

PLANT FACILITIES REQUIREMENTS

3 December 1946

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THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

## PLANT FACILITIES REQUIREMENTS

3 December 1946

CAPTAIN WORTHINGTON:

Gentlemen, the speaker this morning is Colonel Perry L. Houser, who has spent a great many years with the International Harvester Company. After a distinguished career he was called to active duty in the Armed Services early in 1941. For the period 1 February, 1941 to 31 December, 1942, he served with the Army and Navy Munitions Board. On 1 January, 1943, he joined the Production Division, Army Service Forces, and served in various capacities with this Division until 1 August 1945. Most of his important duties during this assignment consisted of acting as liaison officer with the War Production Board for Headquarters, Army Service Forces.

On 1 August 1945, he became Chief of the Facilities Section, Office of the Director of Procurement, Army Service Forces, and served in that capacity until he reverted to inactive status in the Spring of 1946 with the grade of Colonel.

He is now an executive for the International Harvester Company in their Manufacturing Research Department. His subject is "Plant Facilities Requirements."

REQUIREMENTS FOR PLANT FACILITIES

Students and Visitors:

General McKinley suggested that I discuss the requirements for increased productive capacity in war time together with a consideration of the methods used and the accomplishments of the plant expansion program necessary during World War II.

I became involved in this picture in January 1941 and was still involved in it when I took off my uniform in June 1946. The problem of industrial facilities was and still continues to be a very important problem to the Military.

During World War II, I think that we are all familiar with the part that American Industry played in furnishing implements of war that enabled our own forces and those of our allies to bring hostilities to a successful conclusion.

RESTRICTED

I understand that in previous lectures, you have been informed as to how the requirements for end items and various products were computed and transmitted to the operating divisions of the Military. My discussion will be on how to produce those requirements once they were established.

Perhaps it would be well for me to define one or two terms that I will use in my remarks. Industrial installation is defined as a manufacturing plant, whether privately or government owned, with all necessary appurtenances including machinery and equipment, buildings and other items that go to make up an industrial activity. Command Installation is a term ordinarily used to describe installations required for purposes other than manufacturing. An Active Installation is a term used to describe the status of an installation currently in production. A Standby Installation is one that is not in production, and is not surplus to military needs.

Once the requirement for an end item or product has been transmitted to the Military, one of their problems, in devising ways and means of having that product manufactured was to find someone to make it. This was accomplished in several ways. If the part had previously been produced, or was currently in production, the service naturally turned to the present producer or checked their records regarding previous producers. If no one was readily available to produce the item, obviously new sources had to be established. In order to establish new sources the service checked regulations governing such action. In general, the policy along this line which was the conservation of critical material and the fullest possible utilization of existing facilities, whether such facilities consisted of buildings and/or machinery and equipment, required that preference in placing contracts should be given firstly to the contractors who had existing plants or machinery available, and secondly to contractors who needed to acquire the least amount of facilities for performance of the contract.

Where it had been determined that new facilities were essential preference was to be given to contractors who would finance their own new facilities. If no contractors were found who were willing to finance their own construction and acquisition of equipment, the service could then discuss construction of facilities with government funds. There were several methods of such financing. When these factors had been considered, the military service then selected the contractor. After the service had determined that the only way they could meet the end item requirement was by an expansion of existing facilities, or construction of new facilities, and after they had selected the contractor, the next step was to determine the means of financing. There were several basic plans available:

1. As mentioned before, privately owned with no government money.
2. Privately owned with some government interest.
3. Government owned where the contractor constructs the facilities for the government and at the government expense.
4. Government owned through Defense Plant Corporation Lease Agreement. This plan was used for cases in which DPC paid for the facilities. In this plan, the DPC, upon recommendation by the military, enters into an agreement of lease with the contractor, who, as agent for and in the name of DPC, constructs the buildings and purchases the machinery and then leases the facilities from the DPC at an agreed rental with option to purchase at the expiration of the lease.
5. Government owned--supply contract. This plan was usually used for cases in which the contractor acquired facilities (other than real estate and buildings) for the account of the government. The facilities to be paid for by the government and used by the contractor in furnishing the items on his supply contract. The contractor was responsible for the return of the equipment in good condition to the government at the expiration of the supply contract. Title to the equipment was usually vested in the government with an option for the contractor to buy at the expiration of his lease, taking into account normal depreciation.

After the service had determined the method of financing, it then submitted an application for approval of such project. All requests above \$25,000 for "expediting production funds", and all requests involving more than \$100,000 of other funds, during the war had to be submitted to the Production Division of the Headquarters Army Service Forces for their approval, and cleared, through all interested agencies. This request for approval included among other things: The name and location of the project; name and address of the operator; the product and production rate to be created by the project; a general statement of processing operations to be performed and the type of machine tools and other equipment necessary to do the job; a general description of the proposed construction or rehabilitation, and if new construction was involved, the number of buildings and the approximate floor space in each; labor information, such as the number of additional employees; labor conditions in that area, etc.; maximum additional power required; the additional fuel required, giving quantity and type; a statement of the adequacy of water, sewage disposal, rail and highway transportation, and housing; some reasons for selection of that particular site; a statement of the estimated costs, broken down by land, purchase of existing plant, construction and rehabilitation, machine tools and other machinery and equipment, automotive, furniture and fixtures, minor tools and equipment, contingencies, and the amount to be privately financed and the amount to be government financed. In some cases a statement of the requirements for the items to be produced and the existing capacity for such production; the method of financing, and if expediting production funds were to be used request a specific amount; the estimated date of initial operation,

the estimated date of completion of all construction, and the estimated date for full operation.

I have purposely gone into considerable detail in order that you may better visualize some of the steps necessary in starting a new facility. There were still more steps to be taken. If the project was approved by the ASF, Production Division, they in turn submitted it to the War Production Board, Facilities Committee. The Facilities Committee, which included representatives of the Army, Navy, Air Forces, War Production Board War Manpower Commission, National Housing Authority, and others, checked the project over carefully, giving particular consideration to location, utilities, facilities, availability of labor and the general labor conditions. They reported their decision back to the Production Division. At the time that the director of the Production Division gave his approval to the project, and while it was under review by the WPB Facilities Committee, various memoranda were prepared for the signature of the Under-Secretary of War, if expediting production funds were involved. If the Under-Secretary approved the project and the use of expediting production funds, the memoranda were forwarded to the Budget Office of the War Department for the allocation of the funds to the Commanding General, ASF. The documents were then sent from the Budget Office to the fiscal division of ASF, where the funds were sub-allocated to the account of the originating technical service. The original approved memoranda concerning the funds were returned to the Production Division and became a part of the permanent project records. Formal notifications of the approved-allocation was sent to the originating technical service by the Production Division.

After the originating technical service had been notified that the project was cleared by all necessary staff divisions and other agencies of the government, the technical service instructed the contractor, or the Corps of Engineers (all construction work for the military is handled by the Corps of Engineers), to submit to the War Production Board, through the technical service, a priority application covering the entire project. If construction was involved, one type of application, commonly known as a PD-617A form was submitted. If no construction was involved and only equipment was to be acquired, a form known as PD-3A was submitted. These papers had to clear through several government agencies. Efforts were made to handle them with the least possible delay. Needless to say, sometimes difficulties were encountered. Upon receipt of the approved priority application, the contractor proceeded with the actual construction of the project and the acquisition of his equipment.

Let us deal for a moment with one phase of the program which has to do with financial arrangements to carry out this tremendous program. We will take as an example, expediting production funds. These are funds appropriated by Congress to the War Department for use in expediting production. The use of such funds consisted of financing the new facilities mentioned, purchase of existing facilities, and the procurement of

machinery and/or equipment. From July 1940 until March 1946, over ten billion dollars of such funds were used. The records of the former Production Division, ASF, show that for the period from July 1940 to August 1945, there were 1488 projects financed with expediting production funds. This figure included the complete installations already mentioned, plus numerous other expansions consisting simply of the addition of machine tools and production equipment to commercial facilities that were already in operation. The number of projects is not indicative of the number of complete installations, since each project included one or more expansions which might be construed as additions to the original project. To give you some idea of the volume of projects approved and their cost,

In May 1942 there were 162 projects approved with a value of \$770,215,713.

In March 1943 there were 80 projects approved with a value of \$120,785,480.

In August 1944, there were 147 projects approved with a value of \$298,964,454.

In January 1945 there were 92 projects approved with a value of \$377,198,440.

These figures include complete new projects, expansions of existing plants, additions or augmentations, and increased costs involving expediting production funds and/or DPC funds.

As previously stated, I have purposely gone into a rather detailed description of the steps taken in preparing and processing a request for construction of new facilities or expansion of existing facilities in order that you can appreciate the details involved and so you will have some knowledge of the magnitude of the job that was done in providing industrial facilities to produce our war materiel. In so far as it was possible to do so, our existing industrial capacity was utilized. Where there was insufficient capacity to meet requirements, and where private industry did not expand with its own capital, the military had to provide the capacity through the procedure outlined above.

I would like to digress for a moment and quote from the remarks given in a lecture in March of 1946 by Ralph Flanders, one of the nations leaders in the machine tool industry. This man, who is also nationally known for his views on the economic outlook for the country, and who, as I note from the papers has been elected to the Senate, has a very keen concept of the part that American industry plays in any emergency. For the machine tool people he stated, "Machine tool builders are proud of the part they played in the expansion for defense and for war production. We were only a part of the astonishing production record of the United States but we were an early, a basic, and an irreplaceable part.

We are concerned in playing that part well in any future emergency, and the purpose of this talk is not so much to give instruction as to confer with you as to the means by which we may hold ourselves in effective readiness and properly meet our responsibilities when need arises." The point that I wanted to make in quoting the above is that one of the basic industries necessary to any expansion, the machine tool industry, has continually recognized the part that they must play and has acted accordingly.

The records show that including the old line arsenal system, a total of 627 complete industrial plants with a value of \$7,033,000,000 was constructed (including new construction, and additions to existing installations) by the government for the War Department during World War II. Of that total, 245 with a value of \$2,855,000,000 were for the Air Forces. There were 382, with a value of \$4,478,000,000 for the Army Service Forces. Of the 627 complete plants, 253 were War Department owned, including emergency plant facilities and buildings on leased land, with a value of \$4,452,000,000. Of this number, 212, valued at \$3,967,000,000, were for the ASF, and 41, valued at \$485,000,000, were for AAF. Again of the 727, there were 374, with a value of \$2,880,000,000, DPC financed. Of this number, 170, with a value of \$511,000,000, were sponsored by the Army Service Forces. There were 204, with a value of \$2,369,000,000, sponsored by the AAF.

From the above facts and figures, you can well appreciate the magnitude of the job that had to be done in order to start and keep our industrial program rolling. In addition to the figures I have given you, which are on Government owned and Government financed complete installations, there were many other Government financed expansions consisting mainly of the addition of machine tools and equipment to privately owned plants.

There was still another phase to the program, that of privately financed expansions. For the purpose of clarification, we will say that this phase included new buildings, real estate, and production equipment.

As an incentive for inducing private industry to spend its own capital, the Tax Amortization Act was developed and enacted into a law in 1940. Private industry was naturally reluctant to risk its own funds for the creation of war facilities without some form of protection. This protection was given in the form of the Tax Amortization law, which is Section 124 of the Internal Revenue Code. The law allowed a deduction in the computation of taxable income for the amortization of the cost for emergency facilities over a period of sixty months or less. The allowance of this deduction was subject to certain conditions, which included the issuance of a Necessity Certificate under regulations prescribed by the certifying authority with the approval of the President. When covered by a Necessity Certificate the cost of privately owned emergency facilities could, at the taxpayer's request, be deducted over a period of sixty

months or less and was in lieu of normal depreciation for the purpose of determining the net taxable income. Before a Necessity Certificate could be issued, it was necessary that the taxpayer file an application showing the need of the facility and the supply to be produced or the service rendered. He was also required to show that the facility was acquired or constructed after December 31, 1939, and sponsored by a service of one of the military agencies, that is, ASF, AAF, Navy, Maritime Commission, etc. The regulations set no hard or fast rule except as to purely procedural matters, such as timeliness of filing. The guides to be followed in determining the necessity were quite simple and can be briefly summarized. The necessity for the facility was to be determined in accordance with whether the supply it produced was required in the interest of National Defense during the emergency period and was essential to the Armed Forces. Shortage of capacity in the industry was ordinarily shown in order to justify the expansion. The basic reason for insisting on showing that a shortage of capacity existed, rather than to increase the capacity of a particular company to meet its contract requirements, was the desire to spread contracts more evenly among all operations of an industry capable of producing a particular item required in the emergency effort. In the period between the passage of the Tax Amortization Act and the transfer of the Certificate authority from the military to what was formerly known as the War Production Board and what is now known as the Civilian Production Administration industry filed 31,047 applications for Necessity Certificates with the War Department. Of that number, the War Department issued 26,775 certificates. The total value of the certificates based on their estimated worth on the date of the application was approximately five billion dollars. I am informed that during the same period the Navy had a similar procedure for processing applications for Necessity Certificates with respect to those facilities producing supplies under the cognizance of the Navy Department. Following the transfer of the certification authority from the War Department to the War Production Board, the War Department was limited to making recommendations when it was claimed that the facilities were necessary for the production of War Department supplies. On September 29, 1945, President Truman signed a proclamation ending the emergency period for the tax amortization privilege, as defined in Section 124 (E) (2) of the Internal Revenue Code. In view of this proclamation, no Necessity Certificates, under Section 124 were issued for facilities acquired after September 28, 1945.

You are perhaps wondering what type of product was produced in the facilities financed with private capital, and amortized in the manner I just described. These products included among others the manufacturing of aircraft engines; parts and accessories; ship construction, combat and motorized vehicles, guns, ammunition, shells and bombs, explosives and ammunition loading, basic and fabricated iron and steel, aluminum and magnesium, machine tools and various machinery and metal working equipment, chemicals, coal and petroleum products, gasoline, food processing,

electric power generation and transmission, rails, pipe lines, terminal facilities and communication equipment.

In summarizing what happened as far as industrial plants employed by the War Department are concerned, we have the 1488 projects involving more than ten billion dollars of expediting production funds which include some of the above; and we have five billion dollars worth of facilities financed with private funds using the Tax Amortization privilege as an inducement.

When I was in the military talking these kind of figures, it didn't bother me at all, but since I have been back in industry, quoting the type of figures just given, sort of leaves me a little breathless. I hope the above comments, regarding the number of new industrial installations brought into the picture during World War II, will give you some idea of the magnitude of the job that faced us at the outset of the war. Initially none of us knew exactly how big a job was ahead at that time, and it is very doubtful if there were many persons who thought that the job would be of such magnitude.

In getting the program rolling there were many problems encountered. I will try to touch on a few. One of the major difficulties at the outset, and which was later speeded up, was that of securing adequate priority to cover the construction of new buildings and the acquisition of new equipment. At the start, it was a cut and try method. Forms had to be developed. Most forms were changed many times before one was devised that seemed to answer the purpose. Another major obstacle was the flow of paper work through the military, through the civilian agencies, and through the Defense Plant Corporation where that method of financing was involved. The form of the DPC lease agreement was changed many times before one was made that suited the purpose. The equitable distribution of machine tools and other production equipment was a very major problem, and were it not for the activities of several individuals who had sufficient vision to contemplate the problems and devise means of overcoming them, we would have been in a far worse situation than anyone realizes. Fortunately, late in 1941, and early in 1942, a system was devised that permitted the equitable distribution of machine tools on the basis of firm requirements. Another major obstacle was the procurement of material such as steel, copper, brass, etc., in sufficient quantities to meet the production program. Another major factor was the determination of the relative importance of one military job over another.

Auxiliary Industrial Expansion

Let us deal for a moment with the problem of how to equip and maintain those installations that were created or expanded from existing installations. To keep them in operation, the production of capital items such as machine tools, forging equipment, foundry equipment, heat treating; and such minor equipment as cutting tools, grinding wheels, oils and

greases; and other manufacturing aids such as wrenches, pliers, screw drivers, hammers, mechanic's hand service tools, micrometers, calipers, scales, rules, height gauges, etc., ball and roller bearings had to be expanded in proportion to projected requirements. This accomplishment in itself required much forward planning.

Let us take the cutting tool industry for example. Their productive capacity was increased from a normal peacetime basis of approximately 75 million dollars to 220 million dollars, and at the close of the war the supply was still critical. The production and inspection gage industry was expanded from a normal  $4\frac{1}{2}$  million dollars per year to 157 million dollars peak war load. I am sure everyone is familiar with the tremendous expansion of the machine tool industry. Expansion of each of these industries, as well as many others, required forecasting of the military requirements. In order to make such a forecast, representatives of these industries were "drafted" into Government service for the purpose of calculating requirements. To do this they had to work very closely with the military services. Often times no information could be made available from the military until a short time before we wanted production to start. Anticipation of military requirements was made in many cases. For instance, in the Machine Tool Industry, the military requirements for various sizes and types of machine tool equipment was anticipated to the extent that during the war the Government placed "pool orders" for \$1,825,000,000, worth of equipment. To the best of my knowledge all of these pools were liquidated with less than \$500,000 of liability. It is hoped that the military services will work very closely with representatives of the industrial might of the United States in order that as much planning may be accomplished as it is possible to do, in line with military requirements, in peacetime or in troubled times. Much can be stated for the job that was done by all agencies in expanding the industry that furnished the tools to meet the military production requirements.

These are a few examples of the difficulties encountered. Let us delve a little bit into the future. As General Somerville told you several weeks ago, during peacetime we must prepare for the next war, whenever it comes. I know that the armed services through their permanent arsenal system and through the retention of other facilities are attempting to preserve the nucleus of some of the more important implements and procedures necessary to military operations. For instance, everyone knows that large guns are made at the Naval Gun factory and at the Watertown Arsenal, and that knowledge of powder and its production is to be had at Picatinny arsenal, and that at Springfield Armory small arms are produced. I hope that the plans that have been made and which I understand have been or will be presented to the Congress for its consideration will be approved. It is my sincere hope that the purse strings will be loosened sufficiently so that money will be appropriated to the military for the annual maintenance and upkeep of the plants suggested for retention, and for the continuance of a very far reaching research and development program. It is hoped that in this case, history will not repeat itself. In 1920, the

Congressional appropriation to the War Department was \$813,304,262.20; in 1925 it dropped to \$260,246,731.67; in 1930 it was \$331,748,443.50; in 1935 it dropped back to \$263,640,736; in 1938 the tendency was to be slightly more liberal since it appropriated \$415,508,009.94; and, of course after 1938, when the war clouds began to appear in Europe and elsewhere, Congress appropriated more money to the War Department.

It is my firm belief, if we are ever again called upon to do a repeat performance of World War II, that American industry will be much better prepared to furnish the facilities required for production of military material if the military services will keep industry with them in their planning and training operations.

Thank you.

CAPTAIN WORTHINGTON:

We are now open to questions.

A STUDENT OFFICER:

You referred to the site control or site selection records. I would like to know how much authority or control the Site Board exercised.

COLONEL HOUSER:

The WPB Facilities Committee?

A STUDENT OFFICER:

Yes, sir. Did they have any authority to decide if for any reason you couldn't decide on a particular point?

COLONEL HOUSER:

Yes, sir, they had considerable authority. They turned down quite a number of requests and proposals for location of facilities in certain areas. Sometimes certain pressure was brought to bear. It is embarrassing to have some government official call you up and say "My city wants a certain plant. You put it there." That situation had to be contended with. If the labor situation or other conditions in a certain area were such that you couldn't put a particular facility there, it was turned down. Does that answer your question?

A STUDENT OFFICER:

Yes, sir. I would like to go a little further on that. Could that authority be extended even further, we will say to the matter of the dispersion of the industry, and if so, since the industry would be

connected with the Board, if the authority ever conceded there was a bottleneck would that bog down and be ineffective?

COLONEL HOUSER:

The industry itself didn't come to the Board. It came to the Board, mainly, through the military service. As far as dispersion is concerned, that I think would be more or less up to the military as to whether they could afford to or wanted to locate in certain areas, as far as strategic seacoast protection was concerned. Location was discussed quite a lot, I believe, during the early part of the war. At that time they did take location into consideration, but during the later stages of the war I don't believe it meant so much on account of the advent of the long-range airplane. Does that answer your question?

A STUDENT OFFICER:

Yes, sir.

A STUDENT OFFICER:

You spoke of pooling orders for transport vehicles, critical components for transport vehicles. Will you please tell us more about that?

COLONEL HOUSER:

That was a spare parts program for motorized vehicles, if my memory serves me correctly. It was either in the latter part of 1945 or the first part of 1946 that such a program came into being. It was headed by a group from the War Production Board with the military representatives working closely with them. I believe Colonel White from the Detroit Ordnance Area was instrumental in pushing the spare parts program. The military representatives in WPB worked very closely with WPB and industry in carrying this program through. There were no pool orders, however, to the best of my knowledge. Only certain of the machine tools and production aids were covered by pool orders. I would like to ask Colonel Merriman or Major Bergan whether their recollection is the same as mine. They were in the same office.

A STUDENT OFFICER:

My understanding was that that applied only to pool order approval and not to the spare parts.

COLONEL HOUSER:

There was a concentrated program for automotive equipment.

A STUDENT OFFICER:

The way I understood it was that the aid order was for the production of the transport vehicle going to a certain assembly plant.

COLONEL HOUSER:

No, sir. I can't say definitely but to the best of my knowledge there were no pool orders for that type of production.

A STUDENT OFFICER:

Will you give us your opinion as to the desirability of locating the title to plants and facilities in the services themselves or in an agency similar to the Defense Plant Corporation.

COLONEL HOUSER:

If you locate the title to facilities in the Technical Services themselves there is always more or less trouble, but if you locate the title to the facilities in a non-partisan agency such as the Defense Plant Corporation I think it works out much better. That is what we finally came down to during the latter part of the war with our plant expansion. The regulation of expansions was originally in the technical services of the War Department or in the bureaus of the Navy Department. However, when D.P.C. was found, the military would sponsor the expansion of a facility and it would then be processed through the procedure outlined in the Defense Plant Corporation. With the exception of following delivery of equipment of the Services had very little more to do with it. I think a non-partisan agency of the Government should be responsible for the retention of the title of those facilities.

A STUDENT OFFICER:

Doesn't the Government immediately lose control over the plant after the war is over if the Defense Plant Corporation takes the title?

COLONEL HOUSER:

They don't lose control if they say the plant is required in their postwar planning operations. They can fight to retain it in their postwar set-up. Whether they do or not is up to the individual service that sponsored that particular plant. If they don't want it some other service may want it in their postwar planning operations; but as far as losing title to it is concerned, they have the privilege of retaining sponsorship in their postwar planning operations.

A STUDENT OFFICER:

In the case of an industry which carried on its research and development after the opening of the war, such as the synthetic rubber industry, did the impetus come from the service for the development of the industry or was it from an over-all War Production Board impetus that it was carried forward?

COLONEL HOUSER:

I am not too familiar with the rubber industry but my recollection is that there was an urgent need from the military for some further developments with rubber, and I expect it was through the emphasis placed on the rubber situation by the military that the War Production Board took the initiative in expanding the industry. I think you will find that it was mainly on the insistence of the military.

A STUDENT OFFICER:

We all recognize that we will have very limited funds for several years to come, and I wonder if you could comment on where we might best spend those funds. I think that keeping a lot of plants in a stand-by condition is going to be very expensive, and perhaps we could better spend that money in development work and planning, and have some development contact with industry.

COLONEL HOUSER:

That is a rather delicate question but I will give you my personal opinion on it. My opinion is that we should keep those plants that have no value in industry during peacetime. I have particular reference to such types as loading plants or explosive plants. They have very little use in industry during peacetime. We spent millions and millions of dollars in the construction of such facilities. They make excellent places for the storage of material, and we don't have enough places to store material that we have on hand and perhaps may need for future use. One trouble with some of our plans is that they become outmoded so fast. If you go ahead and make extensive plans for another emergency, such as detailed surveying and industrial plants, they are soon outmoded. Right at the moment industry is growing so rapidly that what you survey in one plant here today may move over to another location for a different purpose tomorrow. I think the plan should be to build the framework of a plan that can be moved along very rapidly. As for the cost of maintenance of the plants that are recommended for retention in the postwar era, experience will probably show you that such cost may be between one and four percent of the original cost of the plant for its upkeep during peacetime. When you consider it, it can't be too costly an arrangement to keep a plant for one or two percent. Does that answer your question?

A STUDENT OFFICER:

Yes. How about educational contracts, the small contracts?

COLONEL HOUSER:

Well, I think we should keep abreast of the times in the development of items of warfare, and we should keep industry informed as much as possible. It is doubtful, however, if industry can be kept adequately informed through the educational order contracts. Only a few people know of the product and how it is produced, and as personnel changes in industry such knowledge is usually lost.

A STUDENT OFFICER:

What is your comment on the Melrose plant and the Evansville plant? You took them over under agreements with the Government.

COLONEL HOUSER:

I am not up on the contract details. As far as the Evansville plant is concerned we are not changing the structure of the original building. We are not changing the construction to the extent that we can't return to its original state very rapidly. At Evansville they have simply installed equipment and lines in the building.

A STUDENT OFFICER:

Are you going to change the structural lines?

COLONEL HOUSER:

No, I don't think so. I understand it is a conditional purchase subject to returning the property to its original state on short notice.

A STUDENT OFFICER:

Sixty-day withdrawal?

COLONEL HOUSER:

I don't know the conditions. I am not up on the details of that particular transaction.

A STUDENT OFFICER:

In your opinion do you believe we have enough facilities to meet any future emergency?

COLONEL HOUSER:

We don't have sufficient facilities to meet any emergency. It depends on how long it is going to last and how much preparation is done during peacetime; also whether we will have to go through the same procedure we did this time in the creation of new facilities. It depends upon the probable length of time the war would last.

A STUDENT OFFICER:

What would be your suggestion for future planning to meet that emergency from the standpoint of more plants?

COLONEL HOUSER:

You have put me on the spot, but my suggestion would be for the military to keep industry right with them in their planning to the point where they can develop greater cooperation. I would like to see industry kept right along with all the military planning operations. Bring representatives of industry in here and work with them, or perhaps you people go out and work with those industries. General Armstrong spoke sometime ago about these Industry Advisory Groups coming down here and working with people such as your group here. Machine tools are the backbone of all industrial activities, and you must have a knowledge of machine tools of one sort or another. I have gone in a round-about way trying to answer your question. I think that industry will follow through with their side of the picture. I had contact with quite a number in industry, Ralph Flanders and any number of other people in the same category, and from the standpoint of industry those fellows are interested in seeing that their industry is in a position to meet the requirements put upon them in a war emergency.

A STUDENT OFFICER:

Do you know what the contribution of the International Harvester Company was toward the war effort?

COLONEL HOUSER:

One contribution was that they had about 26,000 people in the service out of about 75,000 people.

A STUDENT OFFICER:

I mean mostly along production lines.

COLONEL HOUSER:

They produced any number of military weapons and equipment. Their

tractor plants were engaged practically 100 percent in military production. Their truck plants were very substantially producing for the military. Practically all of their many plants were producing material for the war effort. Navy torpedoes were made in one of our implement plants. Gun carriages and guns were produced in a Diesel Motor plant, and so on. It shows what can be done. I know that the International Harvester Company is quite desirous of maintaining close contact with the military so that they may have some knowledge of the magnitude of the job facing industry in the event of another emergency.

CAPTAIN WORTHINGTON:

Thank you very much, Colonel Houser, for your splendid talk.

(14 Feb. 1947 — 350)E