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UNITED STATES SUPPLY OF MATERIALS FROM FOREIGN SOURCES—MINERALS

1 April 1947

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THE INDUSTRIAL COLLEGE OF THE ARMED FORCES

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CAPTAIN WORTHINGTON: The speaker this morning is Mr. Paul Nitze. Mr. Nitze is Deputy Director, Office of International Trade Policy, State Department. He was formerly an investment banker. He entered the government service in 1940 as Financial Director in the Office of the Coordinator of Inter-American Affairs. From that time on he successively occupied the following positions: Chief, Metals and Minerals Branch, Board of Economic Warfare; Director, Foreign Procurement and Development Branch, FEA; Vice-President and Director, U. S. Commercial Company; Director, Rubber Development Company; and Vice-Chairman, U. S. Strategic Bombing Survey. His subject this morning is "United States Supply of Materials from Foreign Sources--Minerals."

MR. NITZE: It has been three years since I have given much thought to the problem of foreign procurement of minerals. But from 1942 to 1944 it was one of the most fascinating businesses in Washington. I might start with a few remarks about the organizational setup under which metals were procured abroad.

The War Production Board was basically responsible for the determination of necessary requirements. I think you are all familiar with how that was handled. The Army and Navy and other claimant agencies participated. Of course, requirements cannot be computed in vacuo. You also have to have some idea as to what the potential availabilities are in order to work out a realistic requirements program. As a result we who were responsible for procurement also participated with the War Production Board in the determination of requirements.

The War Production Board was also responsible for the domestic stockpiling program in the United States. It was important to them not only to compute consumption requirements, but also to determine how large the stock pile would have to be so that necessary adjustments could be made from time to time to take care of unforeseen contingencies. As one program went up and another went down, leeway was necessary to make modifications.

The WPB was further responsible for determining the shipping priorities on the import of materials from abroad. They would determine whether a B priority would bring in an import of manganese from a certain area or whether we needed an A priority. They would certify to us the amounts of the various metals or minerals which had to be procured abroad. From time to time they would also give us indications of the areas from which they had to be procured so that the shipping problems could be met.

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On the basis of the directives which we received from the War Production Board it was then FEA's responsibility to do whatever was necessary to actually procure the materials and see that they were delivered in the United States and paid for.

That job broke down into various different parts. In the first place, it was necessary in some instances to conduct negotiations with the foreign governments involved. In Mexico, for instance, it became evident that the chief bottleneck to increased metals production was certain laws on the books of Mexico. One law required any mining company to continue almost in perpetuity any employees that they once got on their payroll. Under those circumstances none of the mining companies was very enthusiastic about building up its operation, because it then would be faced with a continuing responsibility for all the additional employees that were put on its payroll. There were a number of other defects in the Mexican legal situation which inhibited full production.

We, therefore negotiated an over-all agreement with Mexico on metals procurement. In the agreement Mexico agreed to a revision of certain of these laws. The Mexicans agreed to sell to us all their exportable surplus of metals, and we in turn agreed to certain concessions on our side, which included a commitment that we would not abandon our procurement in Mexico except on a given notice, and that they would have a certain period after the termination of the wartime demand to make readjustments.

Similar over-all negotiations were had with a number of governments. We worked out one with Brazil. We worked out one with Chile. All through the world in various spots we had to negotiate over-all agreements as the framework under which maximum metal procurement could take place.

Those foreign negotiations, of course, were conducted under the leadership of the State Department. But it was a technical matter in large part, and FEA had to supply technical personnel for the negotiations to secure the results desired.

Of course, the main problem was the actual purchasing of metals and the negotiation of the necessary financial arrangements for the expansion of production. Let us take a particular instance. The Combined Raw Materials Board allocated to the U. S. all the Chilean copper. We had to negotiate every three months new contracts and set the price. In some instances we would also have to negotiate a development loan that would give the companies involved ten or fifteen million dollars for a specific project to expand a given mine or a given refining plant. In some instances foreign costs went up a point where companies could no longer break even on our ceiling price. In those instances we had to negotiate contracts which paid a higher price depending on costs so that in effect we gave them a premium to cover increased costs but with declining profits to them as their costs rose, so as to discourage cost increases.

Most of the negotiations for the actual procurement of metals were conducted in Washington, as most of these metals were produced in fairly large quantities by individual companies. When it came to the base metals, almost all the contracts were negotiated right here in Washington. The problem was primarily the job of negotiating so as to get maximum production and still not increase the cost to the United States too much.

I would like to expand somewhat on this question of cost. In the very beginning, when it became clear that we needed more chromium, we in the first instance began putting the price up in the hope that a price inducement would get the increased quantities which were required. It soon became evident that that was having the contrary effect; that it worked against maximum production, because we simultaneously were unable to export from this country even what we had been exporting before; and if we poured more dollars into a community and were unable to satisfy the requirements of that community for textiles and all the various things which were used by it, we got an inflationary situation which worked against increased production rather than working for increased production. So we had to avoid this temptation to try to stimulate production by increased prices. That was often difficult. We clearly had to give a price which was adequate to pay the cost and give enough stimulus to get maximum production, and yet we could not go easy on the rope and just bid a higher and higher price and think we would get the increased production.

In some cases it was necessary to take over operations in their entirety. For instance, in New Caledonia the French had a nickel smelter which was of great importance. The costs in that nickel smelter were way out of line with the rest of the world nickel prices. We had to take over the nickel smelter and put the right people in to run it. We really ran it as an operation of the U. S. Government.

We tried to avoid getting into the actual production of metals as much as possible. Insofar as possible it seemed wise to use existing companies, those who were already in business, and which could be expanded at small cost.

When it came to some of what before the war had been considered minor minerals, however, we ran into an entirely different type of situation. Mica, for instance, was a business where there were only four or five people in the United States who had ever dealt in it prior to the war. The British had largely done the job of production. The demand had been small, and only these four or five people even knew how to grade mica. But the wartime requirements were fifty or a hundredfold what they had been in peacetime. There we could not negotiate with an existing smelting or refining company. We had to do an entirely different type of operation, and that was to really get into the business ourselves.

In Brazil we finally had to set up an organization which handled mica and quartz crystal. It had in it, I think, a thousand people. But recruiting that organization was an extremely difficult job. To make it into an organization that really functioned efficiently was also difficult. But the results paid for it. The production of mica in Brazil increased from something like seventy thousand pounds a year of the strategic grades up to something over a million pounds a year.

First of all, we had to send geologists to find out where the deposits were. Second, we had to send our mining engineers to lay out the mine developments. The Brazilian miners themselves did not have the technical background to undertake mechanized operations. We had to send down the air compressors, tractors, dynamite and everything else that was necessary to get the mica out of the ground. We then had to set up a laboratory which graded the mica. We had to pay for it according to grade. Mica is a very difficult thing to grade. Then we needed an air transportation system. The Navy set one up for us from Rio de Janeiro to Natal, where we transferred to ATC.

These development programs necessarily take time. You cannot go to some foreign country and say, "We want you to increase your production by ten to one" and hope that you are going to get it in two months. It takes a year, sometimes a year and a half, before you get volume results. During that time lag we ran so short of mica that the WPB had to allocate mica by the piece, almost, to keep the shortage from interfering with radio production. Air transportation shortened the time from mine to consumer by months. That gave us the necessary time. As a result radio equipment production was not inhibited at all by a shortage of mica during the course of the war.

In quartz crystals the situation was somewhat similar. I remember the Joint Army and Navy Electronics Board told us one day they had increased their estimate of requirements of quartz oscillator plates from what had been a million to twenty million. We were supposed to get the quartz crystals necessary for that twentyfold increase in the program. That required a development program similar to the mica program.

In India we ran into a somewhat different situation again. There were, I think, some hundred-odd thousand Indians working in the mica fields of Bengal. The British were responsible for the direct procurement of mica and were doing a very good job. Then when the Japanese began to come into Bengal and simultaneously rail transportation was interfered with, the whole area had a rice famine and the people began to leave the mines. It became necessary for us to go into the direct procurement of rice in order to feed the people in that area. It was a problem of transporting the mica out of the area and transporting food in to avoid famine and keep the production going.

In the Belgian Congo we ran into a situation where the bottleneck was the lack of trade goods. The natives would not work unless there was something they could buy with their money. So we had to organize a program of getting textiles, pots, pans and various other types of trade goods into the areas so the production would not fall off.

I might also talk for a minute about the shipping problems. Some of these commodities were very bulky. I think we bought some two or three million tons of copper, about three million tons of manganese, a couple million of tin and chrome, and a million tons of lead. During the period of intense shortage of shipping the shipping bottleneck was sometimes more important than the actual production bottleneck.

Take manganese, for instance--there was always plenty of manganese available, particularly in India, if you could ship it out. The supply was there. The problem was really one of shipping, because there is very little manganese in the United States and very little in the Western Hemisphere as a whole.

So in spite of the fact that there was plenty of manganese available in India, we started a deliberate program in Cuba to get a lower grade of manganese beneficiated down there. We built large stock piles, built the necessary roads to get the manganese into the stock piles, and provided the facilities to get it moved from the stock piles to the ships, so that we could draw on that stock pile when it was impossible to make ships available to go all the way to India and get it there.

The preclusive buying of metals to keep them away from Germany and Japan was another aspect of our program. That was really the first one which was aggressively organized. It became clear even prior to Pearl Harbor that that would have to be done and vigorously done. The British started it off and then we took over most of the active work.

In Portugal and Spain tungsten was the principal commodity we were trying to keep away from the enemy. As a result of our preclusive buying program the price of tungsten, which had been less than \$1,000 a ton, climbed up to \$40,000 a ton. We even went so far as to pay five million dollars for a small mine, which I guess today would be worthless. At the time the Germans were getting tungsten from that particular mine, and we just paid the price that was necessary to get it.

In Turkey we competed with the Germans for chrome, and we bid the price way up and made it extremely difficult for the Germans to get chrome from Turkey. I think a postwar examination would show that we did not actually stop much German war production by means of this program, but we certainly made it a great deal harder for them.

Now I would like to turn to one or two other aspects of the problem. The first thing I would like to emphasize is the fact that during the last war we had almost the entire world from which to draw. There was really in all Europe and Asia not much territory rich in minerals which was cut off from us. So we had the entire world's resources. If we hadn't had the entire world resources, it would not have been possible to do the job.

We had good and friendly relations with all our allies. We had virtually complete cooperation from the British, Dutch, Belgians and French in this job. There was a degree of enthusiasm to perform not only on our part, but also on the part of the natives of all countries involved in our operations. In spite of that we had difficulties in meeting the full U. S. requirements.

I think another time the situation might be much more difficult. Many of the deposits from which we managed to extract such large quantities of metals and minerals during World War II are pretty well depleted. In chrome, for instance, our main source was Rhodesia. I am informed that those deposits were severely depleted during the war. The Cuban deposits that we mined for manganese and chrome were virtually exhausted during the war period. There are no other high-grade chrome deposits, at least that I know of, in the Western Hemisphere that are workable now. I am not an expert in this metals business, but it would be my feeling that you have to have Turkey's chrome, New Caledonian chrome, and perhaps Philippine chrome to meet the requirements of the United States. During the war we got the highest grade chrome from Russia.

Manganese is in a similar situation. The Western Hemisphere deposits are low in grade and small in volume. The Indian deposits are large and the African deposits are large. I think it is essential to have those deposits in order to meet the U. S. requirements for manganese. We have some low-grade deposits in the United States, but it would take an enormous investment to try to beneficiate that manganese up to grade where it could be used and the tonnage is relatively limited.

We did not need to import any coking coal. There was no shortage of that in the United States. But our coking coal is running out awfully fast.

We did not have any problem in iron ore except as to the British requirement of high-grade iron ore, which we helped them to get from Brazil. But, as I understand it, the Masabi Range has not many more years to run on its high-grade ore. That means you will have to put in expensive beneficiating equipment in order to get that up to grade.

In the copper, lead and zinc business we sent our geologists all over the world trying to find new deposits during the course of the war. We found no substantial deposits whatsoever. We did find some deposits

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which had been known before but which had not been developed prior to the war. These were developed during the war. But as for new discoveries, there were no new discoveries of the base metals--copper, lead and zinc. There were some new discoveries of minor minerals--quartz, mica, tantalite, asbestos and things of that kind.

We were not well prepared before World War II to tackle a broad program of mineral procurement abroad. Having the whole world to draw on, and Europe having been withdrawn as a competing claimant for foreign minerals, we had enough time to get our program organized. It was a difficult thing to get organized. We just barely scraped through in getting it organized in time and getting enough minerals flowing in to lay the foundation for our war production program.

If we have another crisis it would seem to me that the job would be infinitely more difficult and would require far better advance planning as to what our requirements might be. Requirement estimates would have to be pretty well mapped out in advance. You would have to know the areas from which it was planned to secure supplies. You would also have to have a far larger domestic stockpiling program to make up for the time which we were given in the year's delay between the outbreak of the European war and Pearl Harbor, and also to make up for the smaller area we could count on drawing minerals from and the exhaustion of deposits in those areas.

CAPTAIN WORTHINGTON: Open for questions.

A STUDENT: I would like to ask if you can give us any information on the copper situation in Chile and what the implications are in the trade agreement that Russia has just signed with Chile for purchasing copper there; and also on the tin situation in Bolivia and the implications of the trade agreement that Argentina has just signed with Bolivia.

MR. NITZE: I am not familiar with a Chilean agreement with Russia. I would say that the greatest implication is that today we are faced with a much more difficult political and psychological problem than we were during the course of the war with respect to continuing our procurement. During the war, as I said, we had everybody behind us trying to help us succeed in our procurement. Today the major issues are confused and we do not have everybody behind us.

The Argentineans have made a deal with Bolivia with which we could not very well compete. As I remember it, they have arranged a credit of 62 million dollars and entered into a customs union with them. Those things are economically very necessary to Bolivia. Bolivia is not really a viable country by itself. It does not produce enough food. It does not produce enough of the other civilian requirements. It has to import food, clothes and everything else.

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Its exports are largely metals and it is a high-cost producer. It is in a vulnerable position. One can well see the temptation to Bolivia to enter into a customs agreement with Argentina and to secure this large credit, which will help them get back on their feet and improve the condition of the country. As part of that agreement Argentina is getting, as I remember, eight thousand tons of fine tin in concentrates.

I do not believe Argentina's requirements are as large as eight thousand tons. During the war, as I remember it, they got only 150 to 200 tons of tin. They might have a legitimate use for two thousand tons of tin if they went into the business of making tin plate and canning their food production. But eight thousand tons seems to be larger than Argentina's requirements. I think that Argentina feels that her strategic position in the world is increased by having a call on the additional six thousand tons of tin.

A STUDENT: I had understood that they had upped the price to 79 cents a pound to U. S. concerns. I just wondered why it was that we were not able to get into the field and stop them from buying it at 74 cents and selling it to us at 79.

MR. NITZE: We are buying from Bolivia at 79 cents, too. I think our current price in Bolivia is 79 cents.

A STUDENT: In the postwar period how much of a problem is cartelization in impeding our getting raw materials from other countries?

MR. NITZE: I do not believe it has been a large problem at all, if you mean by cartelization agreements between private firms. We have had some problem in getting things because of governmental regulations, the regulations of the governments themselves. Take tea, for instance, from India--India has put a ten cent export tax on it, which makes it more difficult and more expensive for us to get. The British with respect to cocoa in Africa have instituted a uniform selling arrangement. We get what they tell us we can get.

But I would say the problem is 99 percent government regulation rather than private agreements between business concerns. The tin cartel is dissolved. The rubber cartel is dissolved. The quinine cartel is really a quasi-governmental thing. But that is insignificant, because it does not now have access to the quinine of the Netherlands East Indies. So I would say that at the moment business cartels are not much of a problem.

A STUDENT: Can you give us any information on the prospective position of Turkey as to chrome deposits? Are they playing out?

MR. NITZE: As I understand it, the Turkish chrome deposits are still large and represent one of the best of known deposits of chrome. I do not believe they are running out.

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A STUDENT: Along the lines of cartelization from 1942 on, you remember you had trouble getting mica out of Brazil in the fall until you got squared away with the mica interests in India.

MR. NITZE: No. I do not think that that was a real problem. The Watson family had one brother who was the largest producer in India. Another had gone to Brazil and was one of the large buyers and producers of mica in Brazil. But we could not find any evidence that there had really been collusion to deny us mica because of competing interests in Brazil or British India. Watson in Brazil did not have a big enough interest in production to really have much effect on us.

CAPTAIN WORTHINGTON: Thank you very much, Mr. Nitze.

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