wished to see "off the record", and he is in town now.
February 8th, 1944

MEMO TO: MARSHALL FIELD
FROM: ALBERT DEUTSCH

I've delayed sending you this memorandum until I received certain documents, including the attached memorandum from Col. Murray. To avoid any possible misunderstanding, I do not intend to make any journalistic use of the material, verbal or written, received from Col. Murray. I am acting in this matter solely as a transmitter of information.

I spent several hours with Lt. Col. John M. Murray and Lt. Col. Roy R. Grinker, talking over the situation which Murray mentioned to you. Both men talked with complete frankness. Both are relatively young, highly regarded by mutual acquaintances. Col. Grinker, as you know, recently returned from the North African theatre of operations, and prepared a report which was published by the Josiah Macy Jr. Foundation for restricted circulation. Both men are psychiatrists attached to the Army Air Forces. Both impressed me as sincere, soundly grounded psychiatrists, unmotivated by undue personal ambitions and concerned with the well-being of their charges in the AAF. Here's the story they told me in brief:

While James C. Magee was Surgeon General, (he was, as you know, an old wheel horse whose inefficiency almost created a scandal before the resident had the sense to retire him), he didn't bother much with the development of medical services for the AAF. This proved to be a blessing, in a way. Gen. David M. W. Grant (medical chief of the AAF—a man of much ability) was able to
build up a highly efficient organization with as good a psychiatric service as was possible. Five general hospitals in the continental U. S. were built up for AAF service. A comprehensive program for giving special psychiatric training to flight surgeons was developed.

This training program was extremely important in view of the special psychological stresses in aviation, and the high psychiatric casualty rate among flying men. A fine esprit-de-corps existed between the medical personnel and the combat personnel of the AAF. Both Murray and Grinker exhibited this feeling for their men in an unusually high degree in their conversations.

Friction and trouble developed when Kirk became Surgeon General. Murray says he got the post through his personal friendship with Secretary Stimson, who pulled him out of an Army hospital to give him the Surgeon General's post. Kirk is regarded as an able hospital administrator, but other sources confirm the characterization made by Murray that Kirk is an irascible, dogmatic, quick-tempered individual, jealous of his power. Murray says he has good authority for a quotation ascribed to Kirk, made soon after he took office, that he was "going to show the AAF crowd their place".

He proceeded by having circulars 165 and 304 promulgated (July and Nov., 1943), which took away the five hospitals from the AAF and terminated the special psychiatric training program for flight surgeons. The circulars, in effect, integrated the AAF medical services and personnel with the regular army's. The AAF medical personnel was, in effect, thrown into the general Army medical pool, and wounded and sick AAF men were treated in the general Army medical facilities, the same as ground forces.
Grant and Kirk clashed bitterly. Lt. General McNary got Kirk and Grant together, gave them both a bawling out and told them to make up and behave thereafter. But McNary did not act on Grant's complaint. Circular letters 165 and 304 were rescinded and replaced by circular letter 126 (January, 1944), which gave back the five general hospitals to the AAF. The special neuropsychiatric training program for flight surgeons was reinstated in the continental U. S.

The situation is at present fairly straightened out as far as medical service in the continental U. S. is concerned. But here's what's happening in the active theatres, according to Cols. Murray and Grinker:

Wounded and sick fliers are sent to Army hospitals and mixed with hospitalized members of the ground forces. They say this is wrong, especially from a psychiatric viewpoint. The flying man's problems are peculiar, and should be treated in a differentiated manner. He is subjected to extraordinary stress. He is taking a terrific beating in winning the war for us. He has only one chance out of five of survival during a regulation tour of twenty-five missions. The strain shows in a high percentage of neuroses—especially that known as "operational fatigue", otherwise known as "flyers' fatigue" or "combat fatigue". AAF men in the theatres of operation show other psychiatric symptoms which are serious, though not serious enough to be diagnosed operational fatigue. There are longer periods of depression. There are heavy drinking bouts, among those who have never before indulged in alcohol. The physical ailments of these men often have a psychological component—in other words, are psychosomatic
in character. Flight surgeons and psychiatric consultants in the AAF, who know the men, are familiar with these symptoms and are being especially trained to diagnose and treat them. The average Army doctor is ignorant of these peculiarities of the flying man. He often does not know how to treat them.

Flying men have a strong sense of identity with each other and with everybody connected with the AAF. This sense of identity is an important factor in recovery. Chances of recovery are lessened when AAF men are mixed indiscriminately with ground forces in hospitals. The sense of identity is weakened. The doctor-patient relationship is greatly strengthened when a flier knows he's being treated by an AAF doctor.

_Hence, Murray and Grinker plead that the AAF be allowed to set up its own station hospitals in the theatres of operation, or at least be given special wards where AAF doctors can treat their own._

As the attached memorandum by Col. Murray shows, they want training courses in neuropsychiatry set up for flight surgeons in the theatres of operation. They think that a special 150-bed hospital for AAF neuropsychiatric cases should be set up in England and a similar unit be established in other theatres of operation.

There is another strong psychological element here. The average Army doctor, Murray and Grinker say, hasn't the strong tie—this sense of identification—that the flight surgeons and AAF psychiatrists feel for the men under treatment.
"We want to give our men the best we have", says Murray. "They're doing a great job. They're taking a terrific beating individually. They deserve the best. We want to return all we can to active duty. If we can't return them to duty, we want to send them out of the Army good enough to take a responsible place in civilian life. We owe it to them." Murray charges, and Grinker backs him up, "That the average Army doctor lacks the sense of identity with his wounded and sick charges." There is a feeling that enlisted men can be gotten for a dime a dozen, and if an enlisted man is not returned to duty he can easily be replaced.

He charges that the whole rehabilitation program is out of joint, partly on this ground. Rehabilitation should begin in the area of operations. It is vital to give the psychiatric casualty treatment promptly and efficiently at the earliest possible moment. It may not only save him for further duty, but can help restore him to useful civilian life. There is a tendency among many doctors to feel that if a man loses his military usefulness, he can be taken care of by the Veteran's Administration and by pensions.

"We feel differently", says Murray. "We don't want to build up an Army of dependents. We don't want to turn loose a lot of prospective fathers whose children will know them only as dependents of Uncle Sam. We want to rehabilitate them before they are mustered out."

This seems to be the spirit that animates the AAF medical man. It is an added argument for having psychiatric cases in the AAF treated by specialists in aviation medicine, in special hospitals or wards. Murray also cites the economic argument.
It takes at least a year to train a flier, at an estimated cost of $30,000 per man.

When in a ground hospital in a theatre of operations, the AAF man is thrown into the general ground forces pool. Upon recovery he may be sent into the ground forces instead of being returned to aviation duties. This is an economic and military waste. The situation has gotten so bad, Grinker says, that flying men in North Africa are advised by their flight surgeons that if they are sent from the hospital into a ground force, they should run away and rejoin their own squadrons where they will be taken care of.

Murray and Grinker say they are medical men, not politicians. They know there is a big struggle for power going on among the top-hats in the Army. They know that Somervell is trying to corral as much power as possible. They know there is a struggle between the top-hats in the AAF and the regular Army generals on the question of independence or subordination.

"This struggle does not concern us", says Murray. "But we feel that the flying man is being victimized by it all. All we want is the chance to give him the best possible treatment when he is sick or wounded. We ask only that we be allowed to do it without restraints which can be traced back to the power-hungry guys."

Murray feels that nothing can be done from below to solve this nasty situation. He and Grinker therefore ask you to put the problem to the proper person and see if some healthy
decision can't be handed down from the top. In brief, they ask for more independence for the AAF medical service. Concretely, they ask for:

1) Special hospitals or wards for AAF men treated by AAF doctors, in the theatres of operation. (A 150-bed hospital in each theatre of operation would be ideal and practical.)

2) Unhampered development of the special training programs for flight surgeons.

3) Minimization of the antagonistic attitude on the part of Surgeon General Kirk toward the AAF medical services.

(Here I should add, Murray and Grinker charge that Kirk's openly hostile attitude has caused serious demoralization among AAF flight surgeons by deliberate obstructionism of AAF medical programs—instanced by the issuance of circular letters 165 and 304, now rescinded, by pulling hundreds of AAF specialists into ground forces duty, and by fostering a spirit of hostility and suspicion among general Army doctors toward flight surgeons.) I asked Murray if what he proposed did not tend to set the AAF man apart from his fellows, promoting the dangerous feeling that he was better than the ground force man and entitled to special treatment and privileges. Murray answered, "All we say is that we want to give our men the best. We want the ground force medical men to give their men the best. There should be no difference in treatment. It should all be the best. All the men deserve it. But no matter what the situation is in other departments, we want to be able to give the best possible treatment to the men we're responsible for."

It's been sometime since I've seen my friend
Edward A. Strecker, who, as you know, is president of the American Psychiatric Association and psychiatric consultant to Secretary of War Stimson for the Army Air Forces. I plan to see him sometime next week, and hope for a full discussion on the subject, without mentioning my conversations with Murray and Grinker. Murray assured me, however, that Strecker is in full agreement with their position.

You will note, that the accompanying memorandum, which Murray asked to forward to you, is signed by Strecker and by Frank Fremont-Smith of the Josiah Macy Jr. Foundation. Dr. Fremont-Smith, who has been in close touch with military psychiatrists, tells me he is in complete accord with Murray's position.
SUGGESTIONS FOR TRAINING OF FLIGHT SURGEONS AND AIR
FORCSE MEDICAL OFFICERS TO DEAL WITH ACUTE WAR NEUROSES,
FLYING FATIGUE, EXHAUSTION STATES, AND SIMILAR SYMPTOMS.

1. The present incidence in theatres of operations of acute
anxiety states, war neurosis, flying fatigue, etc., already presents
a serious problem which will increase rather than decrease in magni-
tude with increase in active operations.

2. The nature and treatment of these conditions is significantly
different from the type of breakdown occurring in this country during
the period of training. Experience with cases in this country is quite
inadequate to prepare the medical officer to handle the increasing num-
er of cases occurring in the theatres of operations.

3. It is not possible to provide a sufficient number of psy-
chiatrists to handle these cases. Moreover, most psychiatrists have
had little or no experience with this clinical picture.

4. The recognition, treatment, and particularly the prevention
of breakdown in the theatres of operations must be the responsibility
of the Flight Surgeon.

In order to train a sufficient number of Flight Surgeons to
handle this responsibility, it is proposed:

a. That there be established in each major theatre of
operation one or more treatment centers for these cases,
under the direction of a psychiatrist who is a rated
Flight Surgeon and who has had first-hand experience.

b. That small groups of Flight Surgeons be sent every
four weeks to each of these centers for special training
of eight weeks' duration (it would be wise to start with
not more than five in each group) (this might be enlarged
after the program is under way).

These Flight Surgeons, chosen because of special interest
in this problem (the first group should include a few
psychiatrists if possible), would act much as "clinical
clerks" at the treatment center, at first observing, but
within a few days actively participating, under supervision,
in treatment. In addition to clinical duties the men would
participate in group discussions and in the study of special
literature, such as Grinker's monograph "War Neuroses in
North Africa". At the end of eight weeks' special duty
these men would be distributed as follows:

1) Some would be assigned as Flight Surgeons to
units in active operation.

2) Some would be returned to this country to
participate in teaching and training programs.
3) From the first groups a few would be selected to remain on the staff at the treatment center and thus enlarge its teaching facilities as future needs indicate.

These Flight Surgeons, trained to deal with the special psychiatric problems of the Air Forces, will be very valuable later, particularly during the post war period in the Convalescent Training Program. There will be a tremendous shortage of psychiatrically trained personnel unless steps are taken now to supply more such training.

While it is recognized that these men would not be fully trained psychiatrists, it is believed that they would have far more practical knowledge in dealing with the most prevalent and important neuropsychiatric disability occurring in the Air Forces, and would be better able to handle these cases successfully than the majority of well-trained psychiatrists who have had no actual contact with these patients.

5. It is also believed that in order to treat and actively rehabilitate the more severe cases who have become chronically ill and have been returned to this continent, it will be essential to have a considerable number of medical officers who have had first-hand experience with the acute phases of these war neuroses.

It should be recognized that while the problem of acute war neuroses, battle fatigue, etc., occurring in the Air Forces, is similar in many respects to the type of breakdown occurring in the Army Ground Forces, there are particular problems relating to flying personnel, especially, but also to all Air Force Personnel, which make it essential that the treatment of these cases from the outset be in the hands of Flight Surgeons who have, from first-hand experience, a knowledge of the special conditions to which Air Forces personnel is exposed by the special nature of air operations, and also who have a genuine understanding (which can only be obtained by first-hand experience) of the particular elements which go to make and to break morale in the Air Forces personnel.

It is impossible for a physician who has not lived with flyers to understand them, and the flyers are the first to recognize this fact.

6. It should be emphasized, therefore, that the training program here outlined is predicated upon the assumption that Air Forces casualties will be handled from the outset by the Flight Surgeon and other medical officers of the Air Forces.

* * * * * * *

4 January 1944

JOHN M. MURRAY, Lt. Col., MC
Dr. Frank Fremont-Smith
Dr. Edward A. Strecker
February 24, 1944

MEMORANDUM FOR MISS TULLY:

General Arnold has spoken to General Marshall about a letter which Marshall Field wrote the President recently. Transmitted with the letter were reports by three prominent civilian doctors to the effect that they did not believe the Army was doing the best possible job in rehabilitating officers and enlisted men returned from overseas. To the contrary, the doctors reported, the Air Forces had adopted a very intelligent program and were realizing good results from it.

General Marshall is naturally eager to have the whole Army benefit from such procedure as the Air Force has found so effective and for this reason, he requests that he be permitted to see the letter from Mr. Field and its accompanying papers.

Could you let me know whether there is any objection or whether it will be all right for Mrs. Eden to let us see the papers.

McCarthy
WAR DEPARTMENT
HEADQUARTERS OF THE ARMY AIR FORCES
WASHINGTON

March 30, 1944

MEMORANDUM FOR THE PRESIDENT:

In connection with your letter from Harry Hopkins reference Colonel Sol Rosenblatt's detail to Russia, I have talked the matter over with Colonel Rosenblatt and, at the moment, he is engaged in duties of such character that I can ill afford to spare him just now. In this, Colonel Rosenblatt agrees. Accordingly, I would suggest that this matter be held in abeyance for awhile.

W. H. ARNOLD,
General, U. S. Army,
Commanding General, Army Air Forces.

Incl:
Memo for Gen. Arnold
3/29/44 from President
Memo for the President
3/28/44 from Harry L. Hopkins.
THE WHITE HOUSE
WASHINGTON

March 29, 1944.

Personal and

MEMORANDUM FOR

GENERAL H. H. ARNOLD:

Dear Hap:

What do you think?

F.D.R.
March 28, 1944

MEMORANDUM FOR THE PRESIDENT:

My dear Mr. President:

There is a military mission, I understand, that is in Russia.

I have a note this morning from Sol Rosenblatt who is very anxious to go to Russia to explore and help with the whole question of supply and maintenance for our air planes and other air materiel that we are giving to the Russians.

Sol wants very badly to go. He has done this kind of a job in India and the Middle East and done it very well.

If you would approve it, I am sure Arnold would readily agree. I think Sol has been so helpful in a number of ways that he has got it coming to him.

Sincerely yours,

HARRY L. HOPKINS
THE WHITE HOUSE
WASHINGTON

March 29, 1944.

Personal and Confidential

MEMORANDUM FOR
GENERAL H. H. ARNOLD:

Dear Hap:

What do you think?

F.D.R.

Memo for the President, 3-28-44 from Harry Hopkins, re military mission in Russia, and that Sol Rosenblatt is anxious to go to Russia to explore and help with the question of supply and maintenance for our airplanes and other air materiel that we are giving to the Russians.
MEMORANDUM FOR GENERAL WATSON:

Subject: Proposal of a New Air Freight System Between India and China.

Returned herewith is the paper secured today from your office.

In my conference with the President, I made the following points with him:

a. At this writing a total of 28,000 tons is required for the military effort in China, all of which must go over the Hump. Of this, over 8,000 tons are required by the B-29s. This leaves a balance of about 19,000 tons required for the other military effort.

b. The best we have done so far by Air Transport Command is 15,000 tons, thus there will be a shortage of 4,000 tons. Until this shortage is obtained, we should not do anything with reference to providing goods for civilian use.

At this time there are no air fields around Calcutta that are not used to the maximum. There is a shortage of gasoline in that area and the railroad from Calcutta and the steamers on the Brahmaputra River are all used to their capacity. So quite obviously we have a difficult problem on our hands, if we do nothing more than meet military requirements.

I suggested to the President and he notified Dr. Kung that this matter was under study so let it go at that, until we are called upon for a more definite reply.

The President apparently agreed.

H. H. ARNOLD,
General, U. S. Army,
Commanding General, Army Air Forces.
PROPOSAL OF A NEW AIR FREIGHT SYSTEM
BETWEEN INDIA AND CHINA

I. Introduction

China is entering into her eighth year of war against Japanese aggression. In a strictly military sense the Japanese have had no major successes in the past five and a half years since the fall of Hankow in 1938, until their most recent offensive along the Peiping-Hankow-Canton Railway. However, the sustained Japanese blockade since the close of the Burma Road in 1942 has produced the severest effect on China's civilian economy. While the Chinese people have stood unalteringly firm through the ordeal of Japanese indiscriminate bombings and other acts of terror, they are now beginning to show signs of exhaustion and war weariness under the burden of the worst economic pressure ever experienced by any people in the world. The critical nature of the present situation within China and the seriousness of its consequences on the Allied war effort in the Far East cannot be over-emphasized. The decline of civilian morale, accentuated by the unfulfilled expectation of the re-opening of the Burma Road last fall, must have had a great deal to do with the recent reverses suffered by the Chinese armies.

II. Objectives

No nation can survive a long war without an active civilian economy in support of the military effort. While China has tried her best to cut down the consumption of civilian necessities and to attain an economic self-sufficiency during the two years of complete blockade, the loss of rich productive coastal provinces, the concentration of population in the hinterland provinces due to mass migration, the shortage of essential materials and tools for production, the gradual breaking down of internal highway transport due to the shortage of automobile parts and fuels, all lead gradually toward the condition of economic stagnation. A pre-war annual import of about three hundred million U. S. dollars, mostly of civilian goods, cannot be entirely discontinued without producing profound effects on China's national economy.

For immediate relief it is believed that with 5,000 tons per month of imported civilian goods available on the Chinese markets, the commodity prices could be lowered to a considerable degree, thus contributing substantially toward the relieving of the hardships of the Chinese people and, as a result, the bolstering of the civilian morale. In this proposal a new air freight system is recommended between India and China for the exclusive transportation of civilian goods into China. On the return trips of the cargo planes, strategic materials such as tungsten, tin, antimony, mercury and so forth, could be delivered to the United States in the interest of the common war effort of the two countries, and as a further stimulation to China's civilian economy through the cycle of foreign trade.
III. Routes

In view of the already congested traffic in the area of Dibrugarh, a base further west should be used as the India terminal of the proposed air freight system. As may be seen from the attached map, Tezpur, or a base in its vicinity, would be selected to serve as this terminal. From Calcutta, inbound cargo could be transported to Tezpur by water and/or by railway. It is believed that the transportation capacity of the water and railway routes could be much improved under more efficient management. If necessary, planes could even be loaded and unloaded at Calcutta, using Tezpur as a refueling base both on inbound and outbound flights. Planes would normally start their flights from Tezpur and go over the "Hump" in the regions around Tali where flying conditions and altitude are more favorable. From Tali they could fly further on to Chengtu, Suiifu, Chungking and Kuming. As distribution centers Chengtu would serve the Northwestern area and Kuming the Southwestern area, while Suiifu and Chungking, although already heavily laden with traffic of the existing air freight route, could be used alternatively to serve such neighboring regions like the provinces of Hunan, Hupei, Kiangsi, Shansi and Honan. No fuel would be taken on at any of these aforementioned four cities and all planes would unload and reload cargo from these cities and return to Tezpur for refueling. Under such an operation, the payload on the return trip would, of course, be greater than the payload into China. The distances between Tezpur and Chengtu, Suiifu, Chungking and Kuming are as follows:

<table>
<thead>
<tr>
<th>Route</th>
<th>Distance</th>
<th>Round Trip</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Tezpur to Chengtu</td>
<td>886 miles</td>
<td>1772 miles</td>
</tr>
<tr>
<td>From Tezpur to Suiifu</td>
<td>816 miles</td>
<td>1632 miles</td>
</tr>
<tr>
<td>From Tezpur to Chungking</td>
<td>940 miles</td>
<td>1880 miles</td>
</tr>
<tr>
<td>From Tezpur to Kuming</td>
<td>639 miles</td>
<td>1272 miles</td>
</tr>
</tbody>
</table>

IV. Equipment

It is estimated that to transport 5,000 tons per month of civilian goods into China a fleet of 56 C-54A type transport airplanes or its equivalent would be required. The C-54A's with a practical take-off weight of 62,000 lbs. have the highest payload per trip among the available cargo planes in production. However, certain alternate choices may be considered in case of the limitation of availability of C-54A's, such as substitution of a portion of the fleet by C-87's and/or C-46's. The basic consideration is that all the planes should carry enough fuel for a round trip plus a sizeable amount of cargo.

V. Operations and Tonnage

The operations and tonnage of the proposed air freight system naturally will depend upon the number and type of aircraft available.
For preliminary discussion an example is set forth herewith of how monthly quota of 5,000 tons could be met with the use of C-54 A type transport planes. It is pointed out that because of fuel limitations an aircraft would, from a practical standpoint, contact only one of the four Chinese terminals on each trip. The payload per plane from Tezpur to these terminals is as follows:

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Monthly Tonnage In</th>
<th>Number of Active Aircraft Required</th>
<th>Monthly Tonnage Out</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chengtu</td>
<td>3.85 short tons</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chungking</td>
<td>3.36 &quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kunming</td>
<td>5.52 &quot;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suifu</td>
<td>4.40 &quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The payload on the return trip from each of the four points would be 15,000 lbs. (the higher payload on the return trip is due to the reduction in gas load.) With 56 planes in the fleet, approximately 46 would be available at all times. This allows 20% spares for maintenance, repair and overhaul. The distances involved and the speed of the aircraft would permit each aircraft to make one round trip per day from Tezpur to one of the Chinese points. It is also assumed that in a month's period 90% of the scheduled flights would be completed, 10% cancelled due to weather, and other reasons. This gives 27 operation days in a month.

If the monthly total of 5,000 tons is divided among the four Chinese terminals in accordance with their respective needs, the following are the number of active airplanes which should be assigned to each of the four routes and their corresponding tonnage on the return trips: (For detailed calculation, please see appendix.)

In considering other types of aircraft it should be pointed out that no other type has the high payload per trip that the C-54A has. Therefore, it would seem that no other type is as desirable as the C-54A. However, certain alternate choices should be considered.
VI. Personnel

An estimate of the personnel requirements indicates that about one thousand air crew members and three thousand ground crew members would be needed for the operations of such an undertaking. While a certain amount of personnel could be supplied from China, it is anticipated that a larger portion of air crews and ground technical crews would be drawn from the U.S.A., either through the operation of the U.S.A.A.F. Air Transport Command or contracts with American carriers.

VII. Conclusion and Recommendation

Cost figures are not included in this proposal as it is believed that immediate relief of the acute shortage of civilian goods now prevailing in China should be done at all costs. Even if the Ledo Road through India, North Burma, and China could be successfully opened before the end of the year, the substantial tonnage carried by the proposed air freight system, reaching directly to the interior of China, would serve its distinct field of utility and justify its continuous operation until more substantial tonnage could be brought in by sea. Any possible diversion of air crew and equipment from the European Theater to the Far Eastern Theater this year, through the success of the Allied campaign on the continent of Europe, may be utilized in multiplying the operations and tonnage carried on the proposed air freight system.

It is strongly recommended therefore that immediate requisition be submitted under the Lend Lease program to procure a fleet of fifty-six C-54A's or its equivalent planes to carry out the proposed plan.
APPENDIX

**ESTIMATES TO DELIVER FIVE THOUSAND TONS PER MONTH WITH C-54A'S**

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Monthly Tonnage</th>
<th>Inbound Quota</th>
<th>No. of Round Trips</th>
<th>Inbound Payload Per Pl.</th>
<th>No. of Aircraft Required</th>
<th>Monthly Outbound Tonnage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tezpur</td>
<td>Chengtu</td>
<td>1300</td>
<td>48.2</td>
<td>1</td>
<td>3.85</td>
<td>13</td>
<td>7.5</td>
</tr>
<tr>
<td>Tezpur</td>
<td>Chungking</td>
<td>1200</td>
<td>44.5</td>
<td>1</td>
<td>3.36</td>
<td>13</td>
<td>7.5</td>
</tr>
<tr>
<td>Tezpur</td>
<td>Kunning</td>
<td>1100</td>
<td>40.7</td>
<td>1</td>
<td>5.52</td>
<td>7</td>
<td>7.5</td>
</tr>
<tr>
<td>Tezpur</td>
<td>Suifu</td>
<td>1400</td>
<td>51.8</td>
<td>1</td>
<td>4.40</td>
<td>12</td>
<td>7.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5000</td>
<td>185.2</td>
<td></td>
<td>45</td>
<td>56</td>
<td>7.5</td>
</tr>
</tbody>
</table>

The above figures are based on the performance and operation data of C-54A aircraft listed below:

- Gross Weight at Takeoff-Lbs. 62,000
- Empty Weight + Crew Wt.-Lbs. 28,000
- Fuel + Payload Wt.-Lbs. 24,000
- Cruising Speed at 10,000 Ft.-MPH 198
- Fuel Consumption - Gallons/Hr. 198
- Estimated Fuel Required (Still Air)*
  - Tezpur to Chengtu - Gals. 1,351
  - Lbs. 8,108
  - Tezpur to Chungking - Gals. 1,434
  - Lbs. 8,602
  - Tezpur to Kunning - Gals. 1,065
  - Lbs. 5,321
  - Tezpur to Suifu - Gals. 1,258
  - Lbs. 7,549

*Figures indicate gallons consumed on flight into China only. Double for round trip, add 35% for reserve-10% for wind, 25% absolute reserve.
Proposed Air Freight System

Scale: 1/4,000,000
August 23, 1944.

Dear Mapi:

I have inspected with much interest the model of the jet propelled, P-59A, Airacomet, which I appreciate your sending to me.

As your accompanying memorandum stated, this plane represents a significant milestone in aviation history, and the possibilities in the field it has opened to us are staggering to the imagination.

It will be a pleasure to have this model in my collection.

Always sincerely,

[Signature]

General H. H. Arnold,
Army Air Forces,
Pentagon Building,
Washington, D. C.

(Secrest plane in study)
HEADQUARTERS, ARMY AIR FORCES
WASHINGTON

19 August 1944

MEMORANDUM FOR THE PRESIDENT:

Knowing your deep interest in the development of new type airplanes, I am sending you a model of our first jet propelled airplane, the P-59A, AIRACOMET, which made its initial flight on October 1, 1942.

Although many improvements have since been made in jet propulsion, the P-59A represents a significant milestone in aviation history.

Incidentally our jet propelled planes have attained speeds in excess of 550 miles per hour.

H. H. ARNOLD
General, U. S. Army
Commanding General, Army Air Forces
23 August 1944

My dear General Arnold,

I have inspected with much interest the model of the jet propelled, P-59A, Airacomet, which I appreciate your sending to me.

As your accompanying memorandum stated, this plane represents a significant milestone in aviation history, and the possibilities in the field it has opened to us are staggering to the imagination.

It will be a pleasure to have this model in my collection.

Sincerely yours,

General H. H. Arnold,
Army Air Forces,
Pentagon Building,
Washington, D. C.
1. Model to be closed up and put in President's study until such time as it is no longer classified material and can be sent to Hyde Park.

2. Copy of letter from President to General Arnold acknowledging receipt plus copy of General Arnold's accompanying memo to the President to go in box.

3. Letter from President to General Arnold to go to Miss Tully for signature.
23 August 1944

Dear General Arnold,

I have inspected with much interest the model of the jet propelled, P-59A, Airacomet, which I appreciate your sending to me.

As your accompanying memorandum stated, this plane represents a significant milestone in aviation history, and the possibilities in the field it has opened to us are staggering to the imagination.

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Sincerely yours,

General H. H. Arnold,
Army Air Forces,
Pentagon Building,
Washington, D. C.
#1 - This is the German bomb damage to the Portal of the Athenaul Roman Concert Hall in Bucharest. The German attack was carried out on the day after Rumania surrendered to the Allies.
Another building in Bucharest bombed by Germans after Rumania's surrender was the employer's credit building on Strada SF. Ionica.
#3 - Ploesti story: The bombing of Marshalling yards and bridges in the Balkans helped keep the Huns from getting the little oil still handled in the Ploesti Refineries. Wreckage shown here is in the repair shops of The Bucharest Marshalling Yards.
\#4 - Wrecked railcars still stand in the rail yards at Bucharest, Rumania after heavy bombers of the 15th Air Force did their destructive job on this important rail link.