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COPPER PRICING PRACTICES

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON COMMERCE AND FINANCE

OF THE

COMMITTEE ON

INTERSTATE AND FOREIGN COMMERCE

HOUSE OF REPRESENTATIVES

NINETY-FIRST CONGRESS

SECOND SESSION

ON

H.R. 17657

A BILL TO AMEND THE FEDERAL TRADE COMMISSION
ACT TO PROHIBIT CERTAIN UNFAIR SALES PRACTICES
IN THE COPPER INDUSTRY

JULY 20 AND 21, 1970

Serial No. 91-97

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COPPER PRICING PRACTICES

MONDAY, JULY 20, 1970

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMERCE AND FINANCE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. John E. Moss (chairman) presiding.

Mr. Moss. The committee will be in order.

These hearings may not be tape recorded by any person. The transcript of this hearing, and any hearings of the House, is that which is officially taken by the reporter.

Today the Subcommittee on Commerce and Finance is meeting to hear testimony on H.R. 17657, a bill introduced by Congressman Blanton and myself in May of this year. If enacted into law, the bill would, in effect, make the present pricing and allocation system in the copper industry an unfair method of competition under the Federal Trade Commission Act.

In January of this year, the President directed the Cabinet Committee on Economic Policy to make a study of the U.S. copper market, and the Subcommittee on Copper issued its report on May 13. In explaining the reasons for the administration's concern, that report noted, and I quote:

First, there has been a sharp rise in copper prices and an apparent failure of supply to grow as rapidly as demand.

Second, a pricing system has evolved in the United States by which an essentially homogeneous commodity, refined copper, is sold at significantly different prices.

Third, the Government has received complaints from a number of copper fabricators, pointing out their inability to compete fairly because they have been precluded from purchasing low-priced copper.

Fourth, since 1965, the Government has found it necessary to maintain short-supply export quotas on copper.

The Congress is concerned for the same reasons, and I hope that these hearings will, at minimum, serve the purpose of setting out clearly on a public record all of the pertinent facts relating to pricing and allocation in the copper industry, and the implications of these facts for public policy.

I believe I speak for Congressman Blanton as for myself when I say that I am not personally wedded to the provisions of H.R. 17657. I hope, therefore, that the bill will serve as a vehicle to enable us to elicit the information we will need to make an informed decision on the questions of whether legislation is needed to regulate practices in the copper industry; and, if so, what type of legislation would be most effective.

(The text of H.R. 17657 and departmental reports thereon follow:)

[H.R. 17657, 91st Cong., second sess., introduced by Mr. Blanton (for himself and Mr. Moss) on May 18, 1970]

A BILL To amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 5(a) of the Federal Trade Commission Act is amended by adding at the end thereof the following new paragraph:

"(7) It shall be an unfair method of competition within the meaning of paragraph (1) of this subsection for any person to sell refined copper in commerce at a price which the Commission determines is significantly below the world market price for refined copper of a similar grade, unless such person allocates such copper among the domestic users of refined copper of such grade in a manner which the Commission determines is fair and equitable to such users."

SEC. 2. The amendment made by the first section of this Act shall apply to sales occurring more than ninety days after the date of enactment of this Act.

DEPARTMENT OF COMMERCE,
OFFICE OF THE GENERAL COUNSEL,
Washington, D.C., September 28, 1970.

HON. HARLEY O. STAGGERS,
Chairman, Committee on Interstate, and Foreign Commerce,
House of Representatives,
Washington, D.C.

DEAR MR. CHAIRMAN: This is in further reply to your request for the views of this Department concerning H.R. 17657, a bill to amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry.

H.R. 17657 would amend section 5(a) of the Federal Trade Commission Act to make it an unfair method of competition to sell refined copper in commerce at a price which the Commission determines is significantly below the "world market price" unless such sales are allocated among domestic users in a manner which the Commission determines is fair and equitable to such users.

For the past several years refined copper in the United States has been sold on the basis of a two-tier pricing system. In general, U.S. producers of primary domestic-origin refined copper have sold their production at prices significantly below those for secondary refined copper and imported refined copper. Because the cheaper copper accounts for only 60 percent of domestic supply, the producers have had to develop arbitrary allocation systems. The usual practice is to base sales on a historical customer criterion with modification for newcomers and for relative changes in the needs of regular customers.

Those companies receiving relatively little or none of the cheaper copper are at a competitive disadvantage and have explored several avenues to force a change in this pricing-allocation practice.

The Subcommittee on Copper (of which this Department is a member) of the Cabinet Committee on Economic Policy undertook a five-month study of this and related problems. Although the report, which was recently published, deplored the existence of inequities and economic inefficiencies resulting from the two-price system, it stated that it does not recommend any Government action to force a change in the industry's sales practices at this time.

The copper pricing situation has changed considerably in recent weeks. Whereas in April of this year, European copper prices were about 20 cents per pound above U.S. prices, currently European prices are 4-5 cents below U.S. prices.

H.R. 17657 would involve serious administrative problems. The bill does not define "world market price". It may be intended to refer to the London Metal Exchange (LME) settlement price for spot wirebars—the basis on which African and South American Governments presently peg their export prices. This price is highly unstable since it is greatly influenced by speculations and, apparently, by demand from Red China which varies greatly. In addition, significant proportions of world copper are not priced on this basis. North America (U.S., Canada, and Mexico) accounts for 41 percent of free world production and 39 percent of free world consumption and the LME is not closely related to sales in North America.

The determination of what is a "fair and equitable" allocation system is quite difficult. The Copper Report noted the "virtual impossibility of defining objective standards of equity" in regard to an allocation system. H.R. 17657 would merely shift the responsibility for determining allocations among users from the producers

to the FTC and would create an onerous administrative burden, without legislative guidelines on which to rely.

For the above reasons, particularly the changed relationship between U.S. and world copper prices and the administrative problems which would be created by the bill, the Department recommends against the enactment of H.R. 17657.

We have been advised by the Office of Management and Budget that there would be no objection to the submission of our report to the Congress from the standpoint of the Administration's program.

Sincerely,

JAMES T. LYNN,
General Counsel.

DEPARTMENT OF DEFENSE.
OFFICE OF THE GENERAL COUNSEL,
Washington, D.C., September 17, 1970.

HARLEY O. STAGGERS,
*Chairman, Committee on Interstate, and Foreign Commerce,
House of Representatives, Washington, D.C.*

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of Defense on H.R. 17657, a bill to amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry.

H.R. 17657 would add a new subsection to the Federal Trade Commission Act, which would make it an unfair method of competition to sell refined copper at a price significantly below the world market price, unless the seller allocates copper among domestic users in a manner determined by the Commission to be fair and equitable.

The copper requirements of the Department of Defense and its contractors over the past several years have been obtained primarily at the "domestic" price from domestic producers. At the present time the "domestic" price for copper is only about one to two cents a pound under the world price based on the London Metal Exchange price. However, since the price on the London Metal Exchange fluctuates broadly based on speculation and other reasons, the difference in price has been and can be expected to be considerable. Since this bill is likely to force the price of "domestic copper up to the world market levels, it probably would result in increased Department of Defense costs, without any offsetting advantages.

Under the authority of the Defense Production Act of 1950, as amended, the Defense Material System (DMS) requires that defense orders be filled on a priority basis over non-defense orders whenever a conflict exists. If the bill is enacted a given user of copper who had defense and non-defense business would apparently be faced with a separate allocation system in addition to the DMS. We believe this would be undesirable in view of the possible impingement on the DMS and the complexity of operating under two allocation systems.

Accordingly, the Department of Defense recommends that H.R. 17657 *not* be enacted.

The Office of Management and Budget advises that, from the standpoint of the Administration's program, there is no objection to the presentation of this report for the consideration of the Committee.

Sincerely yours,

J. FRED BUZHARDT.

FEDERAL TRADE COMMISSION.
OFFICE OF THE CHAIRMAN,
Washington, D.C., September 17, 1970.

Hon. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce, House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This is in response to your request of May 21, 1970, for Commission comment upon H.R. 17657, 91st Congress, 2d Session, a bill "To amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry."

The bill would declare it to be an unfair method of competition and thus a violation of Section 5 of the Federal Trade Commission Act, 15 U.S.C. Section 45(a), to sell refined copper at a price determined by the Commission to be significantly below the world market price unless the seller allocates refined

copper among domestic users in a manner which the Federal Trade Commission determines is fair and equitable.

The bill is designed to ameliorate the economic disadvantage experienced by non-integrated fabricators who must either buy at the higher world market price or prevail upon the domestic integrated producer-fabricator to allocate lower priced domestically produced copper to them.

Inasmuch as in many cases the non-integrated fabricator may be a competitor of the producer in the manufacture and sale of copper products, the domestic non-integrated fabricator will in most instances be forced to purchase open market copper.

The Federal Trade Commission has neither the expertise nor resources to undertake the extensive enforcement task placed upon it in determining compliance with the requirements of the bill by domestic producers.

Moreover, the Commission believes it to be undesirable to engraft upon the Federal Trade Commission Act a specific statutory requirement of very narrow focus designed to deal with a special problem which not only may well be transitory but which in its clearly anticompetitive manifestations may well be dealt with under the Federal Trade Commission Act as it stands.

Finally, the Commission is concerned that industry response to such legislation may well be to raise the domestic price to the level of the open market price in order to avoid the allocation requirement and thereby artificially subjecting the domestic price of refined copper to foreign market forces. Such industry response would have unforeseen consequences in higher prices affecting consumers and would be of doubtful value in diminishing the handicap suffered by the non-integrated fabricator who still would have to compete with the fully integrated producer-fabricator on disadvantageous terms.

The Commission opposes subject bill.

By direction of the Commission, with Commissioner MacIntyre not concurring.

MILES W. KIRKPATRICK, *Chairman.*

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C. September 21, 1970.

HON. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This responds to your request for the views of this Department on H.R. 17657, a bill to amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry.

We recommend that the bill not be enacted.

H.R. 17657 would amend the Federal Trade Commission Act to require the Commission to devise and enforce a fair and equitable method of distribution of refined copper to domestic consumers whenever the Commission determined that commercial sales of refined copper were being made at prices significantly below world market prices.

For the past several years the supply of copper has not kept up with rising world demand. The domestic producers of copper, fearing that a sharp price increase might lead to irreversible substitutions of other materials, have chosen to sell to certain domestic fabricators at a price below the world market price. The differential has been as high as \$25 per pound.

Those domestic fabricators who were unable to obtain sufficient low-priced copper to meet their needs have complained that the two-priced system is inequitable and has placed them at a competitive disadvantage.

On January 9, 1970, the President directed the Cabinet Committee on Economic Policy to study pricing procedures in the copper industry. That Committee reported on May 22, 1970, that no direct action to solve the problem was desirable at that time but that domestic production should be expanded.

The Committee specifically considered the possibility of government allocation of copper but cited the administrative burdens, the difficulty of establishing an equitable basis for allocating supplies among users and the expected opposition from producers and users whose allocations would be reduced, as reason against such a proposal.

This Department opposes H.R. 18757 for the same reasons. Shifting allocation problems from producers to Government will introduce new uncertainties and will not correct the basic difficulty of inadequate supply.

Moreover, the price disparity has shrunk to less than \$.01 and shows promise of disappearing altogether. Therefore, it appears that the problem will resolve itself and that legislation is not necessary.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,

HOLLIS M. DOLE,
Assistant Secretary of the Interior.

DEPARTMENT OF JUSTICE,
OFFICE OF THE DEPUTY ATTORNEY GENERAL,
Washington, D.C., September 24, 1970.

HON. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce,
House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Department of Justice on H.R. 17657 (91st Cong., 2d Sess.), a bill to amend Section 5(a) of the Federal Trade Commission Act to prohibit certain sales practices in the copper industry.

Section 5(a) of the Federal Trade Commission Act of 1914, as amended (15 U.S.C. § 45(a)), contains in its subsection 5(a)(1) the basic substantive law administered by the Commission: "Unfair methods of competition in commerce, and unfair or deceptive acts or practices in commerce, are declared unlawful." Subsections 5(a)(2)-(a)(6), which constitute the remaining portions of present Section 5(a) and contain the provisions of the Fair Trade Act of 1952 and the jurisdictional provision empowering the Commission to enforce Section 5(a)(1) with respect to all but certain specified persons, are not relevant here.

H.R. 17657 would amend Section 5(a) by adding a new subsection, 5(a)(7), to provide that it shall be an unfair method of competition within the meaning of Section 5(a)(1) "for any person to sell refined copper in commerce at a price which the Commission determines is significantly below the world market price for refined copper of a similar grade, unless such person allocates such copper among the domestic users of refined copper of such grade in a manner which the Commission determines is fair and equitable to such users."

H.R. 17657 represents entirely new legislation; nothing in the present Federal Trade Commission Act or the federal antitrust laws, either by the terms of such acts or by the interpretation and application of such acts by the courts or the Commission, makes illegal under such acts the sale of any commodity on the conditions specified by the proposed bill. H.R. 17657 would thus create an entirely new anticompetitive offense.

The bill appears to be designed to reach what is generally recognized to be a serious problem in the domestic copper industry: the inequities and economic inefficiencies caused by the existing two-price market and the accompanying system of allocation of primary refined copper.

The recent Report of the Subcommittee on Copper to the Cabinet Committee on Economic Policy has succinctly described the problem and its economic effects. Refined copper is available in the United States from producers and from the open market. The producers' market is dominated by a small number of large primary copper producers which are also integrated refiners and fabricators; the open market consists of secondary refiners, importers, commodity exchanges, and merchants. There is little or no variance in prices among the producers and their prices tend to move up or down at about the same time; the same is generally true of prices in the open market. During the past six years, there has frequently been a large gap between the producers general price level and that in the open market, and during this period the level of prices in the open market has often been higher than that in the producers market by amounts varying at different times from five cents to almost fifty cents per pound.

While anyone may purchase copper in the open market at the going price, this has not been true in the producers' market. Demand for the lower-priced producer copper exceeds available supplies and the producers have rationed their copper. Allocations have generally been made on the basis of historical sales patterns, but also on the basis of what individual producers conceive to be their own long-run interests—a standard that frequently results in sharp changes in the allocations

of particular customers. Consequently, some customers are enabled to meet all of their needs with producer copper; others receive only a fraction of their needs; and still others receive no producer copper. The full requirements of many customers must therefore be met in whole or in part by purchases of higher-priced copper in the open market.

As the Report of the Subcommittee on Copper points out, one effect of the two-price market and its accompanying allocation system is that customers receiving large allocations in proportion to their needs enjoy a broader spread between raw materials cost and product price, and can therefore make larger profits even at lower levels of efficiency, while customers receiving smaller or no allocations face serious competitive disadvantages. As a result, some fabricator plants have been forced to curtail production, others have been shut down, and the entry of new firms has been restricted because of their inability to obtain producer copper.

The broad economic deficiency of the two-price market, as the Subcommittee on Copper has noted, is that resources such as labor and capital may not be allocated efficiently and the nation's scarce mineral resources do not necessarily flow to the most efficient user, but to those favored by a raw material supplier. In this connection, it is obvious that the potential exists for anticompetitive behavior. Under the two-price system, a producer can easily bias his allocations of low-priced copper toward firms that do not compete with its fabricating subsidiaries and away from those that do. It is also very unlikely that the pattern of allocations, whatever the design of the producers, would work out to be the same as that obtaining in an open, competitive market.

To resolve the economic problems engendered by the two-price copper market and its resulting system of allocation, H.R. 17657 would, as noted, require that domestic sales of refined copper be made at the world price or, if made at significantly lower prices, then only on a fair and equitable allocation basis, as determined by the Federal Trade Commission. It seems clear that the bill would not be self-enforcing and would require a complex system of governmental regulation and supervision.

While it is not explicitly required in the proposed bill, it seems clear that, to carry out its mandate, the Commission would be obliged to organize and maintain procedures to keep itself informed of sales prices; since copper sales are made daily and in a large volume, the collection and scrutiny of this information would obviously be burdensome—both for the Commission and sellers. And where allocation is required by the proposed legislation, the administrative burden would become even greater unless rules for allocation could be drawn precisely and equitably. It is not at all clear, however, that such rules could be so drawn; given the array of competing and continually changing demands by existing users of refined copper and the likely demands of future entrants, it would seem to be virtually impossible to set administrative standards of allocation that would satisfy all customers or insure efficient distribution of resources. The proposed bill provides no guidance in this respect, but on the contrary, contains ambiguities. For example, the proposed bill can be interpreted to require that if any given seller at any time prices his copper significantly below the world price, he—or the Commission—must then allocate his available supplies fairly and equitably among all domestic users, whose allocations in turn may have been set as the result of another seller's lower-than-world price. The infinite number of allocation adjustments that would have to be made continually under such circumstances demonstrates, we believe, that the proposed legislation could not be made to work satisfactorily.

Moreover, to the extent that the proposed bill becomes self-enforcing because all domestic sellers avoid allocation problems by selling only at the world price, there is a likely prospect that domestic prices of refined copper would be entirely controlled by artificially-created market forces beyond our shores. At the present time, the world price is presumably the result of open market sales by foreign producers and merchants in overseas markets and hedge transactions in foreign commodity exchanges. There is no assurance, however, that at any future time the world price would not be fixed, either directly or indirectly, by agreement among foreign sellers. On the contrary, the history of the overseas copper industry demonstrates the likelihood that such agreements—in the form of either direct price-fixing or production stabilization programs—would be sought in the future so long as the United States continues to be a net importer of copper and, by virtue of the proposed bill, there is little risk that domestic prices would fall significantly below a fixed world price. Our federal antitrust laws, of course, would not reach such agreements made solely by foreign companies not subject to the jurisdiction of our federal courts.

As noted earlier, the proposed bill creates an entirely new offense under the Federal Trade Commission Act. At the present time, neither that act nor any federal antitrust law proscribes the sale of commodities under the conditions prescribed in the proposed legislation, absent conduct or activities which constitute antitrust violations. If the existing economic malfunctions of the domestic copper market result from such anticompetitive activities, they should be amenable to correction under existing antitrust laws. We believe the latter course of action, which places ultimate reliance for efficient and equitable allocation of resources upon open market forces, to be more preferable by far than the solution proposed by H.R. 17657.

Accordingly, the Department of Justice recommends against enactment of this legislation.

The Office of Management and Budget has advised that there is no objection to the submission of this report from the standpoint of the Administration's program.

Sincerely,

RICHARD G. KLEINDIENST,
Deputy Attorney General.

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
Washington, D.C., September 21, 1970.

HON. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce, House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This is in further response to your letter of May 21, 1970, in which you requested comments of the National Aeronautics and Space Administration on the bill H.R. 17657, "To amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry."

The bill would add to section 5 of the Federal Trade Commission Act (15 U.S.C. 45, 38 Stat. 719, as amended), which relates to unfair trade practices. The new provision would declare it to be an unfair method of competition to sell refined copper in commerce at a price significantly below the world market, unless the person involved allocates the copper properly among domestic users in a manner determined by the Federal Trade Commission to be fair and equitable.

The National Aeronautics and Space Administration offers no comment on the merits of the legislation. The bill would not impact NASA in any unique or special way. It is believed that the views of agencies such as the Department of Justice and the Federal Trade Commission, which are more directly concerned with the administration and enforcement of anti-trust laws, should be given primary consideration in evaluating the proposal.

This report has been submitted to the Office of Management and Budget which has advised that, from the standpoint of the Administration's program, there is no objection to its submission to the Congress.

Sincerely yours,

GERALD J. MOSSINGHOFF,
H. DALE GRUBB,
Assistant Administrator for Legislative Affairs.

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF EMERGENCY PREPAREDNESS,
Washington, D.C., September 22, 1970.

HON. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce, House of Representatives,
Washington, D.C.*

DEAR MR. CHAIRMAN: This is in reply to your request for an expression of the views of this Agency concerning H.R. 17657, 91st Congress, a bill entitled: "To amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry."

This bill would amend section 5(a) of the Federal Trade Commission Act so as to make it an unfair method of competition to sell refined copper at a price which the Commission finds to be significantly below the world price unless the seller allocates such copper among domestic users in a manner which the Commission determines to be fair and equitable to users.

It is assumed that the world price that is referred to in H.R. 17657 is the price on the London Metal Exchange. Prices of copper on that market have been higher in recent years than producer prices for copper in the United States. The London Metal Exchange is a speculative market that is often influenced by commodity traders without regard to supply and demand. It is quite sensitive to rumors which tends to make it unstable.

By contrast, producers in the United States, because of their concern for their future markets which could be lost to competitive substitute materials, have adhered to relatively stable prices thereby lending a degree of stability to the costs of items containing copper. Despite their refusal to adopt the higher world prices, United States producers have been enjoying the highest prices in history.

Enactment of this legislation would result in either higher prices for copper produced in the United States, or in the need for the establishment of an elaborate governmental system for allocating copper among users, or both. Higher prices would result in a windfall to copper producers, inflationary increases in price of items containing copper, and a possible long-range disruption of copper production because of switches to cheaper substitute competitive materials.

Allocating copper would require the imposition of a significant burden upon the United States Government in the form of administration, and upon producers, importers, and users of copper in the form of applications and reports. If some producers decided to use the world price to avoid the need for allocating and others decided to accept allocation of their production rather than raise prices, the allocation process could become so complicated as to be practically impossible to administer in an equitable manner.

In view of the foregoing, I recommend that H.R. 17657 not be enacted.

The Office of Management and Budget has advised that there would be no objection to the submission of this report.

Sincerely,

G. A. LINCOLN, *Director.*

EXECUTIVE OFFICE OF THE PRESIDENT,
OFFICE OF MANAGEMENT AND BUDGET,
Washington, D.C., September 15, 1970.

HON. HARLEY O. STAGGERS,
*Chairman, Committee on Interstate and Foreign Commerce,
Rayburn House Office Building, Washington, D.C.*

DEAR MR. CHAIRMAN: This is in response to your request for the views of the Office of Management and Budget on H.R. 17657, a bill "To amend the Federal Trade Commission Act to prohibit certain unfair sales practices in the copper industry."

For the reasons expressed in the adverse reports of several departments and agencies which are reporting to you on this bill, the Office of Management and Budget does not recommend enactment of H.R. 17657.

Sincerely,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

Mr. Moss. Our first witness today is a representative of the Department of Commerce. We will, of course, want to hear from the Federal Trade Commission and the Department of Justice in the course of these hearings. It was not possible, however, for these agencies to send witnesses today because the hearings for today and tomorrow were called on such very short notice.

We look forward to hearing from the FTC and Justice at the next round of hearings, which I hope will be scheduled in the very near future.

Before we hear from our first witness, I understand Congressman Blanton has a few words to say.

Mr. Blanton?

Mr. BLANTON. Thank you, Mr. Chairman.

For the record, I would like to make an opening statement.

In my opinion, something is very wrong with the copper industry. The purpose of these hearings is to attempt to find out what it is, and how to remedy the situation. We don't want to burn down a barn to kill a rat. What we do want is to find out solutions through legislation which will protect the American consumer, protect the concept of small and independent business, and open up a rather closed industry which restricts the American concept of free competition.

In America, the competitive race is won by the swiftest and not the most powerful. Everyone should get his chance through his imagination and efficiency to join that race.

The interest of the competitive market in the copper industry is one in which the American consumer has a large stake. The pricing practices of the copper industry seem to give reasonable assumption that a few companies which control domestic copper like to keep competition at a bare minimum. A vast array of areas will have to be studied. Since we are limiting this legislation to the copper industry, I do not think we will have the trouble some of the past Senate investigations have had in trying to cover the entire metals industry. Copper alone is complex enough, and perhaps a piecemeal approach is better than a full-scale study of the entire metals industry.

The executive branch has tossed this problem in our laps. The Justice Department has had an on-again, off-again investigation for years. Little appears likely to come from that Department.

The Presidential study of copper by the President's Economic Advisory Council says little.

Therefore, legislation is required, in my opinion, to remedy the situation of an almost monopolistic industry.

I do not like to see more Government regulation of industry; but the need for Government interference always comes as a result of abuses within an industry, not before the abuses are given a chance to develop. Just as we see in the problem of pollution, it seems that industry will not clean up its own house until Government steps in on behalf of the citizens and the consumer, and says, "You must do so."

Therefore, business has no one to blame but itself when Government must regulate it, for in far too many cases it simply will not keep its own house in order.

Mr. Moss. Before introducing our first witness, I would like, on behalf of Congressman Keith, who is the ranking minority member of this subcommittee, to convey his regrets. He has a conflicting committee meeting this morning, the Committee on Oceanography, but he wanted me to assure those present today that he will very carefully review this day's hearing record and wanted me to convey his interest.

Now, we would like to hear from Mr. William A. Meissner, Jr., Director of the Copper Division, Business and Defense Services Administration of the Department of Commerce.

Mr. Meissner?

I want first to express my appreciation to you for being willing to come up on such very short notice. The subcommittee would have liked to have been in the position to have given longer notice, but that was not possible.

I understand you do not have a prepared statement, but are prepared to respond to questions on the general background of this whole problem; if you do have some remarks you would like to make preliminarily, we would be very happy to hear them.

STATEMENT OF WILLIAM A. MEISSNER, JR., DIRECTOR, COPPER DIVISION, BUSINESS AND DEFENSE SERVICES ADMINISTRATION, DEPARTMENT OF COMMERCE; ACCOMPANIED BY RODNEY JOSEPH, CHIEF ECONOMIST

Mr. MEISSNER. I have no prepared statement, Congressman. I was given to understand that I would subject myself to any questions that may be asked of me by this committee.

Mr. MOSS. Well; I think I will turn the operation at this point over to Mr. BORCHARDT.

Mr. BORCHARDT. Mr. Meissner, would you be good enough to give your background for the record and indicate what experience you have had in the copper field.

Mr. MEISSNER. I have been associated with the copper industry, both in industry and Government, for over 45 years. I was called to Washington in February of 1942 to help organize the Copper Division of the War Production Board. Subsequently, I served in the Navy, as officer in charge of raw materials, which included copper and other metals.

At the conclusion of World War II, I returned to industry, was called back to Washington in 1950, to again help organize the Copper Division under the National Production Authority.

In 1952, I was appointed Deputy Director of the Copper Division of BDSA. In 1957, I was appointed Director of the Copper Division, and have continued to this date.

Is that sufficient?

Mr. BORCHARDT. Will you please identify your associate?

Mr. MEISSNER. On my right is Mr. Rodney Joseph, Chief Economist of the Copper Division, and my assistant.

Mr. BORCHARDT. Would you be good enough to detail the responsibilities of the Copper Division?

Mr. MEISSNER. The Copper Division under the BDSA has a dual function; foster and promote the growth of commerce, and to assure the Department of Defense the obtaining of the copper required for military requirements. That is grossly oversimplified.

Mr. BORCHARDT. You were a member of the Task Force on Copper, were you not?

Mr. MEISSNER. Yes. I served on the subcommittee for the Department of Commerce. The official member was the Assistant Secretary of the Department of Commerce, but W. D. Lee, Administrator of BDSA, and I served as his alternates, and I attended the vast majority of the meetings.

Mr. BORCHARDT. Who was the chairman of the task force?

Mr. MEISSNER. Dr. Houthakker, of the Council of Economic Advisers.

Mr. BORCHARDT. The committee has asked Dr. Houthakker to testify and give to the committee the information which he gathered. He indicated that since he was on the staff of the Council of Economic Advisers he would not be able to appear.

Under these circumstances, would you be willing to detail the manner in which the task force proceeded and what the results were of the studies conducted by the task force?

Mr. MEISSNER. No; I would not, Mr. Borchardt. The chairman of the committee, I believe, should have the obligation of explaining the procedures of that committee. I would like to furnish you with a copy of the ultimate report that was made public, but it was my understanding that I was to appear here as an authority on copper—and I don't particularly like the word—to detail and describe to you what has transpired in recent years within the copper industry. I do not feel that I, at this time, want to defend the Houthakker report, or even go into the great details of how we arrived at the report. I do not think that would be proper.

Mr. BORCHARDT. Do you have a copy of the report with you and will submit it for the record?

Mr. MEISSNER. Yes.

I submit for the record a copy of the public report released by the White House on May 22, 1970, and also a copy of a transcript of the press conference of Hendrik Houthakker, chairman of the subcommittee, and W. A. Meissner, Jr.

(The documents referred to follow:)

THE WHITE HOUSE,
Washington, D.C., May 22, 1970.

The contents of this report are embargoed for release until the completion of a press briefing by Hendrik S. Houthakker, a member of the Council of Economic Advisers. The briefing is scheduled to begin at 11:00 a.m.

RONALD L. ZIEGLER,
Press Secretary to the President.

REPORT OF THE SUBCOMMITTEE ON COPPER TO THE CABINET COMMITTEE ON ECONOMIC POLICY

In accordance with its established policy of watching over markets that may be out of adjustment and which might therefore exert an adverse effect on the economy, the Administration has taken note of persistent signs of a possible malfunctioning in the copper market. In particular, four symptoms have attracted the attention of the Administration.

First, there has been a sharp rise in copper prices and an apparent failure of supply to grow as rapidly as demand. Second, a pricing system has evolved in the United States by which an essentially homogeneous commodity, refined copper, is sold at significantly different prices. Third, the Government has received complaints from a number of copper fabricators pointing out their inability to compete fairly because they have been precluded from purchasing low-priced copper. Fourth, since 1965 the Government has found it necessary to maintain short-supply export quotas on copper.

On January 9, 1970 it was announced that the President had directed the Cabinet Committee on Economic Policy to make a study of market conditions and pricing procedures in the U.S. copper industry, and to make recommendations about any needed action by the Government. The Subcommittee on Copper was formed under the chairmanship of Hendrik S. Houthakker, a Member of the Council of Economic Advisers. The others serving on the Subcommittee are:

Philip Trezise, Assistant Secretary of State.

Kenneth N. Davis, Jr., Assistant Secretary of Commerce.

Hollis M. Dole, Assistant Secretary of the Interior.

Fred J. Russell, Deputy Director, Office of Emergency Preparedness (now Under Secretary of the Department of the Interior).

William Truppner,¹ Director, Resource Analysis Center, Office of Emergency Preparedness.

Richard W. McLaren, Assistant Attorney General.

Louis Brooks, Deputy Assistant Commissioner for Stockpile Disposal, Property Management Disposal Service, General Services Administration, attended Subcommittee meetings as an observer.

¹ Mr. Truppner replaced Mr. Russell when the later became Under Secretary of the Department of the Interior.

In studying the copper market two procedures of investigation were followed. First, several of the agencies represented on the Subcommittee prepared background reports on those aspects of the copper market in which they were most expert. These reports were based on information made available to the agencies in the normal course of their operations. Second, an extensive set of informal interviews was conducted among copper producers, fabricators, and merchants. These included all the major producers, many of the smaller producers, and a wide variety of fabricators. A list of firms and organizations interviewed is included in the Appendix.

THE COPPER MARKET

BACKGROUND

The basic stages of the copper industry are mining, smelting, refining and fabrication. Mining involves the removal of copper ore from the ground; smelting converts concentrated ore into "blister" copper which is approximately 99 percent pure; refining produces nearly pure copper in certain standard shapes; fabrication converts these standard shapes to final or intermediate products such as tubing, wire and sheet. In addition to the primary metal obtained from ore, the industry uses a considerable quantity of scrap for re-refining and for alloying.

Although some trading occurs at each stage of copper production, most commercial transactions are conducted between the refining and fabricating stages. Thus major attention in this study is given to the price and quantity relationships between the supply of refined copper (mining, smelting and refining) and the demand for refined copper (fabrication).

Sales of most refined copper produced from domestic ores in the United States have been based on the domestic producer quotations. Sales in the United States of some primary refined copper, secondary refined copper (made from scrap) and alloy copper are at higher open market prices. Except for primary refined copper in Canada and Mexico, which is sold at their own producers' price, foreign refined copper is sold on the basis of the higher world prices, which generally reflect London Metal Exchange (LME) quotations.

The U.S. scrap market more closely resembles a competitive market consisting of many buyers and sellers. Prices for the several grades tend to fluctuate freely but follow the general pattern of refined copper prices on the LME and other outside sources.

The new supply of copper (refined copper and scrap) in the United States in 1969 consisted of primary domestic refined copper, 45 percent; refined copper made from secondary materials, 15 percent; imported materials, 13 percent; and scrap used for alloying or directly by fabricators, 27 percent.

The United States and Canada account for 40 percent of the world mine production. Chile, the Congo, Zambia and Peru account for an additional 40 percent of production. These four countries have formed the International Council of Copper Exporting Countries (CIPEC). The United States, Japan, West Germany and the U.K. account for 70 percent of consumption.

The domestic producing industry is highly concentrated while the fabricating industry is less concentrated. The greatest concentration is in the smelting and refining stages. The mining industry consists of a large number of independent companies, although the bulk of the production is highly concentrated. Four companies own 70 percent of the mine production and 80 percent of the refining capacity. These same four companies own, or have substantial interests in, fabricating facilities that consume over half the copper. Two of these companies smelt and refine much of the copper produced by the independent mining companies. In addition, some of these companies have stock interests in other copper producing and marketing companies.

The fabricating industry consists of electrical wire and cable manufacturers, copper and brass fabricators, brass and bronze foundries, copper powder mills and some small miscellaneous users. Ingot makers make alloys out of scrap for use primarily by foundries.

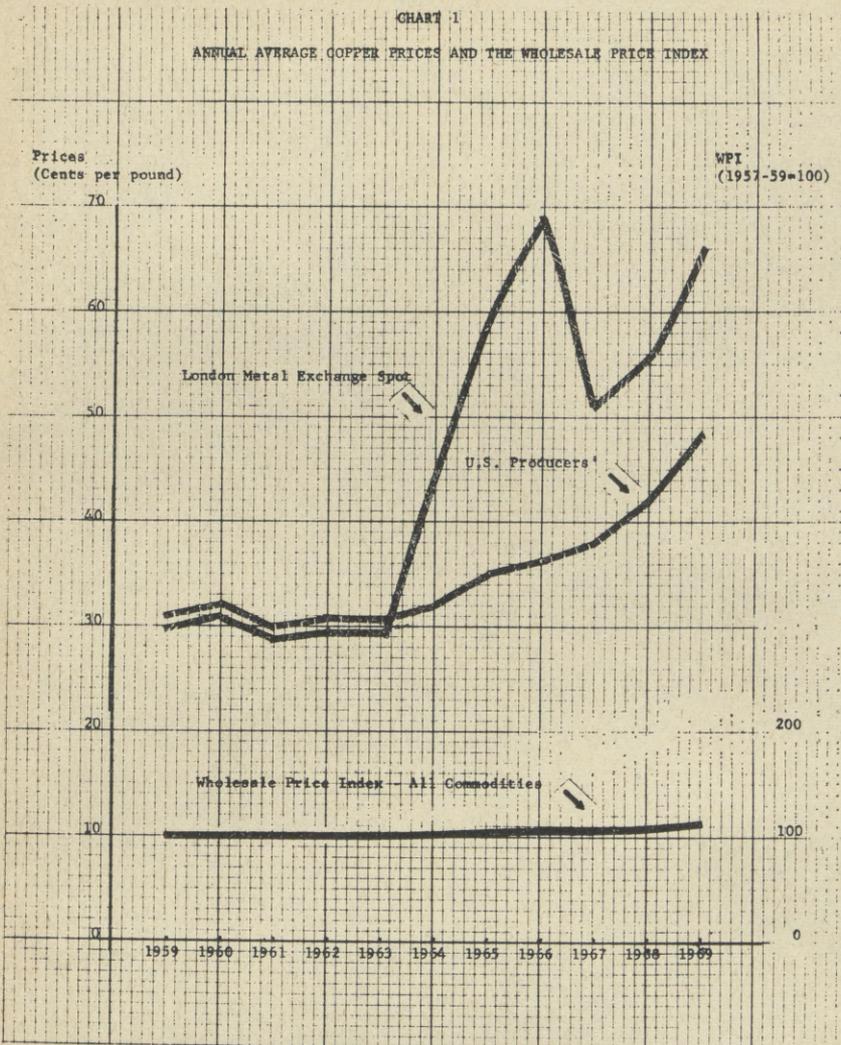
HISTORICAL COPPER-SUPPLY-DEMAND-PRICE RELATIONSHIPS

From 1963 to 1966, average annual world refined copper prices (as measured on the LME) jumped 135 percent following a four-year period in which the price was virtually unchanged. The rise in price was associated with an acceleration in the growth rate of consumption (from 5 percent to 7.5 percent per year) during a period when the rate of growth in world primary production was falling (from

5.5 percent to 4.5 percent). From mid-1966 to mid-1968 a fluctuating pattern of prices occurred, caused in part by the nine-month U.S. producer strike and its conclusion. Since then prices have risen steadily. The LME price on May 1 was 76 cents per pound.

Supply and consumption in the United States have followed these trends except that prices charged by U.S. primary producers have lagged behind world prices. Since 1963 domestic producer copper has generally been from 25 to 40 percent cheaper than copper in world markets. Since refined copper made from scrap and from imported ores, together with imported refined copper, sells at prices that are roughly in line with world prices, a two-tier market has developed in the United States. The two-tier market will be discussed in the next section. The historical movement of world and domestic prices is shown in Charts I and II.

Over the past decade when primary production in the United States was increasing about 4 percent per year, consumption of all forms of copper was rising at an annual rate in excess of 4½ percent. Consumption has been able to grow faster than primary production because of a more intensive use of secondary material and because of sizable releases of stockpile copper during the mid-1960s. Net imports have typically represented about 10 percent of domestic consumption, but have risen to over 25 percent in periods of domestic strikes. The growth of total copper supply and its changing composition are shown in Chart III.



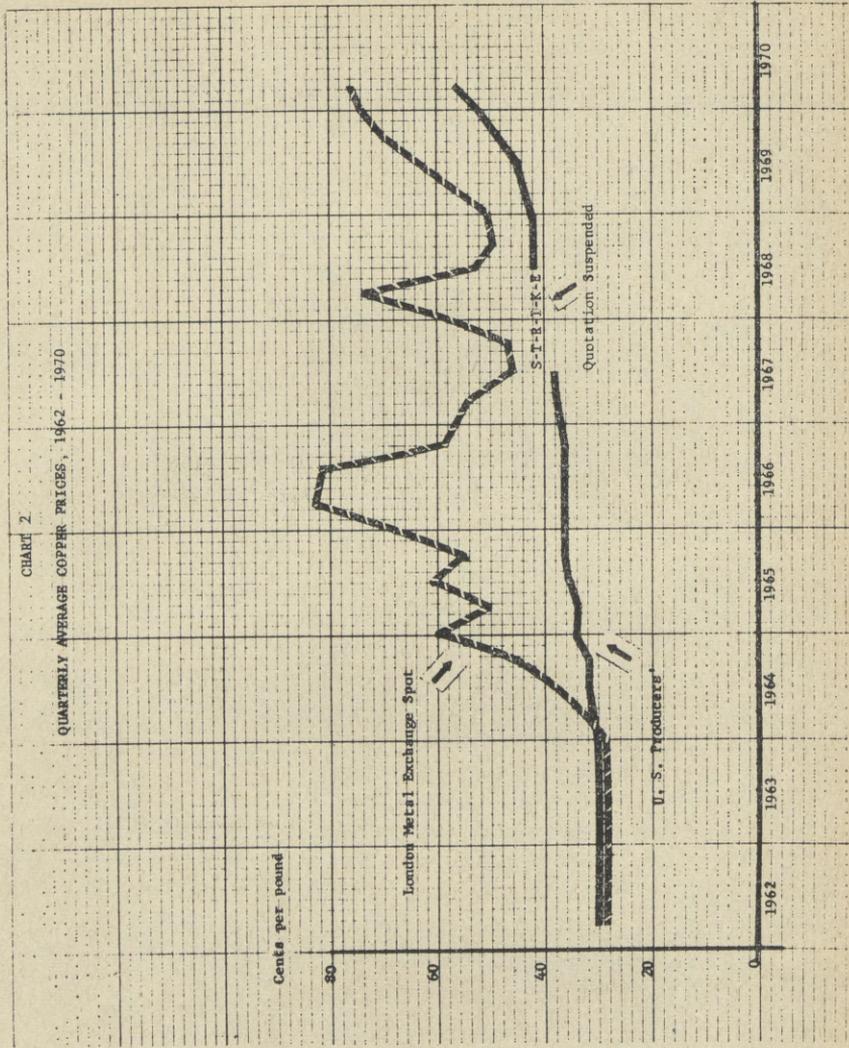
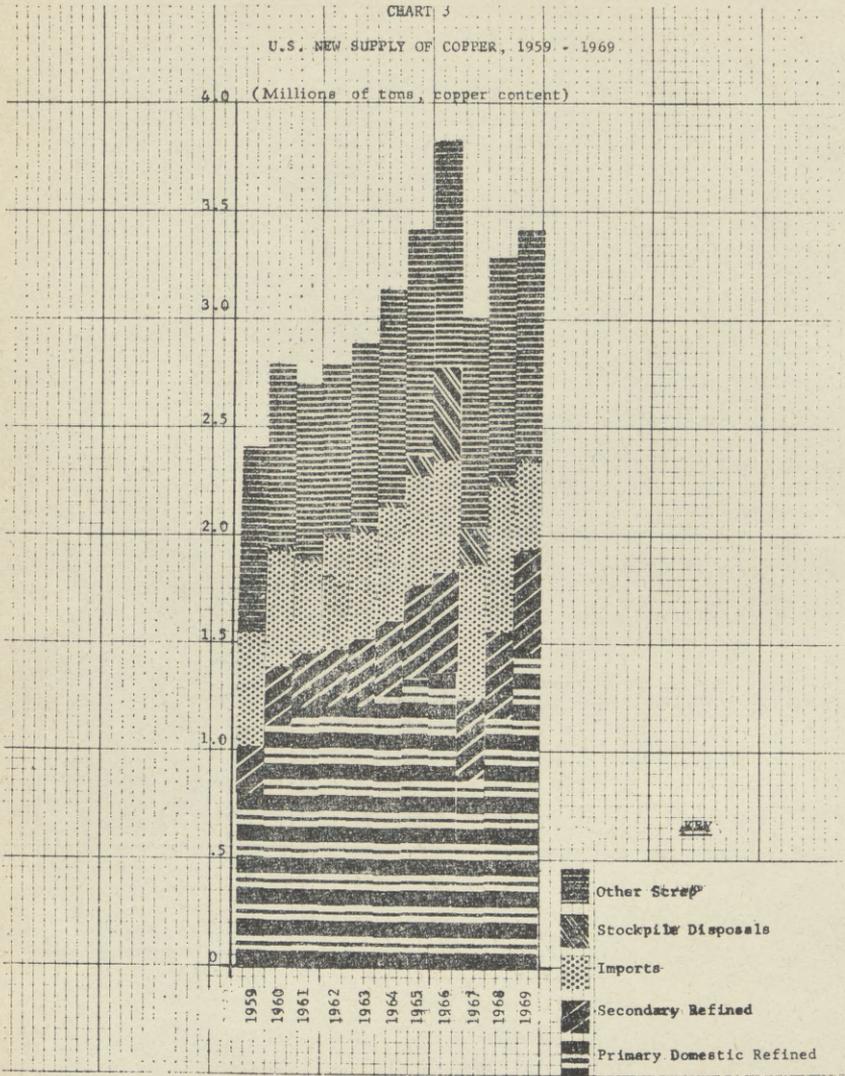


CHART 3
U.S. NEW SUPPLY OF COPPER, 1959 - 1969

(Millions of tons, copper content)



THE TWO-PRICE SYSTEM

Refined copper is available in the United States from producers or from the "outside" market. The producer market is dominated by a small number of large producers who have considerable discretion in setting prices. Not all producers charge the same price, but generally all producer prices fall within a narrow band of a few cents and tend to move up or down at about the same time. The outside market is a complex conglomeration of secondary refiners, importers, commodity exchanges, and merchants. Prices in this sector also vary among sub-markets but again within a band of a few cents.

For more than six years now there has been a large and persistent gap between the levels of prices in the two markets. As of May 1, 1970, most domestic producers sold refined copper for about 60 cents per pound, while in the outside market prices ranged from around 75 cents to 80 cents. When we speak of the two-price system, it is this gap between prices in the producer and outside markets to which we refer and not to the minor variations within each market.

For the most part the outside market is open, in the sense that anyone may purchase copper there if he can pay the price. The producer market is a closed one. Since producers can meet only a fraction of the demands for the lower-priced copper they ration their supplies by limiting their customers and the quantities each customer may purchase.

Industry sources offered three interrelated explanations for the gap between producer and outside copper prices. First, producers have traditionally attempted to mitigate fluctuations in copper prices by changing their prices only at discrete intervals and only after clear and persistent signs that they are not at an equilibrium level. Outside prices have tended to be more volatile and very sensitive to short-run pressures. Thus, there is a tendency for producers to lag somewhat in raising prices during an upswing. The argument is that the prolonged period of high and rising prices we have been experiencing has resulted in a gap between producer and market prices.

Second, some major producers presented data indicating that recent high outside prices are strictly of a temporary nature and largely a carryover from the 1967-68 strike. These producers stated that it is sound policy, therefore, to refrain from price increases that would only have to be rescinded in the coming months. High and unstable prices, they suggest, would cause irreversible substitution of other materials for copper and the loss of future markets.

Third, it was pointed out that some Government actions were taken during 1965-67 which had the effect of perpetuating the gap. Of prime importance were Government efforts to discourage and rescind price increases by domestic copper producers. Other actions included Federal Government efforts to encourage substitution of other materials for copper in Federal procurement, the establishment of set-asides on domestic refined copper production to assure the meeting of Defense copper requirements, the establishment of a domestic copper expansion program, and the disposal of approximately 835,000 short tons of copper from stockpile inventories (550,000 short tons by Presidential release). The present stockpile inventory is approximately 260,000 short tons.

THE ALLOCATION OF PRODUCER COPPER

The immediate consequence of this pricing system is that some consumers purchase copper at prices significantly different from what others have to pay. The limited supplies of low-priced copper must be rationed or allocated by producers. The Subcommittee questioned producers and consumers about the methods of allocation that are employed. From the producers we received only an overall policy outline—not all producers were willing to give detailed lists of their allocations and so the Subcommittee decided not to request them from any producer. The producers described a general policy based on two principles. First, customers as of the period 1961 to 1963 tend to be retained. All producers in some way or another use a historical basis related to this period. In addition, however, producers stated that they make additions to and deletions from their customers list on the basis of the best long-run interests of their firm. Different producers weight these principles differently.

Some fabricators, especially those receiving little or no producer copper, were willing to divulge the sources of their copper, and several gave detailed lists of sources over the past six to eight years. Experiences vary widely among consumers. Several fabricators, including the subsidiary of a major producer, meet all of their refined copper needs with producer copper. Others receive from 40 to 50 percent,

and still others receive none. Although the current experience of fabricators is typically correlated with their 1961 to 1963 position, significant changes have taken place. Some customers receiving up to 75 to 85 percent producer copper in the earlier period, now receive only 40 percent. At the same time, other firms have found their allocations increased sharply.

The proportion of lower-priced copper a firm obtains depends not only on the tonnage allocated to it by producers, but also on the extent to which it purchases high-priced copper in the open market. For example, one fabricating firm does not purchase any high-priced refined copper. Besides some scrap, he uses only producer copper in the limited supplies he can get. As a result, he runs his mill at 25 percent of capacity and at operating costs per unit more than double the capacity rate. Other firms stated that they would operate at higher percentages of capacity and incur lower operating costs if they could get more producer copper.

Firms receiving little or no producer copper told the Subcommittee that they choose not to operate some plants at all. For certain products, such as simple electrical wire, the copper content of the product valued at dealer prices exceeds the competitive selling price of the product. In this situation a firm without access to producer copper would operate at a loss even if it had zero costs in its fabricating plant. Conversely, where copper forms a small part of the value of a product, the problem is minor.

One fabricator has found its historical allocation cut severely or eliminated completely by four of the five domestic producers it has purchased from. Although this firm is a producer itself abroad, its foreign production must be sold in world markets at world prices and it therefore has no internal source of low-priced copper.

EXPORT CONTROLS

Short-supply export quotas have restricted the export of copper-bearing raw materials and semifabricated products since late 1965. The purpose of the quotas is to maximize the quantity of copper available for use within the United States. In most cases, quotas rather than absolute embargoes are maintained in order to retain existing commercial ties. Shutting off the present relatively small exports of refined copper and scrap would add only marginally to domestic supplies.

Partial relaxation or complete open-ending has been proposed on several occasions. Producers of refined copper are not interested in expanding exports at this time nor can it be expected that they would change their pricing policies in the face of increased export demand. On the other hand, exports of refined copper made from scrap could be expected to rise to the extent that world prices exceed domestic outside prices. This would divert scrap from the U.S. market and subvert the intent of the scrap controls.

Relaxation of scrap controls, in all likelihood, would force a rise in domestic scrap prices to a parity with world levels. This would not induce much more scrap collection in the United States, but could stimulate exports. Thus, those companies that now must supplement their copper requirements with scrap because of an insufficient producer allocation, would have to pay higher prices for some of their outside copper. This would, in effect, intensify the harmful effects of the two-price system.

PROBLEMS OF THE COPPER MARKET

The Subcommittee concludes that there are two primary problems in the copper market: (1) the inequities and economic inefficiencies caused by the two-price market and the present system of allocation; (2) present and future hindrances to the rapid growth of supply which have caused and may continue to cause strong upward pressure on prices.

The first of these problems, and perhaps the second, seem to be at least partly attributable to structural characteristics of the copper industry—concentration at the mining, smelting, and refining stages, stock relationships among some of the copper producing and marketing companies, and vertical integration of major producers into fabricating.

In addition, it has become aware of two practices that may restrict markets and intensify the problems noted above.

(1) The requirement by some brass mills as a condition of sale that scrap generated by their customers be returned to them at a price beneath that of the market.

(2) The requirement by some custom refiners and smelters that ore concentrates be sold to them as opposed to permitting smelting and refining on toll basis.

The Department of Justice, which is represented on the Subcommittee, has been made aware of these problems and practices, but the Subcommittee has made no judgment or recommendations with respect to possible antitrust implications.

INEQUITIES AND ECONOMIC INEFFICIENCIES ²

Firms whose allocations of producer copper are disproportionately low are placed at a serious competitive disadvantage. Where the copper content represents a fairly large proportion of the value of a product, even a very efficient fabricator who has to obtain all or the great bulk of his metal on the open market may not be able to absorb this difference in his raw material costs without losses. Over several years this situation has led to the shutting down of some plants and reductions in the net worth of some companies that did not have access to the cheaper metal. It has also restricted the entry of new concerns because of their inability to obtain producer allocations.

On the other side, firms obtaining large allocations enjoy a broader spread between raw materials cost and product price. They can, therefore, make larger profits even at lower levels of efficiency.

The possibility that firms with very low efficiency or very low operating rates can survive by receiving cheap copper, points up the other deficiency in the two-price system—resources such as labor and capital may not be allocated to their most efficient employment. An efficient firm, which could make better use of labor, capital, and raw materials, may find itself reducing the level of operations, laying off workers, and holding back new investment. An inefficient firm that had a substantial allocation could well be operating at higher levels of capacity. Our scarce mineral resources are thus flowing not necessarily to those who can use them most effectively, but to those favored by a raw material supplier.

As with most economic inefficiencies brought about by imperfect markets it is impossible to estimate the precise costs imposed on the economic system. The fact that detailed lists of allocations for the whole industry were not made available limits our conclusions mainly to those fabricators that revealed their copper sources—and they cannot be assumed to form an unbiased sample. Nevertheless, the potential for anticompetitive behavior and for deviations from free market efficiency are obviously great. Under the two-price system it is simply too easy for a producer to bias his allocations of low-priced copper toward firms that do not compete with its fabricating subsidiary and away from those that do. It is also very unlikely that the pattern of allocations, whatever the design of the producers, would work out to be the same as that obtaining in an open and competitive market.

THE PRICE OUTLOOK AND HINDRANCES TO THE FUTURE GROWTH OF SUPPLY

According to announced industry expansion plans, U.S. copper mine capacity is expected to increase at an average annual rate of about 6 percent during 1970–73. Concurrently, the rest of the free world production capacity is projected to grow at an average annual rate of about 8 percent.

Many industry forecasters anticipate an increase in world demand at the rate of 4.5 percent per year through 1973. At these rates of growth, production could exceed demand by a nominal amount, thus permitting some inventory building.

These projections assume no significant changes in price. Quantities supplied and demanded almost always vary with price, but studies of the copper market indicate that the short-run response of these quantities is very limited. Thus, for projections to 1973 the failure to take account of price is probably not a serious shortcoming.

In the long-run, say six to eight years or more, there is evidence of substantial response to price on both the supply and demand side. Table I gives estimates of the U.S. and foreign recoverable reserves that could be profitably developed in the long-run if prices were maintained at certain levels. It is clear that high prices would bring forth substantially greater supplies. The range of uncertainty surrounding future prices, however, is a serious obstacle to investment in new capacity. Long-term, fixed price contracts could provide a solution to this problem, but they are rarely used in the U.S. copper market.

² While agreeing with the described principles of economic inefficiencies the Department of Interior does not concur in the view that such inefficiencies necessarily exist in fact or have been conclusively demonstrated in the aspects of the copper market studied by the Subcommittee.

TABLE I.—LONG-RUN COPPER SUPPLY RESPONSE TO PRICE

Price, copper, 1968, dollars per pound	Recoverable copper, million, short tons	
	United States	Foreign
\$0.50	81	215
\$0.60	94	238
\$0.70	94	268
\$0.80	99	303
\$0.90	100	341
\$1.00	135	381
\$1.10	147	426
\$1.20	159	478
\$1.30	172	537
\$1.40	185	606
\$1.50	198	687

The plans and announced schedules, upon which the rates of primary copper production are projected to 1973, are fairly credible if no significant disruptions occur. Considering the variety of production interruptions that can happen—such as strikes and work stoppages (current U.S. labor contract expire in mid-1971), unusual weather conditions, lack of skilled manpower, lack of adequate water supplies, and failure of equipment and facilities—and the frequency of such occurrences in the past, the supply estimates may be as much as 10 percent higher than may prove attainable. Similarly, the short-run demand estimates are susceptible to a variety of variables including irregular Red Chinese buying, the degree of fighting in Indo China and elsewhere, and the independent economic policies pursued by the major industrialized countries. Thus the range of uncertainty includes the possibility of excess supply and excess demand, and therefore of rising and falling prices.

CIPEC countries, which account for about 40 percent of the world primary copper production and substantial U.S. imports, are also an uncertain factor in future copper supplies. In light of various price stabilization schemes voiced by CIPEC or its individual members—e.g., “copper bank”, CIPEC price setting, production or sales cutbacks—it is uncertain how these nations’ production schedules might be affected by an eventuality of lower copper prices.

The Subcommittee concludes from these facts that it is desirable to have further expansion of U.S. production to bring better balance to the domestic copper market. From study of the supply-demand-price relationship several factors emerge as obstacles to the expansion of domestic primary production capacity.

First, it is recognized that current technology for treating lower grade ores does not provide at current prices for profitable separation and recovery of copper and attendant coproduct materials.

Second, increasing public concern with environmental pollution caused by copper smelters threatens to make smelter capacity a serious bottleneck.

Third, there are conflicting claims on natural resources brought about by ever-increasing and competing demands upon our public lands and the strong trend towards preservation of our natural environment.

Fourth, uncertainties as to future prices act as a deterrent to development of new mines.

Fifth, the absence of a clearly-defined national minerals policy tends to discourage the orderly and economic development of mineral sources.

ALTERNATIVE ACTIONS

The two objectives are to reduce the inequities and economic inefficiencies of the two price system and to increase future supplies. The second objective would contribute to the first in that increased supplies in the producer market would reduce consumers’ reliance on the outside market, while increased supplies on the outside market would reduce prices there and narrow the price gap. However, actions addressed to increasing future supplies will typically take two or more years to have any effect and thus offer no short-term relief to the problems of the two-price system.

Alternative 1. Accept continuance of the two-price system as long as the market imbalance persists, but improve the equity of allocation.—One means of accomplishing this would be to establish a pool of domestic copper for distribution to users denied equitable allocations. Such a pool could be in the form of a nondefense set-aside,

to be allocated by a government agency to clearly demonstrated hardship cases, including new entrants.

Pros

(a) This would eliminate or lessen the hardship experienced by users not on producers' books, including new entrants, and thus probably strengthen competition in the market for copper fabrications.

(b) It would weaken the ability of major producers to influence the policies of their customers through the granting or withholding of allocations.

(c) It might induce the major producers to move toward greater equity and even-handedness in their allocation patterns and policies.

Cons

(a) Establishment of any such pool from set-asides imposed on the producers would presumably require specific legislative authority. It would be difficult to draft such legislation in a form which would be acceptable to Congress while preserving necessary administrative latitude with respect both to the amount of the set-aside and the rules for its distribution.

(b) The administrative burden could be onerous, unless the rules for allocation could be drawn precisely and objectively. The principles on which such rules could be based are not as yet obvious.

(c) Complaints regarding equity would be shifted from the producers to the government. These would be difficult to handle because of the virtual impossibility of defining objective standards of equity. Since the set-aside would have to be drawn from amounts currently being allocated, companies whose allotments were cut as a consequence would also complain vociferously.

(d) It would be strongly opposed by the producers, and by customers whose allocations would be reduced.

Alternative 2. Maintain essentially the present system, but make substantial supplies of producer copper available to the open market. This could take the form of inducing or requiring the producers to throw some tonnages of domestic refined into competitive bidding, possibly through COMEX. The quantities could be determined by formula, e.g., a percentage (say 5 to 10 percent) of current output, or 50 to 100 percent of any increase over 1969 production, whichever is larger.

Pros

(a) The increased supply on the open market should have some effect in bringing open-market prices down, even though open-market demand would also be increased, though not quite as much. Depending on how much copper is involved this should narrow the gap and lessen the present inequities. It would weaken correspondingly the arbitrary market power now enjoyed by the major producers.

(b) The pattern established could gradually be extended by increasing the open market allocations, while minimizing the dislocations involved in any abrupt change. This would also be consistent with the objective of gradually reestablishing a one-price system.

(c) There could be some incentive to increased production since this could be sold at higher prices.

Cons

(a) Inequities, though substantially lessened, might persist until the basic supply-demand imbalance is largely rectified.

(b) It might result in some moderate increase in product prices.

(c) It would increase producer revenues and profits on the amounts sold at higher prices, and could have some impact on labor negotiations.

(d) Legislation would probably be needed since the major producers have shown no willingness to do this voluntarily.

Alternative 3. Permit reverse toll refining of copper bearing ores, concentrates, and scrap, that is, nonrestricted exports of copper raw materials to be refined abroad and returned to the United States.—This could increase the quantity of refined copper available for domestic consumption, since there is a shortage of smelter capacity in the United States.

Pros

(a) Some companies have indicated that the average cost of copper would fall because the processing charges would be less than the costs of converting in the United States.

(b) The primary producers' influence upon small mining companies and some fabricators would be weakened by providing an alternative to outright sale to the producers.

Cons

(a) Adoption of a reverse toll policy that is not restrictive as to who may apply for such authority and as to the quantities to be authorized for reverse toll is tantamount to eliminating or open-ending the quotas.

(b) To limit reverse toll authorization to some specified class (e.g., fabricators who can demonstrate that the returned copper will be consumed by them and that they have a history of a true toll agreement) would be resented by other segments of the industry.

(c) Authorization of reverse toll on copper raw materials may not assure a net increase in U.S. refined copper supply because the reverse import obligation could be satisfied with copper destined for the U.S. under normal trade practices; thus, the result might be to increase U.S. raw material exports with no compensating rise in our refined copper supply.

Alternative 4. Initiate a new domestic copper expansion program.—Past copper expansion programs have provided incentives not available in the commercial market, such as government financing and guaranteed markets at assured prices under long-term contracts. A recently closed copper expansion program resulted in the development of a new copper mining operation by the Duval Corp. in Arizona. This program, which exhausted the available funds, was carried out under the Defense Production Act which expires June 30, 1970. The proposed Defense Production Act extension authorizes appropriation of funds for expansion programs.

Pros

(a) Such a program should result in the long-range expansion of domestic output.

(b) In addition to new proposals, some proposals not accepted under the last program because of lack of funds and fulfillment of that program goal could be reevaluated in the light of today's market conditions.

Cons

(a) Lack of financing was not mentioned by producers as an obstacle to mine development.

(b) Prices and markets could be assured by long-term contracts with consumers in the private sector.

(c) New appropriations would be required.

(d) Significant quantities of new supply would not enter the commercial market for several years due to the length of time necessary to bring approved programs to fruition.

Alternative 5—Promote exploration, extraction and processing by providing appropriate incentives.—Incentives would include tax changes, such as replacing the depletion allowances with a 100 percent write-off of capital expenditures incurred in purchase or lease of property, in exploration, in development, in mining, and in processing (and pollution abatement), including such write-off of existing net book values as of effective date of depletion allowance discontinuance. This would encourage expansion of existing mines and refineries, and development of new mines and smelters.

Pros

(a) Substantial improvements in technology would be encouraged and would significantly increase the future supply of low cost production.

(b) Existing domestic mines would be encouraged to increase production.

(c) Opportunities would be opened for the entry of new firms to the producing sector because some marginal properties would become profitable.

(d) Effective solution to the supply problems would be coupled to the Administration's concern for the quality of the environment.

Con

(a) Revision of tax policies, while providing powerful immediate incentives, would require legislative action and involve implications going beyond the scope of the Subcommittee's concern for copper.

RECOMMENDATIONS

Alternatives 1 and 2 are not recommended by any members of the Subcommittee at the present time. However, the Subcommittee recommends continued surveillance of the copper pricing and allocation systems and provision for the reconvening of the Subcommittee to reconsider these and other actions.

The opinions expressed on Alternative 3 were all favorable. There was some feeling, however, that this program would have to be administered in such a way

as to assure a net increase in refined copper imports, and to this end intensive consultations with affected segments of the industry were recommended.

There is no general support for Alternatives 4 and 5.

APPENDIX

List of Copper Firms and Organizations Meeting with Representatives of the Subcommittee:

Producers

American Metal Climax.
American Smelting and Refining Co.
The Anaconda Co.
Copper Range.
Duval Corp.
Inspiration Consolidated Copper Co.
Kennecott Copper Corp.
Magma Copper Co.
Phelps Dodge Corp.
Tennessee Corp.

Fabricators

Ampeco Metal.
Belden Manufacturing Co.
Bridgeport Brass Co.
Cadillac Cable Corp.
Cerro Corp.
General Electric Co.
Halstead Metal Products Co.
Lead Supplies, Inc.
Nehring Electrical Works.
Okonite Co.
Reading Industries.
Techbestos.
Triangle Industries.
Western Electric Co.
Westinghouse Electric Corp.

Others

Independent Copper Fabricators Institute.
C. Tenant and Sons (merchant).
New York Commodity Exchange.

TABLE 2.—ANNUAL AVERAGE COPPER PRICES AND THE WHOLESALE PRICE INDEX

Year:	U.S. producer f.o.b. refinery (cents per pound)	London Metal Exchange spot (cents per pound)	Wholesale price index for all commodities (1957/59=100)
1959	31.2	29.8	100.6
1960	32.1	30.8	100.7
1961	29.9	28.7	100.3
1962	30.6	29.3	100.6
1963	30.6	29.4	100.3
1964	32.0	44.0	100.5
1965	35.0	58.7	102.5
1966	36.2	69.0	105.9
1967	38.2	51.2	106.1
1968	41.8	56.1	108.7
1969	47.8	66.3	113.0

Source: Metals Week and Bureau of Labor Statistics.

TABLE 3.—QUARTERLY AVERAGE COPPER PRICES 1962-70

[Cents per pound]

Year:	U.S. producer f.o.b. refinery (quarter)				London Metal Exchange spot wirebar (quarter)			
	1	2	3	4	1	2	3	4
1962.....	30.6	30.6	30.6	30.6	29.3	29.4	29.3	29.3
1963.....	30.6	30.6	30.6	30.6	29.3	29.3	29.3	29.3
1964.....	30.8	31.6	31.6	31.8	31.6	37.7	45.3	60.4
1965.....	33.6	34.9	34.9	35.6	51.4	60.8	55.3	66.4
1966.....	36.1	36.0	36.0	36.0	82.0	79.3	58.5	57.1
1967.....	38.0	38.1	38.1	(1)	53.7	45.5	46.6	57.9
1968.....	(1)	42.1	42.1	41.7	73.1	52.5	48.5	50.6
1969.....	43.9	45.4	45.4	48.4	57.4	64.1	69.6	73.5
1970.....	55.9				75.4			

¹ Suspended from September 1967-March 1968.

Source: Metals Week.

TABLE 4.—U.S. SUPPLY OF COPPER 1959-69

[Thousands of tons, copper content]

	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
Total supply.....	2,413	2,786	2,704	2,782	2,878	3,134	3,414	3,834	2,996	3,288	3,414
Refined copper.....	1,544	1,947	1,899	1,992	2,023	2,145	2,374	2,779	2,029	2,260	2,358
Primary domestic production.....	796	1,122	1,182	1,214	1,219	1,260	1,336	1,353	847	1,161	1,467
Secondary refined production.....	235	275	264	272	289	332	430	472	391	401	465
Imports.....	513	540	436	496	495	535	513	520	615	676	406
Government stock- pile releases.....		10	17	10	20	18	95	434	176	22	20
Other scrap.....	869	839	805	790	855	989	1,040	1,055	967	1,028	1,056

Source: Bureau of Mines and Business and Defense Services Administration.

THE WHITE HOUSE,
OFFICE OF THE WHITE HOUSE PRESS SECRETARY,
May 22, 1970.

PRESS CONFERENCE OF HENDRIK S. HOUTHAKKER, CHAIRMAN, SUBCOMMITTEE OF THE CABINET COMMITTEE ON ECONOMIC POLICY AND WILLIAM A. MEISSNER, JR., DIRECTOR, COPPER DIVISION, DEPARTMENT OF COMMERCE

At 11:07 a.m., E.D.T.

Mr. WARREN. You have received the report of the Subcommittee of the Cabinet Committee on Economic Policy.

The President, on January 9, announced that he had directed this Cabinet Committee on Economic Policy to make a study of market conditions and pricing procedures in the United States copper industry, and to make recommendations about any needed action by the Government.

The subcommittee was formed under the Chairmanship of Hendrik S. Houthakker, a member of the Council of Economic Advisers, and it also had on the subcommittee representatives of the Departments of State, Commerce, Interior, Justice and the Office of Emergency Preparedness.

Dr. Houthakker is here to discuss the study report with you.

Dr. Houthakker.

Dr. HOUTHAKKER. Gentlemen, some of you may have been here when the study was first announced in January, and we have now presented the report to the Cabinet Committee and the Cabinet Committee has authorized its release.

As you will remember from the earlier meeting, the attention of the Administration had been drawn to the copper market by the rising prices of copper and the two-price system under which some copper fabricators can obtain copper raw materials at a lower cost than others.

We have conducted interviews with many people from the industry, producers, consumers and a few merchants. We have found that there are two main problems in the copper industry.

The first problem is the inequities and economic inefficiencies caused by the two-price system and by the methods used by the copper producers in allocating low priced copper.

The second problem we have found is the present and future hindrances to the rapid growth of supply which have caused and may continue to cause upward pressures in prices.

We have concluded that the most fundamental remedy for this situation is further expansion of U.S. production. We have found a number of obstacles to this. However, we are not proposing any major action by the U.S. Government to overcome these problems.

We feel that the present price level of copper offers very substantial incentives to the expansion of supply. We have also noted that the world price of copper is definitely weakening and therefore we are inclined to hold off with any very drastic action.

There is one action which is recommended by the Committee with a certain qualification on the part of certain members. This action consists of a liberalization of the copper export program, especially as it applies to copper concentrates.

Apart from this, however, we do not feel any major action is necessary by the Committee. I should make it clear that the Justice Department was represented on the Committee and is undertaking its own studies of the market with a view to any anti-trust problems that may be present.

The Justice Department operates strictly on its own and I cannot answer any questions as to what they are doing.

I should say that I have here with me Mr. William Meissner standing in the middle, who is the Director of the Cooper Division of the Commerce Department; Mr. Joseph; standing near the corner, who works with Mr. Meissner, and Mr. Edward Mitchell, who is a Senior Staff Economist at the Council of Economic Advisers. Those people have contributed a great deal to the writing of the report and the earlier conversations we had.

Question. Are you holding off on any sort of drastic action, as you put it, in hopes that the continued slide in the LME prices are going to, in the short range, at least, remove the problem of the two-price system?

Dr. HOUTHAKKER. No, I think we are holding off, if that is the word, primarily for somewhat different reasons. The slide in LME prices is of rather recent origin and did not really influence our deliberations to any great extent, because we had not attempted to forecast short-term developments in the market.

The main reason why we have held off doing anything on the two-price system is that we feel it is primarily an anti-trust problem. The first question to be decided is whether the present two-price system is or is not illegal under the anti-trust laws.

If the Justice Department decides there is a prima facie case against the two-price system, it will undoubtedly take whatever action it feels appropriate. If the two-price system is not illegal under the anti-trust laws, then presumably this abolition could only be obtained by legislation, since it is clear that the copper producers are not going to abandon this system voluntarily.

So these are essentially legal questions which the subcommittee was not empowered to deal with, and therefore, we did discuss certain actions that might be taken if the system does not come to an end by itself. But apart from this, we do not propose any action to be taken by the Administration as a whole.

Concerning the increase in supply, our feeling was that although we did consider a number of actions that the Government could take, that basically there are very strong incentives for increasing supply already, and we have noted that there may already have been some response to the need we feel for increased supply.

One very large company, for instance, which had told us repeatedly they were not planning to expand production, has in the meantime announced a rather considerable increase in production for 1970. We have also heard from a number of other companies, especially the middle-sized copper companies, several of whom have new expansion plans, and we have also heard from a few companies that are not at the moment mining copper in the United States that are seriously thinking about opening new developments.

We feel that the present copper price is so attractive to the opening of new projects that the subcommittee as a whole does not see the need for additional meas-

ures, although some of the members of the subcommittee were thinking in that direction.

Question. Dr. Houthakker, is this the complete report or has part of it been classified by the White House?

Dr. HOUTHAKKER. No, there is no classified part. The only part, I should explain, that is not quite as it was in the original report, is the section on recommendations, where individual agencies were, of course, identified, but we thought there was no point in identifying those here.

Question. Do you expect that the dropping prices on the London Metal Exchange will soon eliminate the two-price system, or the two-price problem?

Dr. HOUTHAKKER. I don't want to go as far as this. Certainly there has been a move in what we consider the right direction. The scrap price in the United States also has dropped and is now actually below the producer price for refined copper. It had been above for quite awhile. It is now below. This by itself is an improvement. I don't care to predict how far this movement will go.

However, I should say that the copper supply is expanding all the time and more expansion is in prospect, so that I think there is some reason to expect a more balanced condition.

Question. Dr. Houthakker, since the anti-trust aspect is obviously very important, apparently for your future plans, is there any reason why Mr. McLaren was not here to answer questions on the Justice Department investigation?

Dr. HOUTHAKKER. I think that, as I said already, the Justice Department has to operate in confidence up to the point where some advisable action can be taken. The fact that a public or Administration study is in progress means that there is just about nothing they can say.

Question. Sir, you have mentioned that one major company brought in a large new capacity after repeatedly telling your committee that they had no such intention. Do you think that the study that you were conducting was one of the reasons why they did that?

Dr. HOUTHAKKER. I am unable to say that for certain. I was struck by the fact that they did announce a considerable increase after having told us they had no plans for increasing production. I think that there may be many other reasons why they came to this decision. They may also have felt that the copper market was stronger than they had originally anticipated.

So, this is not necessarily the only reason. I would like to think it may have had something to do with it.

Question. Dr. Houthakker, what were the reasons that the producers who refused to discuss with you the companies that they allocate copper to gave for not disclosing that information?

Dr. HOUTHAKKER. They feel it is confidential information involving the relations between sellers and buyers and they on the whole, were very reluctant to provide this to us.

Of course, they realized that the Justice Department can obtain this information, if it wants to, but they felt perhaps that under our rather informal procedures they did not have the same legal protection they would have had in case the Justice Department asked for this data.

Question. Dr. Houthakker, do you believe that the current business slowdown will have a softening effect on copper prices domestically?

Dr. HOUTHAKKER. I think it may conceivably have some effect, although I should say that the copper demand has been remarkably strong despite some slowdown. As you know, much copper is consumed in the electric industries and the investment plans of the electric power industry for 1970 are very, very strong, I believe up about 25 percent from last year, if I am not mistaken.

There is, of course, a lot of copper that is being used in the construction industry for plumbing and house wiring and also a lot of copper used in the automobile industry. Both of these have been less than buoyant. I think it is conceivable that there may be some slowdown of demands.

I would remind you that the copper market is a world-wide market and although there may have been some slowdown in the United States, this is certainly not true in other countries.

Question. Do you expect to make other studies of individual market problems, such as the copper study?

Dr. HOUTHAKKER. At the moment we don't have any such study on the way, but we are always working on various problems in individual industries.

Question. Dr. Houthakker, I am not quite clear. You say the opinions were all favorable. Are you actually recommending Alternative 3?

Dr. HOUTHAKKER. Yes, we are recommending Alternative 3, subject to one qualification, which is mentioned here; namely, that a way can be found of permitting the so-called reverse toll refining without decreasing the net supply of refined copper. This is a question that is primarily up to the Commerce Department, which has authority in this area, and it is a question of drawing up the regulations that will permit this.

If you like, I can ask Mr. Meissner to say more about this question.

Question. Dr. Houthakker, do you expect the Cabinet Committee to take some action, based on your recommendations?

Dr. HOUTHAKKER. I think the action taken at the moment is already being taken, namely, to investigate the technical problems involved in a relaxation of the export controls along the lines advocated by the Subcommittee. These are already being done. I am not saying, however, that the study of the technical possibilities has been completed, but it is being undertaken now.

Question. Do you expect this in itself to alleviate the two-price problem?

Dr. HOUTHAKKER. It will, because one of the problems which the copper industry faces in this country is a shortage of smelter capacity. Smelters have not been built in line with the increased output of mines, and also there is a difficult competitive situation in the smelter industry.

In some parts of the country, such as Arizona, there is very strong opposition to the establishment of new smelters, because they are alleged to contribute to air pollution. Therefore, we have not only a short-run, but possibly also a long-run problem in the smelter area.

Now the smelting of copper in the present state of the art is an essential part of the production process, so that we have to be sure that all the copper that can be produced by our mines can also be refined. We already have heard from certain mines that have been unable to find a home for their concentrates.

So we hope that this action, if it does lead to a net increase in the supply, will alleviate one bottleneck in the copper production process.

Question. Have you studied where most of the U.S. concentrate is likely to go to be refined?

Dr. HOUTHAKKER. There are a number of possibilities. There may be some capacity in Canada, some in Europe and some in Japan.

Question. Did the Committee look into the technical possibilities of reducing their alleged contribution to pollution?

Dr. HOUTHAKKER. Yes, we have done some looking into that. I, myself, made the trip to Arizona last month and inquired of what can be done there. My impression is that there are still a number of technical problems to be ironed out before sulphur dioxide, which is the main problem, can be eliminated entirely from the exhaust of existing smelters.

However, I believe a great deal can be done, although not as much as the State of Arizona would like to be done. This will lead to an increase in the cost of smelting. My feeling is, not speaking for the subcommittee as a whole, that if there is an increased cost in coping with the air pollution standards, then this cost will just have to be borne by copper users.

In other words, what I would not like to see is a situation where we have a copper shortage because of the air pollution standards and people just curtail production because of these standards.

I think the pollution problem can be overcome by just spending more money and this money will presumably have to be paid, at least in part, by the copper users, and in part by the copper producers.

Question. Can you tell us something about the production of copper in smelting, what companies control most of it?

Dr. HOUTHAKKER. There are some figures in the report here, which you will find on Page 6, I think, at the top. You will find some figures on concentration.

Question. You mentioned four companies. What is the fourth?

Dr. HOUTHAKKER. Those four companies are: Kennecott, Phelps Dodge, Anaconda and American Smelting and Refining. Now those are not necessarily the biggest four in mining, as such, but the figure in the statement here is chosen with some care. These are not necessarily the four largest mining companies. The Magna Company is a larger mining company than American Smelting and Refining, but Magna is not involved in refining at all.

Question. Dr. Houthakker, was there any active antitrust inquiry into the two-price system before the subcommittee began its investigation?

Dr. HOUTHAKKER. The Justice Department has been looking at the copper industry on and off for a number of years. I believe there were plans for a major

investigation in the early 1960's. At that time, I am told, there was concern about international implications of an anti-trust study, and therefore, it was never pursued. But the Justice Department has been interested in the industry for some time.

I believe that the subcommittee which I chaired may have had something to do in reviving its interest in the industry.

Question. Dr. Houthakker, on Page 14 of your report, would you mind explaining Point 2 at the end of that page about toll basis for smelting and refining?

Dr. HOUTHAKKER. Yes. The problem which we referred to here is that there are very few companies that treat ore concentrates produced by other mines. There used to be an industry called custom smelting, which still exists in the area of scrap. This industry just treats concentrates on toll. Just as you bring your clothing to the laundry, they give it back to you in more concentrated form.

Now this industry in recent years, especially those firms that cater to the small mines, have increasingly insisted that some or all of the concentrates be sold to them. In other words, it is as if your laundry were replaced by a linen supply industry, which just insists on buying the dirty linen and selling you back clean linen.

Question. I believe you said there are some strong incentives for an increase in the domestic copper supply. Can you tell us what some of those are?

Dr. HOUTHAKKER. The mining industry, at least, has been very profitable in recent years, and this is the basic incentive that exists. This is also the reason why there is now a disposition on the part of many mining companies to expand their output and why, also, a number of metal companies that have not mined in the United States before are thinking seriously of opening new mines.

In other words, our feeling is that there are plenty of funds in the United States, there is a lot of relatively low-grade ore that can be mined profitably not only at the present prices, but prices that would be somewhat lower than they are now.

Question. Did the subcommittee conclude that the recent round of price increases in the domestic market were justified?

Dr. HOUTHAKKER. We have not expressed any opinion on the subject of whether these increases were justified or not.

Question. Could you tell us what those export controls amount to at the present time?

Dr. HOUTHAKKER. I will call on Mr. Meissner to answer this.

Mr. MEISSNER. On the alternative of export controls, the difficulty we may encounter and our big problem would be if we implement it, to assure the return of the refined copper to the United States.

This is rather difficult because under normal circumstances we do import a certain amount of refined copper, approximately 12 percent of our supply. What we do not want to incur, if we do not have this mechanism properly geared, is the promiscuous export of copper scrap or ore and concentrates, and not have it returned. We do not want to dwindle the domestic supply by exporting and not getting it back.

For example, we would not want a company that normally imports—hypothetically speaking, if they were importing a thousand tons and had contracted that for the calendar year 1970, we would not want them to contract a thousand tons of scrap against that import. We would lose 1,000 tons.

So if we go forward, we have to have a lookout, a sort of control system, posting of a bond or certification or something, so that that raw material that is shipped abroad would come back in the form of refined copper.

Question. Is there a complete ban on export of copper material now?

Mr. MEISSNER. No. There is a quota in effect currently, but the export control limitation at the moment does not include shipping abroad and bringing it back. The thought here is to expand it further to permit reverse toll. The current quota is 30,000 tons on scrap, 25,000 tons of domestic refined copper, 1,500 tons of composition ingot and 8,000 tons of semi-fabs.

Question. Could you run through that again and tell us what time periods you are talking about on these quotas?

Mr. MEISSNER. The time period currently is January to June. It is 30,000 tons of scrap, 1,500 tons of composition ingot, 25,000 tons of refined copper and 9,000 semi-fabs.

Question. Is that all the quota?

Mr. MEISSNER. That is the current quota in effect until June 30 for the six-month period, January to June.

Question. Covering all exports?

Mr. MEISSNER. Covering all copper exports.

Question. What percentage of output is that?

Mr. MEISSNER. What percent of the total supply?

Question. Yes.

Mr. MEISSNER. It is less than one percent, approximately a little less than one percent.

THE PRESS. Thank you, gentlemen.

Mr. BORCHARDT. But it is your understanding, Mr. Meissner, that in the files of the Council of Economic Advisers, additional information is available that might be of interest to this committee. Is that correct?

Mr. MEISSNER. Oh, yes; indeed.

Obviously, the final report to the public was a reduced-down version of all the data that was utilized by the committee in preparing this report.

Mr. MOSS. Let me ask a question on that, then.

This committee is now engaged in its constitutional function of legislating, and in order to legislate in this field, we must know if the information contained in the records of the Council of Economic Advisers is the type of information this committee would require in order to make an equitable judgment as to the type of solution which might be required, or whether or not a solution is required?

Mr. MEISSNER. I would believe so.

Mr. MOSS. In your opinion, it is.

And if we do not receive it from the subcommittee, we would have to then independently develop it on a hearing record?

Mr. MEISSNER. Oh, Congressman, I don't believe you would have any trouble obtaining it but I just do not feel that I should furnish the data.

Mr. MOSS. Well, due to the fact that you were not the chairman of the subcommittee, I would not at this point pursue the question. You probably know, over the years, that the declining of information, either to me or any committee of this House, usually causes me to become very deeply involved very promptly, as chairman of another committee which has operated for many years in the field of information and its availability. We will not press that point today, however. That doesn't mean that the Chair isn't reserving the right to a very careful examination. I just wanted that to be on the record.

We will receive the information that you have submitted.

Mr. Borchardt?

Mr. BORCHARDT. Mr. Meissner, will you proceed in your own way to develop the background with regard to copper pricing in the United States?

Mr. MEISSNER. Well, I think that we have very loosely in recent years talked about a two-price system. But in actuality, there is a multiprice system throughout the industry.

For example, we could say that there is a U.S. domestic price in the United States, there is a merchant price, there is a Canadian price, there is a Chilean price, there is a Katanga price, and there is a Zambian price. There is a London Metal Exchange price, and there is a Commodity Exchange price. So this is a very complex subject. But in essence, in recent years, at least within the last year, most of all these prices that I have related, with the exception of the U.S. domestic selling price, domestic producers' price, are related to the London Metal Exchange, and not necessarily exactly the London Metal Exchange price.

Mr. BORCHARDT. Would you permit an interruption? You used the term "merchant price." What is your understanding of that term?

Mr. MEISSNER. "Merchant price" would be a broker, a dealer, or what we also sometimes term as the "outside market price." But if I dwell a little, I would like to come back to the price situation and first would like to give the committee a little explanation as to why there are these prices or why there are these differentials.

In 1969, the free world production, or supply, of refined copper was approximately 6 million tons, and the free world consumption was approximately 5,800,000 tons. Now, the U.S. supply of refined copper—and I emphasize supply, because there is a difference between supply and production—is approximately 2,360,000 tons. And if we look at the U.S. supply, approximately 65 percent—60 to 65; it varies—was produced from domestic ores. About 17 percent was produced with foreign ores; and 20 percent was produced from secondary metals.

Now, right at this point is where we get into price disparity. The copper in the United States sold by the domestic producers from domestic ores mined in upper Michigan, Utah, Arizona, Montana, and so forth, are produced by the so-called major producers, and they sell at their price. But it is not sufficient to meet the total demand.

The second source of supply is the so-called custom smelters, who buy scrap on the open market and in some instances toll it, and based on the cost of their scrap, they sell the resulting refined copper.

And the third source of supply is either imported refined copper, which comes into the United States as refined copper, or copper produced from imported blister ores and/or concentrates.

Now, the domestic producers sell their copper at a price. The secondary producers' price is predicated more or less, we believe, on the cost of their scrap, and during this tight copper situation, in many instances, the scrap prices were higher than the producers' selling price.

Foreign copper is usually sold based more or less on what the producing country dictates. Chile has Chilean copper in the United States, and they have sent Chilean blister to the United States. They dictate the price. And up until recently, their price has varied. But within the last year or so, their price has been basically the London Metal Exchange price, as of a given date.

With that background, unless you have questions, I will turn to the price, what has happened in price in the past 5 or 6 years.

Mr. BORCHARDT. Would you permit another interruption?

Could you identify at this point on the record the major copper producers in the United States?

Mr. MEISSNER. I would say Anaconda, American Smelting & Refining, Copper Range, Kennecott, Phelps-Dodge, as being basically the majors. Some smaller ones, that are also producers of refined copper from domestic ores, Duval, Inspiration, Magma, Pima, and Tennessee.

Mr. BORCHARDT. Do you have information with regard to the relative percentages of business carried on by these companies in the domestic copper field?

Mr. MEISSNER. I have such information, but disclosure regulations are such that I could not give you this data, because it has been given to us on an individual company classified basis. I could give you data

relating to concentration of five or six, seven companies, but I wouldn't mention companies.

Mr. MOSS. Now, just a moment. You are talking of the disclosure provisions of title 18 of the United States Code. These disclosure provisions specifically do not apply to the Congress of the United States.

Mr. MEISSNER. We get the data I am referring to—

Mr. MOSS. Even though you receive the data in confidence, it is not to be presumed that the disclosure to Congress would compromise the agreement. If you will check the more recent enactment of the so-called Freedom of Information Act of 1967, you will find that title 18 is modified rather significantly as it relates to the rights of the Congress to have this information, so I am going to ask that that information be provided to the committee. And I will not ask that it be provided at this time in an open session, but I do ask that it be provided to the committee because the committee does require it, it is material which is in the possession of the Department of Commerce, and in your possession, and it is material information which I will most insistently require for this committee's use.

Mr. MEISSNER. Congressman, the data that I am referring to, and we have received, is under the Defense Production Act.

Mr. MOSS. Even under the Defense Production Act, I would still insist upon having it.

Mr. MEISSNER. I do not have the data per se with me, anyway.

Mr. MOSS. No, we will reserve the right to receive it for our uses, and then be guided by the committee's decision beyond that point. But I just want to make it clear that whether it is Defense Production Act or anything else, I think the protection accorded is under title 18 of the United States Code and your associate nods that that is correct. That does not apply to the Congress. When the Congress wanted to have a prohibition against access apply to itself, it has always specifically stated that it apply to the Congress; in this case, it does not apply to the Congress. The legislative history does not indicate that it does, and we will, as I say, insist upon receiving it. We will receive it, and I will ask that it be sent to the committee and sent rather promptly.

Mr. MEISSNER. I hope you appreciate my position.

Mr. MOSS. I certainly appreciate your position.

Mr. MEISSNER. OK.

(The following information was received for the record:)

MEXICO

Compania Minera de Cananea, S.A. de C.V. excluding custom.....	29,790	20,650	31,967	30,944	29,033	33,021	35,496	36,464	36,521
Compania Minera de Santa Rosalia.....	2,500	2,550	2,200	4,630	5,044	5,300	4,923	4,664	2,522
Fresnillo ⁷	3,134	2,990	3,564	2,229	2,158	2,105	2,069	2,088	4,707

¹ Operations ceased.

² Production for Galena, Silver Bell, San Xavier, and Mission. Production for Ground Hog included as operations resumed May 1969.

³ Includes Hecla's share of production from each mining property since date of acquisition of such property.

⁴ Includes production from Moctezuma in Mexico through 1960.

⁵ Includes copper produced from purchased ores.

⁶ The totals for these concerns are to a large extent duplications of the reports of other producers.

⁷ Year ended June 30.

Note: The Business and Defense Services Administration has verified the accuracy of the above data published in the June issue of the Year Book of the American Bureau of Metal Statistics by comparing it to data available to the agency.

Mr. MEISSNER. I might point out that as of Friday, domestic prices were 60 to 60¼ cents. When we talk prices in the copper industry, we are always talking the wire bar price.

Canadian price in Canada was 59 cents. That is equivalent US\$, 56.99. The Chilean, Katanga, and Zambian prices were being quoted at 61.67 and the London Metal Exchange—

Mr. MOSS. When you say 61-67, is that 61 and 67—

Mr. MEISSNER. 61.67 cents a pound.

Mr. MOSS. It isn't a range of between 61 and 67?

Mr. MEISSNER. No.

Mr. MOSS. Thank you.

Mr. MEISSNER. And the London Metal Exchange price, as of July 17, was 61.47, the closing session.

Now, the history of pricing, starting with 1963—and I will make all of this available for the record, Congressman—

Mr. MOSS. Thank you very much.

Mr. MEISSNER. I will just hit the highlights, but will give you the complete table; 1963—and I am taking yearly averages now, to illustrate the range of prices—the domestic price was 30.6 cents per pound. The merchant price, I am sorry, was not available, but the London Metal Exchange price was 29.4.

This is the beginning of the complication that has occurred in recent years. This is the reason I have started with 1963.

In 1964, the domestic average price was 32 cents; the merchants' price was 44.8; and the London Metal Exchange price was 44 cents even.

In 1965, 35, 56.8 on the merchant price and 58.7 on the London Metal Exchange.

In 1966, the London Metal Exchange had jumped to 69 cents; the merchant price had jumped to 67.6, and the domestic producers' price was 36.2.

By 1967, the domestic producers' price was 38.2; the merchant price was 51.5; and the London Metal Exchange was 51.1.

Now, I hope you will understand that I am giving you the years' average, but they fluctuate daily.

In 1968, the domestic price was 41.9; merchant price 55.2; London Metal Exchange price 56.2.

By the end of 1969, the domestic price was 47.8; merchant price 65.7; London Metal Exchange, 66.3.

By January of 1970, the London Metal Exchange had gone to 73.7, and the domestic price had gone to 55.8. And it reached a high—I am going to skip the months here because in April of 1970, the London Metal Exchange had gone to 79.2. The domestic producers average price was 59.3, and the merchant price was 77.8.

And then the market started to slide. And I will take only the London Metal Exchange to illustrate. In May, London Metal Exchange went to 73.1; by June it had gone down to 66.6, and we hit July, and the first day of July, the London Metal Exchange price, 62.52, and as of Friday, the London Metal Exchange had come down to 61.47.

Now, that is basically the history of the pricing, insofar as the London Metal Exchange and the other prices. The domestic producers prices, as I stated earlier, 60 cents to 60¼ with a few minor exceptions, but among the major producers, the price range is that.

I would like to point out that insofar as the London Metal Exchange is concerned, while it is commonly said that the London Metal Exchange price is the world price it is not necessarily so.

In 1969, to the best of our ability to obtain information, there was approximately 2 million tons of copper traded on the London Metal Exchange. But actual deliveries were only 160,000 tons. The point I am trying to make, is that there is not any appreciable quantity of physical copper exchanged on the London Metal Exchange. Of the total transactions, only 8 percent were physically delivered.

However, in many parts of the world, exclusive of the United States, the London Metal Exchange is used for a pricing basis.

I merely want to get that emphasized.

(The table referred to follows:)

U.S. COPPER PRICES 1963-68

[Value in cents per pound]

	Refined Copper				London Metal Exchange ³
	Scrap ¹	Domestic ²	Merchant ²	Export ⁴	
1963	25.1	30.6	(⁵)	28.4	29.4
1964	30.5	32.0	44.8	31.0	44.0
1965	38.9	35.0	56.8	35.6	58.7
1966:					
January	47.8	36.1	68.1	41.8	76.2
February	52.5	36.0	75.4	42.8	85.0
March	57.5	36.1	82.0	44.3	84.8
April	59.1	36.2	82.2	43.4	86.2
May	53.9	36.0	73.4	55.4	75.1
June	57.1	35.9	75.0	57.3	76.5
July	55.6	36.0	70.9	57.7	70.8
August	41.2	36.0	55.4	48.8	53.9
September	41.9	36.1	53.5	47.1	50.9
October	46.4	36.3	59.2	52.4	57.6
November	46.3	37.0	59.9	53.3	58.8
December	41.7	36.2	56.2	49.8	54.8
Annual average	50.1	36.2	67.6	49.5	69.0
1967:					
January	42.9	37.9	55.7	49.8	56.3
February	41.6	38.1	54.3	50.2	55.3
March	36.9	38.1	49.9	46.7	49.8
April	32.3	38.2	44.9	43.0	45.1
May	33.8	38.1	45.0	43.2	46.9
June	33.3	38.1	44.5	43.8	46.0
July	33.7	38.3	45.0	43.4	45.2
August	35.3	39.1	48.4	45.0	47.3
September	35.6	(⁷)	49.4	45.5	47.8
October	37.2	(⁷)	53.6	47.4	51.3
November	42.6	(⁷)	64.3	54.7	62.2
December	42.1	(⁷)	63.0	53.6	60.0
Annual average	37.3	38.2	51.5	47.2	51.1
1968:					
January	41.9	(⁷)	65.8	54.9	64.1
February	43.9	(⁷)	79.3	61.1	78.2
March	45.2	(⁷)	77.8	61.1	77.1
April	38.0	42.2	56.8	50.1	56.9
May	34.5	42.1	47.3	46.0	49.5
June	35.7	42.1	47.1	48.7	51.2
July	35.2	41.7	46.1	45.7	47.6
August	35.4	41.7	46.0	45.0	47.7
September	37.4	41.7	47.8	47.5	50.3
October	37.8	41.7	47.5	46.6	48.7
November	38.2	41.7	48.4	46.6	49.6
December	41.5	42.1	52.8	49.8	53.4
Annual average	38.7	41.9	55.2	50.3	56.2

See footnotes at end of table, p. 36.

U.S. COPPER PRICES 1963-68—Continued

[Value in cents per pound]

	Refined Copper				
	Scrap ¹	Domestic ²	Merchant ³	Export ⁴	London Metal Exchange ⁵
1969:					
January.....	44.4	43.9	55.8	52.1	56.6
February.....	43.8	44.2	56.9	53.0	58.0
March.....	46.2	44.8	57.9	53.8	57.8
April.....	51.0	45.0	63.3	57.7	62.8
May.....	48.3	45.9	63.0	58.1	62.8
June.....	49.6	46.0	64.7	61.1	66.9
July.....	49.4	46.0	64.8	61.6	65.6
August.....	50.1	47.9	69.0	68.0	72.4
September.....	52.6	51.8	71.1	68.5	71.1
October.....	52.1	52.1	71.6	66.7	70.2
November.....	54.1	52.5	74.8	69.8	73.9
December.....	55.3	52.9	75.3	72.5	77.0
Annual average.....	49.7	47.8	65.7	61.9	66.3
1970:					
January.....	55.7	55.8	72.6	70.8	73.7
February.....	58.3	56.0	73.5	74.0	75.3
March.....	59.9	56.0	76.1	78.3	79.7
April.....	60.8	59.3	77.8	77.8	79.2
May.....	56.4	59.7	73.0	71.3	73.1
June.....	49.5	59.7	67.4	64.7	66.6
July 1.....	48.0	59.7	64.0	64.7	62.52
July 17.....	47.0	(⁶)	(⁶)	(⁶)	61.47

¹ American Metal Market. Refiners' buying price for No. 2 copper scrap.² Metals Week. Based on domestic sales price.³ Philipp Bros., division of Minerals & Chemical Philipp Corp.⁴ Metals Week. Primary domestic copper sold outside United States, f.o.b. refinery on Atlantic seaboard.⁵ Metals Week. London Metal Exchange, spot wirebars.⁶ Not available.⁷ Strike period; quotations suspended.

Mr. MEISSNER. Now, how is copper sold in the United States? Taking our supply and demand table, and the consumption of refined copper in 1969 was 2,358,000 tons, and the supply was 2,364,000. You must bear in mind that of the 2,364,000 only 1,469,000 tons was produced from domestic ores. So for all purpose and intent, this about 62 percent of the copper, refined copper produced in the United States, was sold in that low-priced category.

And this is where the dilemma starts. The consumer—and to the best of my knowledge, I do not believe that any single consumer in the United States obtains a hundred percent of his requirements in domestic refined copper—rather he gets a proportionate percentage in the domestic refined copper. If that percentage should be as I have related here 62 percent, the balance of their demands must be met from the so-called outside market. And as a result of this, they then come up with a blended price, which becomes the basis of their selling price.

Now, the dilemma that has been created and the complaints that we and others have received, and I am sure Congressman Blanton, Congressman Moss, and other members of this committee, is that certain consumers can't meet that blended price, because they are obtaining only a small percentage of the low-priced copper or perhaps, in some instances, none, and they strictly have the high-priced copper. Or if they have a blend, the blend is not compatible with maybe their competitors' blend.

Now, I have tried to briefly explain this, and if there are any questions I would answer.

Mr. BLANTON. Mr. Chairman?

Mr. MOSS. Mr. Blanton.

Mr. BLANTON. I would like to ask a question at this point.

I, too, want to add my thanks to you, Mr. Meissner, for appearing on this short notice, and we sincerely appreciate having a man of your experience and know-how, and I hope you will understand that we are representing the American consumer in this matter, and we are interested in their welfare. I am going to be very detailed and specific about the questions that we ask, and I have a definite reason for these questions.

Talking about the supply of copper in this country, it concerns me that we can't produce enough copper in this country. In fact, I am led to speculate that the so-called shortage could be an artificially contrived one. In a highly competitive, concentrated market, where producers are vertically integrated with large smelters for refining ore, and large fabricating concerns, it seems to me that there may be vested interests in a shortage, certainly in the sense that large price increases are justified on that basis. I would like to give you a quote by Paul Zimmer of the Bureau of Mines. Mr. Zimmer, who is Assistant Director for Planning, told the House Appropriations Committee on Interior this past February—and I quote Mr. Zimmer:

I am concerned when we look at the announced plans of major domestic copper producing companies. They really have not announced any immediate plans for a very large expansion in terms of tonnage, significant in terms of the continuous increasing demands of some 4½ percent per year.

Mr. Meissner, at the same time, the domestic producers are announcing huge expansion plans overseas, and this is in the face of certain political conditions in those countries, certainly in South America. Can you give me your opinion why there seems to be a reluctance on the producers' part to develop our domestic supplies, and if you agree that there is a reluctance?

Mr. MEISSNER. I am not sure there is a reluctance, Congressman. In 1967, for example, our supply of refined copper was 2,029,000 tons; and in 1969 it increased to 2,364,000 so there was expansion, and to be specific, there was a drastic increase in the production from domestic ores, but we must consider that there was a strike that got involved. It was an 8½-month strike. So I would like to just step back a little and go to 1966, prestrike production, and I am speaking strictly of domestic ores, now, which would be produced by the so-called major producers.

The production was 1,353,000 tons, and in the 1969 year, it was 1,469,000 tons. So there was an increase in production.

Mr. BLANTON. Would you say that this increase would average 4½ percent a year for the last 10 years? It would average, the increase in domestic production?

Mr. MEISSNER. About 4½ rate of increase?

I am sorry. I don't think it is that high.

Mr. BLANTON. Well, the demand has been about that.

Mr. MEISSNER. The demand has been that high; yes.

Mr. BLANTON. The increasing demand has been about that.

Mr. MEISSNER. Yes.

Now, there have been some complications. The Government had a copper expansion program, back in 1965. It was an interagency committee, and attempts were made at that time to expand the pro-

duction of refined copper. It was not very successful. We had one company with an aid of Government funds, Duval, that did bring into being some new operations. Since that time, other companies have brought in new operations. I do not have detailed accounts here, and I am sure the Bureau of Mines would be more authoritative than the Department of Commerce would be on this. But, there have been, in my opinion, sincere attempts to expand production. There are some complications and one of the big complications today is the smoke pollution problem.

Mr. Moss. Is what?

Mr. MEISSNER. Is the pollution problem.

Mr. BLANTON. When Phelps-Dodge kicked off its latest round of price increases in April, I was interested to note that the profits of the large producers for the first quarter are for the most part record earnings. Phelps-Dodge itself posted the highest earnings in the company's history, something like 58 percent over the preceding company report.

Kennecott, the largest producer, had also reported record earnings, and the other big producers reported significant gains.

In terms of cost to the American consumer, these price boosts have affected the costs of everything from housing and construction materials to the price of automobiles. I am wondering if you have an estimate of what it costs the Government in terms of defense needs for copper, and what percentage of copper is ordered put in reserve under the Business and Defense Services Administration program?

Mr. MEISSNER. Well, for many years, we have not been putting copper into the stockpile. And we have a provision which is administered by BDSA which has been in effect since 1965 wherein we have a monthly or a quarterly set-aside of copper produced from domestic ores.

This provides for the military's obtaining the lowest priced copper. Currently, the set-aside is 14 percent of their production, or roughly 17,000 tons per month. Military has first choice, but I would like to point out that the military does not buy per se refined copper. They buy military hardware, ammunition, sheet, strip, and so forth, but the company that produces this is entitled to a priority under the system, to obtain domestic produced copper to fulfill the military contract and, obviously, it is reflected in their bidding to the Government.

So, all during this period of short supply, provisions have been in there to provide the Defense contractor with the lowest price copper.

Now, to give you an estimate of what it costs the Government, frankly, offhand, I couldn't tell you. Mr. Joseph has just come up with some fast figures here; the take is from 200,000 to 250,000 tons per year on the part of the Department of Defense, on this indirect method that I am speaking of, so if you took \$1,200 a ton, that would be \$240 million total cost.

I don't believe the Congressman wants that, though, Rod. I think he wants the difference between what they would have paid prior to the increase and what they are currently paying.

Isn't that right?

Mr. BLANTON. Right. That was the question.

Mr. MEISSNER. All right, start another way: Prior to the strike, the domestic producers' price was 38 cents. The strike concluded in April of 1967, and the price went to 42 cents.

So, from 42, it has now gone to 60, but it has gone at different stages, so you can't take the whole year. Actually, we would have to do a little mathematics, and, frankly, I think again the Department of Defense should come up with what their increased cost is, because you don't know when they broke off, what period, how much copper might have been acquired prior to the increase. You follow what I mean?

But some calculation could be made.

Mr. MOSS. Right.

Do you have the requirements of the military, as contrasted to the set-aside for the military?

Mr. MEISSNER. Right.

Mr. MOSS. I say, do you have that?

Mr. MEISSNER. I do not have it all over a period of years, but I am saying currently military take is 17,000 tons per month.

Mr. MOSS. Does that meet the military need?

Mr. MEISSNER. Yes.

Mr. MOSS. It does, entirely?

Mr. MEISSNER. Yes.

Mr. BLANTON. Mr. Chairman?

I would like to ask a question. I believe that the domestic copper producers, and, of course, we are talking about four or five major concerns that produce 70 percent of the domestic copper in this Nation, use this justification of a shortage for their price increase and, of course, as you just stated, the price increase has gone from 42 to 60 cents in the last 18 months. This seems to me grossly out of proportion.

Could you give us your ideas or views as to why this tremendous increase in 18 months?

Mr. MEISSNER. Well, by the same token, Congressman, there were many times when the domestic producing industry, if they were looking at the London Metals Exchange, could have asked 80 cents a pound for their copper—but they held the line. Now, currently, you have a differential of 60 versus 61, but just a few months ago the price was up to 78 cents on the London Metals Exchange, and were I a stockholder in a copper company, in all honesty, I would be screaming like hell. I would say, "Why the hell don't you sell your copper for 78 cents?"

Mr. BLANTON. What percent of our domestic copper does go on the London metals market?

Mr. MEISSNER. None. We have an export control.

Mr. BLANTON. None of these four or five major producers—

Mr. MEISSNER. To the best of my knowledge.

Mr. BLANTON (continuing). Sell their copper, domestic copper, at the London Metals Exchange price?

Mr. MEISSNER. That is right; none.

Mr. MOSS. Would you yield at that point?

What is the mechanism which determines the domestic price?

Mr. MEISSNER. The company announces they have a price increase—or a price decrease, but there have been no decreases lately, and this is their price from that day forward.

Mr. MOSS. And do the others, then, very quickly fall in line?

Mr. MEISSNER. They follow the leader. If a company announces a decrease, they usually follow.

But we haven't seen any decreases lately.

Mr. Moss. It is entirely, then, on the basis of company initiative?

Mr. MEISSNER. Yes.

Mr. Moss. And that would be the major U.S. producers producing from ores?

Mr. MEISSNER. Domestic ores.

Mr. Moss. From domestic ores?

Mr. MEISSNER. I want to emphasize domestic ores, because the ores might come from Mexico, or it might be blister coming from Chile, in which case the government of Chile would normally dictate what the company would sell that copper at. In other words, blister may come up from Chile to be refined in the United States. Some of it might be sold in the United States, and a lot of it might be re-exported.

Mr. Moss. Is blister the raw metal, unrefined metal?

Mr. MEISSNER. Yes. Blister is the next stage to refined.

Mr. Moss. Yes.

Mr. BLANTON. Do you have figures available to show that the producer mines are running at full production now, and what percent of the copper ore is being left untouched, in our domestic mines?

Mr. MEISSNER. Well, this is literally an unanswerable question, Congressman, because we have no way of measuring capacity. We do know that there is a shortage of smelter capacity, due to the smoke pollution problem. Mine expansion has gone on, but the smelter expansion has not kept pace with the mine expansion, for the simple reason that invariably, when a copper producer company in recent years—at least in the last year or two—whenever they went to build a smelter or contemplate a smelter, and it is something that can't be done overnight, it is usually, "Don't do it in my backyard, do it in the other guy's backyard; we don't want the smoke pollution." And there has been some complications in this area. It is part of the reason that the smelting facilities have not kept pace with the mining facilities, but that is not an answer to your question. Your original question was could we tell whether they are operating at capacity. To my knowledge, I would have no way of measuring this, because it depends on a lot of things. The amount of ore, the amount of copper contained in the ore, you may have one vein that has a nominal amount of copper content, it might be 1 percent or even less than 1 percent; another vein in the mine might have 3 percent. You can shift around, depending on weather conditions. They might have excellent weather in Arizona in an open-pit mine, and their production may come out beautifully with no weather interruption. There is really no way you can measure capacity. You dig, you move a hundred tons of gross weight ores, and the copper yield might be 1 or 2 percent, so they have to eliminate that. So there really is no way of measuring whether a mine is operating at capacity or not.

At least to my knowledge, there wouldn't be.

Mr. Moss. Would you yield at that point?

Mr. BLANTON. Yes, sir.

Mr. Moss. I have two questions, one going to the matter of the pollution problem in connection with smelters. Hasn't technology advanced to the point where there is equipment which will extract from the smelter smoke the solid particles, the chemical particles?

Mr. MEISSNER. Not in every instance, Congressman. It is my understanding that some of the companies now have pilot plants trying to get to the total elimination of the sulfur, however, I am not

an authority in this field. In various communities, for example in Arizona, they can only emit so much smoke in the air in a 24-hour period. American Smelting & Refining just recently declared force majeure on the smelting of ores and concentrates because they have to reduce 15 percent to meet local regulations. The companies have come up with smoke pollution control methods but not sufficient to meet certain regulations—and they vary, incidentally, all over the map. I think Congress is now being asked to get this whole problem into one agency, because at the moment it is scattered. The companies have been desperately trying to come up with a chemical process instead of a melting process to eliminate smoke, and it is my understanding they have spent untold dollars in trying to come up with these technologies, but they do not have them to meet the current code as yet. The only way they can reduce smoke emission is by cutting back on their smelting production.

I would rather have someone that is more authoritative in this area, because I am not.

Mr. MOSS. We will seek witnesses in this field who are experts.

Then the second question is, Why would domestic producers quote prices below the London price? Do they have any advantage in proceeding in this manner?

Mr. MEISSNER. Yes. You, yourself, I think, made reference to their earnings. Certainly the prices at which they have been selling have been most profitable. Their fear is, and I think a justifiable one, of pricing themselves out of the market. We have had inroads and substitutions on copper, specifically aluminum and plastic, and the companies always feel—I assume they feel; I have no way of speaking for the companies—but we have heard it told to us many times, that they do not want to price themselves out of the market, and as long as it is profitable. With an illustration of 56 cents or whatever the case may have been, there was one time where the London Metals Exchange, in a few days, was up as high as 90 cents, and producers were selling at 56, so why didn't they immediately move? Well, my assumption is, in the long range, they felt they might be pricing themselves out of the market.

The automotive industry, for example, for many, many years, has been threatening to go to aluminum radiators; once they do so they would never go back to copper.

Mr. THOMPSON. Would the gentleman yield?

Mr. MOSS. Yes.

Mr. THOMPSON. But would not you have precisely the same effect if this bill were to pass. With this bill you would be selling at the world market price. If the world price is high then we are going to have high market prices here.

Mr. BLANTON. Would the gentleman yield?

Mr. THOMPSON. Yes.

Mr. MOSS. Yes. The gentleman from Tennessee has the floor, and had yielded to the Chair, and the Chair yielded to the gentleman from Georgia. The gentleman from Tennessee has the floor.

Mr. BLANTON. Thank you, Mr. Chairman.

Does the Department of Commerce have the figures of foreign copper supplies that are owned by American copper companies? What percent?

Mr. MEISSNER. You mean—

Mr. BLANTON. The foreign copper, Chile, Zambia, and so forth.
 Mr. MEISSNER. Yes.
 Mr. BLANTON. Could you produce those for the record, please?
 Mr. MEISSNER. I believe so.
 (The following table was received for the record:)

U.S. COPPER COMPANIES/FOREIGN OWNERSHIP

[In short tons]

	Production 1969		
	Domestic	Foreign	Total
Anaconda ¹	157,000		599,000
Foreign copper ownership:			
Chile:			
Compania de Cobre Chuguicamata 49 percent		312,000	
Compania de Cobre Salvador 49 percent		85,000	
Compania Minera Exotica 75 percent			
Chile Copper Co			
Santiago Mining Co		2,000	
Mexico:			
Compania Minera de Cananea		36,000	
Cobre de Mexico			
Nacional de Cobre			
Peru: Anoes del Peru			
Canada: Anaconda Britannia Mines		7,000	
American Smelting & Refining Co. (ASARCO) ¹	71,000		311,000
Peru:			
Southern Peru & Copper 52 percent		² 134,000	
Northern Peru Mining 100 percent			
Canada: Granduc 50 percent			
Australia: Mount ISA 52 percent		81,000	
Mexico: ASARCO Mexicana 49 percent		25,000	
American Metal Climax (AMAX) ¹			440,700
South Africa: O'Okiep 18 percent		(²)	
Southwest Africa: TSUMEB 29 percent		31,000	
Zambia: Roan Selection Trust 42 percent		392,000	
Botswana: Botswana RST 30 percent		17,700	
Kennecott ¹	496,000		699,000
Chile: Sociedad Minera El Teniente 49 percent		203,000	
Phelps Dodge: ¹ Peru: Southern Peru Copper 16 percent	275,000		275,000
Cerro: ¹			
Peru:			
Southern Peru Copper 22 percent			
Cerro de Pasco 100 percent			
Chile: Compania Minera Andina 75 percent			
Newmont: ¹			
Peru: Southern Peru 10 percent			
South Africa:			
O'Okiep 58 percent			
Palabora 29 percent			
Southwest Africa: TSUMEB 29 percent			

¹ Percentage figures, where available, indicate the U.S. company's proportion of ownership in the foreign affiliate.

² Blister copper.

Source: Individual company financial statements.

Mr. BLANTON. I think this will answer the gentleman from Georgia's question as to why there has been lack of interest in expanding our domestic production, because these same companies, the truth of the matter is, own substantial amounts of the copper in these foreign mines, which is a higher grade ore to start with, and can be sold at a higher price abroad.

Mr. Moss. If the gentleman would yield further, I would like to state to the gentleman from Georgia that if he will read the language in the bill, particularly lines 10, 11, and the first two lines on page 12 of the bill, he will find that the bill before us would not have the precise effect he states. I think we should read it for the record, in view of the observation:

It shall be an unfair method of competition within the meaning of paragraph 1 of this subsection for any person to sell refined copper in commerce at a price

which the Commission determines is significantly below the world market price for refined copper of a similar grade, unless such person allocates such copper among the domestic users of refined copper of such grade in a manner which the Commission determines is fair and equitable to such users.

That does away with the quota system based on the 1965 contracts.

Mr. THOMPSON. If the gentleman from Tennessee would yield in order that I may somewhat rebut—

Mr. MOSS. The Chair will interject and permit the gentleman to rebut.

Mr. THOMPSON. I believe the witness made the statement as to why the domestic users did not sell at a higher price was because they may price themselves out of the market. The world markets were 70 or 80 cents, and it was 60 cents here; the reason they did not is because then the domestic users would go to an alternate type of material, possibly aluminum, or something of that sort, and the comment I was making is simply this: That if this bill does pass, and it does allow them to use the world market price which is higher, the net result is going to be precisely the same.

Mr. MOSS. The present law permits them to use the world price. It is the action of the producers which determines that they do not use the world price. But they also exercise, apparently, a rather stringent control over the producers who were not contracting with them at the time of the base period of 1963 in the allocation among the nonintegrated fabricators of copper products.

Mr. THOMPSON. If I may add—

Mr. MOSS. And it is that advantage or that inequality with which this legislation proposes to deal.

Mr. THOMPSON. If I may add this, granted, legislation does allow them to use the world price. They can use any price that they desire, if there is no control on the price, and competition basically is going to determine the price. But if we are going to price-fix, if we are going to set it so that they can use the higher price whenever they want to, even though competition would dictate a lower price, I don't see where we are doing the consumer in America any favor.

Mr. MOSS. I can assure the gentleman that is not the objective nor would it be the effect of the bill now before us.

Mr. THOMPSON. It would be my interpretation that would be the effect.

Mr. MOSS. No, I think that is a matter which we on the committee will have an abundant opportunity to explore fully in markup.

Mr. THOMPSON. But the gentleman does agree with me, does he not, that today, if they wanted to use the world price they could use it? The domestic producers?

Mr. MOSS. I just a few moments ago stated that that was the condition of the law at the moment.

Mr. THOMPSON. And all this bill does, in effect, is to say it is an unfair trade practice if they sell below the world price.

Mr. MOSS. Oh, no, it does not.

Mr. THOMPSON. Unless they were to apportion all the users throughout the entire country.

Mr. MOSS. But that unless is in the—

Mr. THOMPSON. But if this bill passes, one producer could sell to one consumer, and not apportion throughout the entire market, and if he were to sell at less than the world price he would be guilty of an unfair trade practice, if this bill were to pass.

Mr. MOSS. If the gentleman can conjure up the impossible, my answer might be yes, but I doubt that an examination of the economics of the industry would support the hypothesis which the gentleman has stated on the record.

Mr. THOMPSON. If the gentleman would yield further, I would like to submit that it is going to be practically impossible for any one producer to allot, throughout all the consumers in the United States, his production, so that he would sell at a price lower than the world price. It is much easier for him to pick out only one person to sell to, and then, if he were to sell to that person below the world price, under this bill, he would be guilty of an unfair trade practice.

Mr. MOSS. The gentleman is entitled to put whatever construction he wants upon the legislation. The Chair has stated for the record the construction which is appropriate, in view of the language of the bill, and yields back the floor to the gentleman from Tennessee so he may pursue his interrogation.

Mr. ECKHARDT. Mr. Chairman?

Mr. MEISSNER. Mr. Chairman, may I add something?

Mr. MOSS. Yes.

Mr. MEISSNER. I started out in my presentation here, and I would like to repeat, in 1963, the London Metals Exchange was 29.4 average, and the domestic producers' price was 30.6. Also, if I may, I would like to go back to the American ownership abroad. Within the past year, or 2 years, American companies that had Chilean holdings no longer have the full ownership of the Chilean mines. It has now been converted to 51 percent ownership; on the part of Anaconda and Kennecott, 51 percent ownership by the Chilean Government and only 49 percent of their ownership, and the same thing is occurring in Zambia, insofar as their Roan Selection Trust is concerned.

So the American holdings abroad are not in the pure sense of the word at this moment their holdings. They have minority holdings now, rather than the complete ownership, as they have had over the years.

So the price is at the dictates of those governments, rather than their own.

I just wanted to point that out when we were talking about American owners.

Mr. BLANTON. Mr. Meissner, do you know of any stockpiling of large copper tonnage by the producer fabricators in anticipation of the expiration of the union contracts in 1971?

Mr. MEISSNER. No, our records indicate nominal stocks. There has been no stockpiling. Business has slumped in recent months. Demand has slackened. This, I think, shows in the decline of prices.

I do not believe that any company has substantial inventories. We assume, we feel, the Department of Commerce, Mr. Joseph and I feel that there may be at the first of the year, January or the latter part of December, some hedging on the part of the consumers. At the moment, the consumers are not overly anxious to buy, except for orders immediately on hand.

But if I were back in industry, obviously, the first of next year, I would be thinking of a possible strike, because the 3-year contract will be up June 30, and the strike last time was an 8½ month period, and we have never fully recovered from the loss of something like a million tons of copper during that strike period.

Mr. BLANTON. You know of no stockpiling on the part of the producers, then, at the present time?

Mr. MEISSNER. No, the producers have not had, for many years now, or at least for the period prior to the strike, any substantial inventories. With the cost of money, a pretty prompt turnover is necessary. Producers carry enough to make their shipments. However, we have no exact records of what inventories might be on hand.

Mr. BLANTON. I understand in Public Law 89-9, allocations of copper in 1965 were supposed to have been on a hardship basis.

Mr. MEISSNER. Yes.

Mr. BLANTON. With particular attention to be paid to the requests of small businessmen.

In April of 1965, when applications were made for allocations from the stockpile, Phelps-Dodge entered an application. They had also just released a quarterly report that they were having their biggest year in the past 10 years, with full employment and profits up 60 percent. I am told that Phelps-Dodge and some of the other big producers got up to 70 percent of the allocations from the stockpiles and about 317 small companies got the rest.

Can you confirm this?

Mr. MEISSNER. Well, yes, I can confirm. I do not have the data here, but the Copper Division, over the years, have released approximately 800,000 tons of copper from the stockpile. Some of these releases were made by executive direction of the President, some of them were done by acts of Congress; but in each instance that we made a disposal of the copper, the first consideration was given to defense needs, and a second consideration was based on hardship. A formula was concocted and, subsequently approved, where each applicant submitted an application with pertinent data thereupon and was given a pro rata share of the copper. Many applicants got no copper, because they had inventories on hand or they had sufficient copper to see them through.

Also, small business was given a 5 percent advantage over anyone that was considered not small business.

We distributed the copper on this type of a basis.

No. 1, defense requirements were fulfilled a hundred percent, irrespective of whom the company was.

No. 2, on the basis of a submission of an application stating inventory positions, orders on hand, and so forth. Each time that these stockpile releases were affected, the consuming industry was faced with unemployment in various areas, for lack of copper. And copper was then given on the basis of an application which stated inventory positions, orders on hand, and so forth and so on.

Mr. BLANTON. At that time, Phelps-Dodge, which got a big chunk of this 70 percent, had full employment and the profits were up 60 percent.

Mr. MEISSNER. This could well be, but we were not looking at profits when we were allocating copper. We were looking at the need for copper to continue the employment.

Mr. BLANTON. They had full employment, though. That is the point I am making for the record. Phelps-Dodge had full employment at the time the allocations were made.

Mr. MEISSNER. When you say Phelps-Dodge, you must bear in mind, it might have been a subsidiary of Phelps-Dodge. Phelps-Dodge

Copper Products, the parent company, might have had copper, but they were dispensing their copper to numerous customers; their wholly owned subsidiaries being one of their customers, who may have certified that they did not have the copper. I would be glad to check back the applications and so forth and so on, and look at the specific application, and submit to this committee the basis on which we made these allocations.

Mr. BLANTON. Would you do that for the record?

Mr. MEISSNER. We shall.

Mr. MOSS. Without objection, the record will be held at this point to receive that information.

(The following information was received for the record:)

COPPER STOCKPILE RELEASE AUTHORIZED BY PUBLIC LAW 88-9—APRIL 1965

We have examined our records and find Phelps Dodge Copper Products Corporation, a fabricating subsidiary of Phelps Dodge Copper Corporation, applied for 39 million pounds of copper on April 15, 1965.

This request in accordance with the attached procedure for processing Form BDSAF-711 was screened to a 27,630,000 pound requirement. Subsequently, in accordance with our approved procedure, they were granted 5,032,000 pounds, which represented 2.5% of the available stockpile copper.

Large and small business requests and authorizations were as follows:

[Short tons, copper content]

	Applicants	Refined copper	Brass and bronze	Total quantity	Percentage
Requested:					
Large.....	57	163,618	49,678	213,296	73.7
Small ¹	175	49,241	27,039	76,280	26.3
Total.....	232	212,859	76,717	289,576	100.0
Authorized:					
Large.....	57	22,511	50,098	72,609	73.0
Small ¹	175	8,489	18,418	26,907	27.0
Total.....	232	31,000	68,516	99,516	100.0

¹ As defined by the Small Business Administration, based on employment of 500 or less.

Source: Prepared by Copper Division, BDSA.

BASIS FOR ALLOCATIONS OF COPPER AUTHORIZED BY
PUBLIC LAW 89-9

[Press release dated Friday, April 9, 1965—Department of Commerce,
Business and Defense Services Administration]

APPLICATION FORMS AVAILABLE FOR STOCKPILE COPPER AND ALLOYS

Applications to purchase copper and copper alloys to be released from Government stockpiles must be filed by April 19, the U.S. Department of Commerce said today in announcing that the application forms (BDSAF-711) are now available.

The forms may be obtained from Department Field Offices or from the Copper Division, Business and Defense Services Administration (BDSA), Washington, D.C. 20230.

Approximately 100,000 short tons of copper—including the copper content of brass and bronze alloys—are being released to ease the shortage in domestic consuming industries.

Sales will be made by the General Services Administration in accordance with instructions furnished by BDSA. BDSA will approve applications on the basis of

demonstrated needs by brass mills, wire mills, foundries, and other consumers of copper raw materials, which file formal request for assistance.

The copper will be sold for domestic consumption only, with due consideration for the needs of small business. Sales will be made at current domestic market prices on the day of sale as determined by GSA. The copper will be sold in minimum quantities of 20,000 pounds (copper content), as is, FOB General Services Administration depots.

The sale was authorized by Legislation (Public Law 89-9) signed by President Johnson April 2.

FORM BDSAF-711 (4-7-65) U.S. DEPARTMENT OF COMMERCE BUSINESS AND DEFENSE SERVICES ADMINISTRATION APPLICATION FOR AUTHORITY TO PURCHASE COPPER MATERIALS FROM NATIONAL STOCKPILE INVENTORIES PURSUANT TO PL 89-9	BUDGET BUREAU NO. 41-6535 APPROVAL EXPIRES SEPTEMBER 30, 1965 Name and address of company (Street, City, State, Zip Code)		
Return 3 copies to: Business and Defense Services Administration Attention: Copper Division Washington, D.C. 20230			
INSTRUCTIONS Application in triplicate should be submitted to the BDSA, Copper Division, Washington, D. C., 20230, by April 19, 1965. Companies performing more than one of the operations listed below must file a separate application for each such type of operation for which copper materials are requested. Each such application must cover all plants under its ownership or control which perform the same type of operation. Applications will be accepted only from consumers of copper raw materials (including copper materials for redraw, reroll, extrusion, or insulating) located in the United States and possessions. Any sale by General Services Administration of Government-owned copper authorized pursuant to this request will be for domestic consumption only. Copper will be sold in minimum quantities of 20,000 pounds (copper content), as is, FOB General Services Administration depot. Sales will be made at current market prices on day of sale as determined by GSA. Copper materials for which this application refers are itemized in "Copper and Copper-Base Alloys Available From National Stockpile Inventories," dated April 5, 1965.			
TYPE OF OPERATION (Check applicable block)			
Consumers of raw material (including copper materials for redraw, reroll, extrusion, or insulating):			
Brass Mill <input type="checkbox"/> Primary <input type="checkbox"/> Reroll/Redraw only	Copper Wire Mill <input type="checkbox"/> Primary <input type="checkbox"/> Redraw and/or Insulate only <input type="checkbox"/> Insulate only <input type="checkbox"/> Foundry <input type="checkbox"/> Other (Specify) _____		
Name of person in your company to be contacted if questions arise regarding this application	Telephone number and area code		
Certification - The undersigned company and the official executing this certification in its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.			
Name of company	Signature of authorized official <table border="1" style="width: 100%;"> <tr> <td data-bbox="580 1401 863 1455">Title</td> <td data-bbox="863 1401 1001 1455">Date</td> </tr> </table>	Title	Date
Title	Date		
The U.S. Code, Title 18 (Crimes and Criminal Procedure), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction. The unauthorized publication or disclosure of individual company information by Government personnel is prohibited by law, and such personnel having access to such information are subject to fine and imprisonment for unauthorized disclosure.			
PLEASE COMPLETE FORM BEFORE SIGNING CERTIFICATION			

Section I - TYPES, FORMS AND QUANTITIES OF COPPER REQUESTED

Specify below the types, forms, and quantities of copper materials (copper content) the undersigned company requests authority to purchase (see "Copper and Copper-Base Alloys Available From National Stockpile Inventories"). Indicate whether material requested is for: A remelt, B further fabrication, or C resale or exchange in its present form. (Check appropriate box below).

Item No.	Type	Form	A	B	C	000 Pounds

If the Government is unable to supply the materials listed above, indicate other materials you request authority to purchase in place of the above items.

Item No.	Type	Form	A	B	C	000 Pounds

Section II - INVENTORY

List inventory of all copper raw material (exclusive of work in process and of materials requested in Section I). If not a primary brass or wire mill, include copper materials for redraw, reroll, extruding, or insulating owned by your company including those in transit (000 pounds copper content).

	Dec. 31, 1963	Dec. 31, 1964	April 30, 1965 Estimated
Refined.....			
Scrap			
Other (Specify, such as tube, rod, or wire for redrawing or insulating, etc.)			

Total.....			

Section III - RECEIPTS

Anticipated total receipts during May and June, 1965, of copper materials, exclusive of materials requested in Section I (000 pounds copper content).

Refined.....	
Scrap	
Other (Specify, such as tube, rod, or wire for redrawing or insulating, etc.)	

Total.....	

* If a rerolling or redrawing mill and/or an insulating plant, please indicate suppliers and amount anticipated from each on separate sheet.

Section IV - REQUIREMENTS

List total requirements of copper materials which would, if available, be put into production in May and June, 1965, to meet customers' delivery dates (000 pounds copper content).

	Authorized controlled materials orders	Other orders	Total
Refined.....			
Scrap			
Other (Specify, such as tube, rod, or wire for redrawing or insulating, etc.)			

Total.....			

What amount of the above is for delivery to redrawing or rerolling mills and/or insulating plants other than your own?.....

000 Pounds copper content

If the total shipments to redrawing or rerolling mills and/or insulating plants are in excess of 20,000 pounds, list companies and quantities for each.

Company	000 Pounds

PLEASE COMPLETE FORM ON REVERSE

Section V - CONSUMPTION OF COPPER MATERIALS (000 pounds copper content)			
	Fourth quarter 1963	Fourth quarter 1964	First quarter 1965 (Estimated)
Refined.....			
Scrap			
Other (Specify, such as tube, rod, or wire for redrawing or insulating, etc.)			

Total.....			

Total company employees on December 15, 1964 or on the nearest payroll date.....	Number

Section VII - BASIS OF HARDSHIP CLAIM

Please indicate below (using additional sheet if necessary) the nature of the hardship to your company if this application is not approved. Include reduction in work force, reduction of working hours, etc.

(This area is intentionally left blank for the applicant to provide details of the hardship claim.)

PLEASE SIGN CERTIFICATION ON FACE OF FORM

COPPER AND COPPER-BASE ALLOYS AVAILABLE FROM NATIONAL STOCKPILE INVENTORIES

Item No.	Form	Average gross weight per piece (pounds)	Dimensions in inches			Approximate total copper content (pounds)
			Width	Thickness	Length	
Cartridge brass (ASTM spec. No. B-19 nominal composition cu. 70, zn. 30):						
21	Slab	1,000	15	4	49	5,972,466
		2,100	25	5	63	
22	do	2,130	22	2	167	1,266,993
23	do	950	18	4	39	43,667,076
		3,100	22	5	68	
24	do	1,000	18	4	54	35,268,457
		2,200	25	5	70	
25	do	1,430	20 $\frac{1}{4}$	3 $\frac{9}{16}$	62-64	29,029
26	do	1,711	25	5	25-42	45,525
40	do	2,138	22	5	62	32,918
47	do	1,020	25	2 $\frac{1}{4}$	62	1,454,237
37	do	726	19	2 $\frac{1}{4}$	60	2,417,201
33	do	439	9 $\frac{5}{8}$	2.312	60-67	265,319
34	do	472	12 $\frac{1}{2}$	2.0	56-64	287,133
49	do	43	6	5 $\frac{1}{8}$	36	249,469
		95	15	9 $\frac{1}{8}$	85	
60	do	596	19	2	49-53	146,017
70	do	1,711	25	5	25-42	45,425
67	do	1,430	20 $\frac{1}{4}$	3 $\frac{9}{16}$	62-64	29,029
Total cartridge brass slab						91,176,294
45	Billet	460		18	32	70,141
46	do	453		18	32	3,385,579
39	do	461		17 $\frac{3}{4}$	32	5,576,067
36	do	462	7 $\frac{3}{4}$ (2)		29 $\frac{1}{2}$ 32 $\frac{1}{2}$	397,889
Total cartridge brass billets						9,429,676
58	Ingots	24	3 $\frac{1}{2}$ 4	3 3 $\frac{1}{2}$	10 $\frac{1}{2}$ 11	144,545
Total cartridge brass ingots						144,545
50	Coils	162	4 $\frac{1}{8}$	3 $\frac{5}{8}$	282	148,315
		560	14 $\frac{1}{2}$	7 $\frac{1}{8}$		
31	Strip	8	4.54	0.100	45-75	2,954
32	do	215	9 $\frac{5}{8}$	0.650	96-108	107,166
20	Sheets	412	20	0.390	185	25,379
35	Strip	21	10 $\frac{1}{2}$	0.100	51-77	38,866
Total cartridge brass sheet, strip and coil						322,680
Grand total cartridge brass						101,073,195
Commercial bronze (ASTM spec. No. B-130 nominal composition Cu. 90, Zn. 10):						
1	Billet	506.82		110 $\frac{3}{4}$	17-18	2,394,268
Total commercial bronze billet						2,394,268
27	Strip	64	5	0.350	116	2,590,047
28	do	31	5	0.350	57	68,269
2	do	29.43	5	0.150	116	50,597
3	do	429	20	0.365	184	38,610
4	do	624	22	0.390	236	16,848
Total commercial bronze sheet and strip						2,764,371
5	Slab	1,930	19 $\frac{3}{4}$	5	63 $\frac{1}{2}$ -68	201,492
6	do	1,496	21 $\frac{1}{2}$	4	53-56	4,602,726
7	do	1,644	16	5	63	156,879
8	do	1,794	18	5	60-62	82,345
9	do	1,818	18	5	61-63	178,323
10	do	1,792	19	5	62-63	209,641
11	do	1,872	19 $\frac{1}{2}$	5	60-64	1,169,636
Total commercial bronze slab						6,601,042

See footnotes at end of table, p. 53.

COPPER AND COPPER-BASE ALLOYS AVAILABLE FROM NATIONAL STOCKPILE INVENTORIES—Continued

Item No.	Form	Average gross weight per piece (pounds)	Dimensions in inches			Approximate total copper content (pounds)
			Width	Thickness	Length	
12	Coils	141	5 $\frac{7}{8}$.135-.138		38,451
13	do	552	6 $\frac{1}{2}$.105-.110		260,418
14	do	540	6 $\frac{1}{2}$.059-.050		243,684
15	do	501	6	.043		313,826
16	do	484	5 $\frac{1}{16}$.040-.045		285,676
17	do	1,637	20	.102-.105		110,498
18	do	550	20	0.067		59,981
19	do	601	22 $\frac{1}{16}$	0.183		282,891
29	do	86	10 $\frac{1}{2}$	0.100	240	132,895
Total commercial bronze coils						1,728,320
30	Cake	439	16	5 $\frac{3}{4}$	24	589,268
Total commercial bronze cake						589,268
Grand total commercial bronze						14,077,269
Free cutting brass (ASTM spec. No. B-16 nominal composition Cu. 61.5, Zn 35.5, Pb. 3.0):						
38	Billets	568		17	51	4,282,958
59	do	786	6 $\frac{3}{4}$	(?)	71-73	1,811,540
48	do	992		17	84	5,999,768
53	do	619		16 $\frac{3}{4}$	55	1,544,782
68	Slab	1,548	26	4	52	37,150
Grand total free cutting brass						13,686,198
Leaded yellow brass (ASTM spec. B-146-6C nominal composition Cu. 67.5, Zn. 35.4, Pb. 1.1):						
71	Slab	1,548	27	4	51-52 $\frac{3}{4}$	17,646
72	do	1,711	24 $\frac{3}{4}$	5	44-48 $\frac{1}{2}$	87,881
69	do	1,711	25	5	40 $\frac{1}{2}$ -46	126,815
54	Ingot	22.5	3 $\frac{1}{2}$	3	11	177,026
52	Billets	305		16 $\frac{3}{4}$	28	73,463
Grand total leaded yellow brass						482,831
Leaded yellow brass (ASTM spec. B-30-6B nominal composition Cu. 67.5, Zn. 28.5, Pb. 2.5):						
41	Ingot	21	3 $\frac{3}{4}$	3	11	200,967
43	do	20.38	3 $\frac{1}{2}$	3 $\frac{1}{2}$	10 $\frac{1}{2}$	1,574,883
55	do	21	4	3	11	245,684
61	do	23	4	4	11	634,470
Total leaded yellow brass ingot						2,656,004
Leaded yellow naval brass (ASTM spec. B-30-6C nominal composition Cu. 60.5, Zn. 37.4, Pb. 1.1):						
2	Ingot	23	4	4	11	4,914
Total leaded yellow naval brass ingot						4,914
Manganese bronze (ASTM spec. B-30-8-C nominal composition Cu. 58.5, Zn. 39.0):						
64	Ingot	21	4	2 $\frac{1}{2}$	10 $\frac{1}{2}$	159,708
Total manganese bronze ingot						159,708
Leaded semi-red brass (ASTM spec. B-30-5A nominal composition Cu. 80.5, Zn. 8.5, Pb 7.0):						
42	Ingot	21	2 $\frac{1}{2}$	{ 2 $\frac{1}{2}$ 3 $\frac{1}{2}$ }	{ 12 12 $\frac{1}{2}$ }	1,811,073
65	do	21	3 $\frac{1}{2}$	{ 3 3 }	{ 10 $\frac{1}{2}$ 10 $\frac{1}{2}$ }	131,732
57	do	22	{ 3 $\frac{1}{2}$ 4 }	{ 3 3 $\frac{1}{2}$ }	{ 10 $\frac{1}{2}$ 11 }	42,526
Total leaded semi-red brass ingot						1,985,331

See footnotes at end of table, p. 53.

COPPER AND COPPER-BASE ALLOYS AVAILABLE FROM NATIONAL STOCKPILE INVENTORIES—Continued

Item No.	Form	Average gross weight per piece (pounds)	Dimensions in inches			Approximate total copper content (pounds)
			Width	Thickness	Length	
Leaded red brass (ASTM spec. B-30-4A nominal composition Cu. 85.0, Zn. 5.3, Pb. 4.3):						
56	Ingot	18	{ 3 3½	3 3	{ 10 10½	180,639
66	do	21	3½	3	12	77,034
Total leaded red brass ingot						257,673
Tin bronze (ASTM spec. B-30-1b nominal composition Cu. 87.5, Zn. 4.3, Pb. 0.25):						
63	Ingot	25	3½	3	11	242,282
Total tin bronze ingot						242,282
Leaded semi-red brass (ASTM spec. B-145-T5A nominal composition Cu. 80.0, Zn. 8.5, Pb. 7.0):						
44	Ingot	22	3½	3½	10½	40,893
Total leaded semi-red brass ingot						40,893
Naval brass (ASTM spec. B-124-A3 nominal composition Cu. 60.0, Zn. 39.3):						
51	Coil	206		1½	(*)	11,895
Total naval brass						11,895
Leaded commercial free cutting brass (Federal specification QQ-B-611a-B nominal composition Cu. 61.5, Zn. 35.5, Pb. 3.0):						
73	Rods	109		2	4 52-¾	1,753,802
74	do	62		1-½	(*)	40,792
Total						1,794,594
Federal specification QQ-B-611a-A nominal composition Cu. 60.0, Zn. 38.0, Pb. 2.0:						
75	Rods	8		2 0.470	144	34,369
76	do	3		2 0.291-	144	9,055
77	do	2		0.297 2 0.188- 0.220	144	7,035
Total						50,459
Total leaded commercial free cutting brass						1,845,053
Fire-refined copper (ASTM spec. B-72 grade A):						
78-79	Ingot	50	4	2½	20	60,000,000
80-81	Miscellaneous copper: 44 drums containing clippings, sweepings, nodules and hangers					56,060
Grand total all products						196,579,246

1 Diameter.
2 Round.
3 Various.
4 Random.

DIVISION'S REPORT TO ADMINISTRATOR

April 27, 1965.

To: Mr. George Donat, Administrator, BDSA.
 Through: James M. Owens, Director, Office of Metals and Minerals; William A. Meissner, Jr., Director, Copper Division.

APPLICATIONS TO PURCHASE COPPER MATERIALS FROM NATIONAL STOCKPILE INVENTORIES

The subject applications have been received by the Copper Division and have been screened and posted in accordance with the attached procedure. We have determined that the average allotments based on screened requirements which can be granted are as follows:

[All figures in thousand pounds]

	Fire refined copper (percent)	Total	Brass and bronze materials (percent)	Total
Small businesses.....	25	18,342	45	42,433
Large businesses.....	20	37,461	40	83,138

Requests for fire refined copper totaled 421,709 pounds. Only 60,000 pounds are available for distribution. Of the total screened requests, wire mills amounted to 180,747 and brass mills amounted to 91,051. Since wire mills are unable to use the brass materials, which are readily usable by some brass mills, it was determined by the Review Committee that it would be proper to arbitrarily reduce the screened requirements for refined copper of brass mills which produce large quantities of alloy materials, and increase their screened requirements for brass and bronze materials by the amount deleted from their screened requirements for copper. This resulted in reducing their screened requirements from 91,051 to 37,975. By making this adjustment in the screened requirements of the brass mills, it was possible to allocate to small business 25% of their screened requirements of refined copper and 20% to large business. This will result in small businesses receiving an average allotment of approximately 23.2% of their original request and large businesses receiving approximately 17.1% of their request. Copper wire mills would receive approximately 67%, brass mills 25%, and all others 8% of the available refined copper.

Screened requests for brass and bronze materials totaled 289,565 pounds and we have a total of 140,000 pounds available for distribution. We are therefore able to allocate to small businesses 45% of their screened requirements of these materials and 40% to large businesses.

Attached is a summary showing brass mill, wire mill, foundry and miscellaneous users, and ingot makers requests, screened requests and tentative allotments of fire refined copper and of all brass and bronze materials.

The small amount of copper available to each applicant for refined copper will by no means satisfy his requirements. The allocations of substantial quantities of brass and bronze materials to the brass mills, foundries and ingot makers, however, should ease the pressure on the refined copper market and thereby make more copper available through normal channels to those who can use only refined copper.

TOTAL REQUESTS, SCREENED REQUIREMENTS, AND TENTATIVE ALLOTMENTS

[In thousand pounds]

	Refined copper	Tentative allotment	Brass and bronze	Tentative allotment
Brass mills:				
Requested:				
Large.....	143,942		95,510	
Small.....	24,714		25,812	
Total.....	168,206		121,322	
Screened:				
Large.....	¹ 37,975	² 7,595	¹ 199,973	³ 79,989
Small.....	20,500	⁴ 5,125	45,224	⁵ 20,351
Total.....	58,475	12,720	245,197	100,340
Wire mills:				
Requested:				
Large.....	169,683		3,020	
Small.....	48,549		20	
Total.....	218,232		3,040	
Screened:				
Large.....	140,531	² 28,106	6,717	³ 2,687
Small.....	40,216	⁴ 10,054	1,922	⁵ 865
Total.....	180,747	38,160	8,639	3,552
Foundries and miscellaneous:				
Requested:				
Large.....	14,060		808	
Small.....	13,418		7,237	
Total.....	27,478		8,045	
Screened:				
Large.....	8,802	² 1,760	1,156	³ 462
Small.....	8,390	⁴ 2,098	10,406	⁵ 4,683
Total.....	17,192	3,858	11,562	5,145
Ingot makers:				
Requested:				
Large.....				
Small.....	7,793		22,233	
Total.....	7,793		22,233	
Screened:				
Large.....				
Small.....	4,261	⁴ 1,065	36,743	⁵ 16,534
Total.....	4,261	1,065	36,743	16,534
Total:				
Requested:				
Large.....	327,235		99,338	
Small.....	94,474		33,069	
Total.....	421,709		132,407	
Screened:				
Large.....	187,308	² 37,461	207,846	³ 83,138
Small.....	73,367	⁴ 18,342	94,295	⁵ 42,433
Total.....	260,675	55,803	302,141	125,571

¹ Adjusted.² 20 percent of figure in col. 1.³ 40 percent of figure in col. 3.⁴ 25 percent of figure in col. 1.⁵ 45 percent of figure in col. 3.

Source: Copper Division, BDSA.

ADMINISTRATOR'S REPORT TO ASSISTANT SECRETARY

April 28, 1965.

A. B. Trowbridge
George Donat
Copper Allocations—Public Law 89-9

1. TYPES AND AMOUNTS AVAILABLE

(A) There are two basic types of materials available for distribution to alleviate the current copper shortage. These are fire refined copper of 99.75% purity and brass and bronze materials (to 60 to 90% copper content). The latter are the least desirable for this purpose.

(B) There are 60 million pounds of fire refined copper ingot and 140 million pounds of brass and bronze in 80 different forms and types.

2. REQUESTS AS STATED

233 firms, small and large, representing brass mills, wire mills, ingot makers, foundries and miscellaneous users applied for a total of:

	<i>Million pounds</i>
Refined copper, a ratio of 7 to 1.....	422
Alloyed copper, a ratio of 1.1 to 1.....	155
Total, refined and alloyed copper, a ratio of 2.9 to 1.....	577

3. METHOD OF SCREENING

Since it is impossible to satisfy all requests, they needed to be adjusted to reality. Each application was screened for the following factors:

- (a) Previous production based on three calendar quarters.
- (b) Present and anticipated inventories.
- (c) Current order board.
- (d) Size—Employment prospects.

In order to equitably balance one request against another, a screened requirement was developed for each application.

4. ALLOCATION

The following table illustrates our dilemma.

TOTAL REQUESTS, SCREENED REQUIREMENTS, AND TENTATIVE ALLOTMENTS

[Millions of pounds]

	Fire refined			Brass and bronze		
	Requested	Screened requirements	Tentative allotment	Requested	Screened requirements	Tentative allotment
Brass mills.....	168.2	58.5	12.7	121.3	245.2	100.4
Wire mills.....	218.2	180.7	38.2	3.0	8.6	3.6
Foundries and miscellaneous.....	27.5	17.2	3.9	8.1	11.6	5.1
Ingot makers.....	7.8	4.3	1.0	22.2	36.7	16.5
For adjustments.....			4.2			14.4
Total.....	421.7	260.7	60.0	154.6	302.1	140.0

The proposed refined copper allotments were figured on the basis of granting 20 and 25% of screened requirements to large and small businesses, respectively. The proposed brass and bronze allotments were figured on granting 40 and 45% of screened requirements to large and small companies, respectively.

5. PATTERN OF CONSUMPTION VERSUS PROPOSED ALLOTMENTS

(A) An average of 1.4 billion pounds of copper per quarter was consumed in 1964. Of this approximately two-thirds was scrap and one-third was refined copper. Proposed allotments would relate as follows:

COMPARISON OF CONSUMPTION OF COPPER MATERIALS (1964) AND PROPOSED ALLOCATION

[Copper content basis; percentage of total]

	Refined copper		Copper and copper-base alloy scrap	
	Consumption	Proposed allocation	Consumption	Proposed allocation
Brass mills.....	38.1	21.1	46.6	71.7
Wire mills.....	59.5	63.7	0	2.6
Foundries and miscellaneous.....	2.2	6.5	25.2	3.6
Ingot makers.....	.2	1.7	28.2	11.8
For adjustments.....		7.0		10.3
Total.....	100.0	100.0	100.0	100.0

(B) Alloyed material is more readily usable by brass mills and, in specific instances, can be used in lieu of copper. However, some brass mills require copper. 52.7% of brass shipments are unalloyed copper products and 47.3% are alloyed. This was taken into consideration on individual company basis when screening the application.

INTERNAL COPPER DIVISION'S INSTRUCTIONS

Procedure for Processing Form BDSAF-711—Application for Authority to Purchase Copper Materials from National Stockpile Inventories

I. Applicants required to file application Form BDSAF-711 in triplicate by April 19, 1965.

A. All copies are to be date stamped and assigned control number.

B. One copy together with any pertinent correspondence and a standard work sheet (copy attached) will be put in the file folder which will be the basic work file maintained by the Copper Division as a permanent record of the action taken on each individual case.

C. One copy of the application will be filed alphabetically and the other copy filed numerically according to control number for later use.

II. The work file will be transmitted to the Economic and Analysis Branch which maintains ledger sheets for brass mills, wire mills, foundries and miscellaneous users, and ingot makers. The ledger sheets will be posted to show (1) the applicant's name; (2) case number; (3) large or small business; (4) quantity of each material requested (1st choice, 2d choice, etc.) by item number; (5) amount of screened request; (6) amount of each material approved for allocation; and (7) a running balance of each item.

III. Upon receipt of a new case, the Economic and Analysis Branch will, (A) post applicant's name, case number, quantity of each material requested (1st choice and second choice) and indicate whether a large or small business.

(B) *Requirements.*—Enter on the attached work sheet the applicant's stated requirements as shown in Sec. IV. Since this figure is a 2-month requirement, it will be multiplied by 150% to establish an average 3-month requirement for comparative purposes. Enter in Sec. C, the highest quarterly consumption of copper in the fourth quarter 1963, fourth quarter 1964, or first quarter 1965, if it is lower than the calculated 3 months' requirement. The amounts shown in Sec. C represent the amount of material the applicant would be permitted to put into production if ample material were available.

(C) *Supply.*—Enter anticipated receipts (Sec. III), multiply this figure by 150 to obtain three-month average, add inventory as of April 30, 1965, to obtain total supply of material available if no material were granted under the application.

(D) Subtract material to be put into production from the total supply available to determine theoretical balance at the end of three months, if no material were granted. Subtract this amount from the highest previous inventory (Sec. II) held in December 1963, December 1964 or April 30, 1965. The remainder is the applicant's screened requirement, i.e., the amount required by the applicant for production and replenishment of inventories.

IV. Screened requirements for each item of material will be entered on the ledger sheets and totaled. These sums will be the amount of material which would

be allocated if sufficient materials were available. Total screened requirements are divided by the amount of material available in order to determine the average percentage of each applicant's screened request which can be granted. The percentage figure obtained will be applied to each applicant's screened requirement and the tentative allotment will be entered on the work sheet.

V. *Review Committee.* A Review Committee of four members, any three of which will constitute a quorum, will review each case and the tentative allotment. The tentative allotment will be approved or if necessary, in the judgment of the Committee, will be modified to assure the most equitable distribution of the available material based upon applicant's need and degree of demonstrated hardship. Small businesses will be given a greater percentage of screened requirements than will large businesses. If the tentative allotment is adjusted, the reasons for deviation from the norm will be noted and initialed on the back of the work sheet.

VI. GSA will be advised by form letter of the amount and type of material each applicant is authorized to purchase. A copy of this letter will be sent to the applicant and one will be retained in the work folder.

**Business and Defense Services Administration
Copper Division**

Distribution of Stockpile Copper, April-May 1965

Book # _____

Case # _____

Requirements (Sec. IV)

Big business

(A) (B) (C)
(The highest of Sec. V if lower than B)

Refined _____ X 150 _____
Scrap _____ X 150 _____
Other _____ X 150 _____

Total ACM Orders (Sec. IV) _____

Anticipated Receipts (Sec. III)

Inventory (Sec. II)

Total Supply

(D)

(E)

(F)

April 30, 1965

Refined _____ X 150 _____ + _____ = _____
Scrap _____ X 150 _____ + _____ = _____
Other _____ X 150 _____ + _____ = _____

(F)

(c)

(D)

Refined _____ - _____ = _____
Scrap _____ - _____ = _____
Other _____ - _____ = _____

Highest Inventory 1963, 1964 or 1965 (Sec. II)

(H)

(G)

(I)

Screened Requirement (Copper)

Refined _____ - _____ = _____
Scrap _____ - _____ = _____
Other _____ - _____ = _____

Screened Requirement

First Choice

Initials and Date

Type	Item	Form	Pounds		Allotment
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____

Second Choice

_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____
_____	_____	_____	_____	X _____ %	_____

See opposite side for remarks

[Press release dated Thursday, April 29, 1965—Department of Commerce, Business and Defense Services Administration]

PLANS FOR ALLOCATING 100,000 TONS OF STOCKPILE COPPER ANNOUNCED

Announcement of plans for allocating 100,000 tons of national stockpile copper was made today by George Donat, Administrator of the Business & Defense Services Administration.

Thirty thousand tons of fire-refined copper, approximately 99.75% pure, is being released, together with 70,000 tons of copper contained in brass and bronze materials, in more than 80 different shapes and sizes.

Allocations were made by BDSA on the basis of: previous and current production; present and anticipated inventories; current order boards; and the size and employment picture of the applicants plants.

The copper is available as a result of the passage by Congress of Public Law 89-9, signed by the President on April 2, 1965. The law directs the General Services Administration to sell 100,000 tons from the national stockpile to copper consumers. Sales will be made in accordance with instructions received from BDSA.

Requests from industry for allocations of both fire-refined ingots and brass and bronze materials far exceeded the amounts available. BDSA estimates that only 20-25% of evaluated requests for fire-refined ingots and 40-45% of the applications for bronze and brass materials can be met.

Certification of individual company allotments will be forwarded to the General Services Administration and to individual applicants by BDSA during the week beginning May 3, 1965.

Mr. BLANTON. What condition is our Government's copper stockpile at this time?

Mr. MEISSNER. At the moment we have approximately 260,000 tons in the stockpile, and the public announced goal is 775,000 tons. There are no funds to acquire the balance. There is some copper due from Duval, over a period of years, to repay the \$83 million loan that was given them through GSA to expand their current operation. They are returning that copper to the Government at 38 cents a pound, over a period of years. I don't have the exact figures.

Mr. MOSS. Loan from GSA or from Defense Production?

Mr. MEISSNER. No, Mr. Chairman—

Mr. MOSS. Oh, a loan of—

Mr. MEISSNER. In the copper expansion program.

Mr. MOSS. Oh, a loan of copper.

Mr. MEISSNER. They had \$100 million to expand. Duval qualified and obtained \$83 million as a loan to expand their operation. They have now, just recently, a few months ago, brought this mine into being, and its production into being. They will now pay back to the Government copper to the amount of \$83 million at the cost or at the price of 38 cents a pound.

Mr. BLANTON. Has there ever been an incident, to your knowledge, a situation where the market price of copper rose above the stockpile, and leading producers were allowed to divert these materials from the stockpile without sharing their gain with the Government?

Mr. MEISSNER. I don't quite follow your question.

At any time that we release copper from the stockpile, all of the copper that we have accumulated over the years in the stockpile has always been at a lower price than the time that it was subsequently released. The Government always released the copper at the current market price; although the acquisition price might have been 24 cents, if and when Congress instructed us or passed legislation or a release from the stockpile was made it was made at the then current market price, which invariably was higher than the acquisition price.

Mr. BLANTON. And there has never been an incident in that interim where this copper was released to major producers, and the Government didn't share in the market price increase?

Mr. MEISSNER. You mean on stockpile deferred delivery?

Mr. BLANTON. Right.

Mr. MEISSNER. This has occurred over the years, but not in recent years. In 1953-54, around in there, there were some releases at the conclusion of a strike, but in every instance that we made a release, if the major producers were involved they only paid the Government for the copper, and the Copper Division instructed them as to how and to whom to distribute that copper, along the consumer end. Wherever the copper was deferred from delivery to the stockpile, the Copper Division instructed the producers as to what consumers they should ship this copper to.

I am personally very proud of this record, because we went all through many, many hearings testifying on this, and we do not have one single complaint—at least on record—of this distribution of copper on the part of the consuming industry. The consuming industry as a whole was very pleased in our distribution.

Mr. BLANTON. Mr. Chairman, I have no further questions, but I would hope that as we develop the record that Mr. Meissner would make himself available whenever we get the materials that we have requested today to come back to our committee at a later time.

Mr. MEISSNER. Mr. Chairman, in view of the fact that the stockpile has come up, I do have a listing of Government activities, of actions taken by the Government, from 1964 to date, which I would like to submit into your record. It might be helpful.

Mr. Moss. Without objection, it will be placed at this point, in the record.

(The material referred to follows:)

GOVERNMENT ACTIONS, 1964 TO DATE

1. October 1964, OEP accelerated its sales of DPA stockpile copper to the Mint by authorizing a release of 30,000 tons.
2. December 1964, OEP released 20,000 tons of DPA stockpile copper.
3. March 1965, Public Law 89-9 authorized 100,000 tons of copper released from the National and Supplemental stockpiles.
4. August 1965, OEP released 4,000 tons of DPA copper to the Mint.
5. October 1965, Public Law 89-251 authorized the release of 110,000 tons of copper from the National Stockpile to the Mint.
6. November 1965, BDSA issued Direction 1 to BDSA Order M-11A establishing a set-aside of ammunition strip capacity to meet defense requirements.
7. November 1965, export controls were placed on copper-base scrap.
8. November 1965, 200,000 tons of copper was released from the National Stockpile.
9. November 1965, the suspension of the 1.7 cent-a-pound duty on copper raw materials was proposed.
10. November 1965, the directors of the COMEX agreed to raise margin requirements on copper to discourage speculation.
11. November 1965, producers agreed to roll back price from 38 to 36 cents a pound.
12. December 1965, the Chilean Government agreed to permit the United States to import 100,000 tons of copper at the U.S. domestic price in exchange for a \$20 million, 40 year Alliance-for-Progress loan. In addition, Anaconda, the importing company, was to pay \$3.5 million export surtax to Chile.
13. January 1966, export controls were extended to refined copper and other copper bearing items.
14. January 1966, the copper producers agreed informally with the Secretary of Commerce not to use or sell their proofs of entry of foreign-origin raw materials to export, ex-quota, refined copper of domestic origin.

15. February 1966, BDSA issued Direction 2 to BDSA Order M-11A establishing a set-aside on the production of domestic refined copper to meet defense requirements at the minimum cost.

16. March 1966, 200,000 tons of refined copper was released from the National stockpile.

17. March 1966, a stipulation of the above stockpile release was a special "buy-back" provision at the Government's option.

18. March 1966, Government agencies were directed to use acceptable substitutes for copper wherever possible.

19. March 1966, \$100,000,000 was made available for the Copper Production Expansion Program.

20. March 1966, the Government offered to assist in expediting the delivery of mining and processing equipment.

21. June 1966, Public Law 89-468 suspended the 1.7 import duty on certain copper raw materials retroactively from February 1966 through June 1968.

22. December 1966, 150,000 tons of copper was released from the National Stockpile for defense rated order use only.

23. April 1967, the Department of Commerce began publishing data on the inventories of copper mill products held by end-users.

24. November 1967, GSA negotiated a \$84 million contract with Duval Corporation under the Copper Production Expansion Program.

25. April 1968, the Copper Production Expansion Program was concluded.

26. August 1968, the Copper Substitution Order was rescinded.

27. October 1968, the duty suspension was extended retroactively from July 1968 through June 1970.

28. January 1970, the President directed a study of the pricing methods used by the copper industry.

29. March 1970, Representative Blanton introduces House Resolution No. 855 which would create a select committee to conduct investigation and study of copper producers and markets.

30. May 1970, White House releases copper report prepared by Copper Subcommittee of the Cabinet Committee on Economic Policy.

31. May 1970, Representatives Blanton and Moss introduce H.R. 17657 to amend FTC Act to prohibit certain unfair sales practices in the copper industry.

32. June 1970, Duval Corp. copper mine opened. Partially financed with \$83 million loan from U.S. Government.

33. July 1970, Public Law 91-298 extends copper import duty suspension through June 1972.

34. July 1970, Copper export controls include "Reverse Toll" for second half 1970.

35. July 1970, House Subcommittee on Commerce and Finance begins hearings on H.R. 17657.

Mr. MEISSNER. All right.

Mr. MOSS. Mr. Eckhardt?

Mr. ECKHARDT. Mr. Meissner, I believe you said that there were three major sources of copper. One was domestic mining; another was smelting, scrap; and another was import. Is that right, generally?

Mr. MEISSNER. Basically.

Mr. ECKHARDT. Is the quality of copper produced in each of these three ways the same, or is it of a different quality and a different price?

Mr. MEISSNER. It is the same, basically.

Mr. ECKHARDT. It is the same, and what you are giving me as wire bar price might be wire bar price of copper from any of these sources, but of an equal grade?

Mr. MEISSNER. Correct.

Mr. ECKHARDT. Then, as I understand—

Mr. MEISSNER. With one exception, sir, and that is on the U.S. Commodity Exchange, you buy copper on the Commodity Exchange, and you have no way of knowing what you are going to get. It is just copper, period. Nor do you know from what point it ultimately might be delivered.

But, basically, when you are buying copper, it is up to the standard and the grade. London Metal Exchange copper is a little less in grade than the U.S. produced copper but basically it is usable by the industry as a whole.

Mr. ECKHARDT. And I believe the classification you gave, comparing the various prices of copper, and I mean the most recent, I think you gave them in the first part of your testimony, as I recall, you said that the domestic produced copper was at about 60.25, somewhere in that neighborhood?

Mr. MEISSNER. Currently, the domestic producers price. I don't have the date that the price went into effect, wire bar price is 60 to 60 $\frac{1}{4}$ cents. One company specifically, Kennecott, sells wire bar at 60 $\frac{1}{4}$ cents. The rest of the companies sell it at 60 cents.

Now, there are some minor exceptions to this. One company, American Smelting & Refining, does not sell their copper at a flat price. They sell it on the metals week average.

Mr. ECKHARDT. Yes.

Mr. MEISSNER. And metals week average is merely a compiling of all copper sold and divided by the tonnage, and it comes out roughly a fraction over 60 cents.

Mr. ECKHARDT. In other words, it is from 60 to 60 $\frac{1}{4}$ cents, as you stated.

Mr. MEISSNER. Right.

Mr. ECKHARDT. And did you state that the present London Metal Exchange price is 61.47?

Mr. MEISSNER. As of Friday. I haven't had this morning's report.

Mr. ECKHARDT. But you said, I think, at another part of your testimony, that at certain times the spread had been as much as, say, 9 or 10 cents between these two exchanges.

Mr. MEISSNER. At one time, 20 cents.

Mr. ECKHARDT. Now, how can this occur? Who would buy copper on the London Metal Exchange if they could buy copper at, say, 10 or 20 cents less?

Mr. MEISSNER. Well, they can't buy it in the United States. The foreign consumers of copper would be buying. The London Metal Exchange specifically is a hedging operation. I tried to point out that in 1969, there was 2 million tons transacted, but there was only 160,000 tons of physical sales. You are buying futures.

Mr. ECKHARDT. Yes, I understand. So what you are saying is that the reason persons would buy on the London Metal Exchange is because that same purchaser couldn't buy copper at the lower rate from domestic American production, for some reason.

Mr. MEISSNER. Well, for several reasons, Congressman. First, we have had export controls in effect. We want to keep that copper in the United States, as long as we are a net importer. So we have had export controls in effect since 1965, in varying quotas. So there is very little likelihood of our domestic produced copper getting abroad.

Mr. ECKHARDT. Well, why is it that within recent times this spread, then, has decreased from as high as 20 cents down now to approximately 1 $\frac{1}{2}$ cents, or in some instances 1 $\frac{1}{4}$ cents?

Mr. MEISSNER. I think there are a lot of reasons, Congressman. No. 1, we have had a slump in business in the United States that spread to Europe. We have had a stock market that has gone down, the Europeans are getting jittery. The Red Chinese, who are always

buyers and bidders up of the market on the London Metal Exchange, have ceased to buy copper on the London Metal Exchange. The Japanese, for the first time in many years, have an abundance of copper, and they have disposed of copper on the London Metal Exchange in recent months, and all of these factors have tended to drive the price down.

Mr. ECKHARDT. Well, doesn't it mean this, that at a time when purchasers have an advantage in the United States to purchase U.S. copper in the United States, the price of copper is determined by the domestic production price, but at a time when production in the United States becomes at a lesser level, it tends then to be controlled by the world price, by the London Metal Exchange price, because copper purchases could be made as easily by domestic users, by foreign purchasers, as by domestic purchasers?

Mr. MEISSNER. But if you buy copper, if the London Metal Exchange were 60 cents, equivalent to ours, it still costs you at least a cent and a half to bring it to the States, and a delay of—

Mr. ECKHARDT. I understand. But what I am getting at is this: That the London Metal Exchange price is, in effect, a ceiling on American price, is it not?

Mr. MEISSNER. No, not necessarily. Because, as I pointed out earlier, in 1963, which was the starting of this recent price or recent tight situation, the domestic producers' price was higher than the London Metal Exchange price, because the domestic producers, I hope, were looking at their costs to produce. And they couldn't produce for less than 30 cents, so obviously, they were selling at 30, but abroad maybe they could produce for less than 30 and they were being quoted on the London Metal Exchange at 29½.

Mr. ECKHARDT. I see.

Mr. MEISSNER. This is the beginning of the dilemma, where many sources, many consumers, who had formerly bought from producers, quit buying from the producers and started buying the lower priced copper from merchants and dealers. Now, the outside merchant, when he has his copper to sell, which might be derived from his buying scrap on the open market, and having it converted in a custom smelter, when he is ready to sell, he has got one eye on the London Metal Exchange, and one eye on the producer's price. So he is basically charging the London Metal Exchange price less the freight abroad.

Mr. ECKHARDT. Is there any estimate of the amount of reserves, copper reserves, in U.S. mines?

What I am asking for is the same kind of estimate that exists with respect to known resources of oil, for instance.

Mr. MEISSNER. I believe the Bureau of Mines has some data on this, but we do not have it. We tried to pinpoint this several times. There are estimates by the Bureau of Mines as to known reserves, that is what you are really talking about, I believe.

Mr. ECKHARDT. That is right.

Now, do we know anything as to whether or not known reserves of copper are increasing or decreasing in the United States?

Mr. MEISSNER. Oh, I don't think there is any question they are increasing.

Mr. ECKHARDT. The known reserves are increasing?

Mr. MEISSNER. Yes.

Mr. ECKHARDT. Does that not mean, that we are not producing at the rate we are discovering?

Mr. MEISSNER. This is correct. However, may I point out, Congressman, that I am not an authority in the mining area. The mining area has been, as you know, for years, run by the Department of Interior and the Bureau of Mines. I am not trying to dodge your question, but the Bureau of Mines is the authority in this area. My degree of expertise, if that is the proper term, starts at the refining area, and I am more concerned with the consumption by the consumers of copper than I am with the production and the mining of copper. I am trying to draw a fine line between knowledge here.

Mr. Moss. If the gentleman would yield, we will take steps to get the information you want from the Bureau of Mines, and possibly request a Bureau of Mines witness.

Mr. ECKHARDT. Of course, Mr. Chairman, what I am trying to establish here is where there is a genuine shortage of a material, there is naturally a tendency for it to be a reduction in known reserves, because it is being produced under a larger demand situation than will be met by discoveries. Now, if we find a situation in which the known reserves are increasing it would appear that there is something happening artificially to the market.

Do you have any comment in this regard?

Mr. MEISSNER. Well, the natural assumption—I am not an economist—would be that high prices would bring more production out.

Mr. ECKHARDT. You would think so, particularly when discoveries are being made.

Mr. MEISSNER. You must bear in mind, if you discover a mine tomorrow, you are anywhere from 8 to 10 years before you get that on stream and in production.

Mr. ECKHARDT. Well, that would be true, of course, but the thing is, if your discoveries are at a relatively even rate, your increased capability to produce would be delayed in each instance, but there would be a gradual increase of production, it would seem to me.

Mr. MEISSNER. But there is no question in my mind that one of the reasons that the refined copper production has not increased at a more rapid rate gets back to the pollution problem.

Mr. ECKHARDT. Well, why is this any different from the production of steel?

A basic steel plant—

Mr. MEISSNER. Because in copper, you have sulfur, that gets into the air, and now you have got local authorities, suddenly deciding that they are going to get very conscious of the pollution problem, and I have been told repeatedly by many companies, they have not been able to go ahead with smelting, to put up smelters that meet the local requirements or Federal requirements, sometimes it is the State requirement—

Mr. ECKHARDT. Well, what Federal requirements are there with respect to new sources of pollution?

Mr. MEISSNER. Well, an agency with the Health, Education, and Welfare that has come up with some rules and regulations on smoke emission, and, frankly, I am not conversant enough to get into the details, but I do know they have.

Mr. ECKHARDT. We have passed a bill this time, of course, establishing limitations on new sources, but I am not familiar with any Federal limitations on stationary sources of pollution at the present time.

Mr. MEISSNER. Well, we have American Smelting & Refining which in the last 2 months has declared force majeure in Arizona, Tacoma, Wash., and El Paso, Tex., on the basis that they have to cut back 15 percent production to live with the regulations in those States on smoke emission.

Mr. ECKHARDT. Do you tell me what the situation is in El Paso with respect to, I assume, some Texas laws that limits their production there?

Mr. MEISSNER. I believe so, sir. But, again——

Mr. ECKHARDT. I would like to have the information you have on it.

Mr. MEISSNER. I am not an authority in this area, and I would defer to Health, Education, and Welfare, who at the moment has an agency, known as NASCPA.

Mr. THOMPSON. Would the gentleman yield?

Mr. ECKHARDT. Certainly, glad to yield.

Mr. THOMPSON. For an observation. If production must be cut back in order to comply with pollution requirements, you have mentioned 15-percent cutback in order to comply with the local pollution requirements, this means there is less being produced, which, under a free enterprise economy, basically would mean the price would be higher. Isn't that correct?

Mr. MEISSNER. This is correct, sir.

Mr. THOMPSON. So that if the world market price is higher than the domestic price, the cut back of production to meet clean air standards will in and of itself bring the domestic price up nearer the world market price.

Mr. MEISSNER. Under normal circumstances; yes, except that this is happening at a time when there is a slackening in demand.

Mr. THOMPSON. Well, but the point, again, basically—well, I will yield. I think I have made my point.

Mr. ECKHARDT. I think I understand the point. There is no question, of course, but that if there is a decrease in production in order to meet standards respecting pollution that there would be a tendency to decrease supply and, therefore, increase price. There is no question about that in my mind.

Mr. MOSS. Would you yield at this point?

Mr. ECKHARDT. I yield.

Mr. MOSS. Are you prepared to tell us that the reduction is directed to production in the smelting processes rather than to a reduction in a certain type of emission content from the smelter stacks?

Mr. MEISSNER. I am not prepared. I would prefer——

Mr. MOSS. And would you, therefore, be prepared to state that if the order is to 15 percent reduction, it goes to production rather than to the reduction of the pollutant emissions?

Mr. MEISSNER. They have so advised us, in letter form, that they are reducing production by 15 percent due to smoke emission.

Mr. ECKHARDT. Mr. Chairman, I should like to have whatever information the witness has with respect to this matter for the purposes of the record.

Mr. MOSS. That will be requested, and, Mr. Taylor, will you undertake to contact Mr. Meissner and arrange to get that information?

(The following information was received for the record:)

AMERICAN SMELTING & REFINING Co.,
New York, N.Y., June 29, 1970.

MR. JAMES M. OWENS,
Director, Office of Basic Materials, Business and Defense Services Administration,
Department of Commerce Building, Washington, D.C.

DEAR MR. OWENS: This letter will summarize our concern about NAPCA's "Proposed Emission Standard for Reduced Sulfur from Primary Nonferrous Smelters" (Enclosure 2A). Unless a review of this standard is undertaken by NAPCA, we foresee the imposition of requirements by state and local air pollution control agencies that may seriously impede the ability of the industry to maintain essential production of copper. The proposed emission standard is neither technically nor economically feasible in the present state of the art.

The situation is most acute in the case of copper smelting and in the States of Arizona, Washington and Montana. The standards have already been adopted in Arizona, but not yet made effective. Unless some review procedure is promptly instituted, the NAPCA emission standards may be adopted by the Puget Sound Air Pollution Control Board and the Montana State Board of Health within the next 15 days.

Asarco's three copper smelters, which together account for about 23% of U.S. copper smelting capacity, are located at Tacoma, Washington; Hayden, Arizona, and El Paso, Texas. Last month, because of curtailments of operations to meet air quality requirements, we had to declare force majeure against about 15% of our intake of copper concentrates. The amount embargoed will be about the same in July. As there is no alternative smelting capacity in the United States, the Department of Commerce has granted export licenses to certain of our domestic shippers to permit sale of these copper concentrates to Japan. Inasmuch as the United States is a net importer of copper, this will necessitate additional imports of refined copper or of products containing copper. Improvements will come as additional air quality control facilities are developed and installed.

You are familiar with our work to meet new standards of air quality control. For example, a 750 tpd contact sulfuric acid plant is under construction at our Hayden, Arizona, copper smelter; a new cottrell is under construction at our El Paso copper smelter. We had proposed construction of an 1100 ft. stack at the Tacoma plant as the best available interim procedure to deal with more restrictive ambient air quality requirements there. But our application was denied by the Puget Sound Air Pollution Control Board in March, 1970, after NAPCA representatives urged such denial. A good deal of work to develop new process technology is under way on an urgent basis. Asarco, for example, is now building a pilot plant to test the feasibility of a new process for recovery of elemental sulfur from smelter smoke. See Enclosure 2E. Other companies are working on other approaches to the problem.

The problem of conforming to current concepts of appropriate ambient air standards is most serious in the non-ferrous smelting industry, but we and others in the industry are devoting our energies to coping with the problem in the most effective ways possible.

The new factor which adds an impossible dimension to the problem is the following. In recent months, NAPCA has sought to secure adoption by state and local air pollution control agencies of uniform emission standards requiring 90% or higher reduction in sulfur oxide emissions. These standards were promulgated by NAPCA without consultation with government departments or agencies, or industry advisory committees, and are neither technologically nor economically feasible of implementation on an industrywide basis. Details are further elaborated in Enclosure 2, documents D, E, and F.

Our attempts to deal with the technical deficiencies of the proposed emission standard at hearings before the State Boards of Health in Arizona and Montana and before the Puget Sound Air Pollution Control Board have been unavailing in the face of the presumed technical competence of NAPCA. This is so notwithstanding the fact that Mr. L. P. Argenbright, the senior engineer of Arthur G. McKee and Co. who served as project manager for the technical report on which NAPCA relies, testified at the hearings that the NAPCA proposal "does not reflect the facts derived or the conclusions drawn in the study." (Enclosure 2D)

Efforts by the industry through the Environmental Matters Committee of the American Mining Congress (Mr. David Swan, Chairman) to obtain directly higher level consideration and review by NAPCA of the proposed NAPCA emission standard have been equally unsuccessful. A formal request from the American Mining Congress to Dr. John Middleton, Commissioner of NAPCA, to withdraw the proposed emission standard and undertake a full review of the problem is being delivered today. A copy is attached as Enclosure 1.

We believe that such action by NAPCA is urgent. Unless the Puget Sound Air Pollution Control Board and the Montana State Board of Health are notified that such a review will be undertaken by NAPCA, we believe they may adopt the proposed emission standard within the next 15 days.

We believe that orderly procedure requires that NAPCA, in the first instance provide for review of its proposed standard to assure that the standard is appropriate and to assure that such requirements as it may recommend are feasible of implementation.

Yours sincerely,

CHARLES F. BARBER, *President.*

Enclosures:

1. Letter from American Mining Congress to Dr. John Middleton, Commissioner of NAPCA dated June 29, 1970, requesting review of "Proposed Emission Standard for Reduced Sulfur from Primary Nonferrous Smelters."
2. Documents relating to "Proposed Emission Standard for Reduced Sulfur from Primary Nonferrous Smelters" (NAPCA, Nov. 1969).

* * *

(Enclosure No. 1)

AMERICAN MINING CONGRESS,
Washington, D.C., June 29, 1970.

DR. JOHN T. MIDDLETON,
Commissioner, National Air Pollution Control Administration, Department of Health, Education and Welfare, Rockville, Md.

DEAR DR. MIDDLETON: Several member companies of the American Mining Congress, producers of nonferrous metals in the western states, have reported to us their concern about a NAPCA document entitled "Proposed Emission Standard for Reduced Sulfur from Primary Non-Ferrous Smelters". The paper was originally prepared by Terry L. Stumph, a former NAPCA employee, and submitted to the State of Montana Department of Health. This paper subsequently was received at least by the States of Utah and Arizona and by the Puget Sound Air Pollution Control Agency.

Our concerned member companies have serious objections to the proposed emission standards. They are judged not feasible and not necessary to achieve levels of air quality set forth in the criteria and required by state and local ambient air standards for sulfur oxides.

It was the clear intent of Congress, in passing the Air Quality Act of 1967, that data on adverse economic results and cost effectiveness be included by the Secretary of Health, Education and Welfare in recommending control measures. The Stumph report does not include data on cost effectiveness nor on the enormous economic impact on the copper, lead and zinc industries if the proposed emission standards are adopted and enforced by air pollution control agencies.

In the Act there is no authorization for the Secretary to set industry-wide emission standards. Proposing such standards and permitting strong endorsement of them by NAPCA representatives at public hearings held by air pollution control boards in Arizona, Montana, Utah and Washington is considered far beyond the simple rendering of technical service provided for in the Act.

Because of these and other grave objections we are compelled, on behalf of our affected member companies, to request prompt withdrawal of the proposed emission standards contained in the Stumph report from the air pollution control agencies which have received it and a full review of the entire problem with industry representatives and other government departments and agencies. We further request that the authorities who conducted the public hearings be notified that the proposed standards have been withdrawn and that the problem is under review.

The matter is most urgent. We are prepared to meet with you immediately to discuss it in greater detail.

Very truly yours,

J. ALLEN OVERTON, Jr.,
Executive Vice President.

* * *

(Enclosure No. 2)

DOCUMENTS RELATING TO "PROPOSED EMISSION STANDARD FOR REDUCED SULFUR FROM PRIMARY NONFERROUS SMELTERS"

(National Air Pollution Control Agency, November 1969)—Assembled by American Smelting and Refining Company, June 29, 1970

TABLE OF CONTENTS

- A. Proposed Emission Standard for Reduced Sulfur from Primary Nonferrous Smelters, NAPCA, Nov. 1969.
- B. Statement of Gregory Bujewski, NAPCA, at hearing on proposed emission standard, State of Montana, May 21, 1970.
Mr. Bujewski, representing NAPCA, urged adoption of NAPCA's proposed emission standard (item A) and pointed out that continued grants from NAPCA to state and local agencies depended on adoption by the latter of "effective regulations to control all sources of air pollution". He stated that the proposed standard was based upon the McKee Report (item C).
Similar testimony was given by NAPCA representatives at hearings before the Arizona Board of Health and the Puget Sound Air Pollution Control Board.
- C. Copy of summary portion of "Systems Study for Control of Emissions Primary Nonferrous Smelting Industry", prepared for NAPCA by Arthur G. McKee & Company, June 1969.
- D. Statement of Lee P. Argenbright, Assistant Division Manager, Arthur G. McKee & Company, before Montana Board of Health, May 21, 1970.
Mr. Argenbright was Project Coordinator and directed the research and writing of the McKee report (item C). He testified that the NAPCA proposal "does not reflect the facts derived or the conclusions drawn in the study . . . The conclusions we drew do not support emission standards at the present time . . . We believe that substantial improvement of this situation is several years away."
- E. Statement of James M. Henderson, Asarco research engineer, before Montana Board of Health, May 21, 1970.
Mr. Henderson describes certain of the technical problems incurred in dealing with sulfur dioxide gases in nonferrous smelters and discusses the present state of the art and work being done by Asarco toward more effective process control.
With respect to the assertions in the proposed NAPCA emission standard that adequate technology is available, Mr. Henderson testified: "I can only state that this is not so."
- F. Memorandum on Legality of NAPCA's Establishment of Emission Control Standards for Nonferrous Smelters, Covington and Burling, June 25, 1970.
Messrs. Covington and Burling, attorneys, conclude that there exists a serious question whether NAPCA, in promulgating and promoting the proposed emission standard has not "violated both procedural and substantive requirements of the Air Quality Act of 1967."

(Enclosure No. 2A)

PROPOSED EMISSION STANDARD FOR REDUCED SULFUR FROM PRIMARYNON-FERROUS SMELTERS

Prepared for Montana State Department of Health by Terry L. Stumph

U.S. Department of Health, Education, and Welfare
Consumer Protection and Environmental Health Service
National Air Pollution Control Administration
Division of Control Agency Development
November 1969

INTRODUCTION: THE NEED

Control regulations for sulfur compounds (mainly sulfur dioxide) from industrial processes have in the past consisted primarily of (1) effluent concentration emission limits, in parts per million (2) maximum allowable ground-level concentrations, in parts per million and (3) emission limitations, in pounds per hour,

that vary according to stack height. These types of regulations have many undesirable characteristics, including the following:

1. Effluent concentration standards are subject to circumvention by dilution and do not directly limit the total pollutant discharge.
2. Ground-level pollutant concentrations cannot be successfully regulated without restricting source emissions.
3. Emission standards that vary with stack height serve mainly to allow for construction of taller stacks in lieu of reducing emissions. This proves ineffective in reducing ground-level pollutant concentrations during inversions and resulting fumigations.

These types of control regulations have also been used for particulate matter but have been substantially replaced with mass-emission-rate standards (e.g., pounds per hour) that (1) vary according to the size of the source and (2) require full application of available emission-control techniques. Process weight regulations and fuel-burning emission limits of the type now effective in the State of Montana are examples of modern mass-emission-rate standards for particulate matter that do not have the deficiencies itemized above. There is a comparable need for emission standards that limit the discharge of sulfur compounds to a minimum, consistent with the capability of collection devices. This is the most effective method of ensuring acceptable air quality for the variety of environmental conditions.

DEVELOPING AN EMISSION STANDARD

In order to develop an emission standard based on control technology, it is necessary to know the emission rates that can be achieved through application of best-available control techniques. This approach was used in Los Angeles more than twenty years ago to develop the process weight standards for particulate matter from industrial processes. Under sponsorship of the National Air Pollution Control Administration, the Arthur G. McKee and Company has recently completed a study¹ of the sulfur-emission characteristics of the primary non-ferrous smelting industry. Volume II of this three-volume study contains an informative section on the history of sulfur-emission control in smelters. Excerpts from this section are presented in the Appendix as proof of the existence of adequate sulfur-control technology.

Data from the study permits the formulation of emission standards which require application of best available control technology. The following graphs and tables illustrate some emission standards, with supporting data, that can be applied to the sulfur emissions from these smelters. Allowable emissions of reduced sulfur in pounds per hour vary with the total quantity of reduced sulfur introduced into the smelter operation, also expressed in pounds per hour. These proposed standards are based upon (1) reported sulfur-emission rates from well-controlled smelters and (2) predicted emissions that would result from the use of available control techniques.

THE STANDARD

Figure 1 and Table 1 illustrate the proposed sulfur-emission standards in graphical, tabular and equation form.

CURRENT SMELTER EMISSIONS AND EFFECT OF THE STANDARD

Figure 2 shows the relationship of these proposals to the reported emissions of each smelter located in the United States. More than half of these smelters do not control sulfur emissions, as indicated by the cluster of plants located on a 45 degree line. About half of the zinc smelters are controlled to an acceptable degree. Only one copper and one lead smelter can be described as well-controlled, while a few others control a portion of their sulfur emissions.

Tables II, III, and IV illustrate the status of all smelters in the United States with respect to (1) current sulfur emissions and (2) degree of sulfur control that would be required by adoption of these proposed emission standards. The number in parentheses in the third column of each table is the conversion efficiency of the control equipment (principally contact sulfuric acid plants) for those gas streams being treated. The numbers in column four indicate the proportion of the sulfur emission from a particular process that receives such treatment. It should be obvious that considerable reduction in sulfur emissions could be attained at some smelters simply by applying, to a greater degree, those control techniques

¹ Systems Study for Control of Emissions—Primary Nonferrous Smelting Industry, Arthur G. McKee and Company, June 1969.

that are already being employed. The control efficiencies in columns 9 and 10 of each table apply to the quantity of sulfur that would be discharged (column 6) in the absence of collection equipment.

BASIS FOR SELECTING THE STANDARD

Figure 3 and Table V give the basis for selection of the proposed emission standards. The NAPCA systems study included an evaluation of various sulfur-control schemes applicable to typical plant operations. These operations are described in column 4 of Table V. Most zinc and lead smelters are represented by these models while all copper smelters are represented. The selection of optimum control schemes is based upon consideration of both control efficiency and cost.

Control of sulfur emissions from the lead and zinc smelters in Table V consists of producing sulfuric acid from relatively strong gas streams discharged from the roasting and sintering operations, respectively. These operations account for about 98 percent of the sulfur emissions from each of these smelters. Control of sulfur emissions from copper smelters is more complicated because significant emissions of sulfur originate from the reverberatory furnaces which produce a relatively dilute gas stream. This emission source is controlled by the comparatively inexpensive and inefficient technique of scrubbing with a slurry of limestone. Roaster and converter emissions from the Model B copper smelter are sent to a contact sulfuric acid plant. Various portions (0, 90%, and 100%, respectively) of the converter emissions of the Model A copper smelter are sent to an acid plant, depending upon the size of the plant. Remaining converter emissions are otherwise scrubbed with a limestone slurry.

Figure 3 graphically illustrates (1) the optimum control schemes in Table V and (2) some smelters that employ sulfur control techniques. The dashed lines represent emission reductions that could be achieved by successively treating gas streams from other smelter operations. The proposed emission standards reflect consideration of both the model control schemes and proven capabilities of existing smelter installations.

APPENDIX

GENERAL COMMENTS

1. "The history of attempts to control sulfur oxide emissions from copper smelting, in order to reduce air pollution, goes back at least 150 years (2A). Manufacture of sulfuric acid from copper smelter gases was undertaken in Great Britain at least 100 years ago, partly in response to a need to control air pollution (2A)."
2. "The first plant for making sulfuric acid from zinc roaster gases was built in Germany in 1855 (13C)."
3. "Reverberatory roasting furnaces produced gases low in sulfur dioxide content (1 percent or less) that were discharged to the atmosphere (5C). However, by 1889 the offgas from a zinc smelter in Germany, containing 1 percent of sulfur dioxide, was being scrubbed in spray towers with milk of lime (3A, 5C)."
4. "There is precedent for control of all the general types of sulfur oxide emissions from smelters, including lean streams. The principal barrier to control has been economic rather than technical. Technically feasible methods for control have existed for years, and have been applied when the air pollution problems have been sufficiently critical to outweigh the normal economic considerations. In all but a few cases the sulfur dioxide has been recovered as sulfuric acid, but in some instances where markets were not available for all of the potential production of sulfuric acid, elemental sulfur has been produced (4A, 5A, 33F)."
5. "It has been customary for smelters to recover only as much sulfur (as sulfuric acid) as they could sell to available markets or as they needed for use in their own operations (1A, 26D). However, where the necessity for air pollution control dictated recovery of a large fraction of the sulfur oxides, smelters have sometimes had to exert major efforts to create or develop markets for their sulfur by-products (8A). In the two most notable instances of this kind involving the smelters at Ducktown, Tennessee and Trail, British Columbia, it was the manufacture of fertilizer that eventually permitted disposal (8A). At the Trail smelter, production of elemental sulfur was an interim measure that was abandoned as soon as sufficient markets for sulfuric acid became available (5A)."
6. "Because of the critical nature of the relationship between the cost of sulfur by-product recovery, the concentration of sulfur dioxide in the waste gas, and the volume of waste gas, the nature of the metallurgical process has in turn a crucial influence upon the economics of sulfur recovery. Large volumes of waste

gases have been scrubbed to recover sulfur dioxide present at low concentrations (5A, 30F). Nevertheless, where sulfur dioxide recovery has been desired, measures have usually been taken to reduce the volume of waste gas and thereby to increase the sulfur dioxide concentration. In some cases this has been accomplished in part by reducing air infiltration into the waste gas system; in others, changes have been made in the metallurgical processes themselves."

LEAD SMELTING

7. "With the unmodified downdraft Dwight-Lloyd machines there is a large amount of air leakage into the offgas, diluting the sulfur dioxide to concentrations in the general range of 1 to 3 percent (6B, 9B, 10B). * * * Within about the last decade, updraft sintering has been developed abroad (11B), and it is now going into use in U.S. lead smelters (1B, 5B). * * * The new Gibson smelter will use updraft sintering with gas recirculation and will manufacture sulfuric acid from the offgas (5B). The Bunker Hill Co. is converting older downdraft sintering machines to updraft, and will use the enriched off-gases (7 percent sulfur dioxide) to produce sulfuric acid (1B)."

ZINC SMELTING

8. "Most U.S. zinc smelters produce sulfuric acid from roaster gases. Some of the roasters are of the multiple-hearth type, but these are being superseded by the more modern suspension or fluidized-bed types (2C, 3C, 12C)."

9. "In the small number of instances where sulfuric acid is not produced from zinc roaster gases, no attempt is made to produce rich offgases."

10. "The Ropp furnace is an obsolete device reported in the literature to produce offgases containing about 1 percent of sulfur dioxide (5C)."

COPPER SMELTING

11. "Where converter gases have also been used to make sulfuric acid, the roaster gases have sometimes been used to enrich the converter gases and provide more stable operation of the acid plant (5D, 44F). The revival of interest in roasting coincides with increased interest in acid production and air pollution control (19D)."

12. "The Kennecott Copper Corporation has made pilot-scale tests of oxygen injection into a reverberatory furnace, using roof lances analogous to those used in open hearth steel furnaces (8D, 44D). In the pilot furnace tests, sulfur dioxide concentrations in the offgases ranged from 12 to 18 percent (8D)."

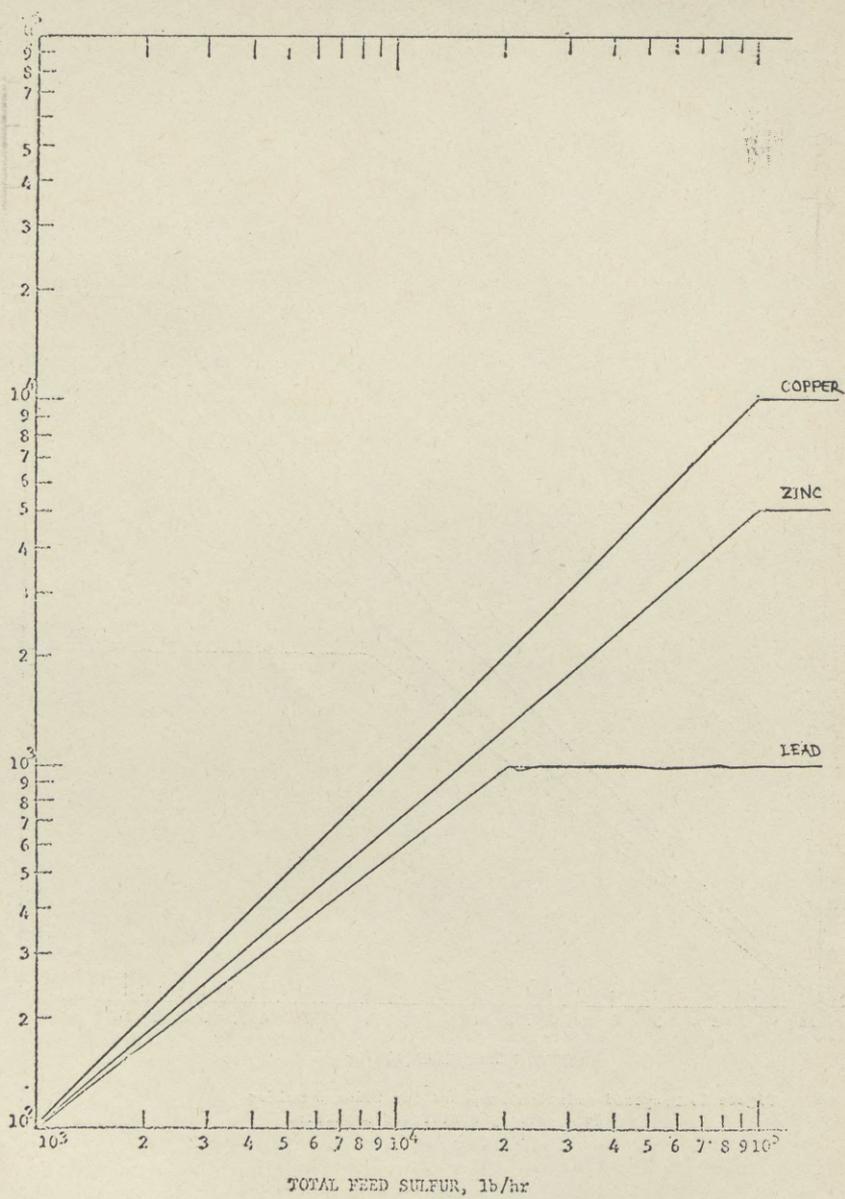
13. "When sulfuric acid is to be made from the sulfur dioxide, at least two, and preferably more, converters must be in operation on cycles so scheduled that there is an adequate flow of gas to the acid plant at all times (33F, 44F)."

EMISSION CONTROL SYSTEMS

14. "Processes for recovering sulfur dioxide at concentrations of about 3 percent or more from smelter gases have been used either to supply favorable local markets for liquid sulfur dioxide, or as a preliminary to reduction to elemental sulfur . . . In the U.S. it is in limited use for production of liquid sulfur dioxide from lead and copper smelter gases (17F), but a unit is reported (39F) to be employed at a Spanish smelter to concentrate sulfur dioxide for subsequent reduction to elemental sulfur."

15. "Reduction of sulfur dioxide to elemental sulfur has been practiced commercially at a number of smelters (4A, 5A). Apparently the processes used have never been very favorable economically, and have been used only where the necessity for air pollution control has been paramount and no adequate market has existed for sulfuric acid. . . . The most notable application of sulfur dioxide reduction was at the Cominco smelter at Trail, B.C. (4A, 5A, 28F, 29F). . . . The reduction process was operated at Trail from 1935 to 1943, when the market for sulfuric acid became large enough to absorb the sulfur dioxide output of the smelter (4A, 5A). It is still being used in Spain to reduce sulfur dioxide from a smelter (39F)."

16. "Extensive pilot plant studies have been made of processes for reducing sulfur dioxide with natural gas (16F, 35F, 46F), and such a system will soon go into commercial operation at Sudbury, Ontario (2F, 3F). . . . The commercial reduction plant at Sudbury, Ontario, is to go into operation in late 1969 (3F). . . . The adoption of the reduction process was probably determined by the combination of the need to control air pollution and of the potential problems and cost of shipping the alternative by-product, sulfuric acid, from Sudbury to the market area in the lower Great Lakes (3F)."



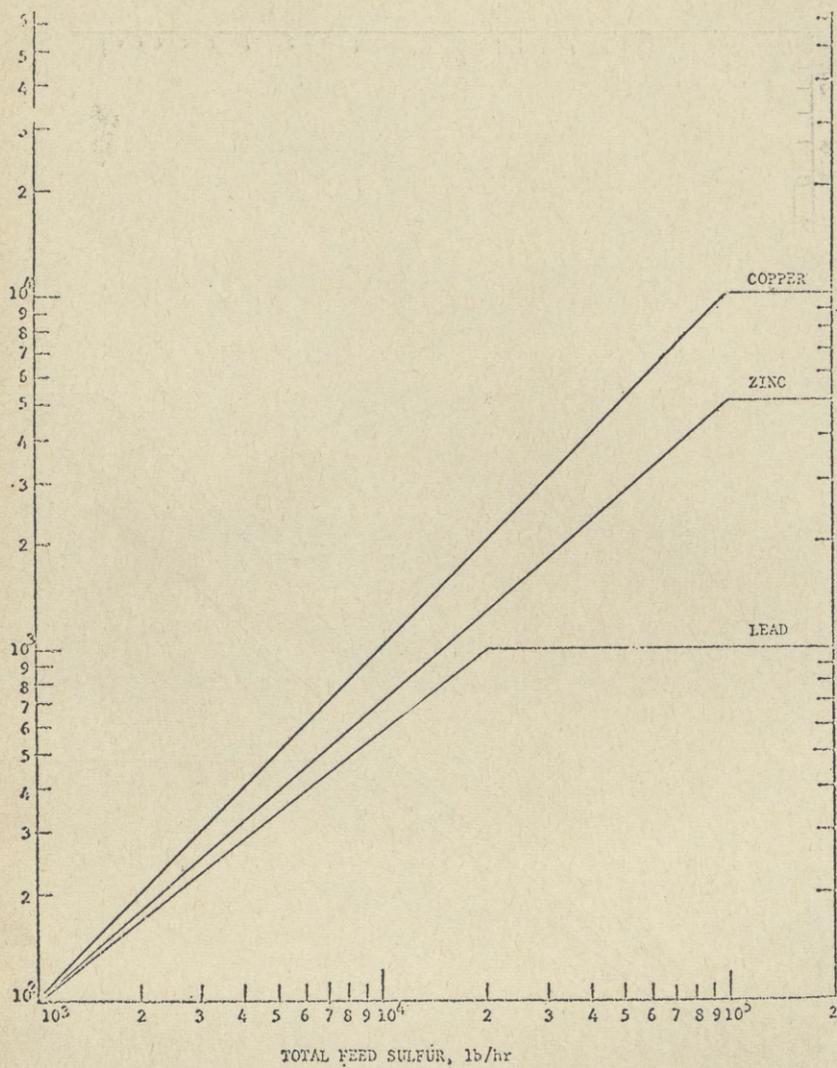


Figure 1. Proposed emission standard for reduced sulfur from primary nonferrous smelters.

TABLE I.—PROPOSED EMISSION STANDARD FOR REDUCED SULFUR FROM PRIMARY NONFERROUS SMELTERS

[Y=Allowable sulfur emission, pounds per hour. X=Total feed sulfur, pounds per hour.]

A. Emission standard equations:

Cu: $Y = 0.1X$.

Zn: $Y = 0.282 X^{0.85}$

Pb: $Y = 0.49 X^{0.77}$

B. Illustrative values:

Total feed sulfur, pounds per hour	Allowable sulfur emission, pounds per hour		
	Cu	Zn	Pb
1,000	100	100	100
5,000	500	394	348
10,000	1,000	704	593
20,000	2,000	1,270	1,000
40,000	4,000	2,310	1,000
60,000	6,000	3,210	1,000
80,000	8,000	4,120	1,000
100,000	10,000	5,000	1,000
>100,000	10,000	5,000	1,000

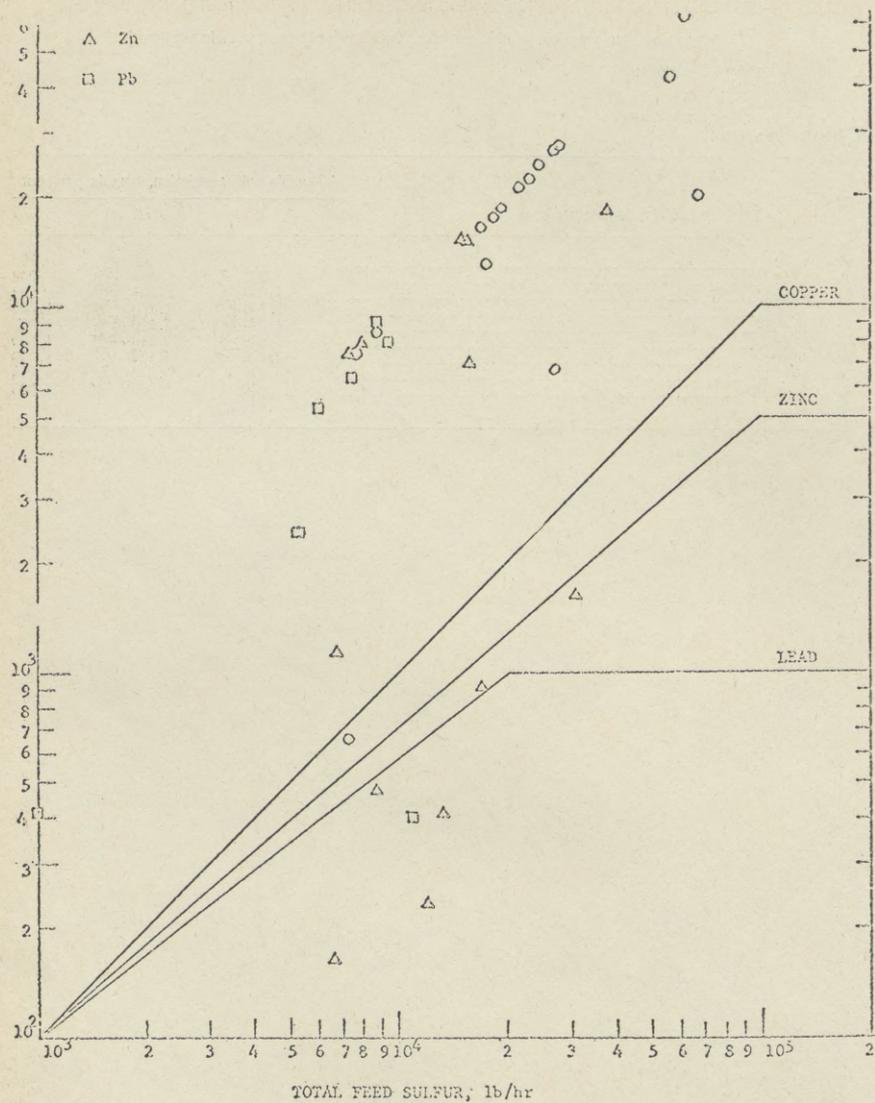


Figure 2. Current emission of reduced sulfur from primary nonferrous smelters in U.S.A.

TABLE II.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS COPPER SMELTERS IN USA

Plant 1 and model 2	Control equipment and efficiency	Gases 3 treated and percentage	Reduced sulfur (pounds per hour)				Degree of control (percent)	
			Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.01 B	None	None	19,500	18,700	18,700	1,950	0	89.1
326.02 A	do	do	18,200	17,700	17,700	1,820	0	89.6
326.03 B	Acid (7)	R/C (?)	27,400	26,800	6,700	2,740	75.0	89.7
326.04 A	None	None	8,830	8,570	8,570	883	0	89.7
326.05 B	do	do	62,000	62,000	62,000	6,200	0	90.0
326.06 B	Acid (78)	R (100 percent)	56,500	54,100	42,200	5,650	22.0	89.7
326.07 A	None	None	17,000	16,600	16,600	1,700	0	89.7
326.08 A	do	do	27,100	26,500	26,500	2,710	0	89.7
326.16 A	do	do	7,700	7,540	7,540	770	0	89.7
326.20 A	do	do	27,700	27,000	27,000	2,770	0	89.7
326.22 A	do	do	23,100	22,100	22,100	2,310	0	89.7
326.24 A	do	do	24,600	24,100	24,100	2,460	0	89.8
326.30 B	Acid (96)	R/C	7,280	6,920	666	728	89.9	89.4
326.36 B	Acid (92.3)	C (48 percent)	17,500	17,000	13,000	1,750	23.5	89.7
326.33 B	None	None	21,700	21,200	21,200	2,170	0	89.4
326.35 A	Acid (95)	C (82 percent)	69,400	67,700	19,900	6,940	70.7	89.7

1 Reference: "Systems Study For Control of Emissions," primary nonferrous smelting industry.

2 A=Reverberatory furnace and converter; B=Roaster, reverb and converter.

3 R=Roaster; C=Converter.

TABLE III.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS ZINC SMELTERS IN THE UNITED STATES

Plant 1 and model 2	Control equipment and efficiency	Gases 3 treated and percentage	Reduced sulfur (pounds per hour)				Degree of control (percent)	
			Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.10 A	Acid (96.8)	R (50 percent)	38,200	36,300	18,400	2,200	49.3	93.8
326.12 A	Acid (97.8)	R (100 percent)	12,100	11,400	233	840	97.9	92.7
326.14 A	Acid (98.3)	do	13,250	12,100	416	900	96.4	92.5
326.15 A	Acid (96.2)	do	8,680	8,630	483	630	94.3	92.6
326.20 A	Acid (90)	R (57 percent)	15,800	14,400	7,000	1,050	51.4	92.7
326.21 C	None	None	15,700	15,100	15,100	1,040	0	93.1
326.25 D	do	do	15,400	15,200	15,200	1,020	0	93.2
326.26 NA	do	do	440	108	108	100	0	(4)
326.27 A	Acid (93)	R (100 percent)	6,770	6,320	1,140	510	82.0	91.8
326.28 A	Acid (97.6)	do	30,650	29,300	1,625	1,800	94.5	93.8
326.29 A	Acid (97.0)	do	17,020	14,408	925	1,120	93.8	92.3
326.31 B	None	None	7,460	7,450	7,450	560	0	92.4
326.32 B	do	do	7,880	7,880	7,880	580	0	92.6
326.37 NA	do	do	400	17	17	100	0	0
326.38 A	Acid (97.3)	R (100 percent)	6,740	6,420	167	510	97.3	92.0

1 Reference: "Systems Study for Control of Emissions," primary nonferrous smelting industry.

2 A=Fluidized or suspension roaster.

B=Ropp roaster.

C=Multiple; hearth roaster.

D=Sintering machine.

NA=(Handle oxide ores only).

3 R=Roaster.

4 Nil.

TABLE IV.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS LEAD SMELTERS IN USA

Plant ¹ and modal ²	Control equipment and efficiency	Gases ³ treated and percentage	Reduced sulfur (pounds per hour)				Degree of control (percent)	
			Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.09 B	Acid and liquid SO ₂ (99).	S (49 percent)	5,420	4,590	2,420	362	47.0	91.8
326.10 A	None	None	8,920	8,810	8,810	540	0	93.8
326.17 A	Acid (99)	S (98 percent)	11,100	9,140	400	640	95.6	93.0
326.18 A	None	None	7,500	6,540	6,540	420	0	93.6
326.19 NA	do	do	1,030	408	408	100	0	75.5
326.33 B	do	do	9,330	8,130	8,130	550	0	93.2
326.34 B	do	do	6,100	5,260	5,260	400	0	92.3

¹ Reference: "Systems Study For Control of Emissions," primary nonferrous smelting industry.

² A=Updraft Sintering, B=Downdraft Sintering, NA=Slag Fuming.

³ S=Sintering.

TABLE V.—OPTIMUM CONTROL SCHEMES APPLIED TO SELECTED MODELS OF PRIMARY NONFERROUS SMELTERS¹

Type, model, and control scheme	Plant equipment and emission	Control equipment and efficiency	Plant size tpd	Design efficiency (percent)	Reduced sulfur, pound per hour			Cost ² (cents per pound)
					Total feed	Uncontrolled emission	Controlled emission	
Cu A 5	Reverb (35 percent)	Limestone (80 percent)	230	80	21,300	20,200	4,040	1.5
	Converter (65 percent)	Acid plant (95 percent)	460	88	43,800	41,600	5,000	1.4
	Roaster (52 percent)	Acid plant (95 percent)	690	90	64,000	60,800	6,080	1.4
Cu B 11	Roaster (52 percent)	Acid plant (95 percent)	230	91.3	30,600	29,100	2,530	1.7
	Reverb (8 percent)	Limestone (80 percent)	460	91.3	61,200	58,200	5,070	1.4
	Converter (40 percent)	Acid plant (95 percent)	690	91.3	91,700	87,200	7,580	1.2
Zn A 1	Fluidized or suspension Roaster (98 percent)	Acid plant (95 percent)	171	93	8,010	7,620	554	.45
			342	93	16,000	15,200	1,110	.39
			513	93	24,100	22,900	1,660	.36
Pb A 1	Updraft sintering (98 percent).	Acid plant (95 percent)	143	93	3,410	2,900	203	.35
			286	93	6,820	5,800	406	.29
			572	93	13,700	11,600	812	.24

¹ Reference: "Systems Study For Control of Emissions," primary nonferrous smelting industry.

² Current prices, cents per pound.

Note: Cu=52. Zn=15½. Pb=15¼.

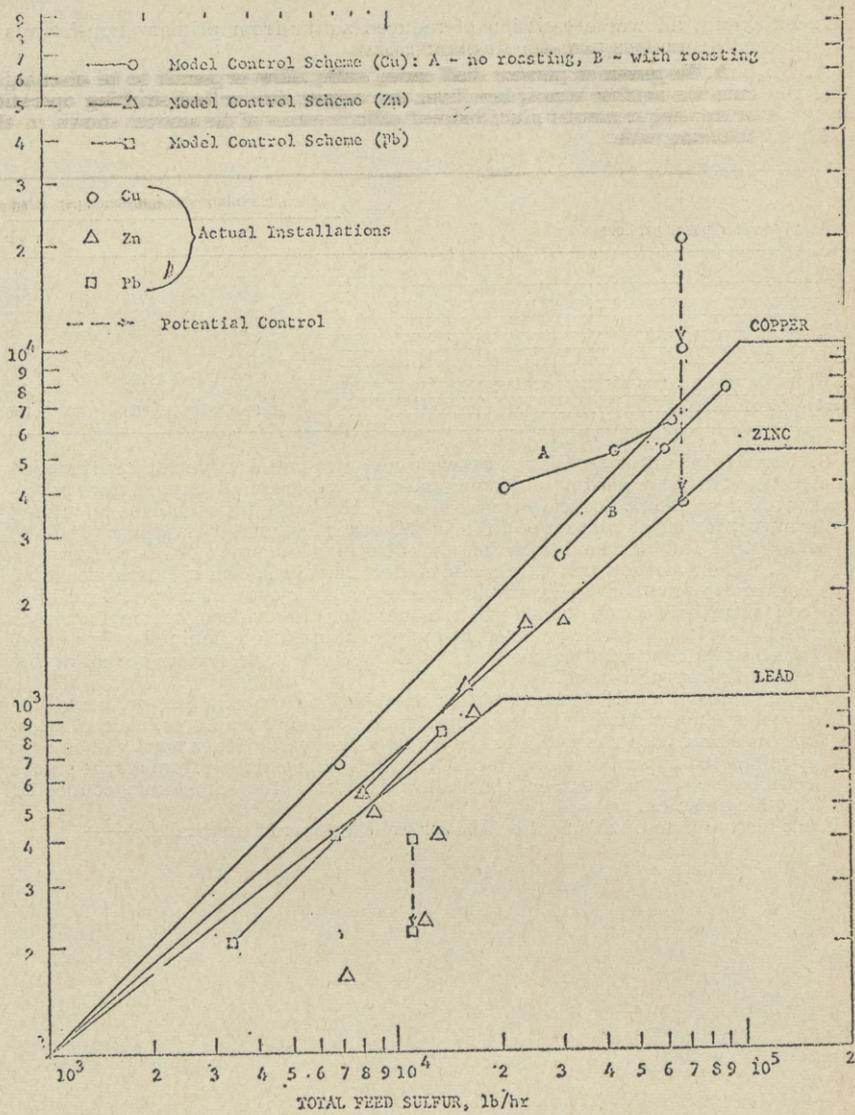


Figure 3. Basis for selection of emission standard for reduced sulfur from primary nonferrous smelters.

Proposed for hearing in May 1970

III. Maximum allowable emission of reduced sulfur from primary non-ferrous smelters and slag treatment plants.

A. No person or persons shall cause, suffer, allow or permit to be discharged into the outdoor atmosphere from any copper, zinc or lead smelting operation or any slag treatment plant reduced sulfur in excess of the amount shown in the following table:

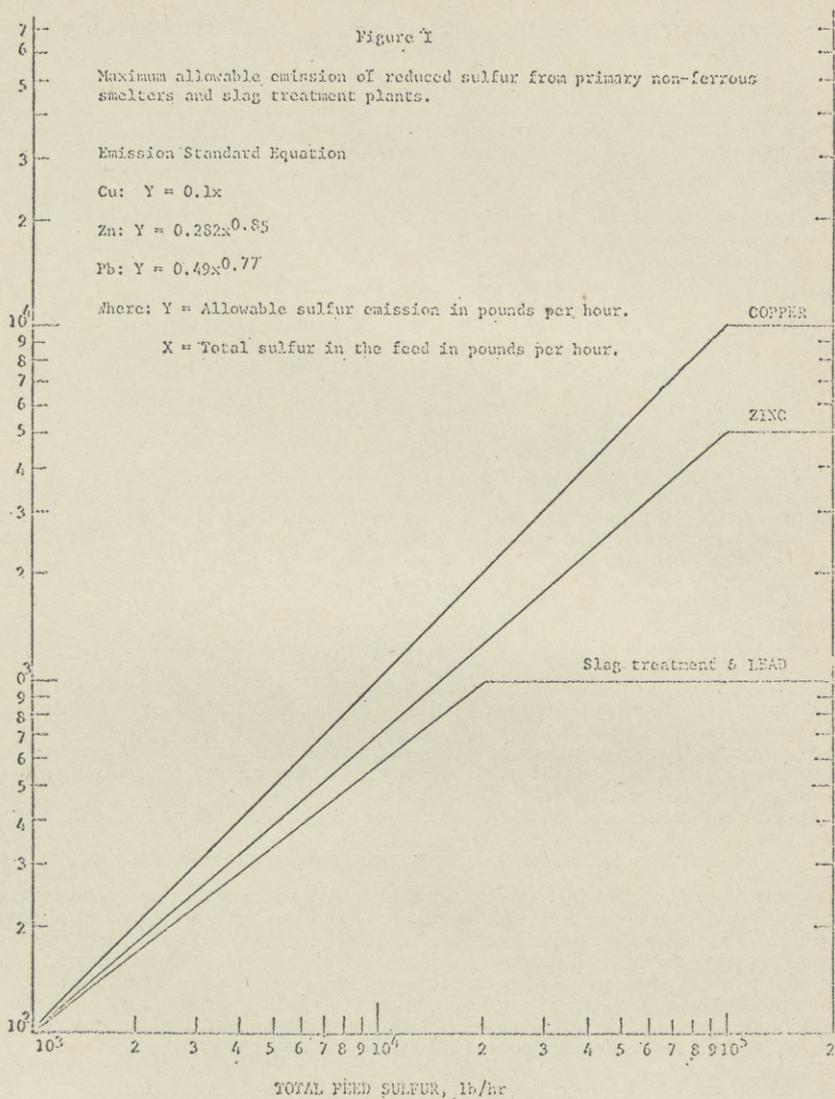
Total feed of sulfur, pound per hour	Allowable sulfur emission, pound per hour		
	Cu	Zn	Pb
1,000.....	100	100	100
5,000.....	500	394	343
10,000.....	1,000	704	598
20,000.....	2,000	1,270	1,000
40,000.....	4,000	2,310	1,000
60,000.....	6,000	3,210	1,000
80,000.....	8,000	4,120	1,000
100,000.....	10,000	5,000	1,000
Over 100,000.....	10,000	5,000	1,000

B. For a total sulfur feed input between any two consecutive total sulfur feed inputs stated in the preceding table, maximum allowable emissions are shown on figure I of this Section III. For the purposes hereof, total sulfur input shall be calculated as the aggregate sulfur content of all fuels and other feed materials whose products of combustion and gaseous byproducts pass through the stack or chimney.

1. When two or more furnaces, sinter machines, sinter boxes, roasters, converters or other similar devices for converting copper, zinc, or lead ores, concentrates, residues or slag to the metal or the oxide of the metal either wholly or in part are connected to a single stack, the combined sulfur input of all units connected to the stack shall be used to determine the allowable emission from the stack.

2. When a single furnace, sinter machine, sinter box, roaster, converter or other similar device for converting copper, zinc or lead ores, concentrates, residues or slag to the metal or the oxide of the metal either wholly or in part is connected to two or more stacks, the allowable emission from all the stacks combined shall not exceed that allowable from the same unit connected to a single stack.

The effective date of this Section III for existing operations shall be—



(Enclosure No. 2B)

STATEMENT OF GREGORY BUJEWSKI, NATIONAL AIR POLLUTION CONTROL
ADMINISTRATION

My name is Gregory Bujewski and my position is Technical Advisor for the Division of Control Agency Development which is part of the National Air Pollution Control Administration. I am currently assigned to the Legislative and Regulations Section of the Technical Support Branch. The primary function of this section is to assist agencies in the development of effective air pollution control regulations and to evaluate control authority for Federal grant requirements. I was requested to provide comments by your agency through the Director of the Air Pollution Control Division, Benjamin F. Wake.

The Division of Control Agency Development which has the responsibility of administering grants which support State and local control agencies has a responsibility to see that control efforts develop properly. This responsibility was provided under the provisions of the Clean Air Act as amended in 1967. Regulations issued pursuant to the act require that the grantee agencies, to qualify for continuing support, promulgate *effective* regulations to control all sources of air pollution within the jurisdiction of the control agency.

The basis for my comments and recommendations are the following:

1. NAPCA's knowledge of the most effective air pollution control regulations being applied by State and local agencies.
2. NAPCA's knowledge of current air pollution control technology.
3. The authority to prevent and control air pollution from all sources within the applicant's jurisdiction as required for continuing Federal support.

I have been requested to speak in behalf of the following proposed regulations:

1. Regulation No. 90-001 "Construction and Operation Permits"
2. Regulation 90-008 "Primary Non-Ferrous Smelters"
3. Regulation 90-008 "Kraft Pulp Mills"
4. Regulation 90-016 "Requiring Testing or Testing Facilities"
5. Regulation 90-017 "Restricting the Emission of Fluorides"
6. Regulation 90-018 "Storage of Petroleum Products"
7. Regulation 90-019 "Maximum Allowable Emission of Fluorides from Primary Aluminum Reduction Plants, Aluminum Smelters or Aluminum Manufacturing Plants."

We support these regulations as proposed and feel that their adoption would be a giant stride in the proper direction to control well known and recognized sources of air pollution within the State of Montana.

Specific comments on each of these proposed regulations are as follows:

REGULATION NO. 90-001, CONSTRUCTION AND OPERATION PERMITS

A permit system that includes both an authority to construct and a permit to operate provides an effective enforcement procedure to both prevent and control significant sources of air pollution. The Agency has direct and immediate control over all sources of air pollutants by using a permit system. In many cases, deficiencies can be corrected before construction has started and costly alterations prevented. A permit to operate is issued only after it is determined by a detailed field inspection, and in some cases by source testing, that the process and/or control system can operate in compliance with applicable regulations. We support the adopting of this type system and encourage all agencies to adopt and enforce it to effect immediate control over all stationary sources of air pollution.

Under section V, denial of permit application, the provision where the Director after denial shall submit the permit application to the board for their review and final action should not be necessary in all cases. We would recommend that a denial should stand and review be done by the board only upon the request of the applicant. After the requested review the board would then concur or reverse the action of the Director.

There is no apparent provision to issue a permit to operate for existing facilities. We recommend that all stationary sources subject to the provisions of any regulation be required to apply for a permit to operate within a reasonably stated time. To be totally effective a permit system must apply to all operations existing and new regulations must be able to not only prevent but also control existing sources.

REGULATION 90-008, PRIMARY NON-FERROUS SMELTERS

A comprehensive study titled "Systems Study for Control of Emissions primary Nonferrous Smelting Industry" prepared for NAPCA by the Arthur G. McKee

& Company under contract No. PH 86074-85 is the basis for many of my comments. This study was used as a basis in formulating the proposed regulations and will be henceforth referred to as the "McKee report." This study is the accumulation of all the best available information on process and control technology for nonferrous smelters located within the continental United States.

There has been mention that the McKee report was written with no intent to develop emission control regulations. This may or may not be true but the report gives the status of currently applied smelter control technology. It also presents emission data from both uncontrolled, poorly controlled and efficiently controlled smelters. This is the basic information needed to develop emission control regulations.

We believe that the technology of control does exist and is supported by the McKee report. Quote from the report, "The history of attempts to control sulfur oxide emissions from copper smelting, in order to reduce air pollution, goes back at least 150 years." "Manufacture of sulfuric acid from copper smelter gases was undertaken in Great Britain at least 100 years ago, partly in response to a need to control air pollution."

"At the trail, B.C. smelter of Cominco, Ltd., the sulfur dioxide in the lead sintering machine gases has been concentrated and recovered by scrubbing with aqueous ammonia. However, methods for recirculating a major portion of the off gases were developed and applied over 25 years ago, and it was thereby possible to produce a waste gas stream containing 4 to 7 percent of sulfur dioxide that could be used as feed to an acid plant."

"Nine of the fifteen zinc smelters in this country recover sulfur oxides from off gases. Two more are smelting material that contains very little sulfur. Four smelters handling sulfur-bearing raw materials do not have recovery units. The smelters with recovery units recover sulfur oxides as sulfuric acid, and only from roaster gas. No sulfur is recovered from the sintering process, primarily because more than 80 percent of sinter feed is dead-roasted calcine."

"There is precedent for control of all the general types of sulfur oxide emissions from smelters, including lean streams. The principal barrier to control has been economic rather than technical. Technically feasible methods for control have existed for years, and have been applied when the air pollution problems have been sufficiently critical to outweigh the normal considerations. In all but a few cases the sulfur dioxide has been recovered as sulfuric acid, but in some instances where markets were not available for all the potential production of sulfuric acid, elemental sulfur has been produced."

The processes that are technically feasible in controlling sulfur oxide emissions from smelters are grouped as follows:

1. Contact sulfuric acid
2. Reduction to elemental sulfur (the McKee report mentions seven different processes)
3. Production of ammonium sulfate
4. Scrubbing with lime or limestone

The McKee report also assumes the following control efficiencies in evaluating control methods:

1. Contact sulfuric acid, 95% Removal of SO₂.
2. Cominco absorption, 95% Removal of SO₂.
3. Asarco reduction, 95% Removal of SO₂.
4. Lime wet scrubbing, 90% Removal of SO₂.
5. Limestone wet scrubbing, 80% Removal of SO₂.

These assumptions made in the McKee report seem logical based upon the collection efficiencies being attained currently by existing plants. The following information from tables I, II, and III attached supports this assumption:

1. Two existing copper smelters attain or exceed 95% collection efficiency of reduced sulfur when producing acid.
2. Seven existing zinc smelters exceed 95% collection efficiency of reduced sulfur when producing acid.
3. One existing lead smelter exceeds 95% collection efficiency of reduced sulfur when producing acid and one plant exceeds 95% when producing acid and liquid sulfur dioxide.

The proposed regulation can be met by the methods of treatment and efficiency of collection for sulfur dioxide listed as follows:

Type	Plant equipment	Method of treatment	Percent
I. Copper smelters:			
A.....	Reverberatory furnace.....	Limestone scrubbing.....	80
B.....	Converter.....	H ₂ SO ₄ acid plant.....	95
	Reverberatory furnace.....	Limestone scrubbing.....	80
	Converter.....	H ₂ SO ₄ acid plant.....	95
II. Zinc Smelter.....	Fluidized or suspension roaster.....	H ₂ SO ₄ acid plant.....	95
III. Lead smelter.....	Updraft sintering.....	H ₂ SO ₄ acid plant.....	95

This information in no way infers that acid production along with limestone scrubbing is the only way to meet the proposed regulation. Only four control schemes out of many mentioned in the McKee report are illustrated to show that the proposed regulation can be met.

This presentation is based solely on the available control technology to reduce sulfur dioxide emissions from non-ferrous smelters. The economics of control are the responsibility of the industry and not the control agency. Without complete access to the company's financial records, we are unable to speak in detail on the economics of control. The McKee report considers economics and bases many of its decisions on making a profit from the product collected to control air pollution. We place little emphasis on this fact in making a decision that control is necessary and warranted. The non-ferrous industry is indeed fortunate to have an air pollutant that can be recovered and has value in the market place and is not like many other industries who have to provide collection and treatment equipment for air and water. Pollution control that produces an entirely worthless product.

If economics is a consideration in the development of an emission control regulation for sulfur dioxide, then the entire economic impact on the environment should be considered. What are the costs to the public for damaged material and plants and depressed property values?

REGULATION 90-008, TOTAL REDUCED SULFUR FROM KRAFT PULP MILLS

The proposed regulation that will limit total reduced sulfur to a maximum of 0.087 pounds per 1,000 pounds of black liquor or 17½ ppm will require installation of the best technology currently available in wood pulping operations. It is likely that direct contact evaporation equipment must be eliminated and replaced by a high solids indirect evaporation system in order to meet the proposed standards. The replacement of direct contact evaporators will require that a phased definite schedule be used that will accomplish the objectives of the standards within a reasonable time. In any event the importance of proper operation of equipment and monitoring of emissions cannot be over emphasized in order to achieve the lowest possible rate of odorous emissions from Kraft pulping operations.

REGULATION 90-016, REQUIRING TESTING OR TESTING FACILITIES

An agency to conduct an effective enforcement program with relation to emission regulations on stationary sources has to have power to require and conduct sampling and testing. The regulation as proposed is reasonable and necessary and we strongly recommend its adoption.

A minor addition that provides greater flexibility concerning test requirements would be the addition of the phrase, "but not limited to" immediately following the phrase "such tests shall include" in the second sentence of paragraph A.

REGULATION 90-017, RESTRICTING THE EMISSION OF FLUORIDES

I. Process emission

Because the principle atmospheric contaminants generated from phosphate rock and phosphate processing equipment are gaseous fluorides, water scrubbing is universally employed to control gaseous emissions. Specific devices used for control include venturi scrubbers, impingement scrubbers, and various kinds of spray towers. Fluoride removal efficiency of these devices varies widely, and staging may be required for satisfactory control.

Requirements for total fluoride (as F) emissions in other control agencies are 0.4 lb. per ton of P₂O₅ production rate and one agency enforces a 0.2 lb. per ton standard. The proposed 0.3 lb. limit proposed is therefore reasonable in light of what is currently technologically obtainable and enforced. Therefore, we recom-

mend that the 0.3 lb. limit apply only to existing facilities and a 0.2 lb. emission rate be considered and adopted for new installations.

The technology for controlling gaseous fluoride emissions by water scrubbing has been available for many years. By proper attention to mechanical design and good mass transfer practice, such a unit can be built and operated to obtain almost any desired reduction in gaseous fluoride emissions. Such scrubbers are capable of operating with collection efficiencies of over 99 percent. The usual exist concentration for this type of scrubber ranges from 0.001 to 0.01 grain of fluoride per standard cubic foot or 0.006 to 0.17 pound of fluoride per ton of P_2O_5 produced.

II. Pond emissions

The gypsum ponds used in phosphate rock processing are significant sources of fluoride air contaminants. Concentrations of fluoride in the pond water apparently approach a limit of 3,000-5,000 p.p.m. as a result of absorption by the gypsum and formation of insoluble complexes with other constituents in the pond.

Most ponds are saturated with respect to soluble fluorides and the concentration of soluble fluorides is directly related to the pH of the pond liquid. The lower the pH, normally between 1.4 to 2.0 without lime treatment, the higher the concentration of soluble fluorides. The partial pressures of soluble fluorides is significant and can result in wind borne losses as high as 200 lbs/day. Raising the pH to approximately 3.5 with lime or limestone will decrease the concentration of soluble fluorides by over 90%. This reduction of soluble fluorides will significantly reduce pond emissions due to the lesser amount of soluble fluorides available to be vaporized.

The requirement of 108 micrograms per square centimeter per 28 days (0.35 lbs/acre/day) is considered a reasonable requirement. A pond of large size, say 100 acres with an emission rate of 2.0 lbs/acre/day would result in a total daily emission of 200 lbs. This rate could be many times the allowable rate from the process which is controlled. All emissions from the plant complex must be controlled to insure that an air pollution problem is not created and perpetuated.

The proposed emission limit, which requires the reduction of soluble fluoride compounds in the pond is normally attained by addition of a neutralizing agent (lime or limestone) a pH measurement would therefore be a far better parameter to regulate fluoride emissions. The Montana sampler measures the emission in an "after the fact manner." This method would be hard to enforce and can never result in immediate control. PH is a direct and immediate measurement that is an indicator of soluble fluoride concentration which in turn is related to potential emission due to mass evaporation rate. We would recommend that a regulation be adopted that would require that a pond be maintained within a specified pH range which would result in an emission rate not to exceed 0.35 lbs/acre/day under most climatic conditions.

REGULATION 90-018, STORAGE OF PETROLEUM PRODUCTS

Hydrocarbons and their derivatives are important factors in air pollution because of their ability to participate in the atmospheric reactions that produce effects associated with photochemical smog. The most reactive group, the olefins (unsaturated hydrocarbons) can also react with nitrogen dioxide to produce all these effects except plant damage. Aromatic hydrocarbons, particularly those having various substituent groups, can react with nitrogen dioxide to produce a type of plant damage different from that usually associated with smog and produce all the oxygen effects as well.

Petroleum storage and handling can emit, if not properly controlled, hydrocarbons which can add to an air pollution problem in an area. The proposed regulation is practical and requires devices and methods which are commonly accepted in many areas. We would, therefore, recommend its adoption because all sources of hydrocarbons should be controlled and the equipment and methods are currently available to comply.

REGULATION 90-019, MAXIMUM ALLOWABLE EMISSION OF FLUORIDES FROM PRIMARY ALUMINUM REDUCTION PLANTS, ALUMINUM SMELTERS ON ALUMINUM MANUFACTURING PLANTS

There are two main points of emission from a vertical Soderberg reduction cell which is the type currently being used in Montana. The major sources are the emissions from the cell vent line and the unvented portion. The anode casing has a skirt which extends horizontally to cover part of the space between the anode casing and the top of the cell wall. A vent line is attached to this skirt to remove carbon monoxide, hydrocarbon vapors and gaseous fluoride compounds which are generated in the cell and is considered the major source of emissions. The secondary source of emissions occurs when the cryolite crust between the skirt and cell edge is broken intentionally or inadvertently. These emissions if not collected leave the cell building untreated through roof monitors.

Usually, part of the dust in the burned gases from a vertical spike Soderberg cell is coarse enough to be collected in particulate collectors such as cyclones: These dry dust collection systems usually make up the first control step. A number of different solutions have been sought for the final treatment of the furnace gas. A common practice is a washing process for collection of soluble fluoride compounds.

We support the proposed regulation and believe that the emission limits required can be met with currently available equipment and technology. The mass rate requirements can be met with 96% collection efficiency of primary cell emissions and 90% collection efficiency on roof emissions by wet scrubbing. This assumes that unvented emissions are kept to a minimum by the most effective ventilation system and operation.

In a new dry process developed and used by Alcoa in five of their aluminum smelting plants in the United States, gaseous fluorides are absorbed on aluminum oxide and collected in a baghouse along with particulate fluorides in the cell vent gases. The recovered fluorides are returned to the pot. This control system is utilized for recovery fluoride emissions from Soderberg cells at the Vera Cruz, Mexico Plant of Alcoa. Although NAPCA does not presently have performance data for this type of control system, ALCOA representatives have stated that the process provides excellent control and could operate in compliance with the proposed emission limits for fluorides.

In conclusion we support the regulations as proposed and justify this stand for the following main reasons:

1. Technology of control has been and is still available
2. No individual or industry has the right to dispose of their effluent in a manner detrimental to others.

Thank you ladies and gentlemen for your time and attention. I will be happy to answer any questions that I can at this time.

TABLE I.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS COPPER SMELTERS IN UNITED STATES

Plant ¹	Model ²	Control equipment and efficiency	Gases ³ treated and percentage	Reduces sulfur (pounds per hour)				Degree of control (percent)	
				Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.01	B	None	None	19,500	18,700	18,700	1,950	0	89.1
326.02	A	do	do	18,200	17,700	17,700	1,820	0	89.6
326.03	B	Acid (?)	R/C (?)	27,400	26,300	6,700	2,740	75.0	89.7
326.04	A	None	None	8,830	8,570	8,570	6,883	0	89.7
326.05	A	do	do	62,000	62,000	62,000	6,570	0	90.0
326.06	B	Acid (78)	R (100 percent)	56,500	54,100	42,200	5,650	22.0	89.7
326.07	A	None	None	17,000	16,600	16,600	2,700	0	89.7
326.08	A	do	do	27,100	26,500	26,500	2,710	0	89.7
326.16	A	do	do	7,700	7,540	7,540	770	0	89.7
326.20	A	do	do	27,000	27,000	27,000	2,770	0	89.7
326.22	A	do	do	23,100	22,100	22,100	2,310	0	89.8
326.24	A	do	do	24,600	24,100	24,100	2,460	0	89.8
326.30	B	Acid (96)	R/C	7,280	6,920	666	1,750	89.9	89.4
326.36	B	Acid (92.3)	C (48 percent)	17,500	17,000	13,000	1,750	23.5	89.7
326.38	B	None	None	21,700	21,200	21,200	2,170	0	89.4
326.39	A	Acid (95)	C (82 percent)	69,400	67,700	19,900	6,940	70.7	89.7

¹ Reference: Systems Study For Control of Emissions—Primary Nonferrous Smelting Industry.² A—Reverberatory furnace and converter; B—Roaster, reverb and converter.³ R—Roaster; C—Converter?

TABLE II.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS ZINC SMELTERS IN THE UNITED STATES

Plant ¹	Model ²	Control equipment and efficiency	Gases ³ treated and percentage	Reduces sulfur (pounds per hour)				Degree of control (percent)	
				Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.10	A	Acid (96.8)	R (50 percent)	38,200	36,300	18,400	2,200	49.3	93.8
326.12	A	Acid (97.8)	R (100 percent)	12,100	11,400	233	840	97.9	92.7
326.14	A	Acid (98.3)	R (100 percent)	13,250	12,100	416	900	96.4	92.5
326.15	A	Acid (98.2)	R (100 percent)	8,680	8,630	483	630	94.3	92.6
326.20	A	Acid (90)	R (57 percent)	15,800	14,400	7,000	1,050	51.4	92.7
326.21	C	None	None	15,700	15,200	15,100	1,040	0	93.1
326.25	D	do	do	15,400	15,200	15,200	1,020	0	93.2
326.26	NA	do	do	440	108	108	100	0	Nil
326.27	A	Acid (93)	R (100 percent)	6,770	6,320	1,140	510	82.0	91.8
326.28	A	Acid (97.6)	R (100 percent)	30,650	29,300	1,625	1,800	94.5	93.8
326.29	A	Acid (97.0)	R (100 percent)	17,020	14,408	925	1,120	93.8	92.3
326.31	B	None	None	7,460	7,450	7,450	560	0	92.4
326.32	B	do	do	7,880	7,880	7,880	580	0	92.6
326.37	B	do	do	400	17	17	100	0	0
26.38	A	Acid (97.3)	R (100 percent)	6,740	6,420	167	510	97.3	92.0

¹ Reference: Systems Study For Control of Emissions—Primary Nonferrous Smelting Industry.² A—Fluidized or suspension roaster; B—Ropp roaster; C—Multiple-hearth roaster; D—Sintering machine; NA—(handle oxide ores only).³ R—Roaster.

TABLE III.—CURRENT AND PROPOSED CONTROL OF REDUCED SULFUR FROM PRIMARY NONFERROUS LEAD SMELTERS IN UNITED STATES

Plant 1	Model 2	Control equipment and efficiency	Gases 3 treated and percentage	Reduces sulfur (pounds per hour)				Degree of control (percent)	
				Feed	Generated	Discharged	Proposed allowable	Current	Proposed
326.09	B	Acid and liquid SO ₂ (99).	S (49 percent)	5,420	4,590	2,420	362	47.0	91.8
326.10	A	None	None	9,920	8,810	8,810	540	0	93.8
326.17	A	Acid (99)	S (98 percent)	11,700	9,140	8,600	640	0	93.0
326.18	A	None	None	7,500	6,540	500	420	95.6	93.6
326.19	NA	.00	.00	1,930	703	6,403	100	0	73.5
326.33	B	.00	.00	9,330	8,130	8,130	550	0	93.2
326.34	B	.00	.00	6,100	5,260	5,260	400	0	92.3

1 Reference: Systems Study for Control of Emissions—Primary Nonferrous Smelting Industry.

2 A—Updraft sintering; B—Downdraft sintering; NA—Slag tuming.

3 S—Sintering.

(Enclosure No. 2C)

SYSTEMS STUDY FOR CONTROL OF EMISSIONS PRIMARY NONFERROUS SMELTING INDUSTRY—VOLUME I OF III—FINAL REPORT UNDER CONTRACT PH 86-65-85, FOR DIVISION OF PROCESS CONTROL ENGINEERING, NATIONAL AIR POLLUTION CONTROL ADMINISTRATION, PUBLIC HEALTH SERVICE, U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE; MCKEE REPORT No. 993, JUNE 1969

I ABSTRACT

Process gases emitted to the atmosphere from primary copper, zinc, and lead smelters in the U.S. contain 1,920,000 short tons of sulfur per year. Copper smelters are the source of 76.5 percent of this. Their problems of emission control are the most difficult in the nonferrous smelting industry. Over 97 percent of all emissions are from smelters west of the Mississippi river.

Neither now nor in the period up to at least 1975 can all of the potentially recoverable sulfur in the west be sold as sulfuric acid. All of it can be sold if a portion can be converted from sulfur oxides to elemental sulfur at a cost that is low enough to be competitive. The area of Arizona-New Mexico-West Texas has the largest potential production of sulfur byproducts but a relatively small market for sulfuric acid.

Production of sulfuric acid from the more concentrated gases can be profitable where a market for the acid exists. The production cost for converting sulfur oxides in the gases to elemental sulfur by modern processes is not yet defined. Production of sulfur for sale at competitive prices will probably be possible only by recovery from gases containing high concentrations of sulfur oxides.

The major technical and economic problem is the control of offgases containing low concentrations of sulfur oxides. Present technology is not adequate to economically recover and concentrate sulfur oxides from these weak offgases. Economical control may best be attained through process or practice changes that have the effect of curtailing generation of weak offgases and delivering other offgases to sulfur oxide conversion units at the highest feasible concentrations.

II. INTRODUCTION

The National Air Pollution Control Administration (NAPCA) and other cognizant government offices have a qualitative appreciation of the competitive and economic pressures on the smelting industry and a limited awareness of the technological obstacles to effective control of sulfur dioxide emissions by the industry. In order to enhance this appreciation and awareness to a sound basis for research and development programs that hopefully can be sponsored jointly by government and industry, NAPCA funded this study. The nature of the study was defined in a Contract for Technical Services entered into by NAPCA and Arthur G. McKee & Company (McKee) and dated December 15, 1967.

A subcontract was negotiated between Stanford Research Institute (SRI) and McKee and approved by NAPCA which defined work to be done by SRI on certain phases of the systems study. Collaboration between McKee and SRI was required in the evaluation of the results of all phases of the study.

Objectives of the study

This study of the primary copper, zinc, and lead smelting industries is intended to make clear the technological and economic factors that bear on the problem of control of sulfur oxide emissions. It also examines the scope of capital and operating costs of several processes that control emissions by converting sulfur oxides to marketable byproducts or disposable waste material. In conjunction with this, a marketing study determines the economic factors relating to the sale of sulfur-bearing byproducts. To increase the usefulness of the study, a survey projects into the future the present trends in metal requirements and attempts to forecast industry changes that may affect the amount of sulfur oxide emissions. Note that this is all generalized economics and application to specific individual plants is not intended.

The results of the above work and of a survey of emission sources at smelter locations have led to conclusions and recommendations as to fields of investigation that appear most promising for future research and development work. Consideration has been given to those areas that show promise of giving the greatest reduction of sulfur oxide emissions while simultaneously yielding economic benefit to the smelting industry.

Limitations of the report

The report and its conclusions are based on information that was available from the smelters, or on facts already known to the contractors and not restricted as confidential. It should not be viewed as absolute documentation, for in some areas the data available were incomplete and may have been inaccurate.

Plan of the report

The report is presented in three volumes. In Volume I (this volume), sections I, III, and IV present the essence of the conclusions reached and the resulting recommendations. Section II (this section), gives the purpose of the study and the plan of the report.

Sections V through VII are less detailed and technical than the sections that follow. The smelter air pollution problem, methods of control, and the statistics of emission and control are discussed. These sections contain references to the more detailed material in the appendices in volumes II and III.

Sections VIII through X discuss the economics of control, the research objectives, and research recommendations. In section VIII, which also gives results of the market study, control methods are matched with smelter models to obtain costs that are illustrative of the effects of some possible courses of action in the industry. Volume II contains appendices A and B and volume III contains appendices C through G. The appendices have the tabulated data, drawings, and extended technical discussions that support the summaries and briefer discussions of volume I.

Acknowledgments

The assistance and cooperation of the smelter industry in the work of gathering the material for this study is acknowledged. The critical review and suggestions of the Industry Liaison Committee were very helpful and the counsel of Mr. Louis V. Olson, who has acted as consultant to McKee on this project, has been greatly appreciated.

Important sections of the report were prepared by Stanford Research Institute (sections Vb, VIII a and b, and appendices D through G), and SRI worked with McKee in the preparation of other sections and in the evaluation of the results of the study.

III SUMMARY

Some 2,800,000 short tons of sulfur are contained in the sulfur oxide gases generated annually at U.S. smelters. Of this, 850,000 tons or 31 percent are recovered, almost all as sulfuric acid, and the remaining 1,920,000 tons are emitted to the atmosphere. Smelters east of the Mississippi generate 350,000 tons and recover 86 percent of it, while western smelters recover 23 percent of the 2,420,000 tons that they generate. Western smelters are the source of over 97 percent of emissions to atmosphere from smelters in this country.

Some 76 percent of smelter emissions to the atmosphere come from copper smelters, 17 percent from zinc smelters, and seven percent from lead smelters. Zinc smelters recover 59 percent of their emitted sulfur oxides, and lead smelters recover 27 percent.

Five of the 16 copper smelters studied control sulfur oxide emissions to some degree. Altogether, the copper smelter industry recovers 19 percent of the sulfur oxides generated, and this is expected to rise several percent in 1970. The control of emissions at copper smelters is hampered by conditions that are inherent in existing processing methods; namely, weak reverb offgases and varying flow of converter offgases. Most of the smelters are also poorly located with respect to sulfuric acid markets.

Nature of the smelter air pollution problem

Present smelting practice in primary copper and lead smelters of the U.S. is fairly uniform from smelter to smelter for each metal. In zinc smelters, there are greater differences in processing methods and in equipment used.

Usually some 93 to 97 percent of the sulfur in the feed to a zinc smelter is eliminated as sulfur oxides in the offgas from the roasting operation. Offgases from the newer fluidized or suspension roasters have from seven to 12 percent sulfur dioxide. Older types of roasters emit weaker gases. Sintering of roasted zinc ore in pyroreduction plants produces offgases containing from 0.1 to 2.4 percent sulfur dioxide, depending upon the amount of residual sulfur left in the roaster calcine.

The sintering operation in lead smelting eliminates about 85 percent of the total sulfur from the feed as sulfur oxides. Offgases from a smelter that uses up-draft sintering machines may contain from four to six percent sulfur dioxide.

Offgases from the first stages of two-stage downdraft machines can be of this strength, but the second stage gases contain only 0.8 to 1.8 percent sulfur dioxide. One percent of the feed sulfur is in the very weak blast furnace and dross furnace offgases, and the remaining 14 percent is retained in the slag and other solid byproducts.

In a copper smelter, the reverberatory furnace emits a steady flow of dilute gas, whereas converter offgas has a higher sulfur oxide concentration but an irregular and cyclical flow. If a roaster is used, the offgas flow is steady and the concentration can be about eight percent sulfur dioxide, after dust removal, depending on the volume of air drawn into the flue system.

Control of Sulfur Oxides

One control method, conversion of sulfur dioxide to sulfuric acid, is now being used by nearly half the smelters in this country. It is an efficient, low-cost method for controlling offgas having over four or five percent sulfur dioxide. The flow rate and concentration of the feed gas to an acid plant needs to be fairly uniform.

The Cominco process is the only absorption process in use by a smelter in the U.S. or Canada for removing and concentrating sulfur oxides from offgases with less than three percent sulfur dioxide. Its disadvantage is that it has high costs, consumes ammonia and sulfuric acid, and necessarily produces ammonium sulfate as a secondary byproduct.

The DMA absorption process delivers a pure sulfur dioxide gas and is used at two plants for recovering sulfur dioxide from offgases that contain over four percent of this oxide. Cost data were not available for this study.

No process is known to be available to extract and concentrate sulfur oxides from weak smelter gases at low cost. A satisfactory process should efficiently removed sulfur oxides from gases containing 0.3 to four percent sulfur oxides. It should be cyclic and should not consume large amounts of reagents or produce secondary byproducts in quantity. Neither the DMA or Cominco processes meet these requirements.

Offgases can be wet-scrubbed with lime or sometimes with limestone slurries. Sulfur oxide removal is more efficient with lime than with limestone. The products are waste materials that must be conveyed to disposal areas. The cost of the lime or limestone is a substantial part of total costs. Costs would limit application of these processes to small volumes of weak offgases or of stronger offgases that cannot be used to make sulfuric acid or sulfur.

Elemental sulfur, from reduction of sulfur dioxide, can be stored or shipped at much lower cost than sulfuric acid. In this study, costs for the old Asarco reduction process were estimated for offgases containing from four to eight percent of sulfur dioxide. The process has high capital and operating costs and has never been used on a full commercial scale. Reduction processes that use catalysts and are more conserving of heat have been developed more recently but data for cost calculations were not available for this study.

The control processes that convert sulfur dioxide to useful byproducts all operate at unit costs that decrease as the sulfur oxide concentration of the feed gas increases. Therefore, any change in metallurgical practice that results in more concentrated offgases should reduce the cost of control. Copper smelters need process changes that do away with the cyclic pattern of offgas flows from the converters. Improved metallurgical processes have been adopted by some smelters, and others are being developed or are in use abroad. The improved processes may reduce the costs of metal production and improve offgas flows and concentrations.

Improvements are needed in process enclosures, specifically in connections between equipment such as copper converters and their offgas duct systems. Tighter connections and reliance on waste heat boilers and cooling coils or jackets instead of on air dilution for cooling the offgases will be needed for realizing the full benefit of some process changes in the form of smaller gas volumes and higher concentrations of sulfur oxides.

Markets for sulfur byproducts

The market study considered four primary sulfur byproducts: elemental sulfur, sulfuric acid, sulfur dioxide, and ammonium sulfate. Of these, liquid sulfur dioxide is used in such small quantities that its production offers no further significant potential outlet for recovered smelter effluents. Ammonium sulfate was considered as a primary product because it is the unavoidable byproduct of the Cominco absorption process, which may be used for concentrating sulfur dioxide from lean gas streams.

The average price for sulfur between now and 1975 will probably be about \$30 per long ton f.o.b. the Gulf Coast. This conclusion resulted from an examination of possible future trends in supply and demand. The price of sulfur f.o.b. the Gulf Coast is frequently quoted as the reference basis for the world price. Prices obtainable for byproduct sulfur derivatives at smelters will be related to the world price of sulfur because elemental sulfur is an item of international commerce whose price is affected by world supply and demand. The \$30 price was used as the basis for estimates of prices that smelter operators might obtain for their byproduct sulfur and sulfur derivatives.

The principal findings from the market study follow:

1. Smelters west of the Mississippi River can potentially produce more sulfuric acid than could currently be disposed of even if part were given away. The maximum quantity of acid that could be sold at prices ranging down to \$0 per short ton f.o.b. smelters would be about 3.1 million short tons per year or 43 percent of potential production. At prices ranging down to a minimum of \$4, 2.8 million tons or 38 percent of potential production of acid could be sold. Potential markets for acid from smelters might grow to as much as 5.3 million tons by 1975, but this would still constitute only 73 percent of current potential acid production. However, if sulfur oxides from western smelters not already being recovered were converted to elemental sulfur, all the sulfur (1.6 million long tons per year) could be sold at prices ranging from a maximum of \$35 per long ton to a minimum of \$25.50 f.o.b. the smelters. These prices represent the maximum production costs of the sulfur that are allowable if the smelter operators are to break even on the recovery operation.
 2. Smelters in the Arizona-New Mexico-West Texas area have the greatest potential sulfuric acid production of any group, but a relatively small potential market. Currently, there is a potential market for only 571,000 short tons per year of acid (15 percent of potential production) at prices of \$4 or more per ton f.o.b. smelters. The market for acid from this smelter group can grow rapidly between now and 1975. However, the potential 1975 acid market is still estimated to be only 1.86 million tons, or 49 percent of the current potential production. In contrast, these smelters should be able to sell all the elemental sulfur they can produce if they can match or better the price of sulfur from the present suppliers.
 3. Current potential markets for sulfuric acid from smelters in Idaho and Montana (minimum price \$4 per ton f.o.b. smelters) are now equivalent to only 16 percent of potential production. However, a large growth in demand for acid can be expected by 1975, mostly for phosphate fertilizer production. By 1975, demand may reach about 1.26 million tons per year, or 90 percent of potential production in 1969.
 4. Current potential demand for acid from smelters in the Pacific Coast states appears to be equivalent to about 70 percent of potential production. It was not possible to estimate the possible growth of future demand.
 5. Operators of the remaining smelters in the western region should currently be able to sell nearly all their potential production of sulfuric acid for \$4 or more per ton f.o.b. the smelters.
 6. Markets exist for any additional sulfuric acid that smelters east of the Mississippi might produce from sulfur oxide emissions not already recovered.
 7. The growth rate of consumption of sulfuric acid is higher than that of production of nonferrous metals. Hence, it is expected that future markets for acid should remain adequate in those marketing regions where they are already so. The largest growth in acid consumption will be in phosphate fertilizer production (supplied mainly from the Idaho-Montana region), along with some growth in leaching of copper ores (supplied mainly from the Arizona-New Mexico-West Texas region). Uranium ore processing should be another important and growing source of demand.
 8. An estimate was made of the probable upper limit of ammonium sulfate production in the western region (924,000 short tons per year) by assuming that the Cominco absorption process might be used to concentrate sulfur dioxide from lean offgases of zinc sintering machines and copper reverberatory furnaces. Of the total, 573,000 tons would be produced in the Arizona-New Mexico-West Texas area, and 219,000 tons in Utah-Nevada. In neither area would it be possible to dispose of all the ammonium sulfate at prices high enough to pay for the ammonia used in its manufacture. In the other western smelter areas, it would be possible to dispose of the remaining ammonium sulfate at prices of \$25 or more per ton f.o.b. the smelters.
- ranging from \$19 to \$36.50 per ton f.o.b. the smelters in order to compete with alternative sources. The production cost of ammonium sulfate from the Cominco

process is not easily definable because it is dependent on arbitrary apportionment of costs between ammonium sulfate and coproduct sulfur dioxide.

The market study was based on evaluating the extreme cases, i.e., determining markets where only one major product (sulfuric acid or elemental sulfur) was assumed to be produced. However, in the realistic case, production of an appropriate mixture of the two major products, orderly penetration of available markets should be easier.

Control method evaluation with plant models

Evaluation of the general economics of the control process and of some combinations of processes was simplified by setting up hypothetical models of smelters using feed materials with specified ratios of sulfur to metal. Various systems of control processes were then applied to these models and costs were determined from the process cost graphs. Most of the models are of three sizes, covering a metal capacity range of three or four to one.

Copper smelter models

Two copper models were set up. Model B plant has a roaster and Model A does not. In the case of the small size Model A plant (230 tons of copper per day), gas flow is too irregular to be used in a sulfuric acid plant. A scheme that uses the stronger offgases from the medium and large model A plant, and all sizes of the model B plant, in making sulfuric acid produces the acid at costs that permit breakeven by at least some of the operators in each of the areas defined in the market study. Credits from sale of the acid cover the cost of scrubbing the weak gases with limestone slurry. With this added step, 88 to 91 percent control efficiency is attained. Without it, control efficiency is only 50 to 60 percent for model A and 83 percent for model B. Breakeven prices for the acid are lower with model B, which has a roaster, than with model A, which does not.

None of the other process systems considered are able to operate at costs that make breakeven possible under present or projected market conditions.

Zinc smelter models

Four zinc smelter models were created: model A, representative of modern plants with fluid-bed or suspension roasters; models B and C, representative of plants with Ropp and multiple-hearth roasters, respectively; and model D, representative of a plant using a sintering machine for simultaneous sintering and roasting. It is profitable to use the roaster gases from even the smallest model A plant to make sulfuric acid. The breakeven price for production of the acid is only \$5.90 per ton for the smallest plant, and \$4.80 per ton for the largest. Sulfur oxide recovery is 93 percent efficient. For model D (one size only), the breakeven price for the acid is \$15 per ton. The breakeven prices of acid from models B and C are above any levels that can be realized in available markets.

None of the other schemes for recovery, such as reduction of the sulfur dioxide by the old Asarco process, can yield a product at a competitive breakeven price for any of the models.

Lead smelter model

Only one lead plant model was prepared, representing the three largest of the six smelters considered. These smelters use updraft sintering machines. Again, only the scheme that sends the strong sintering machine offgas to a sulfuric acid plant makes a byproduct with a competitive breakeven price. Acid production costs are \$10.60 per ton for a small plant and drop to \$7.30 for a large plant. One or more smelters in each marketing area can sell acid in this price range. Control is 93 percent efficient.

IV. RECOMMENDATIONS

Although treatment of lean offgas streams constitutes the greatest current technical and economic problem in smelter emission control, it is believed that smelter technology will evolve toward lessening the importance of such offgas streams by adoption of newer smelting techniques that put out the bulk of the sulfur oxides in offgases of relatively high concentration. Even so, some weak offgases will continue to be produced, and since adequate technology for their control is not now available, it must be developed.

The size of the markets for sulfuric acid is so limited, particularly for smelters in the western United States, that it is necessary to emphasize research and development aimed at low-cost production of elemental sulfur, for which markets exceed potential production.

It is recommended that research and development projects be initiated in seven major areas of study:

1. Develop to the point of commercial feasibility more economic cyclic processes that can concentrate weak smelter offgas streams containing less than four percent sulfur dioxide. The goal should be a process with little or no production of secondary byproducts and minimum cost for renewal of reagents.

2. Develop to the point of commercial feasibility more economic cyclic gas absorption processes capable of concentrating sulfur dioxide from relatively rich gas streams (three to four percent sulfur dioxide, and higher) for subsequent reduction to elemental sulfur. To provide a technical and economic baseline for these studies, an analysis should be made of the only currently operating commercial process in this category, the Asarco DMA process.

3. Develop to the point of commercial feasibility one or more conceptual processes and systems for reduction of sulfur dioxide to elemental sulfur, using natural gas, other hydrocarbon, or coke as the reductants. One objective should be to obtain realistic estimates of the probable attainable production costs for the elemental sulfur. Costs should be developed as functions of the sulfur dioxide concentrations in the feed gas, from 100 percent down to perhaps 10 percent.

4. Make an engineering study of process enclosures and process equipment designed to limit introduction or infiltration of air to a minimum. Estimated costs for a representative system, or systems, should be developed and compared with those for a typical conventional gas collecting and handling system. The economics achievable in the subsequent gas cleaning and sulfur recovery systems as the result of restricting air infiltration should be estimated.

5. Initiate a project to obtain quantitative information about smelter gases and their constituents. Measurements and analyses should be made at representative copper, zinc, and lead smelters. The objective is to define nature and magnitude emission problems at typical plants and to define problems of catalyst poisoning, corrosion, and erosion to be considered in design of recovery systems.

6. Institute a program for development of efficient new metal recovery systems to produce metal at costs competitive with existing processes while producing offgases at high sulfur oxide concentrations.

7. Develop to the point of economical commercial application equipment capable of cleaning smelter offgases at temperatures above 600 F.

(Enclosure No. 2D)

STATEMENT OF L. P. ARGENBRIGHT PRESENTED AT THE MONTANA STATE BOARD OF HEALTH HEARING, MAY 21, 1970, AT HELENA, MONT.

In 1969 my company completed an engineering study for the Department of Health, Education and Welfare concerned with Sulfur Oxide emissions from the Non-ferrous Smelting industry. This work was done for the Engineering Branch of the National Air Pollution Control Administration (NAPCA). The stated purpose of the project was:

1. To Provide NAPCA with an understanding of technical and operating characteristics of the non-ferrous smelting industry.

2. To Examine the nature of sulfur oxide gas streams that exist in the industry.

3. To Examine and evaluate sulfur oxide recovery and control procedures presently available for use.

4. To Determine the extent and nature of the market for sulfur products from non-ferrous smelting sources.

5. To Make recommendations as to areas of research and development most appropriate for the best efforts of NAPCA to further technological and operational control of sulfur oxides.

This study was carried out in great depth and resulted in a three volume report of information. Some conclusions reached and reported are pertinent to this discussion.

It is apparent that there does not now exist a practical system for producing satisfactory sulfur byproducts in all areas from the off gases of non-ferrous smelters.

We concluded that there is and will continue to be a need for practical methods for concentrating the sulfur oxides of dilute process offgases, since such methods are not now available.

We concluded that the most generally disposable byproduct that can be made from smelter sulfur oxides is elemental sulfur.

We concluded that a reliable process is needed to convert sulfur oxides to elemental sulfur.

We concluded that manufacture of sulfuric acid by the contact process is presently the most-used method of controlling sulfur oxide emissions, but markets for the acid are limited and costs are too high when smelter gases are weak.

Our examination of the study information and consideration of the conclusions resulted in a set of recommendations of areas of research and development to NAPCA indicating technical and operational deficiencies needing the most effort for solution. These recommendations are important from the standpoint of the deficiencies they indicate, and the lack of practical solutions for control problems at the present time. Certain of these recommendations are relevant to this discussion.

We recommended development to the point of commercial feasibility more practical cyclic processes that can concentrate weak smelter offgas streams containing less than four percent sulfur dioxide.

We recommended development to the point of commercial feasibility more practical cyclic gas absorption processes capable of concentrating sulfur dioxide from relatively rich gas streams (three to four percent sulfur dioxide, and higher) for subsequent reduction to elemental sulfur.

We recommended development to the point of commercial feasibility one or more conceptual processes and systems for reduction of sulfur dioxide to elemental sulfur, using natural gas, other hydrocarbon, or coke as the reductants.

We recommended development to the point of commercial application equipment capable of cleaning smelter offgases at temperatures above 600 F.

These technical points are indicative of the current need for commercially usable processes to achieve control of sulfur oxides.

An extensive market survey of sulphur products was conducted by Stanford Research Institute as a part of this study. Stanford Research Institute is a non-profit engineering organization devoted to basic research and studies concerned with markets and population.

A significant finding of the market survey shows that potential sulfuric acid production of the smelters in this area is far greater than the potential consumption within the acid market the smelters might be able to penetrate. In addition to this, many users prefer to generate their own acid from elemental sulfur because they can gain process heat needed. They are, in effect, gaining fuel by producing acid from sulfur. It appears improbable that any large volume of sulfuric acid can even be given away if it were to be produced.

One of the matters before this Board is the proposed adoption by the State of Montana of emission standards that are based on a proposal from the Decision of Control Agency Development of NAPCA. This proposal is entitled "Proposed Emission Standard for Reduced Sulfur from Primary Non-ferrous Smelters" and I believe you have copies available to you. If you refer to Page 4 of this proposal under the title of Appendix, you will find statements extracted from our report. These statements are taken out of context from a portion which contains the literature review which was carried out in preparation for the study of the various systems. This section in its entirety chronicles the examination of printed information on sulfur emission control efforts in the past. It is a history of work done up to the time of our study.

The literature review was not in any way complete or responsive to the needs of NAPCA to understand the current complexities of the problem. It is not proof of the existence of adequate sulfur control technology as the proposal states.

The proposal does not reflect the facts derived on the conclusions drawn in the study. Our study did not provide a basis for setting standards and our report makes no comment on control regulations or standards. The proposal presents data based on model smelters. In order to study the systems for smelting and the systems for sulfur recovery and their relationship to one another, it was necessary to create mathematical models of smelters to represent the various types of plants. These models were used in a computer program to make rapid objective comparisons of the merits of various systems. It is important to remember that these models do not exist and are only representative of the various components that are contained in some smelters. Our report on the study indicates the problems the comparison of the systems brought out. It clearly defines the inadequacy of presently existing sulfur recovery systems.

The proposal suggests the use of the limestone slurry process to accomplish control of sulfur oxides from copper smelters. Our report indicates that this is a very doubtful process and current information that our company has tends to show that the process has little chance of operation on plant scale. This suggests

that the proposal, although purportedly based on our report, does not reflect the conclusions of the report. The conclusions we drew do not support emission standards at the present time.

The study by my company indicates a distinct deficiency of technology for commercial recovery and disposition of sulfur oxide products from the non-ferrous smelting industry at the present time. We believe that substantial improvement of this situation is several years away.

(Enclosure No. 2E)

STATEMENT OF JAMES M. HENDERSON PRESENTED TO THE MONTANA STATE BOARD OF HEALTH HEARING, MAY 21, 1970, AT HELENA, MONT.

The problems caused by the fact that sulfur dioxide is formed in production of copper and lead from sulfide ores are indeed old and difficult problems. The chemical literature of the past fifty years reports many attempts by scientists and engineers to prevent sulfur dioxide from being released to the atmosphere. My own company's efforts to accomplish this began at least as early as 1919 and has been continuous ever since. While many processes have been investigated and subjected to test, to date the production of sulfuric acid has proven to be the only practical way for recovering sulfur dioxide in large quantities.

Procedures for reducing sulfur dioxide emissions by producing elemental sulfur and liquid sulfur dioxide from smelter gases have been developed and have found limited use. Included in these is the so-called D.M.A. process of ASARCO for making liquid sulfur dioxide. The trouble here is that liquid sulfur dioxide has a very limited use and can be considered a safety hazard if stored in large quantities. The difficulty with the elemental sulfur processes developed to date, including an old one pursued through the pilot plant stage by my company in the early 1940's, as well as one utilized at Trail, British Columbia, is a lack of reliability. I am sure you will appreciate that a prime requirement for any process committed to assurance of air quality is that it operate reliably without frequent interruptions.

At this point let me emphasize that discussions of available technology in this area inevitably lead to confusion of theoretical and practical methods for eliminating sulfur dioxide from smelter streams. We do not lack for theoretical solutions to our problems. In fact, I could easily give you a dozen such solutions. However, that is not what is needed. Obviously what is required is a practical solution or solutions. In this regard I can only state that the only presently available practical method of removing substantial quantities of sulfur dioxide from the type of gases found in our East Helena lead smelter is the production of sulfuric acid. However, before sulfuric acid production is feasible, a market must exist for it is clear, I am sure, that acid cannot be dumped on the ground.

There is, as you have already heard, no market for the sulfuric acid that can be produced in this area, regardless of the quality of the acid. Moreover, as far as our East Helena plant is concerned, our problem is doubly difficult, for I must state bluntly that our sulfur dioxide bearing gases there would produce an off-grade acid known as "black acid." "Black acid" would be formed due to the unavoidable presence in the sulfur dioxide bearing gases of hydrocarbon materials. Nevertheless, I wish to make clear that American Smelting and Refining Company continues to explore the marketing of sulfuric acid, including any "black acid" that could be produced at East Helena. Through its local management, its New York office, and our Sulfuric Acid Operations office in Tucson, Arizona, the company is active in discussions with potential consumers, and the company is prepared at all times to actively pursue new avenues with all due diligence.

The history of the many attempts to recover sulfur dioxide from waste smelter gases is discussed in some detail in the recent report prepared by Arthur G. McKee and Company for the National Air Pollution Control Administration (known as NAPCA). The purpose of the McKee report, in fact, was to examine and evaluate for NAPCA the sulfur dioxide recovery and control procedures presently available to the non-ferrous smelting industry and to make recommendations as to research needed to be conducted in directing the best interests of all parties toward the technology and control of sulfur dioxide emissions.

Consistent with what he has already said to you here today, Mr. L. P. Argenbright, of Arthur G. McKee and Company, in a recent hearing before another air pollution control agency, commented as follows concerning the emission standards proposed in the report prepared by Mr. Terry L. Stumph, then of the Division of Control Agency Development of NAPCA.

"The proposal, although purportedly based on our report, does not reflect the conclusions of the report. * * * The study by my company indicates the distinct deficiency of technology for commercial recovery and disposition of sulfur oxide products from the non-ferrous smelting industry at the present time. We believe that substantial improvement of this situation is several years away."

Moreover, contrary to what Mr. Stumph said in his report to you, this state of affairs has been well recognized by NAPCA prior to its authorization of the McKee study. Thus in a NAPCA report entitled "Sulfur Oxides Pollution Control—Federal Research and Development Planning and Programming 1968-1972," the role of the Federal Government in the development of methods to control emissions from important sources of atmospheric pollution was outlined. This NAPCA report states on page 92:

"The total funding planned for Program VI, Industrial Process Control, is \$65,732,000, all of which is directly related to the development of SO_x (sulfur oxides) control technology. The distribution of funds by program element and fiscal year of planned obligation is shown in Fig. 13."

Quoting further from Fig. 13 planned expenditures for development of sulfur oxide control technology applicable to that group of industries including non-ferrous smelters is as follows:

Fiscal year:

1968	-----	\$822,000
1969	-----	1,700,000
1970	-----	6,150,000
1971	-----	26,000,000
1972	-----	31,000,000

More recently, the Process Control Engineering Group of NAPCA in a status report issued in November 1969 entitled "Process Control Engineering R & D for Air Pollution Control" lists 47 active research projects directed at control of stationary air pollution sources and which are currently financially supported by NAPCA. Of these 47 active research projects, 15 are pertinent to our field. So it is clear that NAPCA recognizes the deficiency in technology for control of SO₂ emissions. This is clearly evidenced by the expenditure of federal funds to develop this technology.

On the other hand, some subordinate personnel of the Division of Control Agency Development of NAPCA has repeatedly stated that processes are currently available to permit recovery of sulfur dioxide to meet emission standards proposed for the State of Montana. In the report entitled "Proposed Emission Standard for Reduced Sulfur from Primary Non-ferrous Smelters" prepared for the Montana State Department of Health by Mr. Terry L. Stumph, it is stated that the technology is presently available to permit the Montana smelters to meet the proposed emission standards. For instance, as an example of technology purportedly available, Mr. Stumph states that the limestone slurry process is in this category of available technology. I can only state that this is not so. This process which involves treating SO₂ with limestone and water to produce a waste sulfur bearing product, is currently under large scale development in two power stations, but numerous operating problems have been encountered and the process is not ready for practical application. As evidence that this is so, let us examine references, found in the recent literature, testifying to the state of development of the limestone slurry process. In the Second Report of the Secretary of Health, Education and Welfare, NAPCA's parent organization, presented to Congress in January, 1969, it is stated on page 6, and I quote:

"Unsolved problems that may limit effectiveness of the wet limestone process include corrosion and erosion of process equipment, localized air pollution resulting from inadequate plume buoyancy, potential for water pollution resulting from disposal of solid and liquid waste products, and lack of reliable data for scale-up of scrubbers to the size that will be necessary for power plant usage. * * *"

More recently, in the current issue of Chemical Engineering magazine, in a paper reviewing SO₂ control technology, the following summarization of the current status of the limestone slurry process appears:

"The past year's operations of Meramec and Lawrence (two power stations), each cleaning 300,000 to 400,000 cubic feet per minute of gas, have revealed information and problems not evident during pilot plant operation."

It is of interest to note that this paper in Chemical Engineering was authored by the manager and assistant manager of Air Pollution Control Systems of Combustion Engineering Inc., the firm directly involved in the early stage development of the limestone slurry process. It thus would appear evident that the Division of

Control Agency Development of NAPDA, in their zeal to establish controls, quite frankly, are misleading this Board regarding the current practicality of the limestone slurry process.

Moreover, it is highly significant, I believe, that the Secretary of Health, Education and Welfare, in his Second Report to Congress, recognizes the potential for water pollution resulting from disposal of solid and liquid waste products generated in the limestone slurry process, while NAPCA's Division of Control Agency Development apparently ignores this danger in their implication that this process is currently available technology. At ASARCO's East Helena plant implementation of the limestone slurry process would result in the production of an estimated 200,000-300,000 tons per year of waste product which would be a potential source of atmospheric and water pollution. The safety of storing these vast quantities of waste material has not been established, and I am sure you will agree that we cannot solve one problem at the risk of creating another, perhaps more serious, problem.

Referring again to the McKee report, recommendations made to NAPCA include the following and I quote from Chapter 10, page X-2:

"(1) Develop to the point of commercial feasibility more economic cyclic absorption processes to absorb and concentrate sulfur oxides from weak smelter effluent gases that contain from 0.3 to 4.0 percent of sulfur dioxide by volume. * * *

(2) Develop to the point of commercial feasibility more economic cyclic gas absorption processes capable of concentrating sulfur dioxide from relatively rich gas streams (3 to 4 percent sulfur dioxide, or higher) for subsequent reduction to elemental sulfur. * * *

(3) Develop to the point of commercial feasibility one or more sulfur dioxide reduction systems using natural gas, other hydrocarbons, or coke at the reductants. * * *

Consistent with the first two of these recommendations of the McKee report, my own company is researching modification of its D.M.A. process for concentrating relatively weak as well as relatively rich sulfur dioxide bearing gas streams in order to broaden its range of application to all smelter gases and is developing the engineering data necessary to permit the design of the very large plants that will be involved in any such broad application.

What is needed is a reliable process for converting sulfur dioxide to elemental sulfur. Elemental sulfur can be safely stored on the ground and can be easily and relatively inexpensively shipped to distant markets.

Fully consistent with the third of the three recommendations of the McKee report, ASARCO has developed on a laboratory scale a process which we believe overcomes most of the problems associated with prior attempts to produce sulfur, including the reliability problems of the 1940 ASARCO process. The newer ASARCO process holds high promise of contributing to the quality of our environment while at the same time aiding in the conservation of a natural resource. I am sure you are aware that Phelps Dodge Corporation and ASARCO have recently announced that they will jointly build and operate a 20 ton/day pilot plant to further test this process.

Thus, long before the McKee report and the formation of NAPCA, ASARCO has been and is doing what the McKee report recommends and what the government through NAPCA encourages. As recommended in the McKee report, ASARCO is directing its efforts to the absorption of SO_2 from relatively weak as well as relatively rich gases. In addition, ASARCO is directing its efforts to producing sulfur from sulfur dioxide and is now at the point of testing its newer process on a pilot plant scale. But we must emphasize that these projects are experimental and developmental in nature. In other words, they cannot now be installed in our smelter to permit us to meet the proposed emission standards.

In conclusion, in my opinion, there is no way at the present time in which the ASARCO smelter at East Helena can meet the proposed standards.

(Enclosure No. 2F)

MEMORANDUM TO AMERICAN SMELTING AND REFINING CO.

LEGALITY OF NAPCA'S ESTABLISHMENT OF EMISSION CONTROL STANDARDS FOR NONFERROUS SMELTERS

Summary

We have been asked by the American Smelting and Refining Company (ASARCO) to consider the legality of recent efforts by the National Air Pollution

Control Administration (NAPCA) to secure adoption by State and local air pollution control agencies of uniform sulfur oxide emission standards for non-ferrous smelters. These standards, we are informed by experienced company personnel, were established by NAPCA without consultation with industry advisory committees or government departments or agencies and are neither technologically nor economically feasible. ASARCO is vitally concerned with NAPCA's actions because adoption and enforcement of these emission standards would render impossible the continued operation of ASARCO's smelting plants in the United States. It is our opinion that there exists a serious question whether NAPCA, in promulgating and promoting these standards, has not violated both procedural and substantive requirements of the Air Quality Act of 1967.

ASARCO's Smelting Operations

ASARCO owns and operates nine copper, lead and zinc smelting plants in the United States, located in the States of Arizona, California, Missouri, Montana, Texas and Washington. The productive capacity of these plants represents approximately 23 percent of the copper, 54 percent of the lead, and 20 percent of the zinc smelting capacity in the United States. The value of their annual production exceeds \$750,000,000.

The concentrated ores smelted at ASARCO's plants and elsewhere in the United States contain large amounts of sulfur. In the smelting process heat is applied to separate the metallic contents of the concentrate from sulfur and other impurities. The sulfur is driven off in the form of large quantities of sulfur oxide gases. ASARCO has, at considerable expense, built tall stacks to prevent or minimize undue concentrations of sulfur oxides at ground level. It has also installed extensive air quality monitoring systems around some of its plants. Using information derived from these systems and from meteorological forecasting, ASARCO's plant meteorologists have frequently ordered curtailments of smelter production to prevent undue ambient concentrations of sulfur oxides that might result under adverse weather conditions. At some plants it has also been possible to convert some of the sulfur oxide gases produced into byproducts, generally sulfuric acid, when there is an available means for disposing of the byproducts.

The Applicable Law

The Air Quality Act of 1967 establishes a precise procedure for the development and enforcement of state and regional ambient air quality standards. This procedure represents a compromise between State and Federal powers and responsibilities.

In the legislative proceedings which led to the Act, the Commissioner of NAPCA and the Secretary of HEW urged Congress to authorize uniform national emission standards formulated by Federal authorities and applicable to all plants within an industry regardless of location. The Congress explicitly rejected this approach, and instead provided for ambient air quality standards formulated by State and local air pollution control agencies and tailored to meet local conditions and needs.

In order to assist the States in formulating air quality standards, Section 107(b) of the Act directs the Secretary of HEW to issue Air Quality Criteria to the States, describing the effect on health and welfare of various concentrations of pollutants in the ambient air. Similar assistance is provided by Section 107(c) of the Act, which directs the Secretary to issue information on recommended pollution control techniques to the States. The Act also authorizes financial assistance to State and local air pollution control agencies in the form of Federal grants.

Under Section 107(a) of the Act, the Secretary is authorized to designate air quality control regions. When the States adopt air quality standards applicable to such regions, the Secretary has authority under Section 108 of the Act to review the State standards and to issue Federal standards for that region if he disapproves the State standards. However, the initial and primary responsibility for devising air quality standards is lodged with State and local authorities.

Of special relevance here are certain provisions in Section 107(c) of the Act, dealing with the Secretary's issuance of recommended control techniques to the States. The Act provides that recommendations as to control techniques shall be issued by the Secretary only after consultation with appropriate advisory committees and Federal departments and agencies; that the issuance of such recommendations shall be announced in the Federal Register; and that copies thereof shall be made available to the public. Furthermore, the control techniques recommended must be "necessary to achieve levels of air quality" set forth in the Air Quality Criteria issued by the Secretary under Section 107(b). Finally, the Act requires that recommendations as to control techniques must include "such

data as are available on the latest available technology and economic feasibility of alternative methods of prevention and control of air contamination including cost effectiveness analyses".

Administration of the law

The Secretary has delegated most of his authority under the Act to the Commissioner of NAPCA, which has made substantial Federal grants under the Act to State and local air pollution control agencies. In January, 1969, NAPCA issued Air Quality Criteria for Sulfur Oxides and also issued Control Techniques for Sulfur Oxide Air Pollutants. In compliance with the procedural requirements of the Act, these Criteria and Control Techniques were developed after consultation by NAPCA with an advisory committee, which included industry representatives, and with numerous Federal departments and agencies. The Criteria and Control Techniques were announced in the Federal Register, and copies thereof were made available to the general public. They do not recommend emission control standards for nonferrous smelters.

However, NAPCA in recent months has worked vigorously to cause States where smelters are located to adopt emission control standards requiring copper, lead and zinc smelters to remove 90% or more of the sulfur contained in ore concentrates prior to emission of smelting gases into the atmosphere.

In November, 1969, NAPCA prepared a document entitled Proposed Emission Standard for Reduced Sulfur from Primary Nonferrous Smelters ("NAPCA Emission Proposal"). The NAPCA Proposal urges adoption of a 90% or more emission standard for copper smelters and recommends emission control techniques consisting of a sulfuric acid contact process and a wet limestone scrubbing process. The Proposal asserts that these control techniques are technologically feasible and can together achieve 90% or more sulfur removal. Apart from listing some incomplete cost estimates, the Proposal contains no discussion of economic feasibility. Uniform emission standards requiring 90% or more sulfur removal are also proposed for zinc and lead smelters. NAPCA has issued copies of the Emission Proposal to air pollution control agencies in several States, including the States of Montana, Washington, and Arizona, in which ASARCO smelters are located.

During the last several months representatives of NAPCA have also submitted statements and testified at formal hearings before air pollution control agencies in Montana, Washington and Arizona, urging that the 90% or more emission control standards contained in the Proposal be imposed upon smelters. The NAPCA representatives have asserted that 90% removal is technologically feasible through use of the recommended control techniques, and have stated that the question whether these control techniques are economically feasible is not the proper concern of NAPCA or the State agencies. NAPCA representatives also made clear to State agencies that they must adopt NAPCA's 90% or more emission control standards for smelters in order to continue to receive Federal grants from NAPCA. This is of great concern to the agencies because the Federal grants represent a major portion of their budgets. ASARCO believes that NAPCA will make similar efforts in other States where smelters are located to secure adoption of its emission standards. In effect, NAPCA is attempting to establish uniform national emission standards for smelters.

As a result of NAPCA's activities, the Arizona State Board of Health on May 27, 1970, adopted NAPCA's 90% or more sulfur oxide emission control standard for copper smelters. ASARCO expects that other States in which smelters are located will also adopt the NAPCA standards.

The NAPCA emission standards are not feasible

Contrary to the assertions made in the NAPCA Emission Proposal and in the statements of NAPCA representatives, the available evidence establishes that the 90% or more emission standard urged by NAPCA are not feasible from either a technological or an economic viewpoint. This fact is established by an exhaustive study of the latest available data on nonferrous smelting emission control techniques which NAPCA itself commissioned. Arthur G. McKee and Company, a well-known engineering and consulting firm, conducted the study under NAPCA contract and published its findings in a three volume report in June, 1969.

First, the McKee Report demonstrates that technology is not available to achieve 90% or more removal of sulfur oxide emissions from existing copper smelters. Some of the sulfur oxides in some copper smelter gases can be removed through use of the sulfuric acid process, but a large proportion of such gases are

too dilute for use of the acid process. As the McKee Report points out, other processes for dealing with these dilute gases—including the wet limestone scrubbing process recommended by NAPCA—have simply not been developed technologically to the point where they can be used on a commercial scale.

Moreover, while it would be possible through use of the sulfuric acid process to remove between 50 and 75% of the sulfuric oxides in copper smelter emissions, and an even higher percentage in the case of lead and zinc smelter emissions, sale or even disposal of the enormous quantities of sulfuric acid produced would be an insurmountable problem. The commercial market is exceedingly limited, and sulfuric acid is a corrosive and dangerous substance that would cause grave harm to the environment if it were dumped as waste. Permanent storage of the vast quantities of sulfuric acid that would be produced is not feasible. While fertilizer producers and other manufacturers use sulfuric acid, the McKee Report demonstrates that the present and expected future demand for sulfuric acid, particularly in the areas where smelters are located, is wholly inadequate to absorb the massive supplies of acid that would be produced by extensive use of the sulfuric acid process in the nonferrous smelting industry.

The conclusions of the McKee Report on technological feasibility are buttressed by a recent (May, 1970) report by The National Academy of Engineering—National Research Council entitled *Abatement of Sulfuric Oxide Emissions from Stationary Combustion Sources*. This report concludes that alternatives to the sulfuric acid process have not been developed to the point of technological feasibility and reliability, and that it will not be until “perhaps 1980 or 1985” that sulfur emissions from smelters can be brought “under fairly good control,” assuming successful development of new processes. The fact that NAPCA itself is currently spending millions upon millions of dollars to develop techniques to deal with sulfur oxide gases also demonstrates that adequate control technology is not presently available.

The McKee Report also indicates that intensive use of the sulfuric acid process or of alternative processes (assuming that they are developed to the point of technological feasibility) would involve high capital and operating costs. These costs are so great that 90% or more removal would not be feasible economically even if the requisite technology could be developed. NAPCA, however, has refused to consider economic feasibility, and has told State agencies that industry must be forced to meet the NAPCA emission standards regardless of the cost involved.

The effect of the emission standards on ASARCO

Because they are neither technologically nor economically feasible, ASARCO can not meet the MAPCA emission standards now or in the foreseeable future. ASARCO is spending millions of dollars to develop new methods of smelting and a process that would remove sulfur from emissions in the form of elemental sulfur, but development of these new techniques will take many years, and their success is not assured. Meanwhile, through tall stacks and its monitoring systems, ASARCO is making every effort to meet stringent ambient air quality standards established by the States in which its smelters are located. Compliance with these ambient air standards has frequently required ASARCO to curtail smelter production. ASARCO believes that ambient air standards are a proper and effective solution to the problem of sulfur oxide pollution by nonferrous smelters, which are generally the only significant sources of sulfur oxides in the areas where they are located. NAPCA's emission standards are believed to be unsound because they require a uniform, arbitrary reduction of emissions, wholly without regard to the ambient air quality in the vicinity of the smelters.

NAPCA's impossible emission standards will have disastrous consequences for ASARCO when they are adopted and sought to be enforced. Moreover, the threat of being forced to comply with impossible standards presently imposes severe burdens on ASARCO, whose planning and investment in its smelting operations in the United States is predicated on reasonable assurance that such operations will be permitted to continue in the future. For example, a large portion of the ore concentrates smelted at ASARCO's plants are secured from independent suppliers pursuant to long term contracts. The threat that ASARCO's plants may be forced to close because of impossible emission standards hampers ASARCO in securing long term supply contracts, and even if ASARCO is successful in securing such contracts, they may expose ASARCO to serious legal liabilities in the event that its smelting operations are closed down and it is forced to cancel the contracts.

ASARCO also smelts ore concentrates produced from its own mines. Were its United States smelting plants forced to close because of impossible emission standards, ASARCO would, to the extent economically feasible, arrange for smelting of its ore concentrates in other countries where ASARCO controls smelting plants. Such arrangements will involve considerable advance planning and expense. From a broader view, ASARCO is troubled because the American economy would be seriously injured and our defense posture impaired if non-ferrous smelting in the United States were rendered impossible by unattainable emission standards. It is for these reasons that ASARCO is deeply concerned with the legality of NAPCA's actions.

Legality of the actions taken by NAPCA

The actions of NAPCA in promulgating uniform sulfur oxide smelter emission standards for adoption by State and local air pollution control agencies and in recommending certain control techniques for attaining such standards appear to be unlawful and invalid on five distinct grounds.

1. NAPCA has established uniform emission standards and is causing the States to adopt such standards. In so doing, NAPCA is exceeding its authority under the Air Quality Act of 1967. As the legislative history makes clear, the Congress explicitly rejected Administration proposals for uniform Federal emission standards, and instead provided for flexible ambient air quality standards, tailored by State and local agencies to meet varying local needs and conditions. See, e.g., S. Rep. No. 403, 90th Cong., 1st Sess., 4-5 (1967); H.R. Rep. No. 728, 90th Cong. 1st Sess., 14, 17 (1967). NAPCA is seeking to establish a type of standard which Congress specifically refused to authorize.

2. NAPCA is also exceeding its authority under the Act by usurping the power of State and local agencies to formulate air quality standards. The Act provides that air quality standards shall be established by State and local agencies, and limits NAPCA's role to issuance of Air Quality Criteria and recommended control techniques. By formulating its own specific air quality standards, and causing State and local agencies to adopt its standards, NAPCA has violated the careful balance between State and Federal responsibilities which Congress provided in the Act.

3. NAPCA has violated procedural requirements of consultation and publication in recommending to the States certain control techniques for smelters which, it claims, can achieve 90% or more removal of sulfur oxides. Section 107(c) of the Act provides that such recommendations as to control techniques shall be issued by NAPCA only after consultation with an advisory committee and with other Federal departments and agencies, and that such issuance shall be publicized through announcement in the Federal Register and by making copies available to the public. NAPCA has wholly ignored these procedural requirements. It has not consulted industry or scientists and engineers who believe that NAPCA's new recommendations are arbitrary and not feasible. Nor has NAPCA consulted the view of other Federal departments and agencies which might be concerned with the far reaching dislocations in the domestic and international economy and the adverse effect on our defense posture that NAPCA's recommendations might cause. The public has had no effective opportunity to scrutinize NAPCA's recommendations and express its reactions. The procedural requirements of 107(c) are designed to ensure that NAPCA's recommendations are considered and informed. NAPCA's violation of these requirements renders its recommendations invalid.

4. The recommendation by NAPCA of control techniques which it asserts can achieve 90% or more sulfur removal from smelter gases violates the requirement in Section 107(c) of the Act that such recommendations shall consider and be consistent with data on latest available technology and economic feasibility. The NAPCA claim that 90% removal is technologically feasible is erroneous and is belied by the McKee Report, which NAPCA commissioned and which embodies data on latest available technology. Moreover, NAPCA has failed to even consider the question of economic feasibility. Even if the technology for achieving 90% removal were successfully developed, it would not be economically feasible for the foreseeable future.

5. Section 107(c) provides that the control techniques recommended by NAPCA to the States shall be those "necessary" to achieve desirable air quality under the Air Quality Criteria issued by the Commissioner. The emission control techniques recommended by NAPCA to the States violate this requirement because they bear no necessary or appropriate relation to the achievement of desirable air quality. Because smelters are typically the only significant source of sulfur oxides in the areas where they are located, ambient air quality standards for smelters can ef-

fectively assure desirable air quality, and a standard requiring the use of emission control techniques to achieve an arbitrary limitation on emissions regardless of the quality of the surrounding air is arbitrary and contrary to the requirements of the Act.

For these several reasons, the promulgation by NAPCA of uniform sulfur oxide emission control standards and control techniques, in the manner described above, creates a serious and substantial question whether NAPCA has unlawfully usurped the authority of State and local agencies and has otherwise acted in contravention of the procedural and substantive requirements of the Air Quality Act of 1967.

COVINGTON & BURLING.

June 25, 1970

Mr. Moss. We will also contact HEW.

I share the gentleman's recollection. We have passed laws dealing with air emission standards from stationary sources. I believe we deal with it for the first time in the legislation which I don't believe has yet become law, but has been passed by this committee.

Mr. ECKHARDT. That is correct, Mr. Chairman.

Furthermore, the thing that startles me about this statement is that in my own district, we have a basic steel plant, in which people have been simply climbing the walls to get the steel plant to quit polluting, and I have not seen the stringent regulation with respect to the steel plant that seems to be indicated, as exists in El Paso in the same State, with respect to a copper plant. If it is true that copper production is being reduced, the question then arises, why is the same regulation with respect to pollution not imposed respecting steel?

But I may say, frankly, that I have never seen that kind of vigorous enforcement of the Texas antipollution laws that would indicate a real reduction in production of a basic material. So I should certainly like to have some information on this, much more specific than the impression of the witness.

Mr. Moss. We will endeavor to develop that information.

Mr. MEISSNER. I will submit the letter that was submitted from American Smelting and Refining, stating their case.

Mr. Moss. Fine.

They also operate in the San Francisco Bay area, don't they?

Mr. MEISSNER. No; I believe Tacoma, Wash., would be their west coast operation.

Mr. Moss. All right.

Mr. ECKHARDT. I have no further questions.

Mr. Moss. Mr. Thompson?

Mr. THOMPSON. Thank you, Mr. Chairman.

I will have to admit, Mr. Meissner, I frankly have been somewhat astounded by some of the statements that you have made, and with regard to this price-fixing bill. Now, as I read the bill, and certainly anyone can disagree with me that desires to disagree, but this bill simply says it is an unfair trade practice, if a domestic producer sells copper at a price lower than the world market.

Of course, there is nothing to prevent him from selling it higher than the world market, and normally, when one gets into unfair practices and protecting the consumer, you want to protect the consumer from high prices and not from low prices.

You made the statement that in El Paso, and some other areas, because of pollution, producers had to cut back 15 percent to decrease the emissions into the air, to comply with the local clean air stand-

ards, and I asked why this did not affect the price, and you said, "Well, there is a reduced demand for copper."

There may be a reduced demand for copper at present, but I am concerned about the overall tone of the hearings. Particularly when you make the comment that the American owners are losing control of the foreign mines, this concerns me regarding future control of prices.

In Chile, you mentioned that Anaconda, I believe, has 49 percent ownership. You mentioned other areas. Would it not be possible in the very near future, when control of the major foreign mines goes to foreign countries, that those countries can collude among themselves, and set the world price. Then if, as this bill would require, we are going to peg our domestic price as nothing lower than the world price, the American consumer is going to be penalized by higher prices set by foreign governments.

Mr. MEISSNER. Congressman, they are so doing now.

Mr. ECKHARDT. Will the gentleman yield?

Mr. THOMPSON. For a moment, yes.

Mr. ECKHARDT. Has the gentleman not noted that the price can be at any price, so long as all are treated fairly and equitably?

Mr. THOMPSON. Certainly, but in answer to that, the exception in the bill requires that in order to sell below the world price there is an equal allotment among the domestic users. For one producer to have to allot among all the domestic users in order to sell below the world price is, I think an absurd restriction. First of all, it may be a very difficult problem to sell to 150 people when you want to sell to one, and that so-called exception or "unless" or "provided" clause, I think is relatively meaningless.

To me, the meat of this bill is that it would be an unfair trade practice to sell at a price lower than the world market; therefore, you are letting the world market establish the domestic price in the United States. If the foreign producers desire to collude among themselves, and set a high price, then if this bill passes we are going to have a high price here, because of some foreign government's action.

Mr. MOSS. I don't think it is within the province of the gentleman from the Department of Commerce to tell the Congress whether or not we should pass the act. If you want to express an opinion on it, you may, but you are treading into some very dangerous matters.

Mr. THOMPSON. Let me comment with some further questions, then.

Mr. MEISSNER. May I please, Mr. Chairman? I did not come here today to discuss the bill. I am not in a position to relate to the Department of Commerce's viewpoint on the bill. I am sure that will come at some later date.

Mr. MOSS. That is right.

Mr. MEISSNER. But to answer Congressman Thompson, may I say there is an agency known as CIPEC. It is the Intergovernment Council of Copper Exporting Companies. CIPEC consists of the governments of Chile, Congo, Peru, and Zambia. Combined, these countries account for 45 percent of the free world primary copper production, and 80 percent of all copper exports. They are currently studying potential short and long-term price stabilization methods, such as buffer stock arrangements and a possible copper bank. This,

we are well aware of. Most of the member countries have taken certain nationalization acts with respect to copper.

The Congo, in 1966, nationalized its copper industry, owned at that time by the Union Miniere of Belgium. Zambia in 1969 forced its major producers, their Roan Selection Trusts, and Anglo-American Corp., to sell 50 percent interest to the Zambian Government. The Chilean Government has forced Anaconda and Kennecott to sell 51 percent of the Chilean properties to the government. The Peruvian Government to date has not interfered with Cerro's properties, Cerro being an American company, or with the Southern Peru Copper Co. owned by four U.S. companies. I merely want to, I hope that is—

Mr. THOMPSON. Yes; that very definitely—

Mr. MEISSNER. Now, I am sure the State Department could go into much, much more detail as to all the mechanisms their meetings, and so forth.

Mr. THOMPSON. I am delighted that you put that in the record, because that is a great concern of mine. We are a great consumer of copper and there are other consumers such as Japan, West Germany, and many other industrial nations. The nations are also going to be affected by the world market price, which, as I interpret it from your statement, is more and more going to be determined by cooperative collusion among the producing nations to set the price at what they desire it to be.

Now, if we, by passing this bill, are going to set that as the floor price here in the United States, and say it is an unfair trade practice to sell below the world market, we are placing the American consumer, not the American producer; the American producer may quite well have higher profits and so forth, but we are placing the American consumer at the mercy of the price decisions made by some of these foreign countries. They will set the price, and this is something I do not want to happen. But let me ask you several other questions.

I was interested in a comment you made that there was no way of knowing whether a mine is operating at capacity or not, in the United States. Surely the owners of the mine have some idea of whether they are operating at near capacity or capacity. I don't quite understand the reasons.

Mr. MEISSNER. Let me change the statement. Let me say that I would have no way of knowing.

Mr. THOMPSON. I see.

Mr. MOSS. May I interject at that point that you have specifically stated that your field is not mining and that you have no expertise in that area.

Mr. MEISSNER. Right.

Mr. THOMPSON. I misunderstood your earlier statement. I thought that the statement was that there was no way of knowing.

Mr. MEISSNER. I stand corrected. I said, as you said, but I would like to correct it, now, to "I have no way of knowing."

Mr. THOMPSON. Yes. Do you not feel that it is reasonable, in fact, government should demand, that the pollution emissions from the refineries be held to a very bare minimum, and if this does result in a curtailment of production, then that, in and of itself, would tend to bring the U.S. price higher and nearer the world price? Do you not feel that we should have pollution controls?

Mr. MEISSNER. Oh, of course, I definitely do.

Mr. THOMPSON. Well, I frankly am, in my action here in Congress, going to insist on pollution controls in these areas, and if it costs more money to produce the product in order to cut out the emissions, then I think that is what we will have to have. But that, in and of itself, may correct some of the pricing problems that you feel we are involved in.

Mr. MEISSNER. Well, might I add that the Department of Commerce at the moment has under consideration some applications of ores and concentrates which companies would like to ship abroad for smelting and bring back to the United States because of the smoke pollution problem, and as a temporary expediency, there is no question in my mind that we will grant these applications. The new export controls, effective from July for the balance of this year, based on the Houthakker report, which has a recommendation that we permit reverse toll in the ores and concentrates area.

In other words, insofar as the one company that I mentioned, saying that they are at the moment having trouble, and they are declaring force majeure on the ores and concentrates, I believe we will permit to export. I am not the final authority in this, I might say; the Office of Export Control will make the ultimate decision. We will permit them to export their ores and concentrates abroad temporarily, and bring the refined copper back.

Mr. THOMPSON. Under the Export Control Act; is there a total prohibition on exports?

Mr. MEISSNER. No; the export controls, sir, are administered on the basis of short supply. If we deem there is a short supply in the United States, the Copper Division of BDSA then goes forward and presents a paper to the Export Policy Committee, wherein we state that there is not sufficient copper in the United States, with the appropriate factual data and so forth, and request that there be an embargo or a limited amount permitted to be exported.

Mr. THOMPSON. But there, of course, is sufficient copper in the United States to have the price of copper below the world market price, because the demand is not as great as the supply, as related to world situation.

Mr. MEISSNER. No, Congressman. We can't say there is sufficient copper in the United States, when we have just asked Congress to suspend the import duty, and we are traditionally a net importer of about 12 percent of our copper requirements. The fact that there is a difference of price in the United States is only because the domestic producers have elected to sell their copper at 60 cents.

Mr. THOMPSON. If they elect to sell their copper at 60 cents, I can't understand why we, as the Congress, should object to their selling it at a lower price. If their stockholders are happy, they are selling it below the world price, I think that speaks well of American industry.

If they can make a profit at that. Possibly they don't want excessive profits. I don't know.

Mr. MEISSNER. Well, I can't answer to the assumptions or the rationalization that American management takes to price their material. I was merely trying to state the facts as requested.

Mr. THOMPSON. But there is no tariff, basically, on the importation of copper at present.

Mr. MEISSNER. There is a duty on the importation of copper, which Congress has just recently suspended. We have had a suspension for the last 6 years now.

Mr. THOMPSON. Under the suspension, there is no——

Mr. MEISSNER. Not on refined copper per se, but there is a duty on certain fabricated products. On an ad valorem basis.

Mr. THOMPSON. So basically, what you are saying is there is no surplus of copper in the United States today, domestic.

Mr. MEISSNER. To the best of our knowledge.

Mr. THOMPSON. But yet the producers continue to produce and sell at a price below the world market price.

Mr. MEISSNER. Right. And consistently, for the last 5 years.

Mr. THOMPSON. And in addition to that, we are making discoveries which are outpacing the consumption. In other words, reserve. We are discovering new copper reserves, domestically, which are outpacing domestic consumption.

Mr. MOSS. Mr. Meissner stated quite specifically that he was not an authority, nor did he have any basis for making any comment on that.

Mr. THOMPSON. I believe in response to——

Mr. MOSS. Mr. Eckhardt asked that the information be secured. The Chair has instructed the staff to secure it from the Bureau of Mines.

Isn't that correct, Mr. Meissner?

Mr. THOMPSON. Now with regard to earlier, you mentioned, I believe, a GSA loan. I wasn't quite clear as to the \$83 million you are talking about.

Mr. MEISSNER. Congressman, there was available \$100 million. I don't know the legislation or the act. And this \$100 million was available to expand copper production. Subsequently, an interagency committee was formed. The Chairman of the committee was the Administrator of the General Services Administration. I served on the committee as the Department of Commerce's representative, for a brief period of time, until I became ill and hospitalized for a period of months, but subsequently, many applications came in, and the intent here was to take small marginal operations that did not have the finance required to encourage more production of refined copper, and one of the successful companies was Duval, and they were given a Government loan of \$83 million to be repaid over a period of years, with refined copper, to be delivered to the U.S. Government.

Mr. THOMPSON. And that was to be repaid in copper at 38 cents a pound.

Mr. MEISSNER. 38 cents a pound, and the delivery is about the same.

Mr. THOMPSON. And the current price is——

Mr. MEISSNER. The current price is 60 cents.

Mr. THOMPSON. So each time they repay that in copper, perhaps it would be better for them to sell their product and then repay it in dollars. Is there a provision whereby they can do that?

Mr. MEISSNER. I am not thoroughly familiar with the details of the contract. I believe 50 percent is deliverable to the U.S. Government, over a period of years, and the other 50 percent is salable on the market.

Mr. THOMPSON. The reason I raise that question is, obviously, if the price is greater than 38 cents a pound, that company, if the intention was to help them, is being hurt at present by delivering to the United States copper at 38 cents a pound, which they could sell for 60, and then pay the Government with the money thus obtained.

If it were to drop below the 38 cents, then, of course, it would be to their advantage to deliver copper.

Mr. Chairman, I have no further questions.

Mr. Moss. Well, the Chair is going to be very brief. He wants to make it very, very clear that by no stretch of the imagination is this a price-fixing bill, nor is it intended to be a price-fixing bill. It is a twisting and torturing of the language to so characterize it. And I want that to be abundantly clear.

Now as to the total world production in tonnage, what is it?

Mr. MEISSNER. I hope you will bear with me a second, sir.

Mr. Moss. While you are looking for that, let me ask a question again. This trend toward a foreign government insisting that outside owners own less than a majority is neither new or novel nor unique to copper, is it?

Mr. MEISSNER. I am not as familiar with other commodities, but I think it is rather unique among copper, Mr. Chairman.

Mr. Moss. Well, it certainly is not unique as a matter of international policy, in dealing with the ownership of firms within a great many countries, and as chairman of the Committee on Foreign Operations of another committee of the House, I have encountered it in innumerable types of business and commercial activities, so I can state that it is not new.

Mr. MEISSNER. Well, you understand, Mr. Chairman, I eat, sleep, dream, and live with copper, so I don't pay too much attention to oil.

Mr. Moss. I have to eat, live, and sleep with a broader spectrum of problems. And have you now that figure of total world production?

Mr. MEISSNER. Yes. The total free world production, 1969 and this is in metric tons—

Mr. Moss. Yes.

Mr. MEISSNER (continuing) Which is different than we talk in the United States, where we talk short tons, is 5,885,500 tons. That would make a monthly average of 490,500.

Mr. Moss. Now what is the average U.S. use annually, in metric tons?

Mr. MEISSNER. Well, let me give you the U.S. figure. In this figure, the U.S. production for 1969 was 2 million—

Mr. Moss. I am talking now of U.S. use. This is the predicate for a question that I want to ask later on. So the total U.S. demand is, in metric tons?

Mr. MEISSNER. The U.S. consumption in 1969 was 1,924,200 tons. Metric tons.

Mr. Moss. Metric tons.

Mr. THOMPSON. Could we also have the U.S. production?

Mr. Moss. We have that. That was supplied earlier in the hearing.

Mr. THOMPSON. Oh, I didn't hear it. May I have the figure? We have U.S. use—

Mr. Moss. 2,260,000.

Mr. THOMPSON. 2 million what?

Mr. Moss. 2,260,000.

Mr. MEISSNER. Those are short tons, sir.

Mr. Moss. Those are short tons, not metric?

Mr. THOMPSON. All right, now how would that relate to metric tons?

Mr. MEISSNER. About 10 percent. Reduce it by 10 percent.

Mr. THOMPSON. So if you reduced it by 10 percent, then the U.S. production and consumption is roughly equivalent,

Mr. MEISSNER. Yes.

Mr. MOSS. Now we talk about the club which is being formed, or a cartel or whatever we want to call it, an international society, to set the price of copper, of which the United States might ultimately become subservient or a victim. We have a rather strong weapon. One, we have demand, and payment in desirable currencies, and two, we have a very wide latitude for substitution of materials, which the world producers would have to take cognizance of. Isn't that right?

Mr. MEISSNER. Right.

Mr. MOSS. As a matter of fact, the substitution of materials at the present time is being strongly urged, I believe, by another committee of this committee in the case of automobiles, because one of the great problems we have in disposing of auto scrap is copper content, when you melt it down, and it is a limiting factor. And if aluminum were substituted, in many instances, the melting down of the scrap would become much more feasible and maybe for some segments of our Government, more attractive? Is that correct?

Mr. MEISSNER. Yes.

Mr. MOSS. So that we are not defenseless before this club. Being a dominant consumer, having the capacity to substitute in many, many areas, the totality or the reach of that ability to substitute not yet being fully understood, we have a means to pressure back, if we are suddenly made the victim of a price-fixing arrangement which intends to exploit us. Is that correct?

Mr. MEISSNER. I would say so.

Mr. MOSS. Now do I understand that we are considering the exporting of pollution as a national policy?

Mr. MEISSNER. No; not a national policy.

Mr. MOSS. Well, if we are going to permit the issuance of licenses to export products in raw or semirefined state, for higher refining, in order to avoid collision with air emission standards of the United States; isn't the practical effect that we are exporting pollution?

It will have to be smeltered or refined in some other country, and as I have traveled around the world, I have found very few areas without major pollution problems, I was amazed earlier this year in flying into Anchorage, Alaska, to discover that from San Francisco to Anchorage, almost all the way, you had this massive wall of gray, obviously polluted air. It is beginning to move, and it is not just a matter of our concern here, within our close confines.

In fact, in the legislation we have reported out, we have included regional concepts, within the United States. We are no longer confining it to State boundaries. We are recognizing the character of some regions, and I believe that we have also made arrangements or are in the process of making arrangements with Canada, under some international compacts, because of the recognition of the fact that pollution is now not just a domestic, but rather, a worldwide problem.

Has that been considered at all in the deliberations of the Department of Commerce on relaxing the export requirements?

Mr. MEISSNER. We are not relaxing the export requirements, Congressman.

Mr. Moss. You are relaxing them for one purpose, if I recall your testimony correctly. You are considering relaxing them to permit the export of unrefined copper to be reimported. In other words, it would be a limited relaxation.

Mr. MEISSNER. On an individual basis.

Mr. Moss. On an individual basis. But is there any consideration being given to the possible adverse impact on the air quality of the countries to which the export license would be granted?

Mr. MEISSNER. No. The purpose here—

Mr. Moss. I suggest that it might be appropriate for the Department of Commerce to make some inquiry.

Mr. MEISSNER. Mr. Chairman, may I introduce into the record the Department of Commerce's press release of Thursday, July 2?

Mr. Moss. Certainly, you may, and at this point, it will be received. (The press release referred to follows:)

[Press Release—Department of Commerce, Thursday, July 2, 1970]

COPPER EXPORT QUOTAS SET FOR LAST HALF OF 1970

The U.S. Department of Commerce today announced short supply export quotas for copper and related products for the last half of 1970.

In view of improvements in the supply/demand and pricing situation, the controls have been liberalized by increasing certain quotas and by allowing additional quantities to be exported where the material is to be smelted or refined abroad and returned to the United States.

Additionally the Department said it would review the situation in the next few months to see if any further adjustments in the controls may be warranted.

Two quotas were increased. The second half quota on copper-base alloy ingots was raised to 2,000 copper content short tons; that on semifabricated copper products and master alloys of copper was increased to 12,000 copper content short tons.

The second half quotas will remain the same as those in the first half on (a) ores, concentrates, matte, blister and other unrefined copper, (b) copper-base scrap, and (c) refined copper of domestic origin. New quotas are established for the present period, however, to permit both unrestricted quantities (i.e., an open-end quota) of smelter grades of unrefined copper and a maximum of 10,000 copper content short tons of copper-base scrap of custom smelter or refinery grades to be authorized for export without charge to any quota for the purpose of being processed abroad for subsequent return to the United States.

Also, ingots and semifabricated products of beryllium-copper alloys are no longer to be subject to quantitative quota controls but are to be licensed without reference to any specific export ceiling.

In reaching these decisions the Department consulted with the Departments of Defense, State, Interior, and Agriculture, as well as with the Council of Economic Advisers and other interested agencies.

The quotas for the July-December 1970 period are as follows:

Ores, concentrates, matte, blister and other unrefined copper—closed quota (embargo), but with provision for the authorization of reverse tolling on unrestricted quantities of smelter grades of unrefined copper.

Copper-base scrap—30,000 copper content short tons, but with provision for the authorization of reverse tolling on up to an additional 10,000 copper content short tons of custom smelter and refinery grades of copper-base scrap.

Refined copper of domestic origin—25,000 copper content short tons.

Refined copper of foreign origin—open-end quota (no quantitative restrictions).

Copper-base alloy ingots—2,000 copper content short tons.

Semifabricated copper products and master alloys—12,000 copper content short tons.

Historical exporters must file applications with the Department's Office of Export Control no later than December 1, 1970. A date for filing by nonhistorical exporters will be announced later. Applications to export semifabricated copper products and master alloys of copper are not subject to time schedules and may be submitted at any time.

The Department's Office of Export Control will notify each exporter of his share of the quotas for copper-base scrap and for copper-base alloy ingots. For refined copper, quantities allocated to each exporter will be the same as during the preceding six-month period (Jan—June 1970) and there will be no specific notification to exporters by the Office of Export Control.

The Office of Export Control will announce additional details as soon as possible on, *inter alia*, (a) criteria and procedures to be followed with respect to reverse toll authorizations and (b) the allocations to exporters of individual entitlements for semifabricated copper products and master alloys of copper.

Details on information in this release will appear in a Current Export Bulletin to be published early in July. Copies may be obtained for 25 cents from any U.S. Department of Commerce Field Office or from Room 6043 of the U.S. Department of Commerce Building, Washington, D.C. 20230.

Mr. MEISSNER. I will only read the first sentence. "The U.S. Department of Commerce today announced the short supply export quotas for copper and related products for the last half of 1970."

And I merely want to point out that in this press release, we state a procedure for permitting reverse toll, providing the refined copper comes back to the United States.

Mr. Moss. Yes, that is the way I understood it, but that is why I asked the question as I did about exporting pollution. I don't know which countries would be receiving it, but I have been in a great many, and I have observed the phenomenon of pollution, in fact, in some parts of the world where it is much worse than anything I have encountered in the United States.

Mr. MEISSNER. Congressman, we are faced with this problem. At a small mine, or even a large mine, we have concentrates above the ground; we can't process them if we can export them abroad, and get them processed, and bring them back, this just makes good sense. This is not going to be a rule forever; it just would make good sense, in lieu of closing the mine, and laying off miners, that we move the concentrates, to get the refined copper back.

Mr. Moss. I was looking at the broader implications of policy and the interpretation which might be placed upon a policy which tends to overlook the interests of other areas of the world. I know that we have a serious shortage of smelting capacity, and I know that that compounds the problem with which this committee is now concerned, and I am no more anxious than anyone else to see unemployment in the United States. In the long run, we also have to look at the impact of our policy, our short-term policy, upon our long-range relationships with other countries. We have sometimes been accused of being exploiters, and that doesn't always enhance our ability to deal with other nations.

I recognize that that is not an assignment that is supposed to be undertaken by you, but I mention it for possible consideration.

Mr. Eckhardt?

Mr. ECKHARDT. I have one other brief line of questions. Mr. Thompson had asked several questions a minute ago with respect to raising the price to the world price. The question I would like to get at is this: Are there not situations in which present users of copper, in a shortage situation, can simply not get copper, and therefore, must buy copper at the world price at the present time?

Mr. MEISSNER. The answer is "Yes."

Mr. ECKHARDT. And, of course, when the spread is as much as 10 or 20 cents, why this puts that user in a very bad competitive position, with users who are able to get copper at the domestic price. Is that not true?

Mr. MEISSNER. Yes.

Mr. ECKHARDT. And that is what seems to me we are getting at, in the bill.

Mr. MOSS. The gentleman is correct that that is the intent.

Mr. ECKHARDT. We are not attempting to set price at the world price, but rather to provide that if the disparity is to exist among users, then the users must come in on an equal footing. That is the way I understand the bill to read.

Mr. MOSS. That is correct. And I believe Mr. Blanton would concur in that statement of the objectives.

Mr. BLANTON. Yes. We do produce more than we consume. So we naturally have some export.

Mr. MOSS. Are there further questions at this point?

Well, I too want to thank you, and for appearing here this morning on such short notice. We will be back in touch with you on a few points; and the material that I requested I would like supplied to the committee.

Mr. MEISSNER. I believe we have a list of that, but I would like to check later in the afternoon, to make sure.

Mr. MOSS. Check with your counsel, if you desire.

Mr. MEISSNER. No; I mean if I have got the full list of what the committee wants.

Mr. MOSS. Fine.

Thank you. Now we were to hear from Mr. Henderson, Mr. Arciola, Mr. Gold, and Mr. Oliner. Can you gentlemen come back tomorrow morning at 10?

Mr. HENDERSON. Mr. Chairman, so far as I am concerned.

Mr. MOSS. The House is now in session. Under the rules of the House, we cannot sit at this time.

Mr. HENDERSON. Mr. Chairman, so far as I am concerned, certainly I can come back in the morning. These gentlemen have businesses to run; they are small businesses, and it is a hardship on them.

Mr. MOSS. I recognize this, and I truly regret it, but there is on the floor of the House legislative business, and under the rules of the House, the committee is not authorized to sit.

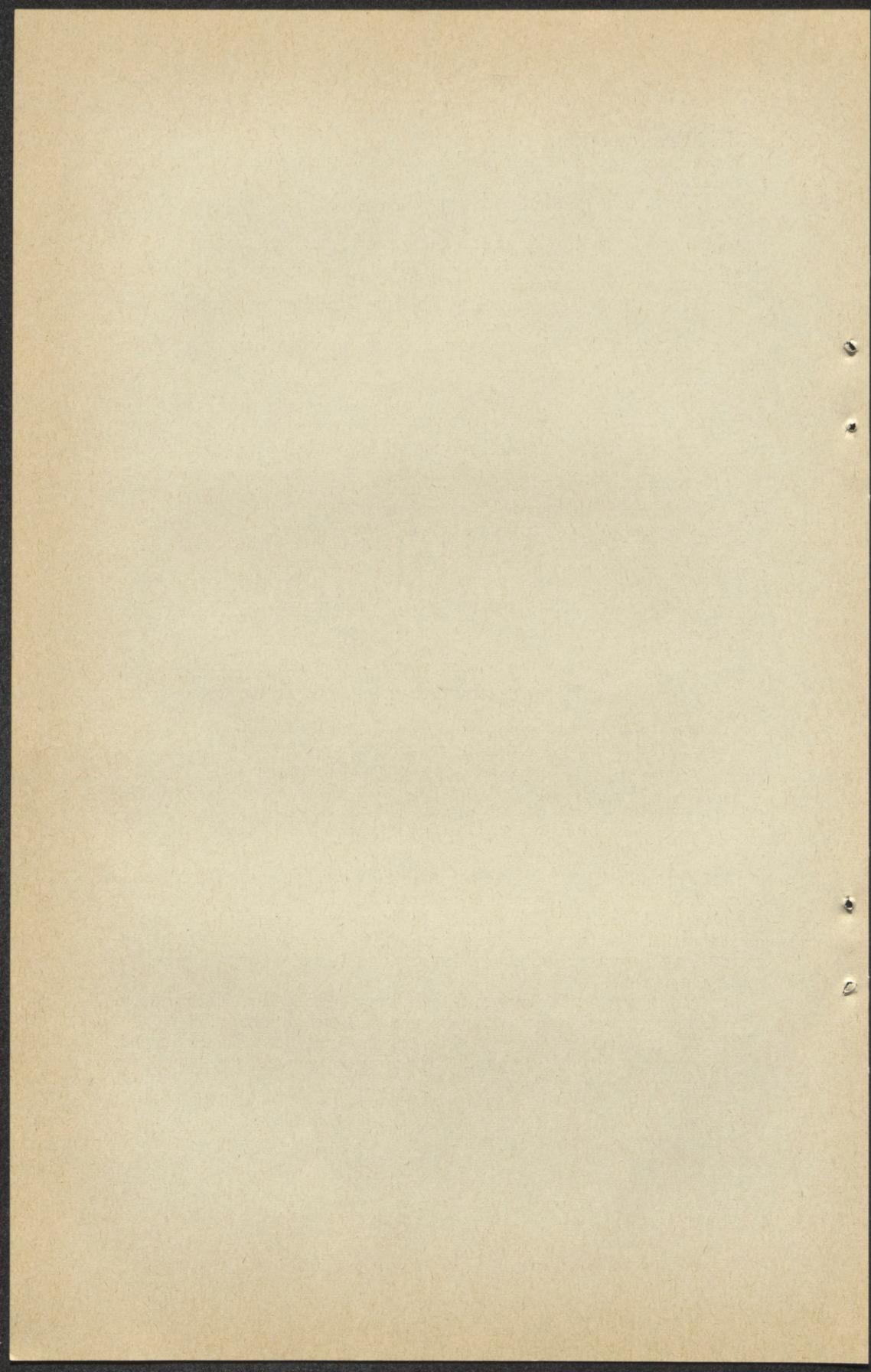
Mr. HENDERSON. I understand that, sir.

Mr. MOSS. Since legislative business is being transacted, I have no alternative but to adjourn the hearings until 10 tomorrow morning, and at that time, I will be pleased to hear from as many of those as can return. From those who can't, we will be pleased to receive statements for the record, or attempt to arrange a later date which will be more convenient.

Mr. HENDERSON. We appreciate it very much, Mr. Chairman. I will notify your secretary as to who will be here tomorrow.

Mr. MOSS. Fine. Thank you. The committee will stand adjourned.

(Whereupon, at 12:15 p.m., the committee was adjourned, to reconvene at 10 a.m., Tuesday, July 21, 1970.)



COPPER PRICING PRACTICES

TUESDAY, JULY 21, 1970

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON COMMERCE AND FINANCE,
COMMITTEE ON INTERSTATE AND FOREIGN COMMERCE,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to notice, in room 2322, Rayburn House Office Building, Hon. John E. Moss (chairman) presiding.

Mr. Moss. The subcommittee will be in order.

Our first witness this morning will be the Honorable Gus Yatron, from the State of Pennsylvania.

STATEMENT OF HON. GUS YATRON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF PENNSYLVANIA

Mr. YATRON. Mr. Chairman, I am very pleased to be able to appear today before the Subcommittee on Commerce and Finance in support of H.R. 17657, a bill to restrict the copper industry's two-tier pricing system.

I would like to preface my statement by commending you, Mr. Chairman, and our able colleague from Tennessee (Mr. Blanton), for the leadership you have provided in attempting to resolve this problem.

As you know, a few large companies today wield a disproportionate influence within the copper industry. The net effect has been to place the independent copper fabricators at a competitive disadvantage and, in some cases, to force them out of business.

Three such firms in my congressional district, employing nearly 1,000 workers, have been adversely affected by this intolerable situation. The large companies control nearly all of the refined copper coming from mines in the United States. They process most of this copper through their own fabricating subsidiaries, setting prices the independent fabricators simply cannot afford.

The flow of South American copper to other markets has produced a severe shortage in the United States. To complicate the problem, the large American copper companies are profiting handsomely from these foreign sales and therefore have a vested interest in perpetuating the domestic shortage.

In addition, some large producers have entered the scrap market, bidding up the price to a point that the independents can no longer afford to purchase even scrap copper. Thus the monopolistic cycle is completed, and the independent finds himself in an increasingly untenable position.

Although the Nixon administration seems to feel that the economic outlook will improve, I personally doubt whether market conditions will be able to correct themselves when in fact the dynamics of free enterprise have not been permitted to operate. Can we reasonably expect a monopoly to yield to the legitimate needs of the independent fabricators without Government action?

For the aforementioned reasons, Mr. Chairman, I respectfully urge you to approve this vitally important legislation.

Thank you very much, Mr. Chairman.

Mr. MOSS. Thank you, Mr. Yatron, for sharing your views with us this morning.

Mr. YATRON. I appreciate the opportunity, Mr. Chairman. Thank you.

Mr. MOSS. Our next witness is Mr. Murray Valene, vice president, Federal Copper & Aluminum Co., of Minneapolis, Minn.

Mr. Valene?

STATEMENT OF MURRAY VALENE, VICE PRESIDENT, FEDERAL COPPER & ALUMINUM CO.

Mr. VALENE. Shall I proceed to read the statement?

Mr. MOSS. Yes, indeed.

Mr. VALENE. Mr. Chairman, we have a new, fully integrated copper tube mill in Pulaski, Tenn., which is capable of melting, casting, extruding, and finishing 3,000 tons of finished water tube, industrial, and refrigeration tube monthly. We are, however, unable to purchase our copper requirements from any of the copper producers. The U.S. domestic price is based at approximately 60 cents a pound, and our major competitors are buying 60 to 100 percent of their metal at that price. Of our major competitors, Chase Brass & Copper is wholly owned by Kennecott Copper; Phelps Dodge Tubing is owned by Phelps Dodge Mining Co., and American Brass is owned by Anaconda. Since the only copper that we can buy is "outside COMEX copper," which today is at premium from what our major competitors with producer copper are paying, all of the major producers of copper have refused our own orders. They state that when they have more copper available they will be happy to see us, but only after they first offer the copper to their old customers who demand sizable increases over their monthly allocation.

We are a small company, and we are experiencing a heavy loss. The city of Pulaski aided and helped finance the project for the sole purpose of providing employment for the area citizens.

Gentlemen, I would now like to go into the present system of buying copper and the two-tier pricing system that prevails in the market today.

Refined copper is available in the United States from producers or from the "outside" market.

The producers market is dominated by a small number of large producers who have considerable discretion in setting prices. Not all producers charge the same price, but generally all producers fall within a narrow band of a few cents and tend to move up or down at about the same time. The outside market is a complete conglomerate-

tion of secondary refiner importers, commodity exchanges, and merchants. Prices in this sector also vary among submarket, but, again, within a band of a few cents.

For more than 6 years now, there has been a large and persistent gap between the levels of prices in the two markets. As of May 1, 1970, most domestic producers sold refined copper at 60 cents per pound, which in the outside market prices ranged around 75 to 80 cents. When we speak of the two-price system it is this gap between price in the producers and outside markets.

For the most part, the outside market is open in the sense anyone may purchase copper there if he can pay the price. The producers level is a closed one, a system of allocating their supplies to a few customers and regulating the quantity they can buy.

Since 1963 only companies with past buying patterns with the major producers were allowed a producers position, meaning that new companies such as ours and companies that were not on their books in 1963 are forced to buy on the "outside market."

Anyone who has a copper position then is guaranteed, at least in part if not in whole, copper at a guaranteed set price.

The three major mining companies, Kennecott, Phelps Dodge, and Anaconda who virtually control 70 percent of copper produced in the United States also are the largest fabricators of copper products through their subsidiaries. They, through their conglomerates, have created a giant monopoly of the entire industry.

If a company like Anaconda can produce refined copper at a cost of 20 to 30 cents per pound and then turn around and sell their subsidiaries at 60 cents per pound, does it really make much difference what they sell the finished copper products for?

I urge Congress to enact legislation that will protect the small independent fabricator and break up the flagrant monopolies that have been created.

The copper producers should be forced to broaden their customer base. The producers should take copper from their own wholly owned subsidiaries and distribute among the independent companies and to companies with a small allocation.

If copper is short, which, in my opinion, I have deep reservation over this statement being true, then everyone should have an equal percent of allocation to their needs based on present usage. This would mean that the giant copper conglomerates would have to give up part of their allocation to give a broader base to all and give everyone the same buying exposure on the "outside market." This would give everyone the same basis upon which to compete effectively.

The other possible solution would be a free market situation where all copper would be sold on some sort of an exchange and would make copper available on a supply and demand factor wholly, giving every fabricator the right to compete effectively on an open and free market.

Even if the inequities were solved, the big underlying problem is that controls would be necessary on the conglomerates as far as pricing policies are concerned, or the giant monopolies should be broken. The giant monopolies of Kennecott, Anaconda, and Phelps Dodge should be forced to divest of their manufacturing facilities. Only in this way would we be able to protect the free enterprise system.

Because of the existing allocation system and the unfair competitive nature of this industry, many independent fabricators have endured severe losses, and many have gone out of business.

The Stewart Draft Virginia factory of the H. K. Porter Co., Roberts Tube, Cadillac Cable, and others have gone out of business this year alone.

The system needs a major overhauling. The producers have refused to correct the inequities and continue to keep their stronghold over the industry.

Legislative action is needed now and legal action should be taken immediately.

Thank you.

Mr. Moss. Thank you.

Mr. Blanton?

Mr. BLANTON. Thank you, Mr. Chairman.

I want to express my thanks to Mr. Valene for coming to testify before our committee.

Mr. Valene, do you know of any companies, since 1963, that have gotten a position with the producers?

Mr. VALENE. No, I don't.

Mr. BLANTON. No new companies have gotten positions since 1963?

Mr. VALENE. There have been rumors in the market that there have been, but I can't substantiate them.

Mr. BLANTON. Well, you don't think there are any?

Mr. VALENE. I don't think there are any, to the best of my knowledge.

Mr. BLANTON. Well, the current allocation system did begin in 1963.

Mr. VALENE. That is correct.

Mr. BLANTON. Granted there is a copper shortage in this country of domestic copper, yet anyone can get as much copper as he wants if he is willing to pay for it. Do you know how the brokers get their copper?

Mr. VALENE. Yes. The main hedging exchange in the United States is the COMEX, which is a part of the New York Stock Exchange, and they buy copper, or they broker copper, from secondary refiners. There have been cases where they have also brokered scrap, and that is primarily where the brokers get their copper. There are some brokers that it is believed that they have a producers position, and then they will turn around and sell to somebody on the outside market and they have traded the position over the years. But primarily the secondary refiners are people who buy No. 2 scrap, and refine it, and come up with fire refined or cathode copper, and then sell it on an open exchange.

Mr. BLANTON. There are thought to be, though, some instances where a broker does have a position with the producer.

Mr. VALENE. Yes, I believe this is true.

Mr. BLANTON. I would like to withhold the balance of my questions for other members if they would at this time.

Mr. Moss. Mr. Eckhardt?

Mr. ECKHARDT. Mr. Valene, I certainly do understand the situation your companies are in, that your company is in, and the other companies in the same position. It seems to me certainly something ought to be done about it. You are excluded from purchasing

copper except on the international market at a price which is maybe as much as 20 cents, I understand, above the domestic price.

Mr. VALENE. That is correct.

Mr. ECKHARDT. And yet you must compete with subsidiaries of companies that naturally have an inside road to obtain copper.

There is one thing, though, that troubles me somewhat about this bill, and that is whether or not the producers of copper would move in the direction of their alternative choice, that is, simply to raise the price of domestic copper to that of the international market, rather than to utilize the other approach which would be available to them, and that is to allocate copper on a fair and equitable basis amongst the users. What is your feeling as to what the companies would do if a bill went into effect that gives them that choice, so to speak?

Mr. VALENE. Well, that is a tough question, because there is no simple answer for the problem. But I believe that they would probably continue on with a modified allocation system, perhaps creating a set price, but having a broader base, maybe through a pool-type system of setting aside a certain percentage of their copper into a pool that would be then dispersed to the companies without allocations or with small allocations.

Mr. ECKHARDT. Now, you have said, and I think accurately, that if the copper producer may sell copper at 60 cents and produce it at something around 30 cents to its subsidiaries, it makes no difference whatsoever as to whether or not the final product is sold at a profit to the subsidiary because the money can be drained off and the profits can be drained off at the producer level.

Now, why wouldn't they just go ahead, then, and raise the price of copper in the United States to 60 cents, or to 61½ cents, approximately, which I understand is about the present London Metal Exchange price, and simply sell their final product from their subsidiary companies at about cost, barely above cost, or even under cost for that matter?

Mr. VALENE. Nothing would really stop them and with the present pricing system that is existing today, which is what I tried to bring out in the statement, that there is an unfair pricing situation going on today which is not allowing an independent fabricator really to make a profit today.

Mr. ECKHARDT. Well, I certainly understand that but, of course, in the absence of any other approach it would seem to me that the approach of this bill should be just from the standpoint of equity as between those who act as fabricators and as between those who are subsidiaries or preferred customers and the real independents, but I am just feeling around for possible other answers in the event that this method would still afford a means of maintaining a relatively high price of copper, permitting the producer of copper to make his profit at that level and requiring you folks to operate at an extremely small margin of profit as against subsidiaries, and this leads me to explore the other possible solution that you refer to on page 5. You say:

The other possible solution would be a free market situation, where all copper would be sold on some sort of an exchange and would make copper available on a supply and demand factor wholly, giving every fabricator the right to compete effectively on an open and free market.

Do you have any suggestion as to the mechanics of accomplishing that objective?

Mr. VALENE. Well, again, this is a complex problem. The London Metal Exchange, which is the major hedge market in the world today, is close to being a free supply and demand market. There could be some modifications on it to make it a broader, more complete market.

Copper is an international commodity. We are a net importer. We are affected directly by the world price. Really, in my opinion, it should be a world product, and should be treated strictly on the world supply-and-demand factor; when copper is tight, or in short supply, the price would be higher, but as demand—it is strictly supply-and-demand factor. As the demand goes down, the price goes down.

In my opinion, I think that if we went on a free market basis, I think you would see a lower world copper price, somewhere around the range of 45 to 50 cents a pound.

Mr. ECKHARDT. Well, I am really asking for information here. You are a man who is experienced in the business and I would appreciate your giving me the information. Some of the questions I ask may appear naive.

Mr. VALENE. If I can answer them, I will try.

I don't know all the answers.

Mr. ECKHARDT. But do I understand—can you explain to me the limitations on American copper export?

Mr. VALENE. Well, to the best of my knowledge, copper exports of our producers refined copper are not allowed. I think this begins in 1968 when they blocked off the exports, but there is allowed 33,000 tons of copper scrap, or copper-bearing scrap, to be exported out of the country on a yearly basis.

Mr. ECKHARDT. Well, then, I understand, because we are not permitted to export copper, the result is that the production of copper in the United States does not affect appreciably, or at least does not affect directly, the price of copper on, say, the London Metal Market. Is that correct?

Mr. VALENE. We are technically the largest producer of copper in the world.

Mr. ECKHARDT. Yes.

Mr. VALENE. And I think that our producers' price has some bearing on the outside world price.

Mr. ECKHARDT. Yes, I imagine it does. But, now, I am certainly not suggesting that this should be the case, but if we were selling copper freely in the world market there would be a tendency for the price of copper on the London Metal Exchange to be the same as the price of copper from the producers in the United States; is that not correct?

Mr. VALENE. No. I think if we were selling on a free market it would strictly be a strictly supply and demand factor. This is an artificial price of 60 cents today.

Mr. ECKHARDT. But if there were a supply and demand factor determining the price of copper, there would be a tendency then for copper to reach a single price, wherever you purchased it, would there not?

Mr. VALENE. That is right. It may fluctuate daily.

Mr. ECKHARDT. So, in effect, the difference between these prices, and the fact that you must pay a high price for copper in the world market, is indirectly related to the exclusion of export, is it not?

Mr. VALENE. It could be, yes.

Mr. ECKHARDT. Now, I am interested, again, in exploring your suggestion here about the equal availability of copper to fabricators.

As I understand, there is a stockpile of copper that the United States maintains but I assume that that is only available for those using copper for sale to the United States in various defense items. Is that correct?

Mr. VALENE. That is correct.

Mr. ECKHARDT. Would it be a possibility to provide for an additional amount of copper, maintained in a stockpile in somewhat the same way that the present U.S. stockpile is maintained but made available to those who are not defense producers at the U.S. market price?

Mr. VALENE. Yes, I think this would be probably the only real solution to this pool system I was talking about, of having an additional set-aside and creating a pool, a stockpile pool, and dispersing it through some sort of organization, whether it be private or through a Government organization through the Commerce Department.

Mr. ECKHARDT. I understand there are 230,000 tons in the stockpile at the present time and the announced goal is 775,000 tons. Of course, that would indicate that copper is being produced at too low a level of production to meet even the stockpile need, so I would assume that the suggestion of stockpiling some copper available to producers in the pinch, where the producers can't buy domestic copper, would have to envisage a greater level of production of copper at any rate, would it not?

Mr. VALENE. Yes. Well, there is a set-aside program now, and the Government is forcing the producers to set it aside. I think it is 17 percent, maybe a little bit less, of their production, for defense uses today.

Now, this has gone from 24 percent down to 17 percent; it may be down to 15 percent today, but to build the stockpile up is a costly thing for the Government and it is not really necessary at this point, in my opinion.

Mr. ECKHARDT. You mean it wouldn't be necessary to use the stockpile for the purposes of defense users?

Mr. VALENE. I am not saying that exactly. I think the stockpile is at a low level, and I don't think it really should be increased.

Mr. ECKHARDT. I see.

Mr. VALENE. I think if there would be a set-aside thing, it would be, should be separate from the defense stockpile.

Mr. ECKHARDT. Yes. We might, for instance, envisage a stockpile, say, 250,000 tons for the governmental purposes as a goal, and maybe perhaps the same amount in addition available for purchases of those who are not able to buy copper except on the world market. Would that be a possibility?

Mr. VALENE. That would be a possibility. That is the only real short-term solution to the situation, in my opinion, is setting up an additional pool of copper.

Mr. ECKHARDT. So, then, there would be two approaches that we have talked about now. One, that of the bill so that you will be able to buy even though at perhaps a high rate, at least the same rate that your competitors buy it.

Mr. VALENE. That is right.

Mr. ECKHARDT. The other would be for the Government to stockpile a certain amount of copper that would be available fairly and

equitably to independent producers, so as to equalize their position with those who are in a preferred position.

Now, I would assume there might be a third approach to it, which would be in the nature of antitrust action. For instance, we could consider breaking up the vertical monopoly of a company producing copper and also fabricating it. Or perhaps create a potential for an action in restraint of trade where copper is being sold to subsidiaries and to preferred companies but is being denied to independents.

This would give us three possible routes to follow and they are not necessarily, I assume, mutually exclusive.

Mr. VALENE. No. I mentioned this in my statement, this course. It is, unless something is really done, with the competitive pricing nature of the business today, even if everybody had the equal basis of buying copper at 60 cents a pound today, it still would, as the pricing is continuing today, force people out of business, even though they may be more efficient than people who are, you know, completely vertical all the way through the line. They could not survive. This is happening today. It is the pricing situation.

Mr. ECKHARDT. What would you think of passing H.R. 17657 as a temporary expedient, but writing into the bill, at least to study and perhaps even machinery going toward the stockpile idea and perhaps also toward the antitrust approach to solving the question?

What I am getting at is H.R. 17657, standing alone, might simply give the copper producers an out by raising the price, but with something in the nature I am speaking of you would have a backstop against that possibility and you would also indicate from Congress that this sort of thing will not be tolerated.

Mr. VALENE. I think this would be a good approach. It is a good beginning step and it has to go further, though, to alleviate the whole problem.

Mr. ECKHARDT. Well, thank you, Mr. Valene, I think your testimony has been most valuable.

Thank you, Mr. Chairman.

Mr. MOSS. Mr. Murphy?

Mr. MURPHY. Thank you, Mr. Chairman.

Mr. VALENE, how old is your company?

Mr. VALENE. We have been in business for 23 years. Our copper tube metal is the fabricating aspect. We have been in construction for a year, and we are in production now. So our tube mill, our manufacturing exposure, is short. Our problem is, we have a mill and can't get it going because we don't have metal at an equitable price, and today there is a temporary lull in the market where the price is low but this is strictly a temporary situation. The business is not that great in the construction industry, we are geared to virtually like in a depression state, and then world economic conditions are not that good, either, so there is a lull in the market where the outside price has come down but it is strictly a temporary-type situation. In fact, today, I believe Mr. Meissner quoted yesterday that copper last Friday was 61¼, or 60.47. Today it is 63¼ on the outside market. So there is definitely a rise in the world market, and it should be higher, but our big problem is that we are not able to buy copper at a competitive price and our second problem is that because of the nature of the business in dealing, trying to compete directly with the giant conglomerates, we are not really allowed today to make a

profit anyhow, because they are selling it at so close to cost of the metal.

Mr. MURPHY. But you have been living with the economic situation of the copper pricing for 23 years.

Mr. VALENE. Right. We are one of the largest distributors of copper water tube in the country today.

Mr. MURPHY. All right.

In your statement on page 5, you say that everyone should have an equal percent of allocation to their needs, based on present usage. Would you have some type of grandfather provision?

Mr. VALENE. What do you mean by that?

Mr. MURPHY. Well, that would be those people who are in the business today, and let us say people who might come into the business because they see an opportunity to exploit it with fabrication mills, would they be afforded the same treatment as those people who had been in the business as long as you have?

Mr. VALENE. Well, I would say, to be fair, I think that copper should be made available to everyone. I think that the more people that are competing in the market will broaden the base and make it a fairer competitive situation and probably better for the consumer as a whole. When you have such a small concentration of people as it is today they really control the prices and in many cases, as it has been in the past, where the price has been extremely high, relative to the cost of manufacturing, but I think that the more people that are in it that it shouldn't be a closed industry, it should be an open industry and it should be, if someone wants to, there is a tremendous investment of getting in, so not everybody will just jump in, and I think it would be good for the industry if it was left as an open field, rather than strictly a closed-door-type situation, as it is today.

Mr. MURPHY. How many housing starts on an annual basis do you feel would create a market that would make this industry healthy?

Mr. VALENE. I think housing starts are down to an alltime low. I don't have the exact figures in front of me right now.

Mr. MURPHY. About 1.1 million.

Mr. VALENE. 1.1 million. I think it should be—what—2.5, or something like that? Well, 2.5 would be a very healthy situation.

Mr. MURPHY. And if, say, we had a housing market or a copper market that high, even with new companies in, you still feel that would be healthy for the industry?

Mr. VALENE. I do. We are right at bottom in this industry right now. I mean, as far as housing, the automobile industry, this is why there is a basic lull in the market, but as soon as the economy starts to pick up, even a small percentage, we are going to see this copper disparity factor, the two-price system, probably be at the highest level it has ever been.

Today it doesn't look so bad but 6 months ago I think you would see a different picture altogether.

Mr. MURPHY. Thank you.

Mr. BLANTON. Would the gentleman yield?

Mr. MURPHY. I am ready to yield the floor.

Mr. BLANTON. One question: Isn't it a matter of fact that now most of the water tube is produced by the major companies subsidiaries, there are practically no independents producing water tube?

Mr. VALENE. Well, there are quite a few independents producing water tube, but it is a relatively small amount, you know, compared to tonnage factors.

Mr. BLANTON. Let me rephrase the question, then.

Six or 8 years ago, independents were producing a good percentage of the water tube market. Is that correct?

Mr. VALENE. Yes; a much larger percentage.

Mr. BLANTON. But now they are producing a very small percent of the water tube market.

Mr. VALENE. That is right.

Mr. BLANTON. Because the major producers' subsidiaries are producing the major portion of the water tube market.

Mr. VALENE. That is correct.

Mr. BLANTON. What I am getting at is the small fabricators are going out of business, because they can't compete with the subsidiaries in the water tube business.

I have no further questions.

Mr. MOSS. We will get the figures, the percentage produced by the independent, nonintegrated producers, in, say, 1962, as compared to the percentage produced in 1969 and have that for the benefit of the committee.

Mr. BLANTON. Thank you, Mr. Chairman.

Mr. MOSS. At the present time, domestic producers have the right if they want to raise their price to the level of the international market, have they not?

Mr. VALENE. Yes, they do. Although I think they are afraid of moving the price too fast.

Mr. MOSS. That is what I wanted to get at.

Mr. VALENE. They have been trying to move up.

Mr. MOSS. The damper has been fear of being priced out of certain highly desirable markets which over the long range provide certain stability to the industry; is that correct?

Mr. VALENE. That is one of the fears; that is correct. That is one of the fears. I think the other fear is the Government allowing them to make more inflationary policy.

Mr. MOSS. Are you talking about the use of export controls?

Mr. VALENE. I am talking about just allowing the copper industry, which is showing tremendous profits, as much as 30 percent profits after taxes, to allow them to keep raising their price up. It has been rolled back, and there have been steps to roll it back.

President Johnson rolled the price back.

Mr. MOSS. I notice that as of today, the price, and I assume it is the domestic price, is 60 $\frac{1}{4}$. You indicated that the London price was 63 $\frac{1}{4}$.

Mr. VALENE. That is right.

Mr. MOSS. Roughly 3 cents difference.

At the close of last week, it was about 1 cent difference.

Mr. VALENE. That is right.

Mr. MOSS. And what is the manufacturing experience of your copper tube mill in Tennessee? Is it operational?

Mr. VALENE. Yes, it is operational.

Mr. MOSS. How long has it been operational?

Mr. VALENE. We have been operating in a redraw capacity, which is buying semi-finished tubing and drawing it down, for the last 6

months. But we haven't been able to buy the copper. We could have gone into a full melting program but the outside copper was so high it was actually cheaper to buy semi-finished material than go out and buy outside scrap.

Mr. MOSS. Now, who did you buy the semi-finished material from?

Mr. VALENE. It is sort of a—from one of the major producers. Subsidiaries, yes. I would rather not give the name.

Mr. MOSS. What was the price for that?

Mr. VALENE. That was based at $11\frac{1}{2}$ cents over the 60 cents level.

Mr. MOSS. In other words, you were paying $11\frac{1}{2}$ cents above the domestic price for the intermediate processing? Is that correct?

Mr. VALENE. Right.

Mr. MOSS. In seeking business, do you meet the price in the market of the integrated producers?

Mr. VALENE. You have to meet it. If you don't meet it, you are just not going to sell. I mean, there are no little side markets that you can run to.

Mr. MOSS. In 6 months of manufacturing experience, it is rather difficult for us to get meaningful projections of profit from you. Is that correct?

Mr. VALENE. That is right. They haven't been very good.

Mr. MOSS. Do you know of any other metals that are handled in this same fashion?

Mr. VALENE. The allocation?

Mr. MOSS. The total integration by the producers through the manufacturing process and marketing.

Mr. VALENE. Steel, aluminum.

Mr. MOSS. Well, is there any allocation of anything like that to domestic producers, or are they freely available?

Mr. VALENE. I am not familiar with the other markets. The steel and the aluminum market.

Mr. MOSS. We will determine that, so that the committee has it available.

As I recall, those metals are not in short supply and the competition from imports in steel would make it impractical for this pattern to be enforced.

Mr. VALENE. Aluminum is fairly free, too, so I don't think we have the same situation.

Mr. MOSS. I recall when gold went on the free market that it went way up, I think to about \$45 an ounce, and gold is now riding at \$35, roughly $35\frac{1}{4}$. And not too long ago it was actually, for a time, under the \$35, which is the U.S. price. So the effect of a free market is rather unpredictable.

Mr. VALENE. That is right.

Mr. MOSS. A free market in copper could, as you have indicated, possibly bring about a lower average price.

Mr. VALENE. I think it would, basically, because there is a tremendous amount of—the reserves are great. There are too many countries that are wholly dependent on copper, and with tremendous reserves that would be forced to go out into miners.

Mr. MOSS. Now, if we were to take the totality of domestic production and allocate it among all domestic fabricators, then we would create a mixed price, between the domestic price and the need to buy a certain amount of import. Is that correct?

Mr. VALENE. That is true.

Mr. MOSS. That would still be, we would assume, below the world price, at least as reflected on the London market. I think we were given the statement yesterday by Mr. Meissner that there is actually a multiprice system, not a two-tier price system.

Mr. VALENE. That is right.

Mr. MOSS. He quoted the fact that there are the Canadian, Chilean, Zambian, merchant, and London exchange prices.

Mr. VALENE. Well, outside of the Canadian price and the U.S. price, all the other prices are, the Chilean, the Zambian price, are almost based on LME pricing, whatever the LME price is quoting; there is one giant hedge market and that is the LME market.

Mr. MOSS. And I assume that COMEX is analogous to the merchant price, or is it not?

Mr. VALENE. It is virtually a merchant price. It is relevant to scrap and the outside market.

Mr. MOSS. Now, when you make the statement that it doesn't really matter what price they sell for, you were referring to the sale of fabricated products rather than the basic copper itself?

Mr. VALENE. Yes, that is right.

Mr. MOSS. The inference there being that they were very much in the driver's seat in determining the price for domestically fabricated items.

Mr. VALENE. Yes.

Mr. MOSS. And as an independent producer you would be tied rather closely to that domestic price, whatever it might be, for a fabricated product.

Mr. VALENE. Yes, especially if I have to pay 80 cents a pound for scrap which we would have to—you see, back in May of 1970, the finished product was selling for 78 cents a pound and I would have a problem.

Mr. MOSS. Yes, I can well recognize it.

Mr. Keith?

Mr. KEITH. I have no questions, Mr. Chairman.

Mr. MOSS. Are there further questions of Mr. Valene?

Mr. ECKHARDT. I have one question.

Mr. MOSS. Mr. Eckhardt?

Mr. ECKHARDT. In the Clayton Act, there is a provision in section 13:

It shall be unlawful for any person engaged in commerce, in the course of such commerce, either directly or indirectly, to discriminate in price between different purchasers.

And I suppose that is not, at least directly, involved here since it is not a discrimination in price but rather a discrimination in affording the sale of the metal at all, which is involved.

Mr. VALENE. That is correct.

Mr. ECKHARDT. The discrimination in price comes about by your not being able to purchase in the domestic market; therefore, you are forced to go to a higher price, but from someone else.

Mr. VALENE. Yes.

Mr. ECKHARDT. Yet I note that in (b) of this same section, discrimination in price, which is, incidentally, titled "Discrimination in Price, Services or Facilities," it is provided that "Upon proof being made at any hearing on a complaint under this section, that there has

been discrimination in price or services or facilities furnished, the burden of rebutting the prima facie case"—and then it goes on to indicate that that burden is on the defendant.

I wonder if section (a) was worded so as to state "It shall be unlawful for any person engaged in commerce in the course of such commerce either directly or indirectly to discriminate in price" and then to add the words "services or facilities," whether this might not reach the question that you are involved with because, really, the discrimination is with respect to a service, so to speak, or an ability to obtain the commodity. I am just suggesting the possibility of a widening of the antitrust provision to cover this matter.

You may already be covered. I don't mean to imply that you are not. Many of these matters have not been fully litigated, as you know. But I merely suggest this as a possibility.

Mr. VALENE. I think there is a case in front of the Justice Department now with Triangle Industries, who is attacking—I am not familiar with the case, but I believe that they are filing something close to what you read off there.

Mr. ECKHARDT. If you could bring that to either the committee's attention or to mine—I don't know whether it is appropriate to ask for it as a committee or not.

Mr. MOSS. If the gentleman would yield I would say that we will have counsel prepare an opinion for the use of the committee and submit it to you for review. It is the Chair's opinion that the matter is covered under existing law, but that there has been a failure on the part of Justice to pursue this matter and that is why it was determined to go the route of amending the Federal Trade Commission Act to give present pricing practices a further classification of an unfair trade practice.

Mr. ECKHARDT. Mr. Chairman, I think this would be most useful, and counsel might also address attention to the possible applicability of section V of the Federal Trade Commission Act—

Mr. MOSS. We will have such an opinion drafted.

Mr. ECKHARDT. Which appears to give authority to the Federal Trade Commission to make rules with respect to unfair competition in an area of this nature.

I don't mean, Mr. Chairman, in this respect, to derogate the importance of the bill, but merely to touch on the nature of the practice.

Mr. MOSS. One of our problems is that there seems to be an agreement of many years standing between the Federal Trade Commission and the Department of Justice, where if one agency is pursuing the matter, the other, although clearly having authority, will not assume any responsibility until the first agency disposes of the matter. I have encountered this in a number of other cases covering marketing practices, and I think here, rather than having the Federal Trade Commission find it an unfair practice if the Congress itself finds it an unfair practice, and then directs the Federal Trade Commission to take the cognizance of it, we might get an expedited consideration of the problem.

Mr. BLANTON. Mr. Chairman?

Mr. ECKHARDT. Mr. Chairman, I assume that this may be known as the Alphonse and Gaston principle.

Mr. MOSS. That, I think, is a perfect characterization of the present relationship between Justice and the Federal Trade Commission.

Mr. BLANTON. Mr. Chairman?

Mr. MOSS. Mr. Blanton.

Mr. BLANTON. Mr. Chairman, has the Justice Department refused to testify on this legislation?

Mr. MOSS. They have not, nor has the Federal Trade Commission, and we will at a future date have them. They have indicated, I think, their willingness to respond to the needs of the committee but they admittedly were afforded the barest minimum of time in which to prepare and I felt it would have been unreasonable for the Chair to have insisted upon their appearance without adequate preparation for that appearance.

Mr. BLANTON. Well, I would hope that the Justice Department will appear.

Mr. MOSS. We will have them before us.

Mr. BLANTON. Since they have this on-again off-again situation on the copper situation.

Mr. MOSS. Yes.

Are there any further questions?

Mr. KEITH. Mr. Chairman, I have one question.

Mr. MOSS. Mr. Keith?

Mr. KEITH. Perhaps this doesn't fit the pattern of the rest of the question but to what extent is Red China buying copper? Do you know?

Mr. VALENE. The figures aren't entirely clear. They have affected the world price of copper by buying large quantities of copper through the London Metal Exchange and when they do get into the market there usually is a considerable rise, because they take out some tonnage.

Mr. KEITH. Are they buying it through the London Exchange and is that perhaps one reason why the London price is higher than ours?

Mr. VALENE. That is part of the reason. I don't think it is the whole reason. I think it adds to it.

Mr. MOSS. Would the gentleman yield?

I believe that yesterday Mr. Meissner testified that at this time China appears to have removed itself from the market and that that possibly accounts for some of the decline in prices on the London Metal Exchange.

Mr. VALENE. Yes, but not to the extent that the London Metal Exchange has gone. I think it is really a truer moving market than everybody supposes it may be.

Mr. KEITH. Could you explain that?

Mr. VALENE. I think it is a freer market. I think it is more regulated on supply and demand, even though it is a speculative market, and may be controlled, but in some cases—but I think it is a freer market. I just think that the world's demand at this particular time is down. The Chinese are out. This does affect it. The Japanese dropped some large tonnages of copper that they had in surplus. This helped to bring the world market down and this is where we stand.

Mr. KEITH. Is the major personality of the London market Fred Wolfe?

Mr. VALENE. Yes, I believe so. Or Mr. Lyons, I believe, Mr. Wolfe and Mr. Lyons.

Mr. KEITH. Thank you, Mr. Chairman.

Mr. Moss. Mr. Valene, we want to thank you for appearing here and giving the committee the benefit of your views.

Mr. VALENE. Thank you.

Mr. MOSS. We would like now to call at their request as a panel: Mr. Lee Smith, executive vice president, National Copper of Solon, Ohio; Mr. Steven Battist, president, Intercontinental Wire Co. of Robesonia, Pa.; and Mr. James Henderson, counsel, Independent Copper Fabricators Institute of Washington, D.C.; Mr. Gold, the president of Cadillac Cable Corp., Pottsville, Pa.

Mr. BLANTON. Mr. Chairman, maybe you misunderstood me. Mr. Smith is going to testify by himself, and these other gentlemen as a panel.

Mr. MOSS. I see. All right.

Then we will hear from Mr. Smith, and then from the panel.

The Chair stands corrected.

**STATEMENT OF CURTIS LEE SMITH, JR., EXECUTIVE VICE
PRESIDENT, NATIONAL COPPER & SMELTING CO.**

Mr. SMITH. Thank you, Mr. Chairman.

I am Curtis Lee Smith, Jr., executive vice president of the National Copper & Smelting Co. Our company is a small, independent manufacturer of copper tubing. We are classified as a redraw mill, purchasing our raw material in the form of large diameter tubular extrusions from primary producers and cold drawing them to small diameter tubing. There are about 10 independent redraw tube mills left, two having merged with primary mills within the last year and one going out of business. Of the two that merged, one merged with a domestic primary mill, not integrated with a producer, and the other was merged with a Canadian producer-owned company.

I am opposed to the legislation under consideration since it tries to come up with a simple solution to a complex matter, and I don't think there is an easy answer. Two-tier pricing comes about through an honest attempt by the producers to keep copper prices at a realistic level in contrast to the speculative influences affecting the world price and the LME. The decision of producers to sell to their regularly established customers in time of shortage is a normal sound business decision. However, the inequities that result from these policies can be severe and the redraw mill's position while differing from that of the integrated independent fabricator can be just as hazardous.

No redraw mill has a direct producer position. We have purchased our redraw tube from producer controlled or independent primary mills who bought the copper for their own accounts. They then owned this producer position and in times of shortage allocated us our share. The price charged us is on a so-called blended basis which is a combination of producer price and world price. This might or might not reflect the true cost of metal to them but since it is below the world price, of course, it is a bargain. The conversion cost added to this metal cost becomes noncompetitive since you will pay whatever it takes to get this "cheap" metal. The decision to cut back and only use producer-priced copper is no longer yours since the lowest price you can get is the blended price. If your allocation is less than your needs you must buy additional copper at the world price and have it converted.

Some of these problems of two-tier pricing have evaporated with a narrowing of the gap between the producer and world price. The raising of the producer price to the 60-cent level, however, creates a new problem. At this level the producer makes an excellent return on sales and investment. The pressure on the producer-owned fabricating facilities to show high return on investment is no longer as intense. Some competitive pricing in a slow period as we now have may reflect this situation. Of course these fabricating facilities want a maximum of profits but it is not a matter of life or death and 60-cent copper can well support these mills through some rough times.

For the redraw mills to survive, we must be able to compete. All these small mills have done the job of modernization of facilities equal to the larger mills. The failure to have a producer position which we could have converted at a competitive price in shortage periods minimize profits when business is good. In slow periods efficiency is no longer important if the producer-owned fabricator can operate under the umbrella of high primary copper prices and profits.

A step in the direction of eliminating some inequities for the redraw mills might be a voluntary recognition by the producers that we have been copper users through the years and need to control our own position. When stockpile releases were apportioned several years ago past usage was a criterion. Some approach along this line could be taken by the producers particularly with their new capacity in this country. One possible source would be the Government contracted metal being mined by Duval in Arizona and being delivered to the stockpile. A relatively small amount of copper allocated to the redraw mills at this time would produce no windfall in profits but would give the security of future producer supply which we lack today.

The small companies have contributed strength to the copper industry. New machines and new processes developed by the small companies have aided our technological advance. New products and marketing skills introduced by the smalls have widened the total market. I think there is a place for the creative innovation that a small company can quickly bring to market. Our ultimate suppliers, the producers, must recognize us as an important link in the distribution of their product and deal with us directly as the important customers we are.

Thank you, Mr. Chairman.

Mr. Moss. Thank you, Mr. Smith.

Mr. Blanton?

Mr. BLANTON. Thank you, Mr. Chairman.

I want to thank you, Mr. Smith, for appearing today, and I understand that your firm is over 50 years old and formerly your business was one of the largest manufacturers of water tubing.

Mr. SMITH. No, we were not one of the largest. We were a manufacturer of copper water tubing as well as small diameter tube.

Mr. BLANTON. Well, why are you not significant in the water tube field today?

Mr. SMITH. We are no longer able to compete with the selling price of water tube in relationship to the cost of our raw material. The price of our raw material has followed the producer price and the so-called blended price up, whereas the selling price of water tube has not followed that in direct proportion at all.

Mr. BLANTON. Who produces the major portion of water tubing?

Mr. SMITH. The primary producers, producer-owned and independent primary producers. There are still a large number of primary producers who are not producer-owned that do manufacture water tubing.

The secondary mills or the redraw mills are producing very little water tube today. Their production has gone off about 60 percent, I think.

Mr. BLANTON. And we could say, as the condition exists today in relation to water tube, especially produced for the building industry, that the producer-owned subsidiary more or less control the market as far as water tube?

Mr. SMITH. I would say they have the majority of it, yes.

Mr. BLANTON. Then the producers themselves, and the fact that they control the price of the mined copper, finished copper—to start with, they control the mine price, plus the fact that they control the majority of the market in water tube, then you could say that they have a controlled water tube market, then, both from price and from production?

Mr. SMITH. If it were better controlled, I think they would have a higher price, rather than it is today, but I think it is the combination of less demand and a scurrying around for the markets, too much production available in this field.

Mr. BLANTON. But you can't compete with it?

Mr. SMITH. We can't compete, no.

Mr. BLANTON. Why can't you compete with them, since you are an independent, and have these modern, new efficient methods of producing water tubing?

Mr. SMITH. We purchase a semi, what is called an extruded shell, and what we pay for that, over raw copper, is too close to the finished sales price of copper water tube.

Mr. BLANTON. In other words, the copper that you are forced to buy, as far as you are concerned, is the raw product for your industry?

Mr. SMITH. Yes,

Mr. BLANTON. In how many cents difference, or what percent difference in what the producer-owned subsidiary has to pay for his?

Mr. SMITH. Today, we would be close to the 60-cent level, the same as the producer. But the finished sales price of the product like copper water tube doesn't really reflect 60-cent copper today, and when copper was at the blended price of 68 cents a pound, this finished sales price of copper water tube didn't ever get to the point of reflecting that price.

Mr. BLANTON. You buy this thick-walled shell at about the same price as the subsidiary copper producer does?

Mr. SMITH. No, they buy raw copper, whereas we buy the extruded shell.

Mr. BLANTON. You have stated in your statement that you feel that the establishment of a domestic copper pool and the allocation of the metal to these small independent copper users would be possibly an answer to a situation, but—

Mr. SMITH. I would prefer it to be a voluntary thing with the producers, coming up with this, rather than—and taking it from our point of view as redraw customers we have theoretically a metal position. We do not own it ourselves, which causes a lot of our problems during shortage periods.

My point is that I wish the producers would recognize this position, and let us control our own copper supply. They have indicated they would do this, when we have approached them in the past. There just has not been sufficient copper to allocate us any of the copper at all.

Mr. BLANTON. Would you explain for the committee's information what the definition of a position with the producer means to a manufacturer?

Mr. SMITH. The position is the amount of copper that you are allocated, based on your previous history with that producer. And, as I understand, they have taken 1963 as a base year, and used the amount of copper you used during that period and then we will sell you today the same amount of copper or a percentage plus or minus from that on today's copper.

Mr. BLANTON. If I were a fabricator with no position with a producer, in what position would I be put as far as competing with your business, if you had a position, since you do have a position with the producer?

Mr. SMITH. You would be in a very difficult position, but I am not sure that you shouldn't be, as someone coming into the business, I don't know why you should get a position, where I can't have one, the way I have explained. I don't have a direct producer position.

Mr. BLANTON. But the bare fact that these positions exist tells us that it is a controlled market, right?

Mr. SMITH. Yes, sir, based on a shortage of the metal, however, I believe.

Mr. BLANTON. Well, whatever it is based on, still the producers, the mighty producers, are in complete control of the copper market.

Mr. SMITH. Right.

Mr. BLANTON. Well, this is one of the important points that I wanted to bring out, then. This is what we are trying to get at—that it is a completely controlled market, unfair competition does exist between the people that have positions and the ones who don't have positions.

I yield back the balance of my time.

Mr. MOSS. Mr. Eckhardt?

Mr. ECKHARDT. Did I understand you to say that it is more efficient to produce the smaller diameter tube that you produce directly from raw copper rather than to produce it by cold drawing the larger diameter?

Mr. SMITH. No. The material we buy is just one step in producing the small diameter tubing.

Mr. ECKHARDT. I see. What you mean is that the same process you perform has to be done somewhere in the process, whether you buy raw copper or whether you buy the tube.

Mr. SMITH. Correct. We just don't do what is called the hot work, melting and casting a pellet and extruding it. That is called the hot work. We do cold drawing only, from that point on.

Mr. ECKHARDT. Would you do the hot work if you could buy raw copper at the producer's price?

Mr. SMITH. That is an interesting question, and since we don't have a producer position we wouldn't be in a position today to make that choice.

Mr. ECKHARDT. Well, you simply can't get the raw copper at the producer price.

Mr. SMITH. That is correct.

Mr. ECKHARDT. So you haven't even explored this question?

Mr. SMITH. Right. We haven't, obviously, explored it. It takes a lot of money to do it, but from our point of view it would be foolhardy to go ahead and build basic facilities and not have copper to put in it, as Mr. Valene obviously did.

Mr. ECKHARDT. I think I understand, but I think you have also said that those who do perform both operations have an advantageous competitive position against you.

Mr. SMITH. Yes. They seem to; certainly during times of shortage.

Mr. ECKHARDT. So they have tended, and the only reason—well, at times of shortage, of course, I would assume the price of tube also goes up, and perhaps at an even greater rate than the producer price of copper.

Mr. SMITH. Not in the finished tube. It wasn't true of the price of finished tube in all cases. For example, copper water tube never did reflect—

Mr. ECKHARDT. I am not saying that. I am talking about the tube that you draw.

Mr. SMITH. Yes, the price of our material followed it up directly, yes.

Mr. ECKHARDT. Does it follow it up directly or even exceed it?

Mr. SMITH. It followed it up directly because they did add for the conversion cost, yes.

Mr. ECKHARDT. And, of course, one reason, I assume, it can exceed it is because you simply can't exercise the choice of operating from raw copper.

Mr. SMITH. That is right. There is no choice. It is much better to buy 68 copper which is the blended price than go out and pay 80 cents, obviously.

Mr. ECKHARDT. Now, if you could, of course, choose to convert your plant to do the hot work, produce the larger diameter tube, you would be in a more advantageous position in making your choice as to whether to continue to perform your function or to expand.

Mr. SMITH. Yes.

Mr. ECKHARDT. And you would be in a better buying position with respect to the large diameter tube.

Mr. SMITH. That is correct. And roughly, since 1963, really that choice hasn't been open to us since 1964.

Mr. ECKHARDT. So, therefore, the price of large diameter tube may rise more rapidly, even, than the price of raw copper on the producers' market.

Mr. SMITH. Yes, correct.

Mr. ECKHARDT. Thank you, sir.

I have no further questions.

Mr. MURPHY. Mr. Smith, what are comparable products, competitive products, to your water tubing?

Mr. SMITH. Iron pipe, plastic tubing, of course, is becoming a major factor.

Mr. MURPHY. Are municipal ordinances so geared so they require copper tubing?

Mr. SMITH. In many cases, they do require copper.

Mr. MURPHY. So you do have a set market, then?

Mr. SMITH. Yes, but it is competitive, certainly. I mean most of them do recognize iron pipe, and you always have the competition of iron pipe as against copper.

Mr. MURPHY. How about the plastics?

Mr. SMITH. Plastic is accepted more and more today. It still has some places that it is not accepted.

Mr. MURPHY. Not accepted because of its——

Mr. SMITH. Because of codes.

Mr. MURPHY. Because of the codes, but not because of its, say, durability?

Mr. SMITH. It has problems in hot water, and other things, yes. There are sound reasons for not accepting it, as far as we are concerned.

Mr. MURPHY. But you don't see a long-range erosion, constant erosion?

Mr. SMITH. There is certainly some erosion occurring today, yes, certainly in the drainage waste and vent field, which was a growth market for copper 5 years ago, is a declining market today, basically because of plastic inroads. And hubless iron, cast iron pipe has come on strong with the high price of copper.

Mr. MURPHY. Thank you very much.

Mr. MOSS. Mr. Smith, I must confess to some degree of confusion over your testimony. You make a very clear and certainly unequivocal statement that you are opposed to the legislation before this committee.

Mr. SMITH. As the answer to the problem; right.

Mr. MOSS. And then you go on to cite the fact that you are at a competitive disadvantage.

Mr. SMITH. No question about it.

Mr. MOSS. Which has forced you to contract your business operations.

Mr. SMITH. Yes.

Mr. MOSS. And you are now drawing small diameter tubing, and have moved out of the water tube business.

Mr. SMITH. Yes.

Mr. MOSS. Now, is there any prospect, with the same economic forces working, that you may ultimately be forced out of small diameter tubing?

Mr. SMITH. It could be, certainly.

Mr. MOSS. The same economic factors are present?

Mr. SMITH. Yes.

Mr. MOSS. The same disabilities to compete effectively are present?

Mr. SMITH. That is right.

Mr. MOSS. And yet you say to the Congress that you would prefer no legislative action?

Mr. SMITH. No; I didn't say that. I said the legislation under consideration, I don't think is the answer to the problem.

Mr. MOSS. That, I think, clarifies and gets us to the point. Were you present yesterday?

Mr. SMITH. No, I was not.

Mr. MOSS. In my opening statement, I made it very clear that I was not wedded to the proposal before the committee, nor to the language of the bill.

Mr. SMITH. Right.

Mr. MOSS. It was introduced as a judgmental factor for purposes of considering the overall problem.

Now, I think you refer to a possible solution, really almost as an afterthought, in the concluding sentence of your statement on page 3:

I think there is a place for creative innovation that a small company can quickly bring to market. Our ultimate suppliers, the producers, must recognize us as an important link in the distribution of their product, and deal with us directly as the important customers we are

Mr. SMITH. Yes.

Mr. MOSS. Is that your solution?

Mr. SMITH. Yes, I think it is. Right.

Mr. MOSS. Well, now, then let's relate that to the second paragraph on page 1 of your statement, where you said—

The decision of producers to sell to their regularly established customers in time of shortage is a normal, sound, business decision

Mr. SMITH. Right. And our contention is that we are their normal customers, and that we should be able to convert the position that we have with their subsidiaries and with other primary producers into our own position.

Mr. MOSS. Well, now, this matter of allocation, in your judgment, as a normal and sound business decision, has continued for approximately 7 years.

Mr. SMITH. Yes, and it is an unfortunate thing if it continues forever, in spite of an increase in producer copper. We know that copper is being expanded in this country. There should be a place for new supplies to new people.

Mr. MOSS. You don't feel, however, that in the area of commercial activities in this country that there is a legitimate Government interest in seeing that the full force of competition is brought to bear in order to gain the benefits of a competitive situation?

Mr. SMITH. Right. If it can't be done through the normal operation of the marketplace, I think Government does have to step in, yes.

Mr. MOSS. Well, how long do you think we should look at a situation which appears to be deteriorating without acting to force more competition?

Mr. SMITH. It can't go on too much longer. No question about it. Speaking only from our point of view in the small redraw plants.

Mr. MOSS. Well, that, Mr. Smith, is precisely why I find your statement rather puzzling to me.

Mr. SMITH. Well, I am talking about the proposal that is what I am opposed to, the proposal that would virtually increase the price of copper, and an alternative to redistribution by the producers. I think there should be something.

Mr. MOSS. Well, I recall when just a few years ago, as I mentioned earlier, gold was forced into a free market and there was the momentary speculative boom, and it went way up and then, strangely enough, it dropped, and for awhile it rode at a level lower than the U.S. price and today it is just fractionally above the \$35 an ounce. I think it is about \$35.35.

Mr. SMITH. Yes.

In copper, we do have—

Mr. MOSS. If we were to have a totally free market—

Mr. SMITH. Right, I would be for it. If you could guarantee me a perfectly free commodity copper market, I would be a hundred percent for it.

Mr. Moss. I can't guarantee you anything.

Mr. SMITH. No, I know that.

Mr. Moss. Now, you have mentioned one area where copper is losing business and let me tell you, in the State of California in plumbing it is losing it very rapidly to plastic tubing.

Mr. SMITH. I know that.

Mr. Moss. There has been talk, in the automobile industry, of expanding into the use of aluminum substitutes.

Mr. SMITH. Yes.

Mr. Moss. And that might have a direct bearing upon some of our solid waste disposal problems.

Mr. SMITH. Yes.

Mr. Moss. And might become appealing to some units of government, as an answer to some of the problems, particularly the almost unsolvable problem of what to do with abandoned automobiles. This is another area where copper might, particularly if it gets too high in price, force itself out.

Mr. SMITH. Yes.

Mr. Moss. So we have a major element of competition coming into play, to moderate any tendency in a free market to maneuver the price higher and higher.

Mr. SMITH. Yes.

Mr. Moss. I would point out that the bill before us does not in any sense rule out a free market, but it says that if you are going to allocate domestically, it shall be, in effect, on a basis deemed by the Federal Trade Commission, to be reasonable and equitable. We would be interested in any proposals you would have to the Congress. We would consider them as carefully as any other proposals.

Mr. SMITH. Right.

Mr. Moss. Do you feel the Congress might act legislatively to assist in bringing about this greater competition and a greater equality in the ability to compete?

Mr. SMITH. We were just called on Friday, and, obviously, I haven't had a chance to talk, other than just over the phone, to two or three of the other people.

Mr. Moss. Well, if you have any additional thoughts, and would like to reserve a spot in this record for the submission of them, the Chair will ask at this point for unanimous consent that the gentleman be accorded that right.

Without objection, the reservation will be made and we will be interested in such proposals as you feel we should consider.

Mr. SMITH. Fine.

(The information requested was not available to the committee at the time of printing.)

Mr. Moss. Mr. Keith?

Mr. KEITH. In your view, Mr. Smith, are there any unfair trade practices that are pursued by your competition in the situation you have described here?

Mr. SMITH. Not that I am aware of.

Mr. KEITH. In your view, is the existing statute as it relates to the Federal Trade Commission adequate for preserving fair competition?

Mr. SMITH. I am not familiar enough with that and I would have to study that with an attorney to see. The selling of a product at such a low price as, say, copper water tube is selling today certainly opens

up questions, I would think. But I am sure they can show, the producer-controlled companies can show other companies lowering the price of water tube as well as the producer-controlled.

Mr. KEITH. Are there sufficient companies in that producer-controlled segment of the business to keep it competitive?

Mr. SMITH. I think they have a serious problem, depending on their producer position, once again. I mean, obviously, some of them last year had a very rough time of it, particularly if they were only in the copper water tube field. Some of them showed heavy losses, and they would have to speak for themselves.

Mr. KEITH. What percentage of the market does the water tube have versus the copper tubing now?

Mr. SMITH. It is generally about half of the tubing market, and the redraw mills, and speaking only for the redraw mills, they are the only ones that are reported separately, used to produce about 3 to 4 percent of that market. We are down now, this year, the first part of 1970, down to 1½ percent of that market.

Mr. KEITH. Has this had an effect on the price of your raw materials?

Mr. SMITH. No. I don't understand how—

Mr. KEITH. Have you had a decreased demand, by reason of a decreased use?

Mr. SMITH. Oh, all right, it has affected. The price of our raw material has gone down in the last 3 or 4 months, yes, partly because the blended price has gone down on copper, also because it is more competitive.

Mr. KEITH. Is there a sufficient supply of ore reflected in the cost of the raw material? Is there only so much that can be mined?

Mr. SMITH. Mined? I am not a miner, obviously. There is an awful lot of ore available, but it has a very low percentage of copper and it is, obviously, more expensive to mine. They have done a fairly good job over the last 2 years to bring on stream some of these low-cost mines, and I think we are going to see essentially enough copper. We may die in the meantime. That is the only thing we are worried about.

Mr. KEITH. Thank you, Mr. Chairman.

Mr. MOSS. Are there further questions?

Mr. ECKHARDT. I have one.

Mr. MOSS. Mr. Eckhardt.

Mr. ECKHARDT. I note that you say that the decision of producers to sell to their regularly established customers in time of shortage is a normal, sound business decision. Do you consider yourself as a redraw mill one of those regularly established customers?

Mr. SMITH. Yes. We are not recognized directly. That is the point I am making.

Mr. ECKHARDT. Well, aren't you in effect asking for a kind of grandfather clause exemption to unfair competition, when you request this?

Mr. SMITH. No, we are—I am just asking that they recognize that we are the customers, and that we should have control over the copper that we have helped these primary producers establish. They have established a primary position with our help. Now they could come to us, and some of them have come, and said, "Well, we have been cut down, we are sorry, we can't make redraw any more." Some of the people that have had primary positions have decided, "Well, this is the cheapest stuff we sell, let's cut this out first."

Mr. ECKHARDT. Well, let me create a hypothetical case which may or may not be practical, but supposing you have a number of companies that have purchased copper for the purposes here involved, and at a time when copper is not so scarce. They have been the old customers and the new concerns. The new concerns may be as efficient as the old ones, but they haven't been as old or as regular customers. Then you are saying that when there is a shortage of copper, the new customers may be cut off.

Mr. SMITH. Yes, this is a rather arbitrary decision, I admit. When do you select your base period—you can be very arbitrary, why should 1963 be a base period, as against 1967? That is a good question.

Mr. ECKHARDT. So no matter how regular the customer has been, you would still use a sort of grandfather clause determination as to who is to continue to get the copper at the domestic price. The producers' price.

Mr. SMITH. I would say if we are doing business regularly with a customer, certainly we do recognize his rights first, before we recognize the rights of a new customer, and I think the producers are recognizing that.

Mr. ECKHARDT. But it seems to me on the last page of your statement you are suggesting something that might go beyond that, and that is the possibility of a Government stockpile.

Mr. SMITH. Yes. I am saying that possibly the diversion of this metal that is being mined under Government contract at the Duval mines, there was a Government contract for 38-cent copper for half of the production of this new Esperanza mine, I believe it is, or the Cerrito mine, and that is going into the Government stockpile. I think this would be a good possible source of creating a relationship between some of the new companies coming on stream, or some of those that do not have producer position, and they are in trouble to establish a relationship with Duval.

Mr. ECKHARDT. Are you thinking in terms of what I think the last witness was saying, that there might be a stockpile other than a stockpile available for defense purposes, but a stockpile available?

Mr. SMITH. This is a possibility; if it was well handled by someone like BDSA, it is a possibility. I think the BDSA handling of the stockpile release, for example, was well handled. I would be a little concerned over the political implications of Government stockpiles.

Mr. ECKHARDT. Are you indicating in your statement that you think that this is a very serious problem, and a problem that requires some attention, either by Government or some other organized function, that the precise answer contained in this bill is not one with which you agree?

Mr. SMITH. Yes, right.

Mr. ECKHARDT. But are you saying that you would agree or at least you would consider as a reasonable approach the use of a Government stockpile to maintain a means by which the inequity resultant from shortage of copper production could be relieved as respects the unfavored purchaser of copper?

Mr. SMITH. Yes, this is a very good possibility; yes.

Mr. ECKHARDT. Thank you, sir.

Mr. MOSS. Any further questions?

If not, Mr. Smith, we do appreciate your appearing.

Mr. SMITH. Thank you, Mr. Chairman.

Mr. Moss. And we will await your additional views.

Mr. SMITH. Yes, sir.

Mr. Moss. We would now like to call the panel previously introduced: Mr. Battist, Mr. Henderson, and Mr. Gold.

STATEMENTS OF JAMES MC I. HENDERSON, COUNSEL, INDEPENDENT COPPER FABRICATORS INSTITUTE; ROY GOLD, PRESIDENT, CADILLAC CABLE CORP., POTTSVILLE, PA.; AND STEVEN BATTIST, PRESIDENT, INTERCONTINENTAL WIRE CO., ROBESONIA, PA.

Mr. HENDERSON. Mr. Chairman, I am here to represent a small organization called the Independent Copper Fabricators Institute.

Mr. Gold is one of the incorporators of that organization; Mr. Battist is in somewhat a similar position, and as I understand, has come here as an individual, but he is also the president of the Intercontinental Copper Co. and not connected with the Independent Copper Fabricators Association.

I shall try to keep my statement very brief, in order that you may hear from these gentlemen, who are in the industry and who have these problems.

Let me say first, and let me say that I have an excuse for not having a written statement, but as Mr. Sam Rayburn once told me—he was a lifelong friend of mine—he said, “If you have got a good excuse don’t use it because you may need it some other time.”

But the shortage of time and the vastness of the problem has really prevented me for giving you a written statement.

I would like to request that the record be kept open for the purpose of a statement, if the committee sees fit.

Mr. Moss. Is there objection to such a request?

Hearing none, the record will be held at this point to receive the written statement.

Mr. HENDERSON. Good.

(The statement referred to was not available to the committee at the time of printing.)

Mr. HENDERSON. I want to apologize, also, for Mr. Arciola and Mr. Oliner¹ not being here today. Mr. Oliner had meetings this morning in New York which could possibly result in his being able to stay in the copper business. Mr. Arciola has been out of the hospital only 2½ weeks from a kidney operation, and he had a medical appointment that he felt that he must keep. He was not feeling too well yesterday.

Mr. Moss. The record on yesterday noted the reservation permitting the gentlemen who were not able to stay over to submit statements for that record.

Mr. HENDERSON. Thank you, sir.

I should like to briefly comment on the bill and if you and the committee will permit—

Mr. Moss. You may proceed.

Mr. HENDERSON. I will give you some of my background.

I have been General Counsel to the Federal Trade Commission and Special Assistant to the Attorney General for Antitrust, counsel to General MacArthur on antitrust matters in Japan, counsel to Congress-

¹ See statement of American Metal Moulding Co., p. 149, this hearing.

man Jack Brooks on his Subcommittee on Government Affairs, and General Counsel of the Economic Stabilization Agency. It sounds like I have been sort of a professional general counsel for the Government.

But the fact of the matter is that I think that the purpose and the intent of this bill is good. I am sure that as it moves through the process of the Congress that there are going to be some changes made in it. I am not sure that some of them will be good, but as of this moment I think it is a good bill and that it should be given serious consideration.

I disagree with Mr. Thompson on the basis of my experience that this is a price-fix bill. I don't think it is. I think that it has some regulatory aspects, but that is a far different thing from a price-fixing bill.

I should like to see this committee proceed with it.

I should like, if the committee doesn't already have the benefit of these documents—one of them is a memorandum that I submitted to the other body of this Congress on February 24, and what perhaps will be more useful to the committee the remarks of Dr. Houthakker, who, as you know, is a member of the Council of Economic Advisers of the President, that these remarks were made at Duke University, March the 11th, and for just one moment I would like to call attention to the fact that he says, and I am trying not to take this out of context, that the producer price does not clear the market. It has to be sustained by rationing.

Now, in this industry, Mr. Chairman, and gentlemen of the committee, we have a system of rationing, allocation, whatever you want to call it, which when the U.S. Government felt it necessary, during the Korean war and during World War II, the Congress had to pass a law creating the War Production Board, the Defense Production Act, and set up a very elaborate system to legalize something that is being done today without any sanction of law whatsoever.

The copper producers decide to whom they will sell, and how much they will sell.

Mr. Moss. At this point, do you have any information on how the producers arrived at a 1963 base period for their allocation to customers?

Mr. HENDERSON. My information, and these gentlemen can confirm it or can supplement it, is that in 1963, late 1963, there was a strike, and that there was a shortage of supply and that in 1964 this rationing system was established because of the short supply and they showed preference to their new customers.

Mr. Moss. To their new customers?

Mr. HENDERSON. I meant to their old customers.

But since that time, sir—and this is what as an antitrust lawyer disturbs me—entry, as Mr. Smith, I believe it was, said, it is practically impossible—practically impossible—for any new entries into the field, so that you have a frozen, solidified, vertical operation in the copper industry. And Mr. Gold can give you some very eloquent testimony as to the effect of this allocation system, as can Mr. Battist, and could Mr. Oliner and Mr. Arciola were they here.

Mr. Moss. Are you offering those documents referred to for the committee's use?

Mr. HENDERSON. Yes, sir.

Mr. Moss. We will receive them at this point for the committee's use, but at this moment they are received only for the files and for study.

Mr. HENDERSON. Yes, sir.

Mr. MOSS. So if you would see that they are handed to me.

Mr. HENDERSON. All right.

I would like to call the committee's attention particularly to the remarks of Dr. Houthakker on page 3 where he discussed rationing; page 4, in regard to the highly concentrated manufacturing and refining within the industry; page 6 where he speaks of the foreign concentration, and if I may just make one other statement on that and that is that at the time this dramatic world price rise occurred the three major companies in the United States did own these mines. Today they still own 49 percent of them and, so far as my knowledge extends, they still manage them.

The technical pricing is going into this combination, which Dr. Meissner mentioned yesterday, formed by the principal governments, where these mines are located.

On page 13, Dr. Houthakker points out that we have monopolies in this country, such as the public utilities, but he makes a very cogent statement to the effect that these monopolies are compelled to sell to whomever requests the product. And this is not true in the copper industry.

On page 11, he speaks of new entries into the allocation system, and says that they have been admitted, but the members of the Independent Copper Fabricators Institute, and Mr. Battist, despite their repeated requests for copper, have not been permitted any copper at producer price.

I think the record is fairly clear on the London Metal Exchange that of all of the trading, I believe it was in 1968 or 1969, all of the trading that occurred on that exchange, only 160,000 tons were delivered. And any one of the major copper companies in the United States could take production from their foreign mines and control that market, 160,000 tons isn't much tonnage to control the world market.

Now, Mr. Congressman Eckhardt, you mentioned a rationing system, and I think that insofar as military supplies are concerned, BDSA has done a very fine job. I disagree with Mr. Smith when he says that they did a fine job on rationing that copper which was taken out of the Government stockpile, the GSA stockpile, in, I believe, 1965, and rationed, because I think the testimony yesterday will show that 70 percent of that went right back to the same people, the major copper producers, and 30 percent of it went to some 317 independent fabricators, so that this gave them a breath of life, for a few days, a few weeks, but the stockpile is now at what the Government considers a minimal position for this country, and so that is not available.

You have your alerting bell, so, Mr. Chairman, I am going to stop talking now, and ask Mr. Gold and Mr. Battist to give you their statements.

Mr. MOSS. All right, Mr. Gold, are you to lead off here? If so, you may proceed.

STATEMENT OF ROY GOLD

Mr. GOLD. Mr. Chairman, my name is Roy Gold. I am president of Cadillac Cable Corp. in Pottsville, Pa. We are a manufacturer of building wire products. Building wire in the wire industry is very analogous, I guess, to water tube in the tubing industry, for copper

tubing. We built a new plant in Pottsville, Pa., approximately 2 years ago. We moved into Pottsville with the help of the local community, and through their industrial development program, and some State funds to help build us a building and help us get started.

During this 2-year period, we were unable to purchase any copper, neither were we prior to that period—any copper, that is, at the producer level. And the result of the 2 years of operation is that we have lost slightly in excess of \$2 million, and that last Monday, a week ago yesterday, we filed a chapter 11 petition under the Federal Bankruptcy Act in an attempt to try and reorganize.

One of our problems in reorganizing is that if we are able to do so we are still faced with no copper position and very doubtful chances of operating profitably under the present situation.

Prior to the 2-year period—this company, I should say we made the supreme mistake of starting a business in 1963. We hit just at the wrong time—we were manufacturers of armored cable, commonly known as BX cable. We purchased insulated wire from other manufacturers. We believed, during that period of time, the various reports and projections that copper would become plentiful in the future. Reviewing our situation we realized that in competing with many large companies that we would be unable to compete effectively, when business was tough, unless we became more vertical ourselves. So we went from purchasing insulated wire to doing our own insulating, and then we set up the plant in Pottsville to draw our own copper wire from copper rod.

As I say, we were hopeful that copper was going to be available, as all the projections indicated it would be, and it was not.

A little over a year ago we stopped making BX cable, which had been our principal product, because the finished product was selling for about the same as our raw material cost. We, in a desperation attempt, attempted to switch to aluminum as a conductor material for making wire and cable.

In BX cable, it has received negligible acceptance, and nonmetallic cable, commonly known as Romex, there has been a slight market for aluminum conductor.

But the problem with substitution for a small company like ours is it requires a tremendous merchandising program, a big marketing job; it—the product—is not widely accepted. Where we are a regional manufacturer and should be shipping our product and could be selling at plant capacity today as bad as business conditions are had we had a producer position in our local backyard area, so to speak, in the Pennsylvania, New York, New Jersey, Washington, D.C., Ohio, Indiana vicinity. We find that the market for aluminum that we are trying to sell, and have tried to sell is from Washington south down to Florida and along the southern part of the United States out to the west coast and as a result we are shipping our product by truck to Portland, Oreg., to Phoenix, Ariz., to Texas, and you name it, and selling none, or virtually none, in the Pennsylvania market. Our closest market is Washington, D.C.

The economics of the situation have made it absolutely impossible for us to operate and yet the plant we built in Pottsville was built with the finest equipment in the industry. Our operation, basically, is as efficient an operation as anybody has for this product.

True we had great start-up expenses and other things, but this could have been absorbed. We could have lived with that condition. We could have lived with the fact that the housing market that we serve has deteriorated substantially, if we also did not get hit at the same time with a copper situation that was totally intolerable.

In 1966, there was a shortage, and there was a high price of copper. But nobody really complained about it, because in 1966 housing was strong, and the retail price of the products or the reselling price of the fabricated products that we all made reflected the copper cost of the outside dealer market, reflected high copper. But when demand slackened, when housing starts dropped—and might I say, aside, in 1965 and 1966 when demand was expected to increase virtually every manufacturer of wire and cable expanded his facilities, so that we are faced today with a tremendous overcapacity in the industry, and a reduction in demand, and the result is that prices today reflect at best the 60-cent copper cost and not an outside market price.

Right now copper is at a level that we could buy it, and we could produce a product and make a profit but, unfortunately, we are out of funds at this point, and are unable to do so.

Really, that is about all I have to tell you, and I certainly could answer any questions that you would like to ask.

Mr. Moss. Would the committee like to hear the next witness, Mr. Battist, and then interrogate all three?

Mr. Battist?

STATEMENT OF STEVEN BATTIST

Mr. BATTIST. Mr. Chairman, I am Steven Battist. I am the president of Intercontinental Wire Co. in Robeson, Pa., and I have experienced pretty much the same as Mr. Gold.

We manufacture appliance and aircraft wire and sell it to insulators. Our history has been one of buying copper from the producers, and paying the LME price for said copper, and in many instances turning around and selling the finished product for as much as we are paying for the copper. That has happened repeatedly.

I don't know what the answer may be to resolving the situation. I do know this: We can't continue to exist under such restraint of trade.

I am for the bill. I am for anything that gets us moving and does alter the course of our destiny via the inequities of the copper situation.

That is all I have to say.

Mr. Moss. How long has Intercontinental Wire been in business?

Mr. BATTIST. We were incorporated in 1964. We have, in addition to that, perhaps one of the most modern, efficient wire mills in the Nation.

Mr. Moss. In other words, you became a producer after the 1963 base period was established by the producers?

Mr. BATTIST. That is correct.

Mr. Moss. And you have had no consideration from them, at least you have not had any productive consideration from them?

Mr. BATTIST. Absolutely not.

Mr. Moss. In the intervening years?

Mr. BATTIST. Absolutely not. I have talked to them, to the three major producers, repeatedly. I have been advised that they are completely sold out of their domestic copper and are likely to be sold

out for the next few years. I have tried everything from the acquisition of scrap and converting said scrap back into our usable raw material, none of which has proved fruitful for our company. We have a relative history of some loss, rather significant to our company, and because of the inequities in the purchasing of copper we have operated our plant at a level below 30 percent of its capacity when, in many instances, we had orders to run at 75, 80, and even 90 percent of our capacity, and did not have the funds, actually, to justify going out and buying 80-cent copper and competing with a competitor who has a domestic producer position who can turn around and sell at a base price of 68 cents a pound. And we have, in many instances, eaten the 12 cents a pound to compete.

The fabricating work that we do to the wire generally generates about 25½ cents per pound average. If we are losing 12 cents a pound on copper, obviously we can't operate on 50 percent of the fabricating income.

Mr. MOSS. Mr. Blanton?

Mr. BLANTON. Mr. Battist, did I understand you to say that you have been able to purchase some wire from the producers, at the LME price, though?

Mr. BATTIST. Rod; yes, sir.

Mr. BLANTON. Well, can you get as much of this as you want from the producers at the London Metal Exchange price?

Mr. BATTIST. To my knowledge; yes, sir.

Mr. BLANTON. Then American producers have the copper as far as having it is concerned, that they ask you the London Metal Exchange price?

Mr. BATTIST. I have been advised, sir, that they purchase the copper for us. I actually do not know about their stockpile.

Mr. BLANTON. But the point I am trying to get at is they tell you they have no copper because there is a shortage of it as far as the domestic price is concerned?

Mr. BATTIST. That is correct.

Mr. BLANTON. And yet they will turn around and sell you probably the same copper, at the London Metal Exchange price?

Mr. BATTIST. As I understand it; we contract with them to buy, for example, 50,000 pounds of copper at the LME price, because there is no domestic copper available to us.

Mr. BLANTON. Who are you buying this from specifically?

Mr. BATTIST. From one of the three big producers.

Mr. BLANTON. One of the big producers?

Mr. BATTIST. Yes, sir. And, in fact, from several of the large producers.

Mr. BLANTON. They don't tell you where the copper comes from? You have no idea where it comes from?

Mr. BATTIST. No, sir; I do not.

Mr. BLANTON. It could come from Chile or it could come from Arizona?

Mr. BATTIST. That is correct.

Mr. BLANTON. Do you know whether it has been smelted in this country or not?

Mr. BATTIST. No, sir; I do not. I have no way of knowing. We receive the copper in the form of rod.

Mr. BLANTON. Mr. Chairman, I would like to point out at this point the apparent fear in some of these manufacturers of the fact that they may lose what position they have because of the threats that have been made by the major producers to them if they became interested in this new legislation which we propose. I think it is obvious, and I think it is well founded.

Mr. MURPHY. Would the gentleman yield?

Mr. BLANTON. Yes.

Mr. MURPHY. Mr. Chairman, are we going to have the representatives of the big three producers as witnesses?

Mr. MOSS. Oh, yes, indeed. We are going to have them. We are going to have Justice and we are going to have the Federal Trade Commission before we conclude the hearings.

The hearings of yesterday and today are but the first phase in this series of hearings before we take the legislation up in the markup session.

Mr. BATTIST. My I ask a question?

Are you familiar with what copper we import, what percent?

Mr. MOSS. We are going to get all of the facts on the copper market for this record. We want to be able to finally consider the legislation from as knowledgeable a position as possible.

Mr. BLANTON. Mr. Chairman, I think that this is in the record in the Houthakker report—I am sure it is—the percentage that is produced by our domestic producers, what is imported, what is scrap, and so forth.

Mr. MOSS. We are going to get, as I say, all of the material.

Mr. BLANTON. About 13 percent.

Mr. BATTIST. What?

Mr. BLANTON. About 13 percent, according to the Houthakker report.

Mr. BATTIST. May I ask a question?

With this 13 percent, one would assume, then, that 87 percent of the copper is domestic copper.

Mr. BLANTON. Not necessarily. Part of it is scrap.

Mr. BATTIST. A portion of it being scrap, which is converted by the domestic producer, is it not, or by subsequent smelters, and fed back into what—to the domestic producers or to the LME, or to the Commodities Exchange?

Mr. BLANTON. They can do whatever they want to with it.

Mr. BATTIST. I see.

Mr. BLANTON. As you just pointed out, they can sell it at either price, and I think that is clearly a violation of this statute you pointed out a few minutes ago, of selling at two different prices for scrap.

Mr. HENDERSON. The Clayton Act.

Mr. BLANTON. The Clayton Act.

Mr. HENDERSON. Mr. Chairman, in regard to these documents that I have offered to the committee, let me make it clear that these documents are public documents. They were available to anyone who went to Dr. Houthakker's office.

Mr. MOSS. It isn't necessary to explain that. They are received for the committee's use.

Mr. HENDERSON. That is right, sir.

Mr. MOSS. Do you have any further questions?

Mr. BLANTON. No further questions.

Mr. MOSS. Mr. Eckhardt?

Mr. ECKHARDT. Mr. Battist, did I understand you to say that all your copper has been purchased through the big three producers?

Mr. BATTIST. No, sir, not all of it.

Mr. ECKHARDT. Who else do you purchase from? Do you purchase from the London Metal Exchange directly?

Mr. BATTIST. No, sir, we have purchased through the Commodities Exchange in New York, and also some brokered copper.

Mr. ECKHARDT. But that copper comes from the foreign sources, I understand, or the world supply sources.

Mr. BATTIST. I know it is generally pretty close to the world price. Let's say the LME price, but I don't know where it comes from.

Mr. ECKHARDT. You don't know where it comes from?

Mr. BATTIST. No, sir.

Mr. ECKHARDT. About what portion do you buy from the big three or through the big three, and what proportion do you buy from other sources?

Mr. BATTIST. Up until about the middle of last year, a major portion was bought through other sources; from about the middle of this fiscal year forward through the big three, most of it, most of our copper.

Mr. ECKHARDT. All of it. But all at the world price or the London Metal Exchange price?

Mr. BATTIST. Yes, sir; that is correct.

Mr. ECKHARDT. Have you been told that the copper that you are receiving has actually been purchased by your vendor, that is by one of the big three in each instance, has actually been purchased on the world exchange?

Mr. BATTIST. They did not mention the world exchange but they did advise me that they would buy copper for our account.

Mr. ECKHARDT. In other words, they purport to be buying the copper for your account rather than supplying you with their own copper? Is that correct?

Mr. BATTIST. Yes, sir; inasmuch as all of their domestic copper is sold out.

Mr. ECKHARDT. And when did your business come into existence?

Mr. BATTIST. We started the drawing or subsequent redrawing of copper rod through fine wire in 1966.

Mr. ECKHARDT. So you have not received any of the allocation of domestic copper?

Mr. BATTIST. None whatsoever. With one exception. We do some defense work, or work for companies that have defense orders, and through these companies we can place D.O. ratings for copper and receive domestic producer prices for said copper. But that is rather limited.

Mr. ECKHARDT. That is all, Mr. Chairman.

Thank you, sir.

Mr. MOSS. Mr. Murphy?

Mr. MURPHY. I have no questions, Mr. Chairman.

Mr. MOSS. I don't believe that I have any other questions at this time, other than that I noted a hesitancy on your part, Mr. Battist, to name your source of supply, your primary source of supply. What would be the basis for that hesitancy?

Mr. BATTIST. The basis is I don't know which—it is the three major companies, it is Kennecott, Phelps Dodge, and Anaconda, and I do not know to what extent or which company we might be buying the majority of materials from.

Mr. MOSS. Would you supply that for the record?

Mr. BATTIST. Yes, sir; I will supply it.

(The information requested was not available to the committee at the time of printing.)

Mr. MOSS. I think, unless there are questions of Mr.——

Mr. BATTIST. Excuse me, Mr. Chairman.

Mr. Gold?

Mr. GOLD. Mr. Chairman, could I just speak?

Mr. MOSS. Yes, just a moment.

Mr. FOCHT, do you have any questions?

Mr. FOCHT. I have none.

Mr. MOSS. Mr. Taylor?

Mr. Gold.

Mr. GOLD. Yes, I just wanted to state, this is a bit of additional information. The form of copper that is sold at producers' price for the wire industry is wirebar and/or wirebar converted to copper rod. Now, we have been offered copper in wire form, which is already drawn. We have been offered their copper by Phelps Dodge's salesman in our place, and this copper has been offered to us at a base price. It should be noted that Phelps Dodge has a published pricelist, and the normal computation would be the cost of wirebar plus about $2\frac{1}{2}$ cents to rod, plus maybe 5 or 6 cents to wire. They were offering wire at a base price of somewhere around 75 to 78 cents a pound, plus an adder. In other words, a 78 plus about 5 cents, which would bring it up to an 81-, 82-cent price, and yet if you based it on their producer price which they were selling others, it would be $62\frac{1}{2}$ plus 5 cents, or 67.

In offering wire, they have never represented that they were purchasing wire or purchasing the copper in an outside market, but, rather, that this was the supposed base price that they were selling wire at in the industry.

I do know—not that I can prove with any documents—but I do know, I feel sure, that if records were subpoenaed by the committee, that there are customers who do not draw copper, who had historic positions that are buying copper based upon the other formula from Phelps Dodge, which would be in the high 60 range or 65-cent range for drawn wire, and if you were to check that I am quite certain that you would find a definite difference in price where they were offering their copper at two different prices.

Mr. MOSS. Thank you.

Mr. Taylor?

Mr. TAYLOR (adviser to subcommittee chairman). Do you have any idea of what percentage of the big three's output is allocated to their own subsidiaries?

Mr. GOLD. I have been told, and this is strictly hearsay, because I do not know for a fact, but I have been told that Phelps Dodge allocates their subsidiary approximately 60-some-odd percent of their requirements on the producer level, which they claim is about the average that is in the industry.

Mr. TAYLOR. That is 60-some-odd percent of the subsidiaries' requirements?

Mr. GOLD. Of their subsidiaries' requirements at producers price and that they supposedly go out and purchase the balance of their copper for the subsidiary in the open market.

Mr. TAYLOR. I see.

Mr. GOLD. I have also been told that on certain long-range contracts that they have purchased copper in the open market in order to fulfill the commitments and have resold that copper at the producer price, taking the loss in the process because of certain contracts and commitments that they have made. They claim that they are not only sold out but in an oversold condition relative to their copper at the present time.

Mr. TAYLOR. No idea on the other companies?

Mr. GOLD. No, I don't. I do not know about the other companies.

Mr. MOSS. Are there further questions?

Mr. ECKHARDT. Just one thing I would like to clarify from Mr. Henderson.

Did you say that domestic producers produce in their foreign operations somewhere in the neighborhood of 45 percent of the copper produced overseas?

Mr. HENDERSON. I don't recall saying it, but I think that is a fairly accurate figure. In the Houthakker report, that figure is quoted, and Mr. Meissner can certainly give you a more accurate one, but, as I recall, 45 percent is produced among Chile, Peru, Zambia, and perhaps one or two other countries.

Mr. ECKHARDT. So, for instance, if Mr. Gold, or any of the local purchasers here, are purchasing from one of the major producers, and the major producer is buying on the world market to sell to the domestic processor, in effect, they may be buying somewhere around half of the copper or even greater amounts than that, if they direct from whence it will come, from their own companies, may they not?

Mr. HENDERSON. That is a correct statement, as I understand it.

Mr. ECKHARDT. And then, as in the example that Mr. Battist gave, they may be selling their copper produced in the United States to their own subsidiaries or their favored customers, those who have been producing before 1963, at the American rate, and they may be selling to him their own copper at the world market rate, is that not correct?

Mr. HENDERSON. That is a distinct possibility. Nobody knows where this copper comes from that they are selling.

Mr. ECKHARDT. Well, if that is in fact the case, would that not be a violation of section 13 of the Clayton Act? Would it not be directly or indirectly discriminating in price between different purchasers?

Mr. HENDERSON. Mr. Eckhardt, I think it would. We are talking about the Robinson-Patman Act now, and it is one of the most complex pieces of legislation on the books today, but giving you an offhand opinion, yes, sir, I would say it would.

Mr. ECKHARDT. Yes, I was referring to title 15, section 13, United States Code.

Mr. HENDERSON. That is right, sir.

Mr. ECKHARDT. Has there been any attempt to get the Justice Department to look into the matter?

Mr. HENDERSON. Let me say that Mr. Gold has walked the streets of Washington; I have; Mr. Arciola has; Mr. Oliner has. We have gone from the White House up to the Congress, and this is the first time

that we have gotten a hearing that was meaningful, and this has been going on for over a year now.

Mr. ECKHARDT. Well, I may say that the statement that Mr. Battist has given would certainly bear investigation, it would seem to me, as to whether or not it constitutes a violation of title 15, section 13 of the United States Code.

Mr. HENDERSON. I think it warrants it, and, as an aside, let me say that when I was chief of the Denver office of the Antitrust Division, I recommended an investigation, and this was in 1942; and up to now we have not had any evidence of a serious investigation.

Mr. ECKHARDT. This is one reason I have had some questions about placing authority within the Federal Trade Commission or the Justice Department, and processing the affairs of certain persons either in the production or in the consumer field.

Mr. HENDERSON. It is always a speculative thing. However, I think that on the whole the record of the Federal Trade Commission is such that it would administer this law fairly, and equitably, and on the past history certainly they wouldn't attempt to fix prices.

Mr. ECKHARDT. Thank you, Mr. Chairman.

Mr. Moss. Gentlemen, I want to thank you on behalf of the committee for your appearance here and the information you have given us.

The subcommittee is going to adjourn this first series of hearings on this subject. When we schedule the next series we will want to hear from the Department of Justice and we will convey that information to them promptly so that they will not then, if given short notice of the actual dates, plead lack of preparedness. The same is true for the Federal Trade Commission, and the committee will also expect that the representatives of the major producers will, when notified of the further dates for appearance, cooperate fully with the committee and appear here so that they may give the committee the full benefit of their views.

Mr. ECKHARDT. Mr. Chairman?

Mr. Moss. Mr. Eckhardt.

Mr. ECKHARDT. I understand we have left open these questions with respect to the discoveries of copper in the United States.

Mr. Moss. Those are all in process of being answered. That information will be sought.

Mr. ECKHARDT. And the HEW replies with respect to pollution. I have received some preliminary answers to these questions, but assume that they will be put in full.

Mr. Moss. They will be pursued and put in the record, with the reservations made yesterday for that information.

With that, the committee will stand adjourned.

(The following letters were received for the record:)

AMERICAN METAL MOULDING CO.,
Edison, N.J., May 24, 1970.

HON. HARLEY O. STAGGERS,
Chairman, Committee on Interstate and Foreign Commerce,
U.S. House of Representatives, Washington, D.C.

DEAR SIR: I am enclosing a copy of a letter which I recently sent to President Nixon. No doubt, you are familiar with the subject.

The findings of the Committee, appointed by the President to investigate the Copper Industry, are to be submitted to him very shortly. Unless some immediate

action is taken to correct the inequities suffered by the small fabricators, who do not have a position with the copper producers, a good percentage of the smaller fabricators will be out of business. This condition exists because of the difference in the world market costs and the blended costs, which are enjoyed by the preferential customers.

I am sure that consumers of copper in all forms would appreciate any corrective legislation or measures that you and your committee can inaugurate to correct these devastating inequities.

Yours very truly,

ALBERT OLINER, *President.*

AMERICAN METAL MOULDING CO.,
Edison, N.J., April 10, 1970.

The PRESIDENT,
The White House,
Washington, D.C.

MR. PRESIDENT: I am writing to you in reference to the talk by Dr. Hendrick S. Houthakker whom you appointed to head a committee to investigate the copper industry. In his statement, Dr Houthakker brought to light the pricing structure as practiced by the copper producers. I have not seen any statement that the findings of the committee have officially been presented to you.

No doubt you are familiar with the request of Rep. Ray Blanton of Tennessee to conduct an investigation into the selling practices of the copper producers. The rumors traveling thru the individual copper fabricating companies are that Dr. Houthakker's report will be filed and Rep. Blanton's proposal will not come out of committee.

Our company has been in business since 1914, fabricating cable for conducting electrical energy into homes and industrial establishments. During the use of rubber for insulators we purchased insulated conductors and fabricated from that step to a finished product. With the advent of plastic as an insulating medium, we have changed our process to purchasing bare copper conductor and doing our insulating. This event happened after the date set by the primary copper producers in order to be considered a preferred customer.

We have been and still are forced to buy copper in the open market at L.M.E. quoted prices. Some of our competitors, who have a "position" with the primary producers, are enjoying a percentage of available copper at the established primary rate. The balance of their requirements are supplied by the primary producers at the world market price giving them a blended price considerably under the L.M.E. cost. The primary copper producers are also fabricators of the products that our competitors and ourselves offer for sale. With the raw material costs which we must pay, as compared to our competition's blended costs and the primary producers costs, it makes it impossible to show any profit in operations.

We know of a number of copper fabricators in other than the electrical industry who are in the same position as we.

We have contacted some of the elected officials in Washington and explained our position. They have all expressed their sympathies and some have suggested going to the Justice Department or bringing civil suit for restraint of trade. Under conditions as they exist we would be out of business before a case of this kind could go to court. Our primary interest is the availability of copper at a price that will enable us to compete and to keep our company and all other small companies in business so that employment can be provided for our citizens.

I believe that less than 5% of the production of the large mining companies would be sufficient to supply the requirements of the small fabricators of all products made of copper. To preserve our free enterprise system, I do hope that some action will be taken by the proper authorities to correct this devastating situation.

Respectfully yours,

ALBERT OLINER, *President.*

THE ELECTRIC MATERIALS Co.,
North East, Pa., July 18, 1970.

Subject: H.R. 17657.

CHAIRMAN, SUBCOMMITTEE ON COMMERCE AND FINANCE, COMMITTEE ON INTER-
STATE AND FOREIGN COMMERCE,
Rayburn House Office Building,
Washington, D.C.

DEAR SIR: The opportunity to express an opinion on H.R. 17657 as it relates to the copper market is appreciated. Our thoughts on the subject are substantially those submitted to the Subcommittee on copper under the chairmanship of Dr. Hendrik S. Houthakker.

This Company was established in 1915 as an independent fabricator of copper and its alloys. Today with approximately 385 employees, we continue to operate independently. We have no affiliation with any of the copper producers or with any other company.

While we recognize that the producers' method of distribution may, because of its very expedience, embody certain inequities; what troubles us even more is that to do differently could lead to still greater distortions. The statement has been made that "a redistribution of producer allocations would create a very structured but more equitable situation" moves us to ask, for whom? Historically, our copper has been purchased from primary producers. During periods of stringency, we, too, have been obliged to supplement our monthly allocations by purchasing substantial quantities in the outside market, thereby rendering us less competitive by far than either most of the fabricating subsidiaries of primary producers, or those other users who might have had a more favorable purchase pattern. We recognize this situation and perforce accept it, albeit reluctantly, if for no other reason than the obvious alternative of Government intervention to dictate to which users copper should be sold, in what quantities, and at what prices, is fraught with greater danger.

Granting that a two-price market is not free in the classic sense, we feel that any alternative now advanced would place most independent fabricators at an even greater disadvantage. While we commend efforts to eliminate inequities in this complex market, we are sure you will agree that they should be approached with extreme caution, lest they create further complications. Meanwhile, we incline toward the belief that only when additional supplies of copper from sources now presumed to be in process of development come into the market will the problem be reduced to manageable proportions.

Our conviction that governmental interference at this point with the existing system would be futile prompts us to urge a hands-off policy respecting both the allocations and the pricing of copper. Moreover, we suggest that H.R. 17657 not be voted out of Committee.

Very respectfully,

PHILIP D. HIRTZEL, *President.*

(Whereupon, at 12:15 p.m., the subcommittee adjourned, subject to call of the Chair.)

(Further hearings were tentatively set for later in the session but because of other legislative demands time did not permit.)

