

United States Senate  
Special Committee Investigating  
The National Defense Program

CONFIDENTIAL

Temporarily at Hotel St. Francis  
San Francisco, California  
August 6, 1942

Honorable Harry S. Truman  
Chairman, Special Committee  
Investigating War Program  
U. S. Senate Office Building  
Washington, D. C.

Dear Harry:

At the request of Senator Mon C. Wallgren, I am enclosing the following instruments:

1. Copy of newspaper release made in Los Angeles, California, August 4, 1942, on behalf of the Subcommittee on Aviation and Light Metals following conclusion of investigations in Spokane, Seattle, Portland, San Francisco, Los Angeles and San Diego.
2. Confidential preliminary findings and recommendations of Subcommittee on Aviation and Light Metals as approved by Senator Wallgren and myself at San Francisco August 5.

Charles P. Clark, as counsel for the Subcommittee, assisted in preparation of the above instruments. Senator Carl A. Hatch accompanied the Subcommittee thruout its investigation but had returned to New Mexico before the above instruments were prepared. It had been expected that he would rejoin the Subcommittee in San Francisco in order to accompany it on its proposed trip to Alaska. However, we have received notice that he will be unable to do so. We are, therefore, sending these instruments to you without his having had an opportunity to examine them but we are sending copies of them to his office in Washington. We are advising him that the originals are being sent to you and we are requesting him to advise you as to whether or not they meet with his approval. We believe that they express with substantial accuracy his point of view as well as ours.



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Hon. Harry S. Truman

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The enclosed preliminary findings and recommendations have been prepared with a view to giving you the Subcommittee's suggestions at this time but no publicity has been given to these findings or recommendations. A number of these suggest prompt action on the part of your Committee as a whole or on the part of its staff and your personal consideration of the recommendations is respectfully requested.

Senator Wallgren and I expect to confer with Senator A. B. Chandler today and with Lieutenant General John L. De Witt tomorrow as to the proposed trip to Alaska by Senator Chandler's Subcommittee of the Committee on Military Affairs and our own Subcommittee. We understand that Senator Chandler's Subcommittee includes Senators Wallgren, Holman and Gurney and that it will be accompanied by a Mr. Malone as its secretary. Our Subcommittee will consist of Senator Wallgren and myself and will be accompanied by Charles P. Clark as counsel. Both Subcommittees probably will leave Spokane early on Monday, August 10 and will be in Alaska for two or three weeks. Some reference to the value of this trip to your Committee is made in Section III of the enclosed confidential report under the title of "Defense of Light Metal, Aviation and other Critical Industries on the Pacific Coast and in Pacific Northwest".

With personal and cordial regards.

Yours sincerely,

HHB:HM

Harold H. Burton.



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RELEASE BY TRUMAN SUBCOMMITTEE, 9:30 AM, Aug. 4, 1942

The Subcommittee of the Truman Committee to investigate the war program, especially as to light metals and aviation, has completed its preliminary investigation in Southern California.

It is submitting a confidential report to the whole Truman Committee in Washington, D. C. and is proceeding to investigate the war program in Alaska. It cannot disclose its findings and its recommendations made to the whole committee but on behalf of Sen. Mon C. Wallgren (D.) of Washington, Chairman of the Subcommittee and Sen. Carl A. Hatch (D.) of New Mexico, who have already left Los Angeles, as well as on their own behalves, Sen. Harold H. Burton (R.) of Ohio, and Charles P. Clark, counsel for the Subcommittee made the following statement as to the observations of the Subcommittee members during their visit to California:

"1. The aviation industry is making extraordinary progress with the war program. This includes the production of bomber, pursuit, cargo and other types of airplanes.

"2. The excellent cooperation within the Aviation Industry in Southern California is well evidenced by the Aircraft War Production Council

"3. The aviation industry is to be congratulated upon its constructive approach to its task and upon the diligence and loyalty both of its management and its workers. The way in which the men in the industry have received women into their ranks and the way in which the women have responded is highly commendable.



"4. The aviation industry has made and is making great strides toward increased transportation of men and freight by air. The new interest of Henry J. Kaiser and of the nation in this program is welcome. The Subcommittee, however, is making a special report to the whole committee on this, having in mind the grave necessity for not destroying and not weakening, in any degree at this time, the great program of bomber and fighter plane construction. The Subcommittee emphasizes the necessity for not diverting from the aviation and ship industries, or other branches of our service, the vitally essential, but definitely limited, supplies of suitable raw materials, critical equipment, trained personnel, plant facilities and engineering skill upon which our war program depends. It emphasizes also the time element of from one to two years involved in the proposal.

"5. The adequate defense by air, of the aviation and ship building plants and light metal industries on the Pacific Coast deserves greater attention.

"6. The housing shortage in Southern California is closely related to the rubber shortage. Attention is recommended to the reality of the rubber shortage as presented in a recent special report of the whole Committee. The housing shortage calls for consideration on a nation wide as well as local scale.

"7. The vigorous prosecution of an offensive to clear the Aleutian Islands and neighboring waters from enemy control, is essential to our own war program. It deserves immediate vigorous, united action from those charged with the executive direction of the war. The Subcommittee is determined to bring to the Senate and the nation the fullest possible realization of this need."



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San Francisco, Calif.  
August 5, 1942.

To: Harry S. Truman, Chairman, and Committee  
From: Senators Wallgren, Hatch, and Burton,  
and Charles Clark, Counsel.

Subject: Confidential Preliminary findings and recommendations of  
Subcommittee on Aviation and Light Metals and other matters  
consistent with S.R. -71.

ITINERARY: The following places and plants were visited by the Sub-  
committee --

July 20, 1942

SPOKANE, WASH.

- (a) ALCOA aluminum plant, in production.
- (b) Aluminum Rolling Mill, under construction.
- (c) Magnesium plant in early stages of construction.
- (d) Geiger, Bomber Training Field.

July 21, 1942

SPOKANE TO SEATTLE, WASH.

- (A) Conference with Maj. Gen. Robert Olds, Commanding General,  
Second Air Service Area.
- (b) Grand Coulee Dam on Columbia River, the source of power for  
light metal plants in that region. Conference with Dr. Raver,  
Administrator of Bonneville Power Administration and staff.
- (c) Conference with Lt. Col. Irving, Commanding Officer of Paine  
Field, Air Combat Defense Service, Everett Washington.

July 22, 1942

Seattle, Wash.

- (a) Boeing Flying Fortress Plant. Conference with president  
Philip Johnson and staff.



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- (b) Olin Corporation Aluminum plant nearing completion near Tacoma. Conference with staff.

July 23, 1942

SEATTLE, WASH. TO PORTLAND ORE.

- (a) Conference with Commander Peck, Commanding Officer, Naval Air Combat Force, Seattle.
- (b) Bremerton Navy Yard, Conference with Rear Admiral S. A. Taffinder and staff.
- (c) Conference at Olympia with Maj. Gen. Muir, Commanding General, Ground Forces in Washington-Oregon, and his staff.

July 24, 1942

PORTLAND, OREGON

- (a) Kaiser Company Shipbuilding Plant, Vancouver, Washington.
- (b) Bonneville Power Plant.

July 27, 1942

SAN FRANCISCO, CALIFORNIA

- (a) Conference with Lt. General John L. DeWitt, Commanding General, Fourth Army, and Western Defense Command, and with Vice Admiral Greenslade, Commanding Officer of Naval Forces.
- (b) Conference with Brig. Gen. Kepner and visit to Unified Command and Interceptor Command Headquarters.

July 28, 1942

- (a) Henry J. Kaiser's Permanente magnesium, ferro-silicon and cement plants.
- (b) Air survey of San Francisco harbor and Mare Island shipyards with Vice Admiral Greenslade and his staff.



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July 29, 1942

LOS ANGELES, CALIFORNIA

Japanese Assembly Center at Santa Anita. Conference with Officials in charge.

July 30, 1942

Douglas Aircraft Plant. Conference with Donald Douglas and staff.

July 31, 1942

- (a) North American Aviation Plant. Conference with J. H. Kindelberger and staff.
- (b) Northrop Aircraft Plant. Conference with L. T. Cohu and Staff.

August 3, 1942

SAN DIEGO, CALIFORNIA

- (a) Conference with Rear Admiral Ralston Holmes, Commandant, Eleventh Naval District and Staff.
- (b) Consolidated Aircraft Plant. Conference with T. M. Girdler and staff.

August 3, 1942

LOS ANGELES, CALIFORNIA

- (a) Lockheed Aviation Plant. Conference with Robert Gross and staff.

CONFIDENTIAL PRELIMINARY  
FINDINGS AND RECOMMENDATIONS.

I. LIGHT METALS

A. ALUMINUM

The Sub-committee found capacity production of aluminum by ALCOA at Spokane, Wash., together with definite plans and provisions for tripling present capacity. This program depends on security of the power supply from the Grand Coulee Dam. Ample water power exists there and provision is being made for the installation of necessary generating machinery to meet future demands.



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This production also depends on continued supply of raw materials such as bauxite, kryolite and carbon. The supply of bauxite from South America depends on security of transportation by sea. The supply of kryolite depends on security of the supply in Greenland and its transportation by sea. This suggests the need for careful attention to the defense of these critical supplies and to the development of additional and alternate sources of supply, at least in the case of bauxite.

Substantial progress is indicated through the construction by the Olin Corporation of its aluminum plant near Tacoma. This plant soon will be in operation. In addition to its production of aluminum through established procedure it will experiment with a new process to develop aluminum from domestic materials, especially alunite and domestic clays abundant in the Pacific Northwest. The success of these experiments will be determined within a few months.

There is indication that kryolite may be produced synthetically. Attention should be given to such process as an alternative source of supply.

The aluminum rolling mill being built near Spokane will provide an important facility making aluminum available promptly in the Pacific Northwest. It should become an important asset in the defense program. It will be important in eliminating a transportation bottleneck.

B. MAGNESIUM

Great interest is shown in this important new metal by the aviation industries. The Northrop Aircraft Company is conducting important experiments in magnesium, as an alternative largely for aluminum. The Committee can render valuable service by following the development of magnesium carefully with a view



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to encouraging and hastening its use and in helping to discover the best of the several processes proposed for its production.

1. The most advanced process within the notice of the Subcommittee was the carbo-thermic (or electro-thermic) process used in the Permanente plant near San Francisco, Calif. This plant is under the management of Henry J. Kaiser. This process was developed originally by Hansgirg but recently it has been substantially improved. This plant is producing magnesium by this process and is ready to expand.

2. Another plant producing magnesium is managed by Henry J. Kaiser at Manteca, near Stockton, Calif. It uses ferro-silicon made at his Permanent plant. The Manteca plant was not visited by the Subcommittee but should be included in any survey of the magnesium program. The Carbo-thermic process is sponsored by the Kaiser Company with the aid of the Reconstruction Finance Corporation while the ferro-silicon process is sponsored by the government through the Defense Plant Corporation. Henry J. Kaiser has exclusive control over the carbo-thermic process. The cost of producing magnesium through the carbo-thermic process is about 15¢ a pound whereas the cost of the ferro-silicon process is about 30¢ a pound. Kaiser is expanding his carbo-thermic facilities from one to four units and his ferro-silicon unit from one to eight.

3. A Plant to produce magnesium is being built and is to be managed by Basic Magnesium, Inc., near Las Vegas, Nevada. This is due to commence operations before September 1. It has, however, become something of a political issue and it should be carefully studied and reported upon after election time so that the Truman Committee's action will not be misinterpreted or given political significance.



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They use a process developed by an English company, Magnesium Elektron, Limited.

4. The magnesium plant, the construction of which is in its early stages near Spokane, has been long delayed. An investigation should be made to determine the cause of this delay.

5. A process, known as the Doerner process, which was developed at the Agricultural State College at Pullman, Washington, has not been put in operation. The Sub-committee feels that a study and test should be made of this process to determine its value.

## II. AVIATION

### A. GENERAL

The aviation industry is making great strides on the Pacific Coast. Excellent cooperation within the industry is evidenced in the Aircraft War Production Council. This grew out of a previous suggestion of the Truman Committee. It acts as a clearing house within the industry in Southern California. All plane manufacturers are doing their utmost to meet the steadily increasing demand for their product. In most cases they are now up to or ahead of their prescribed schedules whether for bomber, pursuit, cargo or other types of planes.

A major complaint voiced by nearly all airplane manufacturers was their inability to use their full productive facilities. In most cases they are producing at about sixty per cent of capacity. Generally they said that the reason for their failure to reach maximum production was their inability to secure the necessary "government furnished equipment" or supplies from sub-contractors. It often was said that the aviation industry, with its present facilities, could double its production if supplied with the parts and materials required for that production. The industry looks with concern upon the



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definitely limited supply of the basic raw materials required for plane production. This reaches back to such materials as aluminum, steel and copper. The industry is affected by the rapid turn-over of labor, some pirating of labor, a shortage of housing and a lack of adequate air defense against possible enemy raids.

The aviation industry deserves the continued vigorous attention and support of the Truman Committee. It should be the subject of an early nationwide committee report emphasizing the extraordinary progress that has been made by the industry as well as the limitations that confront it.

The Sub-committee had heard statements from many of the executives interviewed that, in spite of wide publicity, the Ford Motor Company has not yet completed any bombers nor supplied any supercharges to other manufacturers. The national program is thereby delayed although temporarily the industry has been able to keep up with its schedule elsewhere. This deserves investigation at once.

The industry has made marked progress in the employment and training of women. In the Pacific Coast plants, from eleven to twenty-four per cent of their employees are women. The executives comment favorably on the spirit, loyalty, industry and aptitude of the women.

B. KAISER'S PROPOSED FLYING CARGO SHIPS

This project has been given great publicity but needs prompt well-considered study and a frank analysis and evaluation of the fundamental considerations involved.

There already is in effect a well developed air cargo program which includes transport planes of the Army and Navy. These planes are in use, under construction, and in course of further design. It includes not only the commercial



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passenger planes developed by privately owned transportation companies before the war, but also those like the Douglas C-54 which were designed and ordered by these private companies and which are being produced at about twice the size of the present commercial planes. These will carry about 55 men each. Another proven cargo ship is being produced by Curtiss-Wright. The cargo ship program includes the Lockheed Constellation and the Martin Mars, but both are in the experimental stage.

There must be considered the limitations already pressing on the industry in the form of shortages of "government furnished equipemnt", parts and basic materials. These shortages apply to all models of bomber, pursuit, cargo and other planes. A diversion of any substantial quantity of these items to a great cargo ship program would disrupt the entire aviation program now in effect.

There is an important limitation existing in the available basic raw materials such as aluminum, Copper, steel, magnesium and other metals required especially in the aviation industry. While readjustments to restrict the use of these metals elsewhere could increase their availability for the Kaiser program, the burden of such restriction would inevitably fall primarily on the bomber and fighter plane program which is essential to our successful prosecution of the war.

The same danger arises from any substantial diversion of skilled personnel. Engineering personnel is at a great premium here. The aviation industry involves a far greater proportion of engineering effort than does the shipbuilding or other less technical or novel industries.

The shipyards and ways now in use for building ships are not readily



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adaptable to conversion to airplane production. To divert any part of the present aviation plant capacity to a new large air cargo program would seriously impair the war effort.

There is a tremendously important element of time involved in the production of the Kaiser Flying Cargo Ships. No responsible estimate of less than one year has come to the Sub-committee's attention. It is generally estimated that it would take two years to get into any appreciable production of the flying ships and that they still would be experimental models.

The difficulty which the Ford Motor Company has had in entering into the actual production of air ships indicates the still greater difficulty that would confront anyone attempting to pass from a general contracting or shipbuilding industry into the highly technical and specialized field of aviation.

Recognizing that the shipbuilding and present airplane programs cannot be permitted to cease it is obvious that the addition of a great program of Flying Cargo Ships would aggravate many of the existing transportation, labor and housing shortages.

In view of the extraordinary genius and demonstrated production record of Henry J. Kaiser, any suggestion from him is entitled to respectful and careful consideration. On the other hand when the proposal involves entering into a new industry and possible jeopardizing the entire war program of the country, it must also receive a through analysis and evaluation of its practicality before it is endorsed or undertaken. It may be that there will be derived from this proposal important suggestions beneficial to the aviation industry particularly in the field of cargo and troop transportation. A joint study of the proposal by the aviation industry in a friendly but thoroughly realistic manner would be of



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substantial value and certainly should precede any disruption of the program now in progress. The requirements of the new program must be weighed against all other uses of material, equipment, plant capacity, labor and engineering skill.

The above observations are based upon the familiarity of the members of the Sub-committee with the aviation industry, the availability of all raw materials, the availability of labor and the housing problems which are incident thereto. It is based also upon an apparently unanimous opinion on the part of the executives in the industry. The Sub-committee discussed this matter confidentially with each of these executives interviewed. Each of them indicated a generous and patriotic willingness to cooperate in every way possible with this or any other development in the aviation industry. Each of them expressed an entire willingness to follow whatever policy shall be determined upon by the government. To that end they were willing to modify existing programs and do everything possible to conform to the policy adopted. There was, however, a striking unanimity of opinion emphasizing the probable impracticality of the Kaiser proposal in the form in which it was presented through the newspapers. While maintaining a thoroughly open-minded point of view their experience is well reflected in the above recommendation of this Sub-committee.

On August 4th, the Sub-committee included the following statement in its press release in Los Angeles upon completion of its investigation of the Pacific Coast airplane plants:

"The aviation industry has made and is making great strides toward increased transportation of men and freight by air. The new interest of Henry J. Kaiser and of the nation in this program is welcome. The Sub-



committee, however, is making a special report to the whole committee on this, having in mind the grave necessity for not destroying and not weakening in any degree at this time the great program of bomber and fighter plane construction.

The Sub-committee emphasizes the necessity for not diverting from the aviation and ship industries, or other branches of our service, the vitally essential, but definitely limited, supplies of suitable raw materials, critical equipment, trained personnel, plant facilities and engineering skill upon which our war program depends. It emphasizes also the time element of from one to two years involved in the proposal."

III. DEFENSE OF LIGHT METAL, AVIATION AND OTHER CRITICAL INDUSTRIES ON THE PACIFIC COAST AND IN PACIFIC NORTHWEST.

This calls for a confidential consideration of military and naval policies which should not be made the subject of a public hearing or a public report. The Sub-committee, however, has not hesitated to confer with military and naval officers on these questions because of their vital bearing upon the industries concerned. These industries are essential to the successful conduct of the nation's war program. Destruction or serious damage to any of the light metal, aviation or shipbuilding plants which have been visited by this Sub-committee would impair seriously the war program. Closely related to the light metal industries are the vital power plants at Bonneville and Grand Coulee Dams. While it might be difficult to destroy either of these dams or to damage those structures materially, the power plants, and especially the transformers and related machinery, are extremely vulnerable and impossible of prompt replacement.

While consideration has been given to the protection of the large aviation plants through camouflage, smoke screens, barrage balloons and local



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guards, even these plants are apparently inadequately protected by air forces. The light metal plants and power plants visited are without any protection whatever, except local guards. In some instances, while air fields had local guards, those guards are inadequately armed.

In matters of air defense there generally was found to be cooperation between Army and Navy officials. There also was a recognized, although complicated, division of authority. Each arm of the service relied upon the other and frequently there seemed to be a great lack of information as to the other's strength and ability to supply immediate support. Much reliance was placed upon a program for bringing up additional air protection from distant inland areas requiring several hours or even days.

Before the attack on Dutch Harbor there had been a well established naval patrol extending about 600 or 700 miles out to sea, giving the Navy substantially adequate information as to likelihood of air raids from hostile carriers. This has been discontinued since the attack on Dutch Harbor due to lack of planes. The only patrolling approaching this is by land planes acting under direction of the Navy and reaching a maximum of 100 to 300 miles out to sea. Reliance is placed by both the Army and the Navy upon thier information as to the probable number and location of enemy carriers. This has seemed to the Sub-committee to be an inadequate protection.

While the ground forces appeared to be well organized and alert to their responsibilities, there was a marked lack of anti-aircraft artillery and of air-based planes in contrast to the needs felt by responsible commanding officers. It was obvious that since the attack on Dutch Harbor the air and coast defense had been greatly reduced and had not been replaced.



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As between the Army and the Navy, it was recognized that the Navy in general has jurisdiction over the sea and the Army over the land. It was further recognized that in the event of a sea-based attack, the Navy will take command of all our forces and in the event of a land-based attack, the Army will take like command. The division of command between the land, sea and air units was difficult of explanation, especially where an attempt was made to outline what steps would be taken to call up additional air forces in an emergency. Frequently reliance seemed to be placed upon forces supposed to be at certain points, but which actually were not at those points.

A serious difficulty presents itself as to the adequate defense of the Mexican and Canadian shores against hostile attack and the possible use of these shores as enemy land bases in the event of their capture.

The Sub-committee feels that while apparently there is no substantial ground for fear of actual invasion in force, there is strong possibility of damage by air raid, either carrier or land based, which might result in such serious damage as to amount to the loss of a major engagement.

While, obviously, the Sub-committee has not been in a position to gauge the demands upon the Government for essential military needs elsewhere in the world, yet it seems clear to the Sub-committee that the demands on the Pacific Coast, especially in the Northwest, are for such comparatively small quantities of men and material to protect such vitally important military assets, that it appears to be a great mistake not to allocate a sufficient force to these critical points to afford them reasonable protection requested by responsible officers in charge of those areas.

The Pacific Coast and the Northwest naturally feel themselves to be a front line. Furthermore, these areas are a front line which cannot well be



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promptly evacuated by their inhabitants in time of emergency. There is, therefore, an important consideration of public morale involved in the protection of these areas.

Closely related, and still more important as the first line of defense for the Pacific Coast and the Northwest, is the protection of Alaska. Without attempting to anticipate the Sub-committee's report on this subject, which will be made following its own contemplated trip to Alaska beginning on August 10, it has become clear to the Sub-committee that the defense of Alaska becomes increasingly difficult with each encroachment upon it by the enemy. The danger to America, and to Alaska itself, is tremendously increased as the enemy is enabled to carry on land-based air raids from points within Alaska.

The occupation of any part or all of our Alaskan territory by the enemy deprives us not only of vitally important natural resources and subjects our citizens to great hazards, but it deprives us also of our most important access to Siberia and Japan.

In view of these considerations and of the importance of Alaska to the war program, the Sub-committee has felt it essential that it join in a personal reconnaissance of this territory with the Military Affairs subcommittee. Apart from the purely strategic question involved, there are such matters as the construction of defense and housing facilities in Alaska, the construction of the inland road, and the use being made of the resources of Alaska which come directly within the scope of the Truman Committee assignment. In addition, there is the vitally important relationship of the defense of Alaska to the light metal, power, aviation, and shipbuilding projects which have been under consideration and the location and protection of which are a vital concern of the Truman Committee.



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The fact that the Territory of Alaska is without direct representation in the United States Senate, places a special obligation on committees of the Senate to inform themselves directly as to Alaskan problems. The Sub-committee believes it will help the morale of the troops and the civilians of Alaska to realize that there is a direct interest on the part of the Senate in their situation. It will help also the standard of Alaskan efficiency and economy in carrying out its war program to have it understood that Alaskan projects and expenditures are not beyond the observation and consideration of Senate investigating committees.

#### IV. DEFENSE HOUSING.

Throughout the Sub-committee's examination of the light metal, aviation, and shipbuilding projects on the Pacific Coast, it has given special attention to the incidental housing problems created by these projects. In every instance the housing problem has been and is continuing to be a critical element in the program. In at least one case it was authoritatively reported to the committee that a substantial part of one of the aluminum production plants was not in operation for the reason that housing facilities for necessary employees were not then available.

In general the difficulty is with priorities covering important portions of the housing equipment, such as plumbing, nails, etc. In general there is a recognition of the need for housing and a readiness on the part of local authorities to cooperate with the Federal Government. In practically every instance there is not only an existing shortage of housing, but it is predicted that there will be a still greater shortage due to further expansion.



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In some instances where the projects are located near large cities the problem can be met in part by increased renting of existing facilities in private homes and in part by the construction of less elaborate and less costly defense housing facilities. Recreation and community houses can be omitted from new housing projects. Simplified designs for small houses, similar to one room apartments, can be constructed with little use of nails, steel or other critical materials.

In some places the housing shortage is closely related to questions of transportation.

Especially in Southern California the potential housing shortage is related directly to the imminent shortage of rubber. Workers in this area have little mass transportation available. The drive from 10 to 80 miles daily, to and from their work. Southern California is, perhaps, unique in the fact that it has grown up largely since the development of the automobile and is almost completely dependent upon the automobile as a means of transportation.

The above considerations and other reports received by the Sub-committee indicate that the defense housing problem is one of the critical defense "bottlenecks" of today, and is a nation-wide as well as a local problem. The Sub-committee recommends that a prompt and nation-wide investigation, both of the experience with defense housing and of future policies for defense housing, be made under the direction of the Truman Committee.

**V. SHIPBUILDING**

The only shipyard visited by the Sub-committee was the Kaiser project at Vancouver, Washington, although several shipbuilding projects were observed



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from the air and were discussed with responsible officials. The methods employed at the Kaiser Shipbuilding yards were of an unusual and highly efficient character, which has resulted in the ability of that yard to keep substantially ahead of its schedule of production.

VI MORALE OF WORKERS

One of the most impressive features of the repeated visits of the Sub-committee to the aviation and other defense plants was the high morale of the workers. These included both men and women workers, most of them young. The average age at the Boeing Plant was 23. On every hand the management indicated there was full cooperation with the Selective Service authorities and also that the spirit within the plants was of the best. It was obvious to any observer that the workers were interested in what they were doing and were doing it competently and willingly. They created a definite atmosphere of loyalty and of pride in rendering an important service to their Government in time of war.