

FERROUS SCRAP EXPORT CONTROLS

HEARING
BEFORE THE
SUBCOMMITTEE ON INTERNATIONAL FINANCE
OF THE
COMMITTEE ON
BANKING, HOUSING AND URBAN AFFAIRS
UNITED STATES SENATE
NINETY-THIRD CONGRESS

FIRST SESSION

ON

S. 2119

TO AMEND THE EXPORT ADMINISTRATION ACT OF 1969
(PUBLIC LAW 91-184), AS AMENDED, TO CONTROL THE EXPORT
OF IRON AND STEEL SCRAP DURING PERIODS OF SHORTAGE

JULY 18, 1973

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FERROUS SCRAP EXPORT CONTROLS

WEDNESDAY, JULY 18, 1973

U.S. SENATE,
SUBCOMMITTEE ON INTERNATIONAL FINANCE,
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS,
Washington, D.C.

The subcommittee met at 2:05 p.m. in room 5302, Dirksen Senate Office Building, Senator Adlai E. Stevenson III (chairman of the subcommittee) presiding.

Present: Senators Stevenson, Cranston, Biden, and Packwood.

Senator STEVENSON. The meeting of the Subcommittee on International Finance will come to order.

Throughout the first half of this year, domestic users of ferrous scrap issued warnings that two basic industries—steel and foundries—were threatened by the increasing price and decreasing supply of ferrous scrap. Domestic users maintain that both of these conditions are attributable to sharp increases in foreign purchases of ferrous scrap.

These increases in scrap exports, coupled with a burgeoning worldwide demand for steel, prompted domestic scrap users to request that the administration impose export controls on ferrous scrap.

On May 10, however, the administration instituted reporting requirements for ferrous scrap exports. On June 29, Senator Sparkman and I introduced S. 2119, a bill which mandates the imposition of export controls when the aggregate level of foreign and domestic demand for ferrous scrap exceeds certain levels.

We did so not because we were irrevocably committed to the particular approach in the bill, or because we believe that legislatively mandated export controls for ferrous scrap should be enacted at this time.

As a general matter, export controls are based on a constellation of delicate and complex factors which change with every change in market conditions and do not lend themselves easily to detailed statutory enactment.

Moreover, the greater the congressional willingness to legislate detailed export controls for specific commodities, the greater the temptation on the part of the administration to pass the buck to the Congress, thereby avoiding the political heat that is inevitably generated by export controls.

There are and must be exceptions, however. This committee has recently concluded that timber is such an exception. The purpose of the hearing we hold today is to determine whether the administration's treatment of the ferrous scrap problem deviates from sound public policy to an extent which justifies the extraordinary remedy of statutory export controls. We cannot stand idly by while our steel and foundry industries are crippled by impossibly high prices or inadequate supplies of ferrous scrap.

It is equally clear that we have a balance of payments problem which is aggravated every time we impose export controls, and that the imposition of export controls undercuts our trade negotiating position at a most inopportune time.

Based on the record we build this afternoon, we will do our best to weigh these factors and act accordingly. In particular, we will try to determine whether the export controls imposed by the administration following the introduction of S. 2119 give our steel mills and foundries the security they need.

[Copy of the bill follows:]

93^d CONGRESS
1st Sess. 1973

S. 2119

IN THE SENATE OF THE UNITED STATES

JUNE 29 (legislative day, JUNE 25), 1973

Mr. SPARKMAN (for himself, Mr. STEVENSON) (by request) introduced the following bill; which was read twice and referred to the Committee on Banking, Housing and Urban Affairs

A BILL

To amend the Export Administration Act of 1969 (Public Law 91-184), as amended, to control the export of iron and steel scrap during periods of shortage.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 That the Export Administration Act of 1969 (Public Law
4 91-184), as amended, is further amended by—

5 SECTION 1. (a) Inserting immediately before section 1
6 the following:

7 "TITLE I—GENERAL PROVISIONS";

8 (b) Redesignating sections 1 through 14, and all cross-
9 references thereto, as sections 101 through 114, respectively;

10 (c) Striking "This Act" wherever it appears in sections

1 101 through 114 (as redesignated by subsection (b)) and
2 inserting "This title"; and

3 (d) Striking "This Act" in section 113 (a) (as redesignig-
4 nated) and inserting "This title".

5 SEC. 2. The Export Administration Act of 1969, as
6 amended, is further amended by adding at the end thereof
7 the following new title:

8 "TITLE II—SCRAP IRON AND STEEL EXPORT
9 CONTROLS

10 "SEC. 201. This title may be cited as the 'Scrap Iron
11 and Steel Export Administration Act of 1973'.

12 "SEC. 202. The Congress finds that—

13 "(a) The United States as a heavily industrialized na-
14 tion requires considerable amounts of steel products and
15 foundry castings for its industries and for new construction,
16 and it is in the national interest that domestic United States
17 resources continue to be available to meet the priority needs
18 of the expanding United States economy.

19 "(b) A significant segment of the steel industry and of
20 the foundry industry rely on processes that use scrap iron
21 and steel as their primary raw material.

22 "(c) These segments of the steel and foundry industry
23 are the primary consumers of ferrous recyclable waste, and
24 that the amount of fuel required by these processes to pro-

1 duce a ton of raw steel is less than one-quarter of the amount
2 of fuel needed to produce a ton of steel from iron ore.

3 “(d) There have been periods recently when the for-
4 eign and the domestic demand for this Nation’s scrap iron
5 and steel has strained the supply-demand balance thereby
6 causing precipitous price increases for this critical raw ma-
7 terial.

8 “(e) The unrestrained exportation of scrap iron and
9 steel can lead to disruption of the economic stabilization pro-
10 gram established pursuant to the Economic Stabilization Act
11 of 1970, as amended.

12 “SEC. 203. Congress declares that it is the policy of
13 the United States to alleviate the harmful effects of the ex-
14 cessive exportation of scrap iron and steel during periods of
15 supply-demand imbalance by limiting the volumes of scrap
16 that may be exported from the United States during such
17 periods.

18 “SEC. 204. On and after the effective date of this
19 title, scrap iron and steel shall not be exported from the
20 United States except in accordance with the provisions of
21 this title.

22 “SEC. 205. When used in this title—

23 “(a) The term ‘scrap’ means all grades of scrap iron
24 and steel which can be used for the manufacture of iron
25 and steel products.

1 “(b) The term ‘domestic consumer’ means any indi-
2 vidual, corporation, association, or other legal entity which
3 purchases scrap to use in the United States as a raw mate-
4 rial for the production of iron and/or steel products in his own
5 manufacturing facilities.

6 “(c) The term ‘receipts’ means the total volume of
7 scrap received by domestic consumers during a specific
8 period, less any sale, shipment, or other disposal of scrap
9 other than that consumed during normal production.

10 “(d) The term ‘exporter’ shall be the licensee named
11 in the validated export license or the person, shipper, owner,
12 consignor, or his properly authorized agent, entitled to make
13 the exportation of iron and steel scrap under applicable
14 general license in conformity with export control regula-
15 tions, and who signs the applicable shipper’s export declara-
16 tion forms.

17 “(e) The term ‘exports’ means the total volume of
18 exports for a specific period under Department of Commerce
19 regulations, licensed by the Office of Export Control, or com-
20 piled under United States export statistics, whichever is
21 greater.

22 “(f) The term ‘Secretary’ means the Secretary of
23 Commerce.

24 “(g) The term ‘shortage of scrap’ means a volume of
25 receipts plus exports of eleven million net tons or more of

1 scrap during a period of three consecutive months; and the
2 term 'critical shortage of scrap' means a volume of receipts
3 plus exports of eleven million five hundred thousand net tons
4 of scrap during a period of three consecutive months.

5 " (h) The term 'United States' means the fifty States,
6 the District of Columbia, the Canal Zone, Puerto Rico, and all
7 territories, dependencies, and possessions of the United
8 States.

9 "SEC. 206. The Secretary is hereby instructed and au-
10 thorized to issue such regulations as may be necessary and
11 appropriate to carry out the purposes of this title.

12 "SEC. 207. PROCEDURE.—(a) As soon as possible after
13 the closing of each calendar year quarter, and in all events
14 by forty-five days following the close of such quarter, the
15 Secretary shall determine if no shortage, a shortage, or a
16 critical shortage occurred in that quarter and he shall make
17 this determination a matter of public record.

18 " (b) If the Secretary determines in accordance with
19 207 (a) that neither a shortage nor a critical shortage oc-
20 curred, no export restrictions will be imposed unless restric-
21 tions are still in effect from an earlier curtailment.

22 " (c) If the Secretary determines, in accordance with
23 207 (a), that a critical shortage occurred, he will take such
24 action as is necessary to limit scrap exports for six months
25 so that total exports for the six-month period will not exceed

1 one-quarter of the preceding five-year annual export average.
2 This export restriction is to start no later than the beginning
3 of the third month following the quarter in which the critical
4 shortage occurred.

5 “(d) When export restrictions are imposed under 207
6 (c) they may be removed at the end of the six-month
7 period if the Secretary determines that no shortage existed in
8 the calendar quarter that occurred during the six-month
9 period. If, however, the Secretary determines that a shortage
10 did exist in the calendar quarter that occurred during this
11 six-month period of export restrictions the same level of
12 export restrictions will remain in effect for additional three-
13 month periods until the Secretary determines in accordance
14 with 207 (a) that a shortage no longer exists.

15 “(e) When export restrictions have been imposed in
16 accordance with 207 (c) and for the duration of the period
17 that these restrictions are in effect the Secretary will deter-
18 mine and make a matter of public record whether a critical
19 shortage occurred in each successive three-month period. The
20 determination will be made each month by totaling the ex-
21 ports and receipts of the three most recent months. The first
22 such determination will be made not later than four and one-
23 half months after the imposition of export restrictions, and a
24 new determination will be made within successive thirty-day
25 periods for each month thereafter. If the Secretary determines

1 that a critical shortage exists during and in spite of the export
2 restrictions of 207 (c) he will take such action as is required
3 to stop all exports within two months from the closing of the
4 three-month period in which the critical shortage occurred.

5 “(f) In the event that a total embargo is imposed in
6 accordance with either 207 (e) or section 208 it will remain
7 in effect for a minimum of three months and for additional
8 one-month periods until the Secretary determines in accord-
9 ance with 207 (e) that a critical shortage no longer exists.

10 “SEC. 208. If for any reason the Secretary is not able
11 to make a determination as to the presence or absence of a
12 critical shortage within forty-five days after the close of a
13 calendar year quarter as required in 207 (a) or of a three-
14 month period as specified in 207 (e) a total embargo of scrap
15 exports will be imposed.

16 “SEC. 209. Nothing in title II shall prevent the Secre-
17 tary from restricting the export of scrap sooner or to a greater
18 extent than provided for in title II in order to meet the de-
19 sires of Congress as set forth in section 203.

20 “SEC. 210. After the effective date of this title, domestic
21 consumers and exporters shall permit the Secretary access
22 to related books, records, and accounts and to their scrap
23 storage areas.

24 “SEC. 211. Any domestic consumer or exporter who
25 knowingly and willfully files a false report, or fails to permit

1 the Secretary access to his books, records, and accounts, and
2 his scrap storage areas, or exports any scrap in violation of
3 title II shall upon conviction be fined not more than \$10,000
4 or imprisoned not more than one year, or both, for each
5 violation.

6 "SEC. 212. The provisions of this Act are to continue for
7 a period of three years after the effective date hereof."

Senator STEVENSON. We are fortunate to have with us representatives of the administration, scrap processors and users, all of whom are in a position to speak authoritatively on this important issue. They will appear in that order, beginning with Mr. Gary Cook, Acting Deputy Assistant Secretary of Commerce for Competitive Assessment and Business Policy.

Mr. Cook.

STATEMENT OF GARY M. COOK, DEPUTY ASSISTANT SECRETARY FOR COMPETITIVE ASSESSMENT AND BUSINESS POLICY, DEPARTMENT OF COMMERCE, ACCOMPANIED BY RICHARD E. HULL, DEPUTY ASSISTANT GENERAL COUNSEL

Mr. Cook. Thank you, Mr. Chairman.

Before I begin, I would like to introduce the gentleman on my right, Mr. Richard E. Hull, the Deputy Assistant General Counsel of the Department of Commerce.

If you wish, Mr. Chairman, I can summarize my testimony briefly.

Senator STEVENSON. We are always glad to have witnesses summarize. If you will do so, I will, without objection, enter your full statement in the record (see p. 18).

Mr. Cook. Thank you, sir.

In summary, Mr. Chairman, I would like to cover basically two points. First I would like to briefly outline the actions which the Department of Commerce has recently taken under the Export Administration Act to deal with the present situation in the ferrous scrap area.

Secondly, I would then like to point out several observations we would like to make about S. 2119.

First, with regard to the actions which the Department of Commerce has taken under the Export Administration Act, based on the decision of the Secretary of Commerce, in his press announcement of July 2, 1973, we have taken the following steps:

First, all exports of ferrous scrap now require a validated license for shipment to all destinations. Licenses for exports against orders of 500 tons or more are not being granted for orders that were accepted after July 1, 1973, by U.S. exporters.

Orders which were accepted prior to that date, that is, July 1, 1973, for export in July, have been and are being licensed at the present time.

We will shortly announce the licensing policies for orders accepted prior to July 1, 1973, but for export after July 31 of this year, upon completion of our current review of the scrap situation. Until further notice, we are and will continue to grant licenses for orders of less than 500 tons, regardless of when those orders were accepted.

There is one other statement which I would like to allude to, or one other comment, and that is the actions which the Japanese Government has voluntarily taken to assist us in dealing with this particular problem. The Japanese announced, as you may know, in the first part of July, that they are agreeing to limit the total amount of scrap coming from the United States into Japan to a total of 5 million tons in 1973.

The numbers which we have on the books for orders to Japan indicate at the present time exports to Japan of approximately 6 million tons. So the effect of this, at least according to our numbers, is to reduce the amount of scrap which the Japanese are going to take from us this year by approximately 1 million tons. And we have indicated that in the testimony.

There is one point which is not in the testimony, which I would like to make also, and that is we have just received word from the Japanese Government that pursuant to their statement in early July, they will attempt to spread out their shipments of ferrous scrap to help us with the particular problems we have been experiencing in July and August because of the heavy flow of scrap out of this country.

The Japanese have agreed to limit August shipments from the United States to approximately 560,000 tons. This is a reduction of approximately 29 percent from the orders which were previously on the books for delivery to Japan from the United States, of approximately 800,000 tons.

I would now like to comment upon S. 2119. As we understand it, this bill would provide a trigger mechanism under which ferrous scrap exports would be limited in 6 months to not more than 25 percent of the previous 5-year average of exports if a critical shortage—that is a term of art defined in the bill as exports totaling 11.5 million tons for a 3-month period—existed.

If this critical shortage persisted during the period of controls, a total ban on exports would be imposed; in short, that is our understanding of the approach of S. 2119. We in general commend the attempt of the authors of this bill to attempt more precision in dealing with that area.

The Department has over the past years tried to do a great deal of analysis to introduce more precision into the definition and analysis of the requirements put upon us by the Export Administration Act.

However, having said that we commend the attempt of the authors of this bill to induce more precision into that area, I would like to point out several considerations which we believe mitigate against enactment of the bill, and accordingly, we would recommend against enactment of the bill.

First, we believe the trigger approach suggested in the bill is too rigid. It fails to take into account, we believe, seasonal patterns of scrap shipments.

Second, although the findings in the policy statements of the bill specifically relate to an attempt to deal with the price situation, we believe that this quantity-based trigger mechanism fails to take price into account.

Moreover, the pattern of orders for ferrous scrap, particularly the pattern of orders for export shipments often have a major impact upon spot price. And we believe that the bill ignores the characteristics of the market in this regard, in that it does not deal with the pattern of orders, but only with the pattern of shipments which actually are occurring.

Third, we believe that the quantity definition of "critical shortage" might unnecessarily force us to limit exports during a period when we have reduced domestic demand and relatively high foreign

demand and that might in turn cause adverse effects on our balance of payments.

Fourth, the bill provides no way, short of an act of Congress, for raising or lowering the level of export which triggers controls. As we said before, we believe the rigor with which this trigger mechanism would be imposed is a handicap and the inability of administrative authorities to make changes in the levels of that trigger we believe is a detriment in the bill.

Fifth, we believe the enactment of this bill would lead to demand from other industries for special legislation with mandatory controls triggered by certain export levels and given the difficulties in trying to attempt more precise definitions, we do not believe that this would be appropriate, either.

So, in sum, Mr. Chairman, we believe we have more flexible authority under the present act. We recognize there are problems in implementing that act, and we are taking every step we can to try to be more precise and to try to get better early warning of when problems are going to occur.

[The following was subsequently received for the record:]

The administration has requested an amendment to the Export Administration Act, S. 2053, to give the President the authority to impose export controls for any commodity whenever he determined such action would be necessary to protect the domestic economy from the excessive drain of scarce materials, to curtail serious inflation in domestic prices, or to reduce the serious inflationary impact of abnormal foreign demand. If S. 2053 is enacted, we believe the Export Administration Act, as amended, would provide the flexible authority to cope with fluctuations in domestic prices of all commodities.

Mr. Cook. But we do not believe S. 2119 would be a significant advance in that regard. Thank you.

Senator STEVENSON. Thank you, Mr. Cook.

Let me clarify one point for the record. In your statement, and I believe in your testimony, you said that you were working out licensing policies for orders accepted July 1 or earlier for shipment after July 31. Are you also considering licensing policies for orders accepted July 1 and later?

Mr. Cook. That is correct as well, obviously.

Senator STEVENSON. What effect will the voluntary reduction by the Japanese of their scrap imports have? Won't we, even with the reductions you referred to, won't we still be worse off than we were last year?

Mr. Cook. Mr. Chairman, last year, I believe we had exports of some 8.5 million tons. Under the present—if we were to list all orders which are presently on the books, even with the reduction with the Japanese have voluntarily made, according to our latest information, we will have exports this year of approximately 11.5 million tons of ferrous scrap.

Senator STEVENSON. This year.

Mr. Cook. That is correct.

Senator STEVENSON. You are referring to 1972.

Mr. Cook. 1972, which was 8.5 million tons.

Senator STEVENSON. I believe it was 7.4.

Mr. Cook. That is right; forgive me. The highest year—1971—was 10.4 million tons. So, if we licensed all orders presently on the books, made no changes, even with the Japanese reduction, we would be exporting a million tons more of scrap than we ever have before.

Senator STEVENSON. Even with the Japanese reduction.

Mr. COOK. That is correct.

Senator STEVENSON. Now, in the case of many of these shipments, the Japanese act as middlemen, don't they? They buy scrap here and sell it in other parts of the world?

Mr. COOK. There are on the books, based upon the Japanese statistics and our own, approximately 500,000 tons of scrap that have been purchased by Japanese purchasers, mainly trading companies, to be shipped to Far Eastern ports, primarily, according to the Japanese, to Taiwan and South Korea.

That 500,000 tons has to be added to the 5 million ton limit which the Japanese have indicated that they will impose upon their imports of ferrous scrap this year.

The 11.5 million ton figure that I quoted to you includes that 500,000 tons for transshipment by Japanese trading companies to other ports.

Senator STEVENSON. Do I understand you to say the Japanese are voluntarily eliminating the imports for transshipment?

Mr. COOK. No; they are not. They are only limiting imports for their domestic consumption. They have indicated to us that they have no authority to limit purchases of scrap by trading companies for delivery to other ports.

Senator STEVENSON. Why should we permit any exports when the country of destination is unknown?

Mr. COOK. I guess I would turn that around and say in the past, we have seen no major difficulty in allowing export shipments, even when the country of destination has been unknown on the grounds that we were primarily interested in the balance of payments benefits of such activities, and we were not particularly interested in the country of destination.

Senator STEVENSON. We have a delivery problem now. As in the case of agricultural exports, we have a short supply problem and a problem of allocation. It doesn't seem to me you can allocate very well if you don't know the country of destination.

Mr. COOK. That is entirely correct. And should we develop and attempt to implement an allocation system that would be based on a country-by-country allocation, either on some historical basis or otherwise—

Senator STEVENSON. If you go to controls, will you adopt some sort of country-by-country allocation.

Mr. COOK. I say if we were to go to controls which embodies a country-by-country allocation system, there is no question but what we would want to know how that 500,000 tons was divided up among the Far Eastern countries.

Senator STEVENSON. You are suggesting you might go to controls, but without country-by-country allocation.

Mr. COOK. It is certainly conceivable we could do that; yes.

Senator STEVENSON. Can you tell us about any alternative allocation programs that you are considering?

Mr. COOK. It is very difficult, frankly, to describe those, not because we are not talking about them, but because such an exter-mixture can be considered. It is our attempt to find an approach to licensing which would serve several purposes.

One, it would insure that our traditional customers for ferrous scrap continue to receive reasonable quantities of that material.

Two, and I should have put this first, I think, we want to insure that the domestic producers do receive adequate amounts of material.

Three, we want to insure that in any system that we devise, the risks and the burdens of the system, for example in the cancellation of ship charters, the burden as between exporters shipping from different ports in this country, are equitably distributed.

I suppose the two major kinds of systems that have been used in the past or considered in the past are an auction system of some kind, and a country allocation system. It is our feeling that in this case, an auction system would not be appropriate, and we have in very few cases in the past used the auction system, the reason being that we felt that that might engender windfall gains for certain parties and those would be difficult to distribute to the appropriate individuals.

SENATOR STEVENSON. Well, if there are two basic approaches, and the auction system, one of them, is not sound, I guess you are left with the country-by-country allocation.

MR. COOK. That is true, except that in terms of determining what the allocation is, one tactic we might take, for example, is to, in this case, allow the export of all orders or exports against all orders written before the first of July, or we might cut across the contracts on all orders written before the first of July, as we have done in the case of soybeans.

If we did that, we would still not necessarily need to know where the 500,000 tons of ferrous scrap was going, that is going to be transshipped through Japan, although I might say we would like to know where that material is going, because we would like to insure all countries are treated equitably.

SENATOR STEVENSON. Senator Packwood.

SENATOR PACKWOOD. How much of our ferrous scrap exports go to Japan?

MR. COOK. How much of our scrap?

SENATOR PACKWOOD. Yes.

MR. COOK. In 1972, of the 7.4 million tons compared with a domestic figure—excuse me a moment—I'm sorry, Mr. Packwood, in 1972 it was approximately 30 percent. In this year, if things continue, based on the orders we have on the books, if we shipped all of the material out, and I'm not saying we are going to, but if we did, we would be shipping out 11.5 million tons and we expect purchase scrap needs in the United States of 41.5 million tons; about 25 percent this year.

SENATOR PACKWOOD. To Japan?

MR. COOK. No.

SENATOR PACKWOOD. I'm confused about your answer. I asked how much of the scrap that we export goes to Japan.

MR. COOK. I'm sorry. This year we expect about half of the scrap to go to Japan.

SENATOR PACKWOOD. All right. Now, are we short of scrap in this country, in the sense there is simply not enough to take care of our domestic demand and foreign needs? Or is there sufficient scrap to meet both markets but it is simply higher priced because of the high demand this year?

MR. COOK. That is of course the crucial question. As you know, under the Export Administration Act, we have to meet the three

tests of abnormal foreign demand, inflationary impact and domestic scarcity. It has been the judgment of the Secretary of Commerce that in the present situation there has been sufficient evidence of domestic scarcity, as indicated by the fact that our total exports plus domestic demands this year would exceed by some 8 million tons any previous record year. On the basis of that, and on the basis of some indications that the sources of scrap users are going down precipitously, particularly in July, that in fact we have a scarcity.

But I should say on the other side that we have found no specific case of where individual firms have run out of scrap or clear cut cases where individual firms have actually run out of scrap, and there has been a shortage in that sense.

Senator PACKWOOD. Senator Cranston and Stevenson and I are cosponsoring legislation to limit the export of logs. In the log situation, we have an absolute shortage, in that even if we exported no logs, we would still have to import lumber from Canada to meet our needs.

Do we face the same situation in scrap?

Mr. COOK. No, sir, we are not. We import very little scrap.

Senator PACKWOOD. There is enough scrap to go around, it is just that the overall high demand results in a higher price.

Mr. COOK. The combination of export and domestic demand. This is the highest domestic year, as you know.

Senator PACKWOOD. But how many cases do you know of where domestic manufacturers who want scrap are simply unable to buy it, at any price? They can't find it?

Mr. COOK. We have uncovered no specific instances of that occurring. There have been a number of alleged instances. We have attempted to check those out. In all of them, there have been what I call mitigating factors and it has not been clear cut that the absence of scrap was causing a curtailment of production.

Senator PACKWOOD. I have no other questions, Mr. Chairman.

Senator STEVENSON. Did the price freeze increase scrap exports? Did it have the effect of increasing exports? On the domestic price we are frozen, but the foreign price we are unfrozen. Did exports jump up then?

Mr. COOK. We began the reporting system in late May, and the initial reports, as generally happens in this kind of situation, had inaccuracies and there were some problems with interpretation of the rules.

So it is difficult for us to compare the reports and orders which we had in early June with the reports in late June, which I think are much more accurate. I can say that the export orders between the 13th of June, when the President's announcement was made on the freeze, and the end of June, when in effect, the Secretary of Commerce put on the embargo, that export orders in that period of time rose by some 5 to 7 percent.

Whether or not that would be an abnormal increase for that time of year, I really couldn't say.

Senator STEVENSON. Did a gap develop between the world price and the domestic price of scrap?

Mr. COOK. No, there has not. As far as we can tell, there is no major differential.

Senator STEVENSON. What can you tell us about the capacity of the industry to produce this scrap? Can the capacity be expanded to meet growing demands?

Mr. COOK. We only have on that subject what I would call very soft information. We know the scrap industry is capable or at least was capable several years ago of producing 46 million tons of scrap for the combined domestic consumption plus export, because in fact they did it in one year. Since that time, there have been indications that the facilities, the processing facilities, have been expanded.

And if one assumes—I believe the record year was 1969. If you assume a reasonable rate of expansion since then, one can argue that perhaps the capacity, in terms of the processing capacity, is somewhere between 50 and 55 million tons.

But there are no hard figures on precisely what the capacity is. The other side of that question, of course is, is there sufficient scrap available to be processed to satisfy both the domestic and export demands? The best information we have there is that first the amount of scrap, in terms of the amount which comes into the processing system, responds very differently to the price which is being paid for that. The higher the price, the more scrap comes into the system.

The pool of scrap in the United States is estimated to be in the hundreds of millions of tons. So, presumably at some price we would have enough scrap, as I say, up to a matter of several hundred million tons.

Senator STEVENSON. The quality of the scrap decreases, doesn't it?

Mr. COOK. The quality of the scrap does decrease in the sense that it depends—it depends on the use, however. Much of the scrap in the scrap pool consists, for example, of abandoned automobiles. For some purposes, those automobiles, when burned and put into bundles are a perfectly reasonable grade of scrap, although I think the industry can be more precise about this than I can.

There is no question that I think the higher grades of scrap tend to be purchased first, in part, particularly in this period of time, because the higher the grades of scrap, particularly for the foundry and furnace industry, the more likely it is they produce more, so they buy the higher grades.

Senator STEVENSON. Senator Packwood.

Senator PACKWOOD. What is the normal method of purchasing scrap, domestic and foreign? Is it purchased under a long term contract or on a lot basis?

Mr. COOK. The general method of purchasing, as I understand it, and I guess the gentlemen who follow me will be better versed in this than I am, but in the domestic market, as the general method of purchase is on a contract for delivery in 30 days, although there are a few isolated cases where domestic users purchase for long-term delivery. I believe in most of those cases, that is not at a set price, but at a price that is determined in relation to some index.

In sharp contrast to that is the situation with regard to most foreign countries. Most of the foreign countries, and a particular example is Japan, purchase scrap on a longer-term basis and in many cases at a set price for delivery up to say, 6 or 7 months in the future.

The exception to that, incidentally, is Canada and Mexico.

Senator PACKWOOD. The scrap dealers would rather deal with a country that buys on a long-term basis at a set price than to be subject to the whims of the domestic purchasers?

Mr. COOK. I think I would defer to them to answer that question.

[Complete statement of Mr. Cook follows:]

TESTIMONY OF GARY M. COOK
DEPUTY ASSISTANT SECRETARY FOR
COMPETITIVE ASSESSMENT AND BUSINESS POLICY
U. S. DEPARTMENT OF COMMERCE
BEFORE THE INTERNATIONAL FINANCE SUBCOMMITTEE
OF THE SENATE COMMITTEE ON BANKING,
HOUSING, AND URBAN AFFAIRS
JULY 18, 1973

I appreciate this opportunity to discuss iron and steel scrap exports and S. 2119, a bill to amend the Export Administration Act to control exports of iron and steel scrap. As you know, on July 2, 1973, the Secretary of Commerce imposed export controls on ferrous scrap after determining that the criteria set forth in the present Export Administration Act had been met for this commodity. The Secretary's statement, accompanying factual data and the details of the export controls were made available to the public, and these documents are attached to copies of this testimony.

Briefly, the present export controls require that all exports of ferrous scrap now require a validated license for shipment to all destinations. Licenses for exports against orders of 500 tons or more are not being granted for orders accepted after July 1, 1973. Orders accepted prior to that time for delivery in July are currently being licensed. Licensing policy for orders accepted July 1 or earlier for shipment after July 31 will be announced as soon as our review of the ferrous scrap situation has been completed.

A number of considerations are guiding us in planning the licensing program. We are aware of the need to announce the system as promptly as possible in order to reduce uncertainty in the marketplace. While our primary aim is to insure an adequate supply of scrap for the United States, we recognize the need to treat both exporters and foreign importers equitably, especially our traditional customers. Moreover, the system must be responsive to changing conditions of world trade.

The allowable level of exports after July 31 will be based on our present review of the ferrous scrap situation. Until further notice, licenses will be granted against orders for less than 500 tons regardless of when the orders were accepted.

These export controls are designed to assure that domestic supplies of ferrous scrap will be adequate to meet the needs of U. S. steel mills and foundries. Reports from exporters have given us an estimate of the export demand level for iron and steel scrap. The data as of June 17, 1973, show that exports to date, combined with orders already on hand, total 12.4 million tons for calendar year 1973. Any new orders for export

this year would, of course, add to this total. The total compares with 7.4 million tons exported in 1972, and with the previous record year of 1970, when shipments totaled 10.4 million tons.

The Japanese, on July 2, made a commitment to us to voluntarily limit their imports of scrap and to spread out shipments over the remaining months of the year, to minimize disruption of the U.S. domestic supply. The Japanese Government has now informed the Department of Commerce that it plans to reduce imports of ferrous scrap during August by 29 percent. This reduction will be made from orders already placed for delivery next month and will be administered through an import licensing procedure. The Japanese will reduce total imports of ferrous scrap from the United States in 1973 to five million short tons and defer until 1974 the balance previously ordered.

With respect to S. 2119, I can assure you that we are in sympathy with what we understand to be the bill's purpose. An adequate supply of ferrous scrap is imperative. We have broad and flexible authority to take appropriate action to help maintain that supply under the Export Administration Act, where the criteria of that Act are met.

S. 2119 would provide an automatic "trigger" mechanism, based upon the total of scrap received by domestic users plus exports. As we understand it, the Secretary of Commerce would be required, as soon as possible after the end of each calendar

quarter but no later than 45 days following the close of such quarter, to determine whether a shortage of ferrous scrap exists. If a "critical shortage" exists (defined as a volume of receipts plus exports of 11.5 million net tons during a period of three consecutive months) the Secretary would be required to limit scrap exports for six months so that total exports for the six-month period would not exceed one-quarter of the preceding five-year annual export average. This restriction would start no later than the beginning of the third month following the quarter in which the "critical shortage" occurred.

When export restrictions are imposed as above they could be removed at the end of the six-month period if the Secretary determines that there is no "shortage" (defined as a volume of receipts plus exports of 11 million net tons or more of scrap during a period of three consecutive months). If the Secretary determines that a shortage did exist in a calendar quarter during this six-month period of restrictions, the same level of restrictions would remain in effect for additional three-month periods until the Secretary determines that a "shortage" no longer exists.

When export controls have been imposed under a "critical shortage" condition and for the duration of the period that these restrictions are in effect, the Secretary would determine

whether a "critical shortage" occurred in each successive three-month period. If a "critical shortage" is determined to exist in spite of the export restrictions applied, the Secretary would be required to stop all exports within two months from the closing of the three-month period in which the "critical shortage" occurred. If such a total embargo is imposed it would remain in effect for a minimum of three months and for additional one-month periods until the Secretary determines that a "critical shortage" no longer exists.

We have several problems with this proposed approach. First, the "trigger" approach is simplistic and rigid. I will admit that the idea of a "trigger" is appealing at first glance. It would appear to be simple, understandable, and advantageous in more or less making our decision for us. However, the use of a "trigger" based on the aggregate of receipts and exports overlooks a number of important factors. It fails to provide for changes in the supply and demand situation during the three year life of the bill, or for the fact that both domestic and foreign buying follow seasonal patterns and are not spread evenly over the year. There are further seasonal factors affecting exports, such as, for example, the shipping season on the Great Lakes, which tends to limit scrap exports from the North Central tier of States to seven or eight months in the year.

Second, the quantity-based trigger does not take prices into account. These may vary by grade and type of iron or

steel scrap. Price movements are often, though not always, a reliable indicator of short supply, of whether there is, in fact, a shortage. Moreover, the pattern of orders often determines spot prices, and the bill does not address itself to this characteristic of the market.

This brings me to our third objection to this approach - the implicit assumption that there is a correlation between receipts plus exports, and scarcity. This begs the question. It is quite possible that a combination of receipts and exports might reach the trigger amount in the absence of a shortage. And in a period of reduced domestic demand and high foreign demand, the trigger might force us to control exports, with harmful consequences to our balance of payments, entirely unnecessarily.

Our fourth objection relates to the rigidity of this approach. The bill allows the Secretary no discretion, nor would there be any means, short of an Act of Congress, of raising or lowering the threshold figures establishing a "shortage" or a "critical shortage". In addition, the bill fails to allow for scrap normally exported from border regions remote from domestic consumers.

Finally, if S. 2119 were enacted, we, and the Congress, would be faced with demands from consumers of other commodities for special legislation providing for similar automatic application of export controls. We would then quickly be

brought to appreciate the wisdom of the Congress in casting the present Export Administration Act in general terms and making clear, in its legislative history, that short supply controls were to be used sparingly and only under the most compelling circumstances. We believe we are acting in this spirit in the imposition of interim controls and in designing the system which will be announced shortly.

**UNITED STATES DEPARTMENT OF
COMMERCE****NEWS**

WASHINGTON, D.C. 20230

OFFICE
OF THE
SECRETARY

Statement on Ferrous Scrap by Secretary of Commerce
Frederick B. Dent at a News Conference, July 2, 1973

In recent months, the Department of Commerce has been closely following developments on the price, supply, and demand for ferrous scrap. Our preliminary data led to a decision on May 22nd to impose reporting requirements on all exporters of ferrous scrap so that we could monitor new developments and future order levels on a timely basis.

This reporting system has given us an accurate estimate of the demand levels for exports of ferrous scrap for the remainder of 1973. The data shows that exports to date, combined with orders already on hand, now total 12.4 million tons for calendar year 1973. Any new orders for export this year would, of course, add to this total. This compares with a 7.4 million ton export total for 1972. The information we have made available in the press kit indicate the facts which underlie these totals.

This development has resulted in very serious pressures on domestic supplies and prices of ferrous scrap and I have determined that the criteria set forth in the Export Administra-

tion Act have been met for this commodity. The details of the licensing and control procedures are spelled out in the information which we have supplied to you. In brief, a license requirement is being imposed for all exports of ferrous scrap. Licenses for exports against orders for 500 short tons or more will not be granted for orders accepted after July 1, 1973. Orders accepted prior to that time for delivery in July will be granted licenses. Licensing policy for orders accepted July 1 or earlier for export after July 31 will be announced at a later date. Until further notice, licenses valid for a period of twenty-one days will be issued against orders for less than 500 short tons, regardless of when these orders were accepted.

In addition, I would like to announce that the Japanese Government has notified us that it will license imports of ferrous scrap. The effect of this will be to defer to 1974 one million tons previously ordered from the U.S. Shipments to Japan, plus orders already on the books for shipment to it, now total 6.5 million tons for calendar year 1973. This decision by the Japanese Government will reduce that total to 5.5 million tons. In addition, the Japanese have assured us that, for the remaining six months of the year, they will spread shipments to them of U.S. ferrous scrap to minimize disruption of U.S. domestic supply.

I would like to express the appreciation of the U.S. Government to Japan for its willingness to come forth with this voluntary solution to a very difficult market problem. Ferrous scrap is an important commodity for both the U.S. and Japanese steel and foundry industries and we are pleased that the Japanese Government has acted quickly and voluntarily to help alleviate the current U.S. supply problem.

The action we have announced today is designed to assure that domestic supplies of ferrous scrap will be adequate to meet the needs of U.S. industry. However, we will be monitoring this situation closely and decisions on export levels to be allowed after July 31 will be made based on our findings.

This action has been taken most reluctantly and only after it has become clear that our other efforts to alleviate the problem, including a substantial increase in offerings of U.S. Government-owned scrappable ships, could not provide a full answer.

Thank you. I would be pleased to answer any questions which you may have.

FERROUS SCRAP SUPPLY FACTS

SUMMARY:

RECENT DEVELOPMENTS IN THE FERROUS SCRAP INDUSTRY HAVE RESULTED IN THE FOLLOWING:

- Expected domestic purchases of scrap, and expected exports, are projected to total 54.4 million tons in calendar year 1973, 18% above the previous high year.
- Export shipments to date, and existing orders reported to date for export delivery in the balance of calendar year 1973, total 12.4 million tons. This 6-month total is 67% over total exports for the entire calendar year of 1972 and 19% over the previous year.
- Domestic prices for most grades of ferrous scrap are at their highest levels in 16 years.

IN RESPONSE TO THIS SITUATION:

- Effective immediately, the U.S. Department of Commerce has imposed a license requirement for ferrous scrap exports. Licenses will not be available for export orders accepted after July 1, 1973 (except for orders of less than 500 tons). Orders accepted prior to that time for delivery in July will be granted licenses.
- The Japanese Government has stated that during the last half of 1973 it will license imports of ferrous scrap. This will reduce by 1 million tons imports previously ordered from the U.S. This action will hold Japanese imports of ferrous scrap to 5.5 million tons for 1973.
- The Japanese Government has also indicated that it will spread deliveries over the last six months of 1973 to minimize disruptions of the U.S. market.

July 2, 1973
U.S. Department of Commerce

FERROUS SCRAP IS AN ESSENTIAL INGREDIENT IN THE PRODUCTION OF IRON, STEEL, AND RELATED PRODUCTS.

Steel Industry (employment--500,000)

- . For electric furnaces, which account for 15-20% of raw steel production, ferrous scrap is used for over 95% of the metallic input.
- . For other steelmaking furnaces (basic oxygen and open hearth) ferrous scrap accounts for over 30% of the input.

Ferrous Foundry Industry (employment--230,000)

- . This industry principally uses electric furnaces and cupolas, and ferrous scrap accounts for 85% of the metallic input.

LICENSING AND EXPORT CONTROL PROCEDURES FOR FERROUS SCRAP

I. Orders of 500 Short Tons or More

- A. Orders Accepted on or before July 1 for shipment in July
- Shipper may apply for license to the Office of Export Control
(Attention: 546), U.S. Department of Commerce, Washington, D.C. 20230

Application is to be submitted on forms FC-419 and FC-420,
and is to be accompanied by the following documentation:*

- . Photostatic or certified copy of sales contract to export to a foreign buyer
 - . Sworn affidavit of the amount, if any, previously shipped under this contract
- License is valid only against particular contract and during particular month specified plus seven days following the end of each month.
- Cancellation of contract automatically revokes the license issued against it.
- Cancellation must be reported and license returned.

- B. Orders Accepted on or before July 1 for shipment after July
- Licensing system will be announced in a subsequent bulletin.

- C. Orders Accepted after July 1 irrespective of month of delivery
- No licenses will be issued for export.

II.

Orders of Less Than 500 Short Tons

Until further notice, shippers may apply for license regardless of date on which the order was accepted.

Application is to be submitted on forms FC-419 and FC-420 and is to be accompanied by the following documentation:*

- . Photostatic or certified copy of sales contract to export to foreign buyer
 - . Sworn affidavit of the amount previously shipped under this contract
- License shall be valid for twenty-one days from date of issuance

Cancellation of contract automatically revokes the license issued against it.

Cancellation must be reported and license returned.

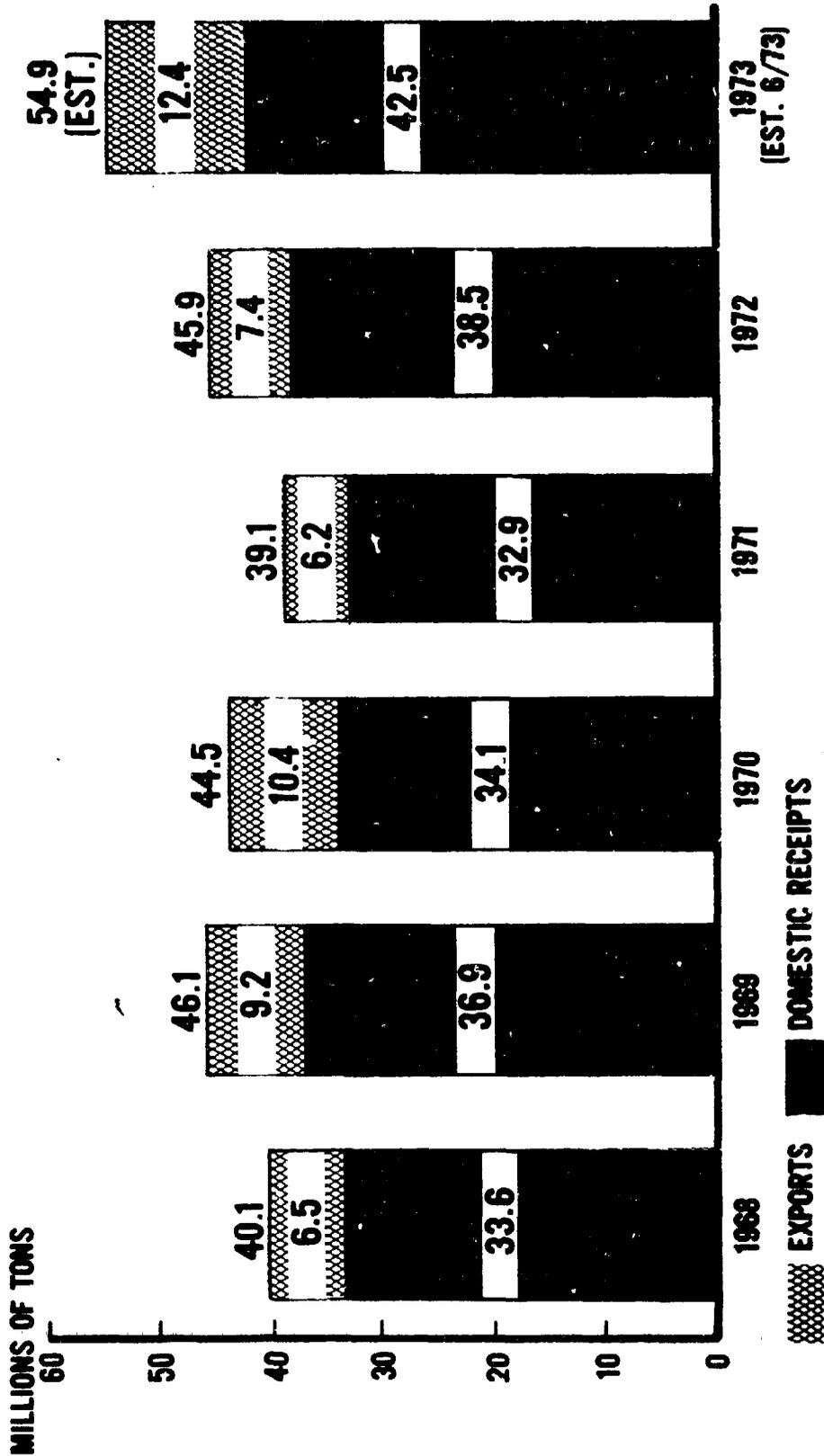
The volume of exports in shipments of less than 500 short tons will be monitored to determine whether more restrictive standards may be required in the future.

* Forms FC-419 and FC-420 can be obtained from the Office of Export Control (Attention: 547), U.S. Department of Commerce, Washington, D.C. 20230 or the nearest Department of Commerce District Office.

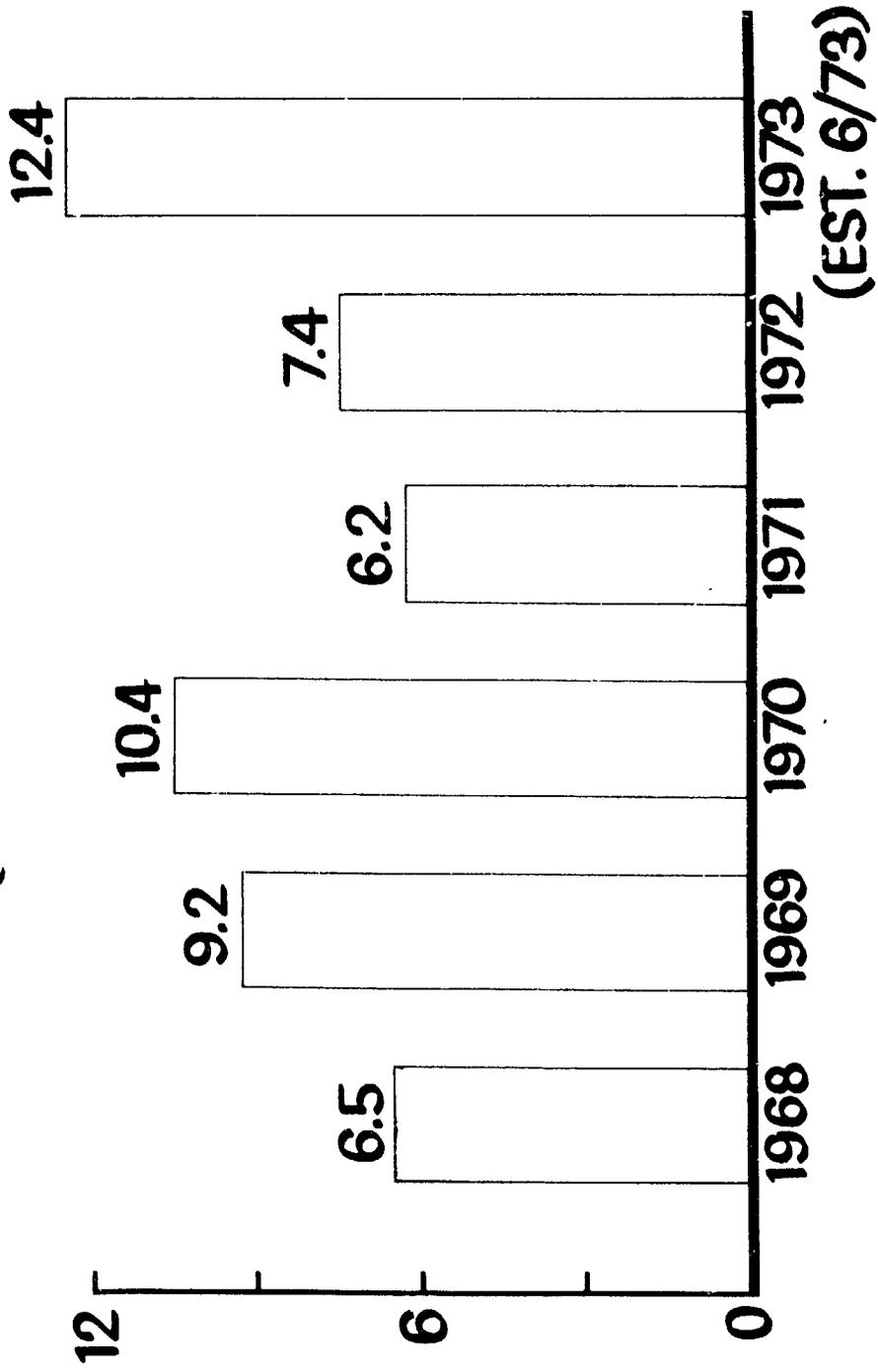
APPLICATIONS AND SUPPORTING DOCUMENTATION WILL BE ACCEPTED IN WASHINGTON BY THE COMMERCE DEPARTMENT'S OFFICE OF EXPORT CONTROL OR, BETWEEN THE HOURS OF 5:00 AND 10:00 P.M., IN THE LOBBY OF THE DEPARTMENT OF COMMERCE, 14TH STREET AND CONSTITUTION AVENUE, WASHINGTON, D.C.

QUESTIONS ABOUT THE LICENSING AND EXPORT CONTROL PROCEDURES CAN BE DIRECTED TO THE EXPORTERS SERVICE BRANCH IN THE DEPARTMENT OF COMMERCE, TELEPHONE: (202) 967-4811.

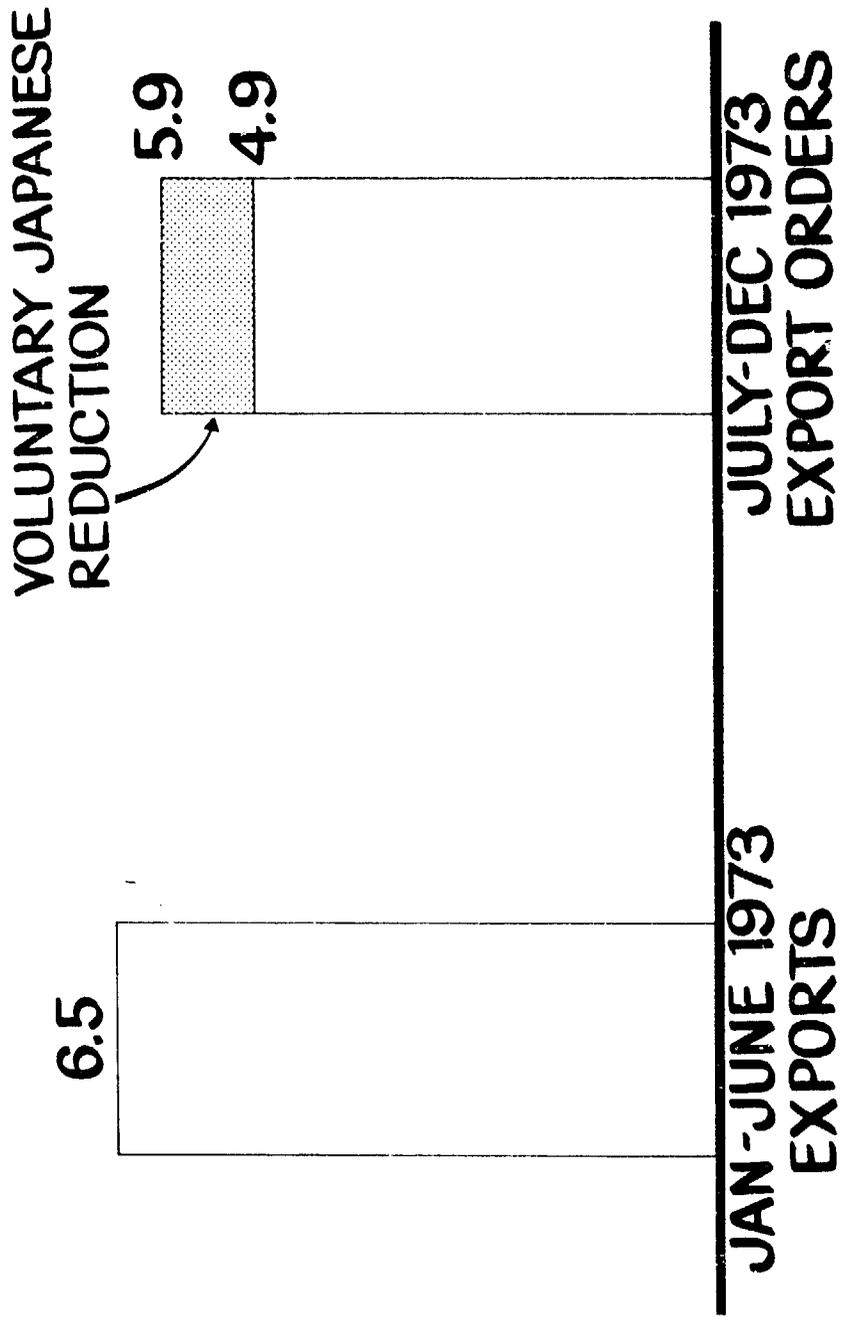
TOTAL SALES OF U.S. FERROUS SCRAP 1968-73



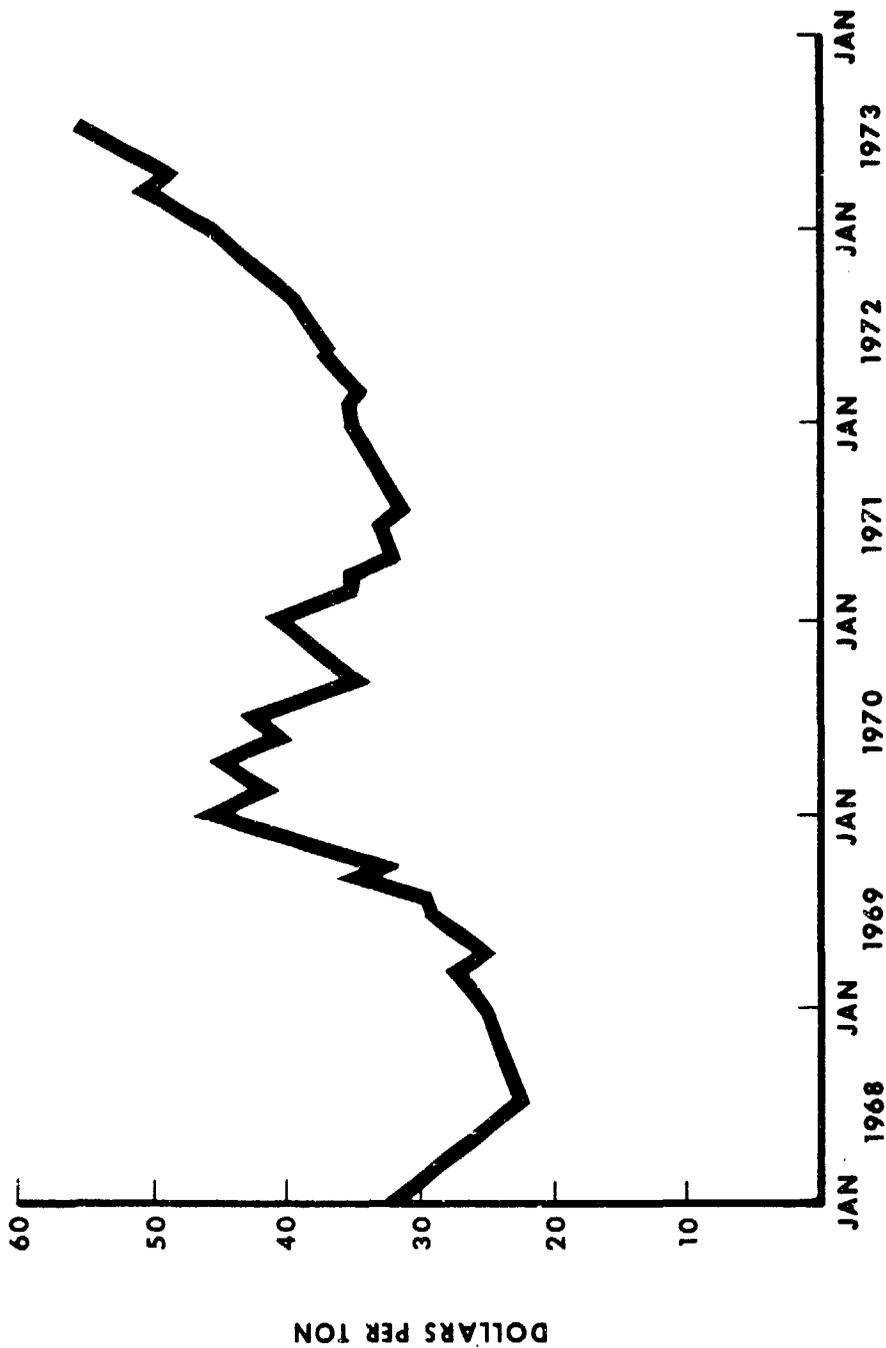
U.S. FERROUS SCRAP EXPORTS 1968-1973 (MILLION TONS)



U.S. FERROUS SCRAP EXPORTS - 1973 (MILLION TONS)



FERROUS SCRAP PRICES (COMPOSITE PRICE, NO. 1 HEAVY MELTING SCRAP)



U.S. EXPORTS OF FERROUS SCRAP BY MONTH, 1973¹

(000 Net Tons)

	JAPAN	ALL OTHER COUNTRIES	TOTAL
Exports, January-June	3,256	3,238	6,494
ORDERS, ²			
July	683	649	1,332
August	801	390	1,191
September	578	280	858
October	421	404	825
November	482	319	801
December	292	127	419
July-December	3,257	2,169	5,426
TOTAL, 1973	6,513 ³	5,407	11,920

1. Includes data as of June 17, 1973; June includes reported exports, plus orders.

2. As reported.

3. Includes 500,000 tons purchased by Japanese trading companies, and destined for other countries, principally Taiwan and Korea.

Source: Bureau of the Census
DIB-632P
1A-1094

July 1, 1973

U.S. EXPORTS OF FERROUS SCRAP BY MAJOR IMPORTING COUNTRY, 1973¹

	(000 Net Tons)		TOTAL
	Exports January-June	Orders July-December ²	
JAPAN	3,256	3,257	6,513 ³
SPAIN	507	503	1,010
CHINA	191	619	810
KOREA	339	220	559
TAIWAN	338	104	442
ITALY	174	237	411
ALL OTHER COUNTRIES	<u>1,689</u>	<u>486</u>	<u>2,175</u>
TOTAL	6,494	5,426	11,920

1. Includes data as of June 17, 1973; June includes reported exports, plus orders

2. As reported.

3. Includes 500,000 tons purchased by Japanese trading companies and destined for other countries, principally Taiwan and Korea.

Source: Bureau of the Census
DIB-632P
1A-1094

July 1, 1973

ESTIMATED EXPORTS AND UNFILLED EXPORT ORDERS FOR FERROUS SCRAP¹

Calendar Year 1973
(000 Net Tons)

	TOTAL	JAPAN	ALL OTHER COUNTRIES
Exports, January-June	6,500	3,300	3,200
Orders, July-December ²	<u>5,900</u>	<u>3,600</u>	<u>2,300</u>
TOTAL, 1973	12,400	6,900	5,500

1. Includes data as of June 17, 1973; June includes reported exports, plus orders
2. Includes an additional 10% for orders under 500 tons which were exempted from the reporting requirement.

Source: Bureau of the Census
DIB-632P
1A-1094

July 1, 1973

U.S. DEPARTMENT OF COMMERCE

NUMBER 89
(ECB-OEC-89)
July 2, 1973

- SUBJECTS:
- I. Revision of the Commodity Control List to Impose Validated License Requirements on Exports of Ferrous Scrap.
 - II. Saving Clause.
 - III. General Provisions.
 - IV. Licensing System for Exports of Ferrous Scrap Against Orders of 500 Short Tons or More for Export in July.
 - V. Licensing System for Exports of Less Than 500 Short Tons.
 - VI. Reduction of Shipping Tolerance Allowance.

PURPOSE AND EFFECT:

Export Control Bulletin No. 84 of May 22, 1973, established a reporting requirement on exports and unfilled or partially filled accepted orders for export of 500 short tons or more of ferrous scrap. This requirement remains in full force and effect. The data submitted pursuant to this requirement have resulted in the following actions:

I. Revision

The Commodity Control List is revised, effective 3:30 P.M. EDT July 2, 1973, to require a validated license for export of ferrous scrap to all destinations, including Canada. Previously, a validated license was required only for shipment to Country Groups S and Z (Southern Rhodesia, Communist-controlled areas of Vietnam, Cuba, and North Korea).

The new validated export license requirement applies to all shipments of the commodities listed below, regardless of the value of the shipment and of whether the shipment is made against an order accepted on or before the effective date of this Bulletin. The commodities are the following:

<u>Schedule B Number</u>	<u>Commodity Description</u>
282.0010	No. 1 heavy-melting steel scrap, except stainless
282.0020	No. 2 heavy-melting steel scrap, except stainless
282.0030	No. 1 bundles steel scrap, except stainless
282.0040	No. 2 bundles steel scrap, except stainless
282.0050	Borings, shoveling and turnings, iron or steel, except stainless
282.0060	Stainless steel scrap
282.0065	Shredded steel scrap
282.0078	Other steel scrap, including tin-plated and terne-plate
282.0080	Iron scrap, except borings, shoveling and turnings
282.0090	Rerolling material of iron or steel

II. Saving Clause

Shipments of commodities removed from general license as a result of the revision in the Commodity Control List set forth in Part I above, which were on lighter destined for an exporting vessel or for which loading aboard an exporting vessel had actually commenced as of 3:30 P.M. EDT July 2, 1973, may be exported under the previous general license provisions. Any other shipment of such commodities requires a validated license for export.

III. General Provisions

Except as provided in Part V below, no licenses will be issued for exports of ferrous scrap against an order which was accepted after July 1, 1973, and no application for a validated license to export ferrous scrap will be considered until further notice, unless it is against an unfilled or partially filled order calling for exportation during the month of July 1973, which was accepted by the exporter on or before July 1, 1973, and reported by him pursuant to the reporting requirement established on May 22, 1973, under Export Control Bulletin No. 84. The licensing system for exports of ferrous scrap against reported orders of 500 short tons or more calling for exportation after July 31, 1973, which were accepted on or before July 1, 1973, will be announced in a subsequent Bulletin.

IV. Licensing System Against Orders of 500 Short Tons or More for Export in July

A. Submission of application with supporting documentation:

All exporters who reported unfilled or partially filled orders accepted on or before July 1, 1973, for exportation during the month of July 1973, of 500 short tons or more of the commodities listed in Part I above, and who wish to be considered for the issuance of validated licenses for export of such commodities, must file with the Office of Export Control (Attention: 546), U. S. Department of Commerce, Washington, D. C. 20230, an application with the following supporting documentation:

(1) Photocopy or certified copy of each contract of sale for export to a foreign buyer, accepted by the applicant on or before July 1, 1973; and (2) a sworn affidavit by the applicant as to the amount previously exported against each such contract, if any. The application shall be submitted on forms FC-419 and FC-420.^{1/} The above mentioned documentation will serve in lieu of the form FC-842, Single Transaction Statement by Consignee and Purchaser, that would otherwise be required pursuant to §375.2 of the Export Control Regulations.

^{1/} Forms FC-419 and FC-420 are available from the Office of Export Control (Attention: 547), U. S. Department of Commerce, Washington, D. C. 20230, or the nearest Department of Commerce District Office.

B. Issuance of Licenses for Exportation During July

The Office of Export Control will verify the authenticity of the application and supporting documentation described in Part A above, and if it meets the requirements set out therein, will issue a validated license for the unfilled balance of the accepted order.

C. Special Terms

Each license issued under this procedure will only be valid for shipment against the particular contract and during the particular month specified, allowing shipment during a period of seven days following the end of each month, to provide for unavoidable delays. Any cancellation of a contract automatically revokes the license that was issued against it. In the event of the cancellation of a contract, the applicant is required to file a report of such cancellation with the Office of Export Control no later than five days from the date of cancellation. If a license has been issued against such contract, the license shall be returned to the Office of Export Control with the notice of cancellation.

V. Licensing System for Exports of Less Than 500 Short Tons

Until further notice, applications for licenses to export ferrous scrap against accepted orders for less than 500 short tons, which are submitted on Forms FC-419 and FC-420, will be considered by the Office of Export Control, irrespective of the date on which the order was accepted, if accompanied by a photocopy or certified copy of each contract of sale for export to a foreign buyer, together with a sworn affidavit by the applicant as to the amount previously exported against each such contract, if any. The copy of the contract will serve in lieu of the Form FC-842, Single Transaction Statement by Consignee and Purchaser, that would otherwise be required pursuant to §375.2 of the Export Control Regulations. After verification of the authenticity of the documentation submitted by the applicant, licenses will be issued for exportation during the month specified in the contract for the total amount of the contract or the unfilled balance, whichever is the lesser amount. The period of validity of such licenses will be twenty-one days from the date of issuance.

Any cancellation of the contract automatically revokes the license that was issued against it. In the event of the cancellation of a contract, the applicant is required to file a report of such cancellation with the Office of Export Control no later than five days from the date of cancellation. If a license has been issued against such contract, the license shall be returned to the Office of Export Control with the notice of cancellation. Exporters are hereby placed on notice that in the event the volume of exports under this licensing procedure reaches an unacceptable level, further restriction may be imposed on exports against orders of less than 500 short tons.

VI. Reduction of Shipping Tolerance Allowance

Paragraph 366.7(b)(1) of the Export Control Regulations states, in part, that a shipping tolerance of 10 percent is allowed on the unshipped balance specified on a validated license for shipments of any commodities licensed in units of short tons. For licenses issued under the procedures set forth above, this shipping tolerance allowance is reduced to 2½ percent.

Section 399.1 and Supplement No. 1 to Part 377 of the Export Control Regulations are amended accordingly, and a new §377.4, "Ferrous Scrap," is established. Replacement pages will be published in a forthcoming Export Control Bulletin.

Senator STEVENSON. Thank you very much.

The next witnesses are Mr. Fred Berman, president of the Institute of Scrap Iron and Steel; Dr. Herschel Cutler, executive director; and Mr. Thomas Boggs, the institute's Washington counsel.

STATEMENTS OF FRED BERMAN, PRESIDENT, INSTITUTE OF SCRAP IRON AND STEEL; DR. HERSCHEL CUTLER, EXECUTIVE DIRECTOR; AND THOMAS H. BOGGS, JR., WASHINGTON COUNSEL

Senator STEVENSON. Mr. Berman, I am going to express the rather prayerful hope that you, too, will be able to summarize.

Mr. BERMAN. Senator, let me say that we worked quite diligently putting this statement together and we spent all morning tearing it apart in order to summarize it and make it as brief as possible.

Senator STEVENSON. You anticipated my prayer.

Mr. BERMAN. My own, as well. I don't think I could sit here and read all of this.

Senator STEVENSON. Very well. Your statement will be entered in the record (see p. 75).

Please proceed.

Mr. BERMAN. Mr. Chairman, and members of the committee, my name is Fred Berman. I appear as president of the Institute of Scrap Iron and Steel, Inc., a national trade association representing approximately 1,250 processors, brokers, and dealers in the metallic scrap processing industry.

Institute members process, ship, or otherwise handle approximately 90 to 95 percent of the iron and steel scrap purchased in the United States and handle equally impressive percentages of the many other metallic solid waste materials which are recycled in our economy.

I am also president of Berman Bros. Iron and Metal Co., Inc., headquartered in Birmingham, Ala., a scrap processing firm specializing in the preparation of ferrous metallics for recycling into iron and steel products.

Accompanying me this morning are the executive director of the institute, Dr. Herschel Cutler, a professional economist, and Thomas H. Boggs, Jr., Washington counsel to the institute.

The institute objects in the most strenuous terms possible to the export control mechanism set forth in S. 2119. These controls are designed by the scrap consuming industry, one of the largest domestic industries, to permit it to exercise price control over a much smaller industry composed of many small companies processing iron and steel scrap.

The bill, as even its authors admit, could result in actually reducing total scrap sales by as much as \$0.75 billion to \$1 billion over the life of this legislative proposal.

Congress is being asked to sanction industry efforts to regulate prices, regardless of the fact that this will reduce scrap processing industry sales by hundreds of millions of dollars, that it will prevent millions of junk automobiles and other obsolete metallics from being recycled, and that it will have a seriously detrimental effect on the U.S. balance-of-payments position. These statistics are not unsupported assertions, but are based upon the steel industry's own cal-

culations of the effect of the legislation on ferrous scrap sales. The audacity of such a blatant special-interest legislative request is startling, particularly when there is no demonstrated need for such legislation.

FERROUS SCRAP MARKET

Before discussing the institute's specific concerns with S. 2119, a bill which would expand vastly this country's use of export controls, it is essential that this committee understand the operation of the ferrous scrap market. Once the forces in this market are understood, it will be clear to the committee that the proposed expansion of export controls is not only unwarranted but is, in fact, detrimental to the ferrous scrap market.

Iron and steel scrap is sold in a market governed solely by supply and demand. The market historically has experienced numerous short-term fluctuations reflecting these forces. Exhibit 1 shows a 20-year history of the price movement of No. 1 heavy melting scrap iron and the price of finished steel during the same time period. It is obvious that the wide swings in scrap iron price, up and down, all tend to exhibit a long-run equilibrium around a narrow price range; the situation with regard to steel price is unidirectional, upward.

It would seem to be unnecessary to discuss basic economics and the role of price in establishing available supply for a commodity that is traded and for which an almost limitless supply exists. However, this bill requires such an exposition.

In times of high demand, the scrap processor must pass on any increased selling price which he receives to scrap collectors to entice them to bring to the processor's yard the necessary scrap to meet the orders of the mills and foundries. This is the critical concept. Without increased price, there is no incentive to bring marginal scrap to market. In addition, these same higher prices are necessary to develop new sources of scrap and to entice people previously not in the business to enter the collection process. Thus, gentlemen, price is the name of the game when it comes to getting more sources and more scrap into the marketplace.

To me, S. 2119 is price control in disguise.

This could create shortage during periods of high demand. In normal times, the collector, scavenger, or peddler provides the scrap processor with the most easily obtained scrap materials to meet the demands of the mills and foundries. When scrap demand rises in response to an increase in steel demand, the scrap processor must be able to interest the collection system in developing sources of metallic solid waste that normally and unfortunately are not recycled. The processor also must create the atmosphere in which persons and firms not otherwise employed in scrap collection will turn to that activity to increase the available metallics.

The only known vehicle to accomplish this end, short of governmental edict or voluntary citizen effort, is price. However, since the additional material sought is not part of the normal scrap flow, additional dollar sums are required to sponsor the outlying collections and the attraction of new collectors.

In simplest terms, scrap iron on the Eastern Shore of Maryland will move much faster if the price is high than it will when the

price is low. There is need to sponsor such movement and the method is higher prices.

The irony of the position of the mills and foundries is that they are advocating, through S. 2119, a procedure which will lower the price to the processor and thus to the collector, thereby creating the very shortage potential which they want to avoid. When the marginal collection of solid metallic waste is not profitable to the collector, he will not collect. At that point there is a real danger of a shortage. This danger cannot occur while price remains at levels that support the present extensive collection efforts.

Practically all steel produced, in the United States as well as abroad, is derived either from the smelting of iron ore or from the remelting of iron and steel scrap. In so-called integrated steelmaking, iron ore is smelted in a blast furnace, and the resulting hot metal is generally converted to steel via the basic oxygen steelmaking process. The proportion of scrap used in the basic oxygen steelmaking process is very nearly equivalent to the proportion generated within the steelworks during rolling, finishing, and sizing of steel products. Accordingly, in terms of net finished steel shipped, the basic oxygen process neither generates nor consumes significant amounts of scrap. The tonnage of steel shipped from integrated plants is roughly equal to the tonnage of blast furnace hot metal smelted from ore.

In so-called nonintegrated steelmaking, scrap iron and steel from various sources is remelted in an electric-arc furnace, then refined to steel. Generally speaking, no ore is used, and all of the finished steel leaving the plant has entered the plant as scrap reclaimed from industrial operations and the salvage of obsolescent steel devices and structures. As in integrated plants, there is an internal reflux of processing scrap.

Integrated steelmaking is characterized by large-scale operations, large unit increments to capacity and very high long term investments. As nominal figures, one might cite capacity changes in terms of units of 4,000 tons per day, or 1.5 million tons per year, costing from \$300 to \$350 per annual ton of new capacity or \$450 million per step increment. A decision to increase integrated capacity by building new facilities has a cycle time of about 2 to 4 years, mainly engineering and construction time. Once built, new integrated capacity must be fully utilized owing to high fixed charges. If steel demand cannot absorb the new production in full, older operations—generally built in smaller increments—will be retired or temporarily idled.

A decision to activate a blast furnace, new or old, is a definite long term commitment because of high refurbishing and startup costs. The campaign life of a blast furnace, once started, is 4 to 7 years. Similarly, iron ore for smelting is developed in large increments and purchase of the ore is generally in terms of long term commitments.

In contrast, nonintegrated steelmaking is much smaller in scale and is characterized by much shorter decision/commitment cycles. In an existing plant, electric-arc furnaces may be started up or shut down on short notice and at very modest cost. Typical capacity increments range from 300 to 900 tons per day, or 0.1 to 0.3 million

tons per year, and thus are one-fifteenth to one-fifth of the increments in integrated capacity.

The capital cost of capacity increments is on the order of \$100 to \$130 per annual ton, or even less if excess steel-rolling capacity is present in the plant. The cycle time for engineering and construction is on the order of 14 to 18 months. Owing to lower fixed charges, the nonintegrated steelmaker is not constrained to utilize all of the new capacity he installs.

Several factors are important in considering the effects of an increase in demand for steel. Until this increase shows itself to be permanent over a term of years, there is no basis for adding to integrated capacity.

The first response of the industry is to make full and complete use of nonintegrated capacity that can be put into production within a week or so.

A second response is to stretch the output of both integrated and nonintegrated capacity where possible.

A third response is to bring idle integrated capacity into production, that is, starting up smaller and less efficient blast furnaces that had been idled by previous installation of modern equipment.

But until this third response takes effect, over a period of about two months, all of the increase in output is ultimately derived from increased use of scrap.

A step increase in steel demand will not produce a permanent adjustment of integrated steelmaking capacity, in terms of modern, efficient equipment, for years. The pressure upon scrap markets and prices is substantial, and the effects upon scrap price provide the ultimate impetus toward construction of new integrated steelmaking capacity.

Turning to the scrap market itself, three components of scrap used in the production of steel must be recognized and distinguished.

The first of these is the recycled or "home" scrap generated during processing of raw steel to finished steel within the mills. Home scrap is a more or less constant proportion of total raw steel production and it is clearly impossible to make an increase in finished steel output through the generation and use of home scrap.

The second component of scrap supply is so-called prompt industrial scrap, that which is generated by the fabrication of finished steel into consumer goods, buildings, and equipment. Of course, steel users try very hard to minimize their generation of prompt industrial scrap, with the result that the flow of prompt industrial scrap is very closely pegged to steel output and steel utilization.

Again, there is no possible way to meet an increase in the demand for steel through increased flows of prompt industrial scrap. If it is desired to buy a larger amount of autos, structures, machinery, and other steel-containing products, the new steel must come ultimately from either iron ore or from recycled obsolescent scrap. Because new steel from iron ore cannot be obtained on a short term basis, obsolescent scrap from salvage operations bears the entire brunt of increases in steel demand for several months, and, in the adjustment period, in decreasing proportion for up to several years.

To generalize the cause/effect relationship outlined, were the price of scrap to become fixed or artificially stabilized through artificial

means, the inevitable result would be a proportionate loss in this Nation's ability to respond promptly to changes in the demand for finished steel. Also, it is likely that the impetus for prompt investment in integrated capacity would be dampened or lost altogether. In short, an external and involuntary stabilization of scrap prices would amount to sand in the gears.

DOMESTIC DEMAND

Domestic consumers of iron and steel scrap employ an historical buying practice whereby scrap is purchased on a 30-day basis in contrast to foreign consumers who buy at least 90 to 120 days in advance. Orders in the latter case allow the scrap processor to plan his raw material requirements, production, shipping, and so forth; orders on the former basis force instability.

Although the domestic steel industry has boasted of heavy demands for its raw steel production in 1973, it generally continues to buy scrap on a 30-day basis, and, at the first sign of softening in the market, mills and foundries—(1) Again initiate the practice of canceling orders the last day of the shipping month, and /or (2) reject carloads of scrap in the falling market awaiting renegotiation at lower prices; and /or (3) “stay out of the market” to further force the price downward. These practices dramatically heighten scrap price swings.

While the steel industry demands immediate fulfillment of its requirements of scrap iron from the scrap processing industry, it is telling its customers that they can expect delays of 4 to 6 months on delivery of steel products. It is also saying to potential customers that regular customers have the first opportunity to buy their needs.

In short, the steel industry cannot fill its domestic demand and is picking its customers; but this industry also has seen fit to export 1.5 million net tons of steel during the first 5 months of this year, a 36-percent increase over the same period in 1972.

Where is the concern for domestic users of steel who are truly experiencing a shortage of necessary material? Possibly a trigger mechanism for steel exports is needed.

Mills and foundries have no intention of stabilizing the price of scrap iron in a narrow band.

Mills and foundries prefer to create the speculative swings in market price, but they seek legislative control of the higher prices which their own actions have induced. The funds and time expended in this lobbying effort could more properly be invested in the stabilization of the scrap market.

There is no disputing the fact that when prices rise the costs of operating mills and foundries goes up. But, likewise, when prices fall, the bargains found in the scrap market are astounding.

In the price decrease from 1970 to 1971, the steel mills enjoyed a profitable windfall of more than \$200 million, though this Congress was not called upon to restrict the amount obtained. During the scrap price decrease from 1965 to 1966, the gain was at least \$125 million; and from 1966 to 1967, the total was at least \$100 million, while from 1967 to 1968, the gain approached \$60 million. (See exhibit 2.)

These "rewards" of the supply/demand market were enjoyed and welcomed by the steel industry; no cries were heard that more scrap should be purchased to make certain iron units were not wasted; no decreases in the composite price of finished steel occurred; no deflationary pressures were noted; the composite price of finished steel does not indicate whatsoever that steel reaching consumers in various forms experienced any overall reduction in price.

What happened to the windfall gains from these sharp reductions in scrap iron prices? If all the furor today is concerned with "precipitous price increases" for this "critical raw material", where did the benefit go when this same material had an equally "precipitous price decrease?"

DEVELOPMENT OF SCRAP EXPORTS

The export of ferrous scrap from the United States developed because the domestic consuming industries would not purchase all of the scrap iron that was available and other countries of the world needed this raw material. (Exhibit 3.)

The first occurrence of international demand was in the early 1920's. Since the United States was—and remains—a scrap surplus Nation, trade was undertaken.

Although the tonnages cannot be compared to more recent times, the historical relationship of domestic needs for iron and steel scrap and the scrap processing industry's ability to process and ship scrap, are matters of record. There are only two domestic industries which consume significant volumes of ferrous scrap—the foundry industry and the steel industry. Export, by necessity, provided a third market for scrap iron which could not be used in this country.

Even though the scrap processor then and now would prefer to have his product purchased domestically, U.S. consumers of ferrous scrap, heavily tied to owned or controlled virgin materials, did not choose to use the scrap available. Other nations of the world had a need for scrap, that scrap was not wanted by U.S. consumers, and to survive as an industry, the scrap processor had no alternative but to enter the international market.

The exportation of iron and steel scrap began to reach more substantial tonnages in the mid-1950s. Again, it was a case of supply and demand—an excess of supply of scrap in the United States and a need for scrap by other nations of the world.

In the late 1950's and early 1960's, with the introduction of the basic oxygen furnace process of steelmaking, the domestic steel industry's need for scrap further declined. Whereas the open hearth furnace required 40 to 50 percent scrap, the BOF required 25 to 30 percent scrap, most of which originated in the mill as "home" scrap.

In 1956, domestic consumers purchases a then record 36.8 million net tons of iron and steel scrap and 6.3 million net tons were exported. It was not until 1969, 13 years later, that the domestic consumers purchased more scrap than in 1956 and that was only by 100,000 net tons. Yet, raw steel production increased from 115 million net tons in 1956 to 141 million net tons in 1969.

It was during these years that the American scrap processing industry was able to survive, although many firms went out of business, because of the foreign demand for iron and steel scrap. In fact,

if it were not for these years of export trade, the scrap industry today would not be prepared to meet the needs of even its domestic customers.

It also should be noted that in 1956, iron ore imported jumped from 26 million net tons in 1955 to 34 million tons, reaching a peak of more than 50 million net tons for the years 1965, 1966, and 1967 before declining to 46 million net tons in 1969.

What the scrap industry witnessed in those years was a definite drop in the domestic consumers' desire to purchase their product, a dramatic increase in the imports of iron ore and a need to cultivate world markets for ferrous scrap in order to stay in business.

It is most interesting that at no time during those years did the scrap iron industry ask to curtail imports of iron ore to protect the domestic scrap industry. The Government was never asked to force the domestic steelmakers to rely first on scrap generated by the United States and only then to allow the importation of iron ore.

The tremendous tonnages of iron and steel scrap that accumulated in the form of obsolete automobiles alone was visible recognition of the metallic solid waste problems this country faced in the late 1950's and 1960's because there was a limited domestic market for the process material. The scrap processing industry has, by necessity, thus been forced to rely on the foreign market for its surplus scrap—which, if not recycled, undermines our efforts to achieve environmental quality.

And it is important to again stress that the scrap processing industry prefers to sell its material to domestic users for economic as well as political reasons. The political motivation is obvious—our appearance here this morning and our efforts since last December to protect and retain free world trade in scrap iron speak clearly enough to that subject.

The economic rationale may not be as apparent. The shipper of scrap domestically is faced with fewer credit, shipping, and liability problems in contrast to the magnified difficulties in each of these areas when foreign trade is involved. For example:

(a) The average rail shipment is a car of 50 to 55 tons—even multiple car shipments amount to only 500 to 1000 tons—whereas the typical oceangoing ship today is 20,000 to 25,000 tons of carrying capacity. The costs of capital involved in the gathering, processing, and concentration of such volumes is immense as is the storage problem and the scheduling required to insure that the material is dockside when the vessel arrives.

(b) The paperwork and documentation necessary to export is infinitely more complex than the simple bill of lading used to ship domestically.

(c) Credit is more readily established in this country than in foreign transactions.

(d) Inspection of the material sold [all scrap sales are subject to receivers' weights and inspection] occurs thousands of miles away with the inherent difficulties of great distances, in contrast to the domestic scene where the inspection may occur only a few miles or, generally, 100 or so miles from the origin.

(e) Vagaries of the sea, including the possibility of late ship arrival or departure, delayed loading, and so forth, each of which is

very expensive in terms of demurrage [\$3,000 per day per ship is not unusual] adds further hazards to the foreign trade area.

The recognition that the risks of trading overseas are greatly magnified has not stopped the export trade of scrap from this country. The reason for this is that the absence of viable domestic markets has required the development and maintenance of foreign markets to preserve the domestic scrap processing industry. In the absence of foreign demand, the scrap industry would be further atrophied and unable to perform as desired by the domestic consumers.

Moreover, like any buyers, the foreign consumers have a right to rely on the stability of their supply sources. They cannot be expected to provide a market when the exporter needs it and to rely on other sources when the "fair-weather buyers" of the exporter suddenly find it to their advantage again to enter the scrap market. The capriciousness of the legislation at issue would seriously harm the market for scrap iron and steel throughout the world and might virtually destroy that market for the export shipper.

World trade is not something that can be turned on and off; one customer is a valued asset that is not exploitable at the whim and fancy of other customers.

The institute has heard repeatedly that the domestic steel industry is supplying first and primarily those customers who have remained loyal to the domestic steel producers during the past years of low steel demand and only then is it considering the orders of those customers who had strayed from their doors.

The scrap industry is not setting such priorities; the scrap industry has met, is meeting, and will continue to meet the needs of its domestic and foreign consumers. All that is asked is that the industry be permitted to produce and sell to all of its customers.

The steel industry recognizes the need to protect loyal customers where steel is involved; S.2119 would reward the opportunist domestic customer and penalize the foreign customers who, more than many of his domestic counterparts, has been a mainstay in the American battle to preserve the environment and recycle obsolete metallics.

LACK OF DEMONSTRATED NEED FOR EXPORT CONTROLS—INFLATIONARY IMPACT

S. 2119 states that prices of scrap iron can lead to disruption of the economic stabilization program now in being. This represents a significant change from the language of the Export Administration Act of 1969, which considered a serious domestic inflationary impact, not merely price rises. The reason for this change is critical to the understanding of the thrust of S. 2119.

Inflation is not a mere price increase. The institute has shown repeatedly that scrap iron prices rise and fall as a result of steelmill and foundry-buying practices, but the price of new steel moves only in one direction—up.

The two charts attached hereto as exhibits 1 and 3 indicate clearly and without challenge that there is no price inflation in the scrap iron market since even today scrap iron is selling for approximately

what it sold for in 1956. Steel prices, however, are now more than double the price of 20 years ago.

Reviewing these two charts shows that there is no relationship between the price of scrap iron and the price of steel.

Moreover, if the premise inherent in S. 2119 had even a fragment of truth, the price of steel would have fallen when the price of scrap fell. This obviously has not happened even once during the past 20 years, though, also obviously, scrap prices have fallen sharply on many occasions.

Inflation cannot be sustained as a charge in the scrap iron market. Accordingly, the proponents of this bill found it necessary to shift from the more acceptable criteria of a serious domestic inflationary impact to one that is concerned only with price.

The truth of the matter is that little or no impact on consumer prices is traceable to the price of scrap iron. The recent increase in scrap prices translates into an additional cost of less than \$5 per car on a new automobile; 12 cents per new air conditioner; and 50 cents per new refrigerator. And this presumes that all the costs would be passed forward. However, even this premise is unreasonable since it would be expected that consumers would share in the subsequent decrease in scrap iron prices that always follow.

Yet, the mills and foundries argue that the price of scrap must fall at present. At no point do the mills and foundries agree to lower their prices when scrap prices fall. Nowhere in the bill is a safety mechanism provided to insure that scrap iron prices will not fall to such low levels as to challenge the economic viability of the scrap processing industry.

THE CONCEPT OF SCARCITY

S. 2119 refers to a "strained supply/demand" balance in the marketplace for iron and steel scrap without anywhere discussing definitions of this "strain." The bill fixes 11 million tons of production in any one quarter as a "shortage" condition and 11.5 million tons of production in any quarter as a "critical shortage" without expressing any basis for the calculation or offering any support to evaluate the criteria employed or the figures used to establish the shortage.

Objective consideration of the shortage concepts in this bill should engender a rationale for the figures offered. No analysis can, in fact, demonstrate that the numbers have any significance other than to restrict production, especially the export segment, with the anticipated goal of lowering price. The philosophy is not one based on controlling shortage; rather, it is one based on controlling price.

Reproduced below are the results of applying the trigger concept during the year 1969, 1970, and 1972. The calculations are taken from a widely circulated letter prepared for the Ferrous Scrap Consumers Committee explaining the function of the so-called Bowman Trigger which is the mechanism included in this bill.

[The chart is printed at p. 95.]

It is obvious that nothing is expected to change but the export volumes. There is no indication that any more material would have been purchased domestically. This certainly challenges the concept of scarcity. It is a reasonable expectation that, if a shortage existed

and exports were curtailed, domestic consumption would have increased to reflect availability where previously there had been no supply. No such result is indicated by the mills themselves.

Moreover, the absurdity of the conclusion that supply is short is never better demonstrated than in the same paper which shows that in these 3 years alone, the ferrous scrap industry actually produced 10 million more tons—4 million more in 1969; 3.3 million more in 1970; and 2.6 million more in 1972—than would have been purchased by the mills with the trigger mechanism fully operative. Since the material was produced, clearly there was no shortage.

Why, then, the request for this legislation? In simplest terms, the trigger concept envisioned in S.2119 is a subterfuge—it is price/control legislation; self-serving legislation by one industry that is asking the Federal Government to protect it from the fallacy of its own ways. S.2119 is special-purpose legislation of the worst magnitude since it would frustrate one industry that did not create the current situation facing the domestic mills and foundries—a problem of price, not supply—to relieve the other industry which created—and will create again—the problems of current concern. In fact, these consumers are already engaging in the very same tactics that created the situation to begin with and from which they now are asking governmental relief.

If the mills do not intend to purchase more than they did without the export restrictions, there cannot have been a shortage. That is a reasonable, and the only logical, conclusion. The answer then is that the mills want the knowledge that millions of tons of scrap iron will be available without a viable market. The presence of that huge supply overhanging the market can only have one effect: A sharp decline in price!

Other evidence of the lack of a scrap shortage exists. The Environmental Protection Agency, in conjunction with the Scrap Metal Research and Education Foundation, sponsored a study of iron and steel scrap problems. The research, conducted by Battelle Memorial Institute, Columbus Laboratories, developed two important conclusions:

(a) Obsolete scrap in inventory as of 1969 totaled 750 million tons;

(b) Only about 60 percent of the new annual supply of obsolete metallics is recycled.

Both of these conclusions merit serious consideration by this committee.

First, the available metallics in 1969 clearly indicate that there is no shortage of ferrous units. In fact, if no new scrap iron were added to the cycle yearly, the available and existing inventory would meet the needs of the steel and foundry industries—both domestic *and* foreign—for approximately 15 years even at today's levels of scrap consumption.

When the net result of the 60 percent annual recycling rate is added to the 1969 inventory, the effect is to increase the available metallics by approximately 30 million tons annually, thus increasing the available metallics to levels far in excess of 750 million tons.

It should also be stressed that the 750 million tons are only those units of iron which are obsolete—none of this material includes the

iron and steel products still in use in the form of buildings, railroad tracks, cars and trucks, and so forth. If the available metallics in the form of usable iron and steel is added to the obsolete inventory, the total available for eventual recycling amount to an almost astronomical 2.1 billion net tons.

To avoid any possible misinterpretation of the Battelle conclusions, I have attached as exhibit 4 the summary pages of the calculations which clearly indicate the vast reservoir of iron and steel scrap now available. This sophisticated analysis effectively destroys any notion that scrap iron might be in short supply.

BUYING PRACTICES OF MILLS AND FOUNDRIES

The volatility of the ferrous scrap market rests with the purchasing practices of the steel mills and foundries. These buyers fail to follow the basic purchasing policies which characterize the procurement of essential materials in virtually all other manufacturing industries. Inventory control practices which would minimize the negative impact of wide price fluctuations generally are not used.

The opportunities for informed buying to flatten the peaks and valleys abound for the scrap buyer. It was possible to buy more than the required scrap at the low price levels which existed during the doldrums of the past 2 years. Some mills did, thereby insulating themselves to varying degrees from the recent price movement. The fact that such buying relieved the problem for those mills indicates that it is not the export of scrap that has caused the price rise; rather, it is the buying practices of the majority of the domestic scrap purchasers.

Generally, the mills and foundries have not purchased with any concept of need to preserve a viable supply system; rather, they buy to meet crises and as such have created a crisis-controlled marketplace. They see no reason to buy when the price is low, ignoring entirely the value of adding to inventory at low purchase price levels. The effect of this policy is to atrophy the scrap supply system to the extent that when the next boom in steel demand arises, the steel mills and foundries have very low inventory levels, which necessitate fast and concentrated buying of scrap materials. This sudden burst of demand can have one effect—an effect that all concerned recognize, namely, higher prices.

When, after long absences, virtually all the mills and foundries reenter the market at approximately the same time, at high volume levels, the immediate demand cannot be instantaneously met by the then available supply. The supply exists, but it is not processed; in many cases, it is not normally movable. The processor must pay a realistic and economically feasible price to the collector of obsolete scrap to encourage this participation in the scrap cycle.

In basic terms, when steel demand rises with the resultant increase in scrap demand, whose firms and individuals who had been hauling farm products or other merchandise can be induced to collect junk autos and other metallic discards only if the price is higher than would have prevailed had the supply system been functioning properly. The firm or individual must be convinced to shift from other ventures to scrap iron collection. They do so, realizing that the scrap

market will not continue to provide a reasonable living since scrap demand will soon be met and prices will fall, the scrap processor must pay more; the steelmill must pay more. The problem is not exports or actions by the processors; the problem is the buying practices of the consumers.

Moreover, the commitment to flattening out the peaks and valleys of scrap buying practices does not envision necessarily a huge financial burden. To the extent that any mill or foundry would hold open and exercise the option of adding to inventory when prices are low and reducing purchases when prices rise, there is a necessary commitment of dollars, though such a posture is rewardable with large returns to scale. In those instances where funds are not readily available or where the funds have a higher potential in other investment alternatives, stability in the marketplace can likewise be attained through use of longer term buying arrangements than the 30-day contracts now utilized.

SITUATION OF FOUNDRIES

Much attention has been paid to the alleged plight of the foundries in this Nation, with some extreme news items noting the perilous condition facing certain publicity-oriented foundries. In some instances the situation appears to threaten the very existence of these firms. In the main, the claims are either overstatements or false; in no case of which we are aware was a shortage of scrap proven.

Foundries who have complained are generally very small firms. They have developed a pattern of single or dual source buying with no concept of the market and no concern with availability. Thus, in the case of one foundry, which had been buying a particular grade of scrap for years, the absence of supply from its long-standing source led to a formal complaint to the government. It was quickly established that the supplier to that foundry was a steel mill—not a scrap processor—and the mill found it more advantageous to use the material itself. A noncustomer of the scrap iron industry asking that scrap iron exports be controlled because he could no longer buy scrap iron from an industry with which he never did business anyhow.

A second case concerns a grade of foundry scrap iron that was the byproduct of another steelmaking process. Such byproducts no longer exist at that source, with the result that again a complaint urging scrap iron export restrictions was lodged. The grade in question is not exported so that a total embargo will be of no use to that foundry.

In a third case, the foundry required a most unusual, most demanding, and most costly grade of scrap material, which, in many cases, was not accepted by the foundry after it had been prepared and shipped with the added freight cost now part of the delivered price.

A rejection by a mill or foundry provides the scrap shipper with two options—take the material back and bear a second freight charge or negotiate to sell the material at a lower price. In either case, the scrap shipper loses. Shipments are made under these condi-

tions only so many times before the customer is no longer desirable. That was the reputation of this one foundry which also complained because allegedly no one would produce to its specification. The material thus was allegedly unavailable. In fact, the foundry was offered the material it wanted at a price \$3 under the seller's freeze price, but only if the foundry would inspect and accept the material at the shipper's yard. The offer was never accepted.

Another foundry quadrupled its demand of a particular scrap grade, and when the scrap processor was only able to double its output virtually overnight to meet the new level of demand, the foundry complained to the Government, even though metallic alternatives were readily available for it to melt into the identical product. It refused the suggested alternatives choosing instead to complain to the Federal Government because the other material was "too expensive".

Finally, special mention must be made of the cast iron and soil pipe foundries. Here the problem is somewhat different. There is simply a shortage of cast iron scrap. The reason is obvious—how many persons have cast iron radiators or cast iron bathtubs in their homes or cast iron pipes for their plumbing? There is obviously very little cast iron scrap to be recycled.

Thus, many progressive foundries are converting their charges from cast iron scrap to steel scrap and are producing the same products with the same quality. Obviously, Congress does not expect the scrap industry to create scrap cast iron—nor should this Congress condemn the scrap industry for being unable to provide one particular grade of scrap iron when countless other substitute grades are available. The Congress cannot permit a technologically inefficient "tail to wag the dog." Moreover, cast iron scrap is not exported in any significant amount, so the impact of controls on this grade would be minimal, if at all recognizable.

If foundries are in trouble, it is not because of the price of scrap iron. The foundry industry is suffering from costly expenditures required to add air pollution control equipment, and many foundries are no longer functioning because the cost was something they could not bear. Other crippling factors are the escalating costs of coking coal and the true shortage of ferrosilicon, both of which have experienced price conditions reflecting of scarcity with the resultant inflationary impacts. Yet no hue and cry is raised about these products or their price and supply status.

JAPANESE PURCHASERS AND FOREIGN CONTROLS ON FERROUS SCRAP EXPORTS

There are broadly-based misconceptions that only the United States permits the exportation of ferrous scrap and that the Japanese buy all of their scrap iron needs from the United States. Both of these concepts are incorrect.

First, Japan imports scrap iron from many countries in the world. For example, during the first 5 months of 1973, the Japanese imported scrap iron from Australia, the Soviet Union, Canada, and India, to name but a few other nations exporting to the Orient.

Admittedly, the tonnage is significantly higher from the United States than it is from the other nations, but review of the American location of scrap available for sale would indicate that this would be an expected result. For example, since the west coast has far more scrap generated and available than can possibly be used domestically, exports to Japan are a natural consequence.

Second, the Institute has been able to develop a partial list of other exporting countries in the world, in addition to the United States, to meet the often stated incorrect allegation that only the United States permits scrap iron exports.

Included on the list of countries exporting ferrous scrap are West Germany, France, Italy, Holland, Belgium, Luxembourg, Ireland, Norway, Austria, Finland, Portugal, Sweden, Iceland, Australia, Rumania, Yugoslavia, East Germany, Tunisia, Liberia, French Equatorial Africa, Canada, and other nations, including many in South America.

Moreover, none of these tonnages is minimal, especially in relationship to the volume of scrap iron retained domestically in the Nation for its internal use. Thus, the arguments about the uniqueness of American scrap iron exports is nothing but an illusion; American scrap iron competes throughout the world with scrap iron generated and sold, with the blessing of the national governments involved, in those foreign markets where iron units are desired.

PROFITABILITY OF THE STEEL INDUSTRY

In light of the allegation that scrap prices are "critical inputs" to the steelmaking process, it is worthy of inquiry to establish what happens to steel profits when scrap prices are high. If the steel industry's premise is correct, steel profits should fall when scrap prices are high and should rise when scrap prices are low.

The facts of profitability are the exact opposite. When scrap iron prices move upward, steel industry profits move upward also, and when scrap prices fall, steel industry profits also fall. High scrap iron prices parallel high steel industry profits—and this result is a reasonable expectation, not a coincidence.

Since the steel industry is one based on capital investment, when such capital is less than efficiently utilized, profits may not be significant or they mount slowly. However, when operating levels approach peak efficiency, profits mount rapidly. Thus, rather than forecasting poor financial results, high scrap iron prices foretell significant improvement of steel industry finances since high scrap prices mean high steel demand, higher production levels, more efficient operating practice and more net income.

In fact, in the 2 years recording the highest scrap iron prices in recent history—1956 and 1957—steel industry profits were at record levels. The evidence clearly supports the fact that high scrap prices are symptomatic of excellent financial news. To escalate further these profits to even higher levels, by artificially lowering the prices of scrap iron, clearly is not justified.

The indications are that 1973 will follow past trends. While the steel industry implores the Congress to legislate a sharp decrease in scrap iron prices because of the alleged effect these prices have on

their financial ability to survive, that very same industry has reported a 78.6 percent increase in net income during the first quarter of 1973, the second highest percentage improvement in profits of all industries reporting in a survey printed in the Wall Street Journal. (Exhibit 5.)

Steel mills are reporting record first quarter profits in light of higher scrap iron prices, as would be expected. Moreover, those mills using only scrap iron as the metallic charge, are reporting major advances in their profit picture, again fully in conformity with expectations.

While on the subject of profitability, it is also necessary to stress the influence of cost associations facing all American industries. Everyone's cost of doing business in the United States has increased. However, the steel industry presents this case as if it were the only industry faced with increasing costs for labor, machinery and equipment, money, and so forth. The economy provides no insulation for the scrap processing industry from these same forces. And the price of scrap is only approximately what it was in 1956. Certainly, labor, equipment, money and the like are more expensive for everyone today than in 1956. During the 17 intervening years, this fact of business life was of no concern to the steel industry, which saw its prices continue to rise while scrap prices hit lows of \$25 per ton and less.

The scrap processing industry is capital intensive. The equipment which takes old automobiles and reduces them to grades of scrap is huge—both in absolute terms and in relative terms to the size of the individual business firms. Certainly, the decision to invest \$1 million to \$4 million in an automobile shredder to increase scrap production is as critical to the scrap processor as the decision to invest \$150 million in new melting capacity is to a steel mill, when considering the relative economic base of each firm.

In short, the steel industry allegation that scrap prices must be lower because the steel industry is faced with higher costs of doing business, is absurd. The scrap industry also is faced with higher costs of doing business and should not be expected to subsidize the steel industry with scrap prices below the levels of 17 years ago.

DETRIMENTAL EFFECTS OF S. 2119—EFFECTS ON THE DOMESTIC ECONOMY

As Mr. Boggs will explain in more detail later, ISIS has calculated that if this proposal had been in effect since 1969, it would have reduced the gross sales of the scrap processing industry by \$750 million to \$1 billion between then and the present.

This staggering loss of business obviously would be the difference between profitability and loss for numerous operators. It likewise would affect the profitability of the Nation's railroads and port facilities and would lead to significant reductions in jobs in the scrap processing and supporting industries.

All of these sacrifices are demanded by the ferrous scrap consuming industry solely so that it can increase its control over scrap price and increase unreasonably its escalating profits. Any unbiased balancing of equities in this situation must result in a determination that the controls sought are totally unwarranted.

FAILURE TO COMPREHEND REGIONAL DIFFERENCES

S. 2119 fails entirely to appreciate the varying sources of metallic solid waste. Scrap iron is not generated uniformly throughout the country; it does not occur where scrap consumers would like it to be. Rather, scrap iron results wherever people work, play, and live. Because of domestic freight rates, it generally must be processed at or near the place where it is found.

Thus, the bill does not recognize that millions of tons of solid metallic waste are lying on the west coast and in New England—which are both experiencing sharp decreases in volumes of locally produced steel—for which there is no conceivable American demand. The imposition of export controls on such material which cannot be used domestically means only one thing—those solid wastes will accumulate.

On the west coast, $2\frac{1}{2}$ to 3 times the annual possible consumption of scrap iron is generated. This scrap has no alternative destination within the United States, since freight rates preclude movement of the scrap across the Rocky Mountains. The populated areas in the West would be inundated by mountains of junk automobiles, old refrigerators, and demolition materials that will rust and generate hygienic problems solely because S. 2119 prevents their exportation. In fact, significant volumes of home scrap are exported by the mills in the area to this very day. How such an embargo assists the domestic mills and foundries one iota is nowhere explained in the bill.

The same is true for New England, southern Florida, and many gulf coast cities, where the accumulations of solid waste soon would be the major problem for these geographic areas which today rely almost exclusively on export markets to clear the countryside and city streets of the vast annual accumulations of ferrous waste. Again, the bill is silent on the benefit to such communities of S. 2119. Certainly, nothing will be gained by the Nation as a whole or by these local areas when presently recycling metallics are precluded from the only viable market option available. For this reason alone, S. 2119 is confiscatory. Scrap processors will be deprived unreasonably of their only market, while no useful public purpose will result from the cavalier action.

INTERNATIONAL TRADE AND MONETARY EFFECTS

Export sales of iron and steel scrap during the past 20 years have ranged from a low of 0.4 percent—1953-54—of total scrap consumed domestically to a high of 14.7 percent in 1961. [Exhibit 6.]

The numbers indicate clearly that scrap iron exports are not the determinative factor in the total scrap iron market. In fact, exports are far less significant with respect to total domestic consumption of scrap iron than they are in the case of a truly short commodity—coking coal. Moreover, the Japanese also were and are the major factor in the purchase of export coking coal from this Nation, but never is there any indication of the need for a coal embargo. No trigger bills are advocated to limit foreign purchase of coal.

The U.S. Government has been strongly advocating increasing world trade by American firms because of the overall impact which

this has on the American economy. Yet, such unilateral actions as envisioned in S. 2119 would create serious international tensions with long-range detrimental implications. The damage to future scrap sales in the foreign area is so significant as to provide yet another basis for the defeat of S. 2119.

Export sales of scrap iron contribute positively to the U.S. balance-of-trade position by an amount in excess of \$500 million annually. Imports of iron ore account for approximately the same sum as a negative drain on the U.S. balance of payments. It would seem that an industry which finds it necessary to import iron units while undertaking policies that force the export of other iron units does not need export controls to solve its problems.

Why doesn't the steel and foundry industry agree to limit or ban imports of iron ore until it consumes the available iron units in the form of scrap iron? Why isn't the trigger concept tied to a procedure which would require the domestic purchase of available scrap iron before any import of iron ore is undertaken? Why doesn't the steel and foundry industry employ its huge purchasing power in the interests of helping the United States to produce a favorable balance of payments rather than fostering an unfavorable one?

ENVIRONMENTAL IMPACT

No one can dispute that environmental considerations dictate a reduction in demand for irreplaceable natural resources such as iron ore, and the encouragement of as much recycling as possible.

Every pound of scrap iron that can be collected, processed, shipped, and remelted should be viewed as a positive contribution to the environment and the economy. World demand for steel has created a corresponding demand for ferrous scrap. Without this strong demand, the metallics now being melted by scrap consumers would contribute to the metallic solid waste problems. As a result, record levels of obsolescence grades of scrap are moving to processing plants from the countryside and remote areas of the Nation.

The ability of this type of material to move is directly related to the price of prepared scrap. Abandoned and obsolete automobiles are being transported from fields and automobile graveyards because there is a demand for scrap. Farm implements left to rust are being collected and brought to market.

Since the early 1950's, the amount of ferrous scrap recycled as a percentage of scrap generated has declined. This year offers the potential for a change in that disappointing downward trend. The scrap industry's consumers in the United States and abroad want scrap. And, accordingly, the consuming industries, the scrap processing industry and the Federal Government have the opportunity to witness and participate in environmental economics by allowing this total world demand for ferrous scrap to continue to be met; the backlog of ferrous scrap will continue to move into the scrap cycle, lessening the burden of solid waste.

To initiate artificial market controls would be an unfair, unwarranted and unjust blow to the Nation's efforts to combat land pollution.

Iron and steel scrap is forced to compete in a market which allows discrimination against secondary materials. Discriminatory freight rates and tax policies provide a definite competitive edge to virgin materials used in the iron and steelmaking processes. The impact of these negative artificial factors on the environment have been well-documented before this Congress and other departments, agencies and commissions of the Federal Government.

Although the Senate and House have received legislative proposals to end these discriminatory policies and have held public hearings on their merits, no congressional action to eliminate the discrimination has occurred to date, although some relief may arise during this Congress.

It is ironic that while we strive to see these discriminatory policies nullified legislatively, we are here today in an effort to prevent yet another discriminatory policy—a limitation of markets.

What is sought is legislation to limit the growth of the scrap processing industry. Both the economy and the environment are benefiting by the accelerated movement of ferrous scrap; both will suffer if that movement is reduced by still another Federal obstacle.

The effect on the quality of our environment would be one of continued deterioration. It would seem that before this Congress undertakes action with such potentially damaging environmental consequences, it should engage in the same type of environmental impact analysis as the 91st Congress wisely provided for in the National Environmental Policy Act of 1969, with respect to executive branch actions.

Among other things, such a study would indicate that this proposal, which establishes a growth limitation on the scrap processing industry, would increase dependence on virgin materials in steelmaking. Both the Environmental Protection Agency and the National Commission on Materials Policy have reported the significant energy savings realized by making new steel from scrap rather than virgin materials. EPA further documented other environmental savings realized by making steel from scrap. [See exhibit 7.]

Environmental economics dictate that, rather than further impede this Nation's ability to recycle its waste, every effort be made at least to allow these manmade resources to compete equitably with virgin materials in a free market.

To add a new market discrimination to freight rate and tax policy discrimination is totally unjustified.

Thank you, sir.

Senator STEVENSON. Thank you very much, Mr. Berman. Do you want to proceed next, Mr. Boggs?

Mr. Boggs. Yes; thank you, Mr. Chairman.

My purpose this afternoon is simply to outline to the committee some of the legal implications contained in legislating a trigger mechanism which S. 2119 provides. A summary of our thesis is: (1) That this legislative proposal is unwarranted, because existing law adequately deals with any conceivable demand or supply problem; (2) that the proposal is too complex and unclear for congressional sanction and provides too many opportunities for manipulation; and finally (3) that the legislative effort culminating in this proposal raises serious antitrust questions.

For these reasons S. 2119 does not merit the approval of this committee and should not be reported to the Senate. If this special interest legislation nevertheless is adopted, the Congress should require that the price of finished steel be reduced by the total reduction in scrap cost achieved by these export controls.

Additionally, import restrictions on foreign ore to the United States also may be appropriate to stabilize demand for scrap iron and steel.

The first premise we have is that the present law is adequate. I do not think I really need to dwell on this.

I think Mr. Cook covered it very adequately in his presentation. Suffice it to say that under present law there is adequate authority to impose controls when a commodity is in short supply and there is a serious inflationary impact caused by abnormal foreign demand.

Of course, this provision of the act has been used by the Commerce Department and while we disagree with that action, we do recognize that the present law does provide that authorization.

Moving from that discussion to a discussion of the trigger mechanism, we feel that the mechanism is extremely complex and is not adequately set forth in the legislation.

The way it reads to us, it apparently would work as follows: First, as soon as the total domestic receipts and exports for any calendar quarter exceeded 11.5 million net tons of scrap, the export limitation provisions of the bill become operative and the Secretary of Commerce is required within 2 months of the end of this quarter to impose export controls for a period of 6 months.

Total exports for this 6-month period are not to exceed one quarter of the preceding 5-year annual average.

It should be noted that even though exports during this preceding 5-year period, which are used as the base, were considered reasonable at that time, the trigger mechanism cuts the volume of these exports in half for the period of control.

One example of the confusing nature of this bill is that it is not clear how the 5-year average is to be computed.

If controls were to commence September 1, 1973, for example, would the 5-year period be September 1, 1968 to August 31, 1973 or some other 5-year period?

Secondly, once export controls have been imposed, the Secretary of Commerce apparently is required at the end of each month that controls are in effect, to establish total domestic receipts and exports for the preceding 3 months, although the first such determination is not required until 4½ months after the imposition of controls.

Once again the legislation proposed is unclear as to the period for which computations are to be made. If controls are imposed September 1, 1973, the first such determination is not required until January 15, 1974.

The statute is unclear as to which 3 months are to be included in this determination. If a determination is made that during the period of control, domestic receipts and exports for a 3-month period computed pursuant to the preceding paragraph exceeds 11.5 million tons, a total embargo on exports for a period of 3 months must be imposed, regardless of the fact that there may be outstanding contracts and outstanding orders issued prior to that time.

This embargo may be extended for succeeding 1-month periods if domestic receipts and exports continue to exceed 11.5 million net tons for the 3-month period under consideration.

Thirdly, the bill also provides that controls may be lifted if "during the calendar quarter" occurring during the 6-month control period, domestic receipts and exports did not exceed 11 million net tons. This bill does not take into consideration that in some 6-month periods, two calendar quarters will arise. In addition, the bill does not indicate what is to happen upon termination of a total embargo.

Are exports to be unrestricted at this point or restricted? In summary, because of its complex and confusing nature, S. 2119 is unsatisfactory from a technical viewpoint, thus adding further weight to the numerous and serious policy objections to this proposal.

The second point I would like to make, Mr. Chairman, is the point Mr. Berman touched upon and that is, if controls similar to the controls envisioned in this bill were in effect for the last 3 years, rather than the next 3 years, those controls would have resulted in the imposition of the trigger mechanism three times, one of which would have resulted in a total embargo.

The results of that would have been over the last 3 years a reduction of 14 million net tons of scrap being processed in the United States and not being exported.

A 14-million net ton reduction would be approximately \$1 billion in balance of payments receipts that were received by the United States which would have been lost.

I think you can realize that 14 million tons of scrap which are processed and exported, from environmental points of view, are a major net benefit to the United States.

The third point we would like to make deals with the antitrust implications of the legislation. The fundamental issue before the committee appears to be, should Congress enact special legislation to benefit one industry whose member firms are large, powerful companies, which legislation will clearly harm an industry composed of small, and in many instances, family firms.

In our estimation, serious antitrust questions surround not only the merits of the proposed legislation but the means and methods used by the small group of firms sponsoring the proposal.

The proposal stems from efforts by a small segment of the steel industry to set prices by securing legislation to limit demand for ferrous scrap.

As this committee is well aware, an agreement or conspiracy among competitors to limit demand is a per se violation of the antitrust laws.

We recognize that certain joint industry undertakings have been held not to violate the antitrust laws under the so-called *Noerr-Pennington* doctrine.

However, we submit that the actions in question by a small group of firms who have recorded some of the highest profits in their history in the first quarter of this year, may not fall within this doctrine.

Accordingly, we believe the committee should at a very minimum obtain the views of the Federal Trade Commission and the Antitrust

Division of the Department of Justice as to the legality of this situation under the antitrust laws.

What we, in fact, believe is that these few firms are in effect asking Congress to control prices when there is no demonstrated shortage of scrap.

In addition to the fact that the efforts to secure this legislation raise substantial antitrust issues, the trigger mechanism presents opportunities for abuse. If you have a trigger mechanism that automatically controls price and exports, it is not very difficult for a few firms to get together any one period of time, look at the numbers and decide that by advance buying in this month, they can trigger the trigger.

Once the legislative mechanism is triggered, as you know, it is triggered for a period of 6 months. So, they could certainly get back the few extra dollars it cost them to trigger the trigger in that 1 month, over the next 6 months, when the prices would tumble down because of the imposition of the controls.

Finally, as we stated at the outset, if such a mechanism were adopted, we feel at least two provisions should be added to the bill.

One provision would provide that any reductions in scrap prices enjoyed as a result of governmental action of export controls would be passed along to the consumer of steel and not simply retained by the manufacturer of the product.

Secondly, we would hope that if scrap demand drops below a certain level, instead of increasing above a certain level as the trigger mechanism calls for, if that happens, there would be some equal restriction on the importation of the competitive product to scrap, namely virgin ore, so you would assure a floor of scrap demand in the United States.

In summary, the institute strongly recommends that S. 2119 be recognized for what it is, an attempt by a segment of the steel industry to control prices; secondly, that this committee not adopt the special legislation and finally, if the committee is going to consider it further and more seriously, that it ask for the opinions of the Federal Trade Commission and the Justice Department as to whether or not there are any serious antitrust implications in the development of the proposal.

Thank you, Mr. Chairman.

[The complete statement and attachments may be found at p. 119.]

Senator STEVENSON. Thank you, Mr. Boggs.

You have a chart depicting the price experience with steel and scrap stopping in 1972. Hasn't there been, since the middle of 1972, some of which is shown on the chart—

Mr. BERMAN. That bottom figure on the chart shows some 1973 figures—the first 6 months of 1973.

Senator STEVENSON. I see; I didn't see that.

What I am getting at is since the middle of 1972, and the imposition of the freeze, your No. 1 heavy melting scrap price rose by about 50 percent.

That price freeze must affect something. Does that, if not a scarcity, at least reflect a rapidly rising demand for scrap?

Mr. BERMAN. Yes, sir, it reflects exactly what we have maintained all along, and that is a rapid rise in demand, which is something

that was completely unpredictable to us in the processing business. And it also reflects the fact that many of the consumers had very little, if any, scrap inventory and consequently all came into the market at the same time, all seeking and looking for the same ton of scrap, and on short-term contracts they simply ran the price up trying to buy it.

It is difficult to explain, but scrap is bought, not sold, because of the limited number of people to whom we have to sell it, and if they all come into the market at the same time because of the requirements of their business, then the only way they can get the material, and it not necessarily has to generate from the scrap supplier, it generates from industry as well, is to simply go out and bid against one another to get it.

Senator STEVENSON. Is there now a gap between the world price and the domestic price for scrap?

Mr. BERMAN. When you relate back to shipping charges and loading charges, et cetera; no, sir. I mean the price delivered, CIF, is one thing. But when you relate that back by deducting from it the various costs of moving the merchandise overseas, the price is just about the same level.

Senator STEVENSON. We all, I think, approach export controls with the greatest reluctance, and in all cases of rapidly rising prices, which to one degree or another are attributable to rapidly rising demand, we would prefer increased productivity with which to meet that increased demand.

Now, in the Battelle Institute Report, which I think you, Mr. Berman, referred to, it was said, and I quote, "It is clearly indicated that the scrap industry's capacity to produce is underutilized."

The report cited figures showing the average scrap processing facility operated less than 48 hours per week with 80 percent of all processors fitting into that category.

My question is with apparently underutilized capacity in the industry, this rapidly rising demand, accompanied by rapidly rising increases, how is the industry going to respond?

Is capacity going to increase in a way that will assure us stable prices, no scarcities, and prices and a supply that will not only meet the needs of the big companies that you referred to, but also the needs of some small companies, foundries, which are finding it very difficult to stay in business at this time because of the prices for the scrap?

Mr. BERMAN. Let me try to answer the question this way, sir. When we talk about the capacity of the industry and its ability to produce, we, of course, are confronted with the same problems of manpower that anyone else is confronted with.

We also are confronted with the problem of selling the material on very short-term contracts. Consequently, our buying policies are affected by this very same thing.

The scrap that you buy today isn't processed and shipped tomorrow. Thus, you are buying in advance all of the time, or rather in anticipation all of the time of what you are going to be doing maybe 30 or 45 or 60 days from now.

No one; myself included; gears up a business to operate at 120 percent of capacity. And I think that is the situation that has confronted the entire scrap processing industry, the steelmaking indus-

try and everybody else in this country right now, that this tremendous demand for metallics came upon all of us so suddenly that though in the main the facilities are there, the manpower isn't always there to utilize them.

We have cases in many areas of the country where consumers of scrap have called upon their suppliers to triple and quadruple their supplies.

As I say, these limitations have presented themselves to all industry, and even the steel industry, which is now telling its customers, you will get delivery in 4 months or 6 months from now. The scrap business doesn't operate that way.

In the scrap business here in the United States the consumer expects to buy at the beginning of the month and get delivery before the end of that month.

It is extremely difficult, but in spite of that, we don't know of anyone who has not been able to obtain all of the material he might need to operate his plant.

We won't say that they have not substituted one item for another. That is true in my home today. Maybe we don't get to eat all of the steak we want, so we eat something else. But no one has had to shut down because of a lack of metallics.

The consumers have gotten in the habit of using certain items, and maybe rightfully so, and that is fine and dandy, but when they are not available immediately in the quantity that they are asking for, then they have found they have been able to use something else.

Dr. CUTLER. Senator Stevenson, if I may add to Mr. Berman's answer, I am Herschel Cutler. The bottom line shows a short-term instability in price, but if you draw a line through it you will see there is a long-term, very stable price as contrasted with the movements on the top line, which is steel.

I think this is a very important consideration that you and the committee should be aware of, sir, that the movement is short-term, which bears out what Mr. Berman has just said.

When there is a very quick, sudden demand in an industry that is characterized by 30-day contracts, the only way you can meet that sudden demand is to pay higher prices to the collectors to induce the additional material to come onstream.

You can see it takes time—there is a gap—to get it.

Once it is reached, the supply being processed and offered to meet the demand, once that level is attained, the price comes down. This is the classic economic model. And the proof of it is that bottom line.

The flatness of the long-term price, though, I think, is extremely important contrasted with the upward movement, the single movement direction of the price of steel.

The other thing I think should be stressed is the legislation that is being considered at the moment would stabilize only on the high side. The suggestions that Mr. Boggs mentioned just a few moments ago would tend to stabilize on the bottom side also.

If there is to be a concept of stability, obviously you have to stabilize from both sides. When price goes up as well as when price comes down.

I think both of those concepts are important.

Senator STEVENSON. Isn't there one line missing from that chart, a line denoting the prices for foundry products?

Mr. BERMAN. Are you saying, Senator, the price of the finished foundry product? It is an almost impossible figure to put your finger on because there is a multitude of products and a multitude of end uses, purposes for which they are made.

Some foundries make a finished product. Some make simply a casting which goes into further operation.

Senator STEVENSON. That may be so. I think the foundries, though, or many of them, are feeling the squeeze and are hard-pressed by the rising scrap prices now, with many of them becoming unprofitable.

Mr. BERMAN. Well, of course, there is also another problem. Birmingham happens to be a large foundry center and I know the cost to these foundries of equipping themselves to operate in this day and age under new pollution requirements. Many of them can't adjust to these requirements, or, frankly, they are not profitable enough to adjust to.

Then, of course, there are increased costs of the other raw materials they use, over which they have even less control, such as coking coal.

Senator STEVENSON. To get back to the question I asked, and I am a little uncertain about the answer—am I right in interpreting what you have said as indicating that in response to the acknowledged increased demand for scrap the scrap industry is not increasing its capacity for production?

Mr. BERMAN. No, sir; the scrap industry, frankly, is processing and delivering all of the scrap that is being called for.

I am sure that throughout the country the average operating time has increased tremendously, throughout the various scrapyards. I can say, if I look at Birmingham as an example, there is still a great deal of excess capacity available for processing scrap to meet increased demand.

Senator STEVENSON. There is more demand.

Mr. BERMAN. The demand that is there is fully satisfied. If there were more demand, the material would be there and the hours would be there to satisfy it.

Mr. BOGGS. One point which might be worth mentioning, Senator, is that the processing capacity of the scrap industry is more than adequate. The price goes up when the collection of the material becomes more and more expensive.

In other words, when you have to dig deeper for old automobiles to process.

So, when you have a sharp increase in the demand for the product, the real significant part of the price increase from the scrap processor's point of view is not the cost of processing the material, it is the cost of getting the material from the scrap supplier, the junkyard, or what have you.

This problem could be ironed out if the purchase contracts were of longer term, because all of a sudden you have a tremendous increase in demand for the products, and then it falls off, then you

have an increase again, which accounts for much of the price instability.

Senator STEVENSON. If, as you say, there is no shortage of scrap, or at least there is sufficient scrap and processing capacity to meet the demand, what rationale did the administration give you for its—by you I mean the industry—for its export controls?

Mr. BERMAN. Price.

Senator STEVENSON. Is that all? I don't believe under the law the administration has the authority for imposing controls on that basis.

Dr. CUTLER. I think a broader answer to your question, Senator, would include the finding that there was an abnormal foreign demand which create a serious domestic inflationary impact. That is the requirement under the law.

I think Mr. Berman is reacting in a more precise sense.

Senator STEVENSON. I believe the law requires a finding of abnormal foreign demand, inflationary impact on prices, and scarcity.

Dr. CUTLER. I don't believe so, sir. I think it says "or."

Senator STEVENSON. Well, we deal with that law day in and day out. It is within the jurisdiction of this committee. I can state that as a fact. I don't know what the administration's rationale was to you. That is why I asked the question.

But the law is quite clear, and we have discussed it in recent hearings with the administration. I don't think there is any misunderstanding or misinterpretation on the part of the administration. In fact, it is seeking broader authority because the law does lay down the three requirements.

Dr. CUTLER. I am sorry. I just checked. The confusion came from the House activity on that legislation where I thought the word substituted was "and," whereas in fact the word substituted was "or."

I have it backwards. You are quite correct. The House bill proposes to change the law to substitute the word "or" rather than the "and."

Mr. BERMAN. I might comment, Senator, that when this happened, the question was asked of me as the president of the organization if I didn't feel we had legal recourse against the action because of the manner in which it was taken.

My only answer at that time was, and still would be, I would really like to see whether we are going to be seriously hurt by it before I decide to take some legal action against it. Certainly until the Department has the opportunity to implement and we see what is going to be done, I hate to run around crying "wolf" and hollering that we are greatly damaged by it.

Mr. Boggs. I think another point that ought to be stressed here, Senator, is that under the present law the administration has the flexibility to take into account the fact that almost all of the scrap produced in California is either exported or it is not consumed because you can't ship it into the midpart of the United States, whereas under a trigger mechanism there would be no recognition of the geographic distortion that could take place.

Senator STEVENSON. Then in your opinion the administration exceeded its authority by imposing the export controls?

Mr. Boggs. We disagree with its findings. I think if its findings were accurate—

Senator STEVENSON. We have agreed on what the law says and that it does require a finding of scarcity. You say there is no scarcity. I don't think you can escape the conclusion that the administration, in your opinion, has exceeded its statutory authority.

Mr. Boggs. That is correct.

Mr. BERMAN. Yes, sir.

Senator STEVENSON. Senator Cranston, do you have any questions?

Senator CRANSTON. I just wanted to ask you, Mr. Boggs, about one statement you made indicating that the proposed legislation had serious antitrust implications. What do you mean by that? Are you suggesting that the foundry industry constitutes a small monopoly or what?

Mr. Boggs. No, sir; I am not. I am suggesting two things: (1) That such a proposed trigger system could lead to the possibility of antitrust action because if you know for example, in July, that you are right below the 11 million tons or whatever the committee decides is the figure for that period of time—I am talking more about the steel industry than I am the foundry business—only a few major buyers of scrap—without even talking to each other, could easily determine if they placed orders before the end of July, even though they didn't need the scrap in August when they would receive it, that the receipt of that scrap the following month could be high enough to trigger the trigger mechanism.

They would, therefore, benefit over the next 6 months from lower prices. And it just doesn't take a great deal of crystal balling to see them doing that. But the results would be a price impact that is unwarranted and I think that really raises a question of whether or not the law itself leads to that result.

Senator CRANSTON. Thank you.

This question is addressed to anyone who might most appropriately answer it among the panel. To what extent do you feel the foundries could, to at least some degree, get around the present shortage by any of the following measures: Using more pig iron; switching to different grades of scrap; or making a greater effort to collect scrap from outlying areas?

Mr. BERMAN. I am sorry. I didn't understand the last part of the question.

Senator CRANSTON. Making greater efforts to collect scrap from a more widespread area.

Mr. BERMAN. Well, let me say this: I don't think anybody thinks that there is an overabundance of pig iron in this country. Certainly in the Southeast there is not. Many of the blast furnace facilities in the South have been closed for numerous reasons, pollution requirements and so forth.

Consequently they just have shut down; gone out of business.

Then, the last part of your question, as far as more material is concerned, we maintain that more material is available and the price

will bring it out. The higher price is paid to the peddler who in turn goes out and brings in that marginal material.

The second part of your question is probably the logical answer to any foundry, and that is the substitution of one type of material for another.

In my experience in this business I have found that many foundries, particularly small foundries, have limited facilities for analysis work, lab work, et cetera, and have simply established procedures and types of scrap based on the least likely to give them any trouble in their processing.

Consequently they have established these procedures and they have established these grades and this is what they use and in normal times they have been able to get everything they want in those particular grades

We are now confronted with a shortage of pig iron in the sense that there is less being made, there certainly is not an overabundance of cast scrap anywhere in the United States because it is a grade of scrap that is dying, it just is going out of existence. And many foundries used this material in times past.

We have seen in our area that many foundries have changed their melting procedure and their melting facilities to enable them to switch from cast iron scrap, for example, to steel scrap by going to a basic cupolo instead of an acid cupolo.

We also find many foundries are substituting one grade for another, and, with just a little more effort and following stricter procedures are doing just as well and still getting a plentiful supply of scrap.

Senator CRANSTON. I would be interested in your comments on the particular problems we face on the west coast. On the one hand the west coast foundries use a particularly high proportion of scrap and are, therefore, suffering from current high prices. On the other hand, it is argued that the west coast produces more than it consumes and that it is too expensive to ship the surplus scrap to the eastern foundries; therefore, it is argued that exports are particularly important to the west coast.

Can you comment on that general situation and any other aspects of the west coast problem you care to?

Mr. BERMAN. From what we have been told about the situation on the west coast, the area itself generates many thousands of tons of scrap in excess of what the entire foundry and steel industry is capable of consuming out there, or has consumed, or has shown any desire to consume in the past.

As far as the foundries are concerned, here again the major problem that we have found has been this desire to increase demand for specialized grades in a relatively short period of time.

Well, in cases that are outlined in our presentation, most of these have taken place on the west coast where foundries have gone into a particular supplier because this is the supplier that supplied them in the past when they were using a certain amount and simply said look, our business has increased, we want to increase our supply of scrap fourfold and, as one of our members told us out in Los Angeles, we have now gone from one shift a day to two shifts a day, with the temperature 106 degrees, and I just can't find anybody to work

the third shift to produce more scrap for these people. He says we have talked to other people, we are trying to substitute grades and are doing the best we can, but when the demand increased that suddenly then, of course, it becomes a matter of substitution. We can't always get the one grade of scrap which some foundries like to use in order to decrease their metallurgical problems.

Mr. BOGGS. I think one point should be added. There are certain scrap processors on the west coast that do nothing but export. Their customers are totally export customers. And again if you have a trigger mechanism, it would certainly affect those particular companies more adversely than it would affect somebody processing scrap in Birmingham who has a small percentage of its product exported.

You would virtually put the fellow on the west coast out of business, though it might not have such a drastic effect on the operator in the Southeast or South.

Senator CRANSTON. Does scrap sell on the basis of a national price or regional price?

Mr. BERMAN. It is fairly well regional, yes, sir. Regional, probably, I would say east of the Mississippi River, with freight rates taken into consideration. And, then, of course, your west coast market price is regional and export.

Senator CRANSTON. How do the west coast prices compare to those in other regions?

Mr. BERMAN. Right now I would venture to say they are fairly close. There are different grades and different locations. I think in our specification booklet today we have some 70-80 different grades of scrap iron.

Concerning the west coast, you asked earlier another question I wanted to answer. We had a complaint from a consumer on the west coast about a certain grade of scrap that he couldn't buy and we found out that he wasn't even buying from a scrap processor. He had been buying scrap from a steel mill out there and the steel mill decided it wanted to use the material itself.

There is nothing that obligates them to sell scrap. It was just a byproduct and consequently when he walks into the market and decides after all this time that he wants to go into the open market and buy, it becomes difficult because it is a special preparation, a special type of material that he wants.

There are steel mills—I might say this to you—on the west coast that operate their own scrapyards and buy scrap in direct competition with these very people that would be controlled. These mills have also sold scrap for export themselves.

Mr. BOGGS. I do think it is fair to say, though, that if you impose export controls, the price on the West Coast would probably fall the quickest in the sense that you would have the largest—

Senator CRANSTON. Would probably what?

Mr. BOGGS. Fall the quickest of any region because you would have such a surplus of scrap located on the west coast.

Mr. BERMAN. I think one of the largest areas of production for which there is no domestic consumption is in the San Francisco Bay area. There is very little scrap consumed in that area and the production is very, very large.

Senator CRANSTON. Thank you very much; that is all I have.

Senator STEVENSON. We will have to move along. Just a couple of brief questions.

Mr. Cook said that the Department of Commerce saw a short supply, in other words, a scarcity due to an expected 1973 demand of about 8 million tons greater than the total produced in any previous year. He didn't say anything about price.

Is the industry going to be able to meet that demand?

Mr. BERMAN. Yes, sir.

Senator STEVENSON. At what price?

Mr. BERMAN. At what price?

Senator STEVENSON. What is the effect going to be on the scrap price?

Mr. BERMAN. I frankly was of the opinion that we had peaked out right now in price. I don't know what is going to happen with the licensing arrangements and what effect that will have on the price. We are already seeing declines in scrap prices in various areas.

Senator STEVENSON. Let's assume no controls now, no export controls, and a free market. What would the effect of that large increase in demand in 1973 have on scrap prices?

Mr. BERMAN. On scrap prices, they would be up. They would have to be.

Senator STEVENSON. How much?

Mr. BERMAN. Well, I would say from—I am just trying to put some figures together as to how much the market was up from January through June. Roughly about \$10 to \$12 a ton. And the scrap, I might say this to you, Senator, from what we have been told and what we find, the scrap was flowing in record tonnages into the yards of the processors and moving through there and going out in record tonnages.

One of our biggest drawbacks, frankly, has been the shortage of railroad cars. Many of our members, particularly in the Midwest, have scrap—I don't know if the situation has been alleviated—but had scrap backing up and backing up, getting worse and worse because of the shortage of railroad cars.

Senator STEVENSON. Will you have to meet that greatly increased demand through widespread substitution of grades?

Mr. BERMAN. I don't think it would be widespread substitution because in the steel industry the number of grades used is relatively small. It is more in the foundry industry than it is in the steel industry that you would find substitution of grades.

The producing industry has developed in such a way that many of the types of scrap which are processed, for example, the old automobile, are prepared in processing facilities that have changed so drastically that the end product is considered a much better end product today than it was 5 years ago. For example, the advent of the massive shredder that takes the automobile and tears it up and produces an extremely clean piece of iron that previously went into a No. 2 bundle and wasn't considered all that clean.

And yet the No. 2 bundle itself is a most desirable item today for some consumers, simply because of the demand.

Dr. CUTLER. Senator, I think a further answer to your question on price is that one of the determinants would be for how long a period of time is the steel industry's domestic demand going to stay at this level.

In other words, we could go to two or three shifts a day, working 5 days a week. These things could be accommodated. But when you make that permanent commitment to a second shift or another day, you have created a fantastic liability.

As Mr. Berman said, the commitment to us is 30 days. So the impact on price is a definite function of how long a period the steel mills continue to buy at this level.

Senator STEVENSON. I don't know on what basis the Department of Commerce makes its projections but it is projecting that increased demand on the basis, presumably, of some increased consumption by the steel industry.

Dr. CUTLER. Yes, sir. As I understand that projection, it is approximately 42 to 43 million tons domestically and the rest of it is the anticipated foreign.

Senator STEVENSON. Finally, your second recommendation says this committee should request the Federal Trade Commission and the Department of Justice to investigate the joint efforts of a certain segment of the steel industry to control demand for scrap and, therefore, control prices.

What segment of the steel industry are you referring to?

Mr. BERMAN. Well, sir, we feel, frankly, that it is the non-integrated segment of the industry that is seeking this control, more so than the integrated segment of the industry.

There is a committee which has been formed called the ferrous scrap consumers committee that is composed of all non-integrated steel producers who are seeking the passage of this legislation, or leading the attempt for the passage of this legislation.

Senator STEVENSON. That represents the segment of the steel industry that is controlling demand for scrap and, therefore, prices?

Mr. BERMAN. Well, of course, what they are trying to do here is simply to get the Government to pass a piece of legislation which in our opinion would control the price of scrap. It certainly would make it easier to control because without a segment of the market to which scrap is now being shipped, the market would tend to be controlled and, of course, as we stated, when you reach a certain level, by a little more buying, you can artificially control this market.

Senator STEVENSON. There is nothing unlawful about any industry or segment thereof coming before the Congress and asking for legislation. You are saying we should request the Federal Trade Commission and the Department of Justice to investigate some apparently unlawful activities on the part of some industry or segment of the industry.

I am asking you now what that segment is. There is nothing wrong with industry groups coming before this committee to support one bill or another.

Mr. BOGGS. I am sure you know, Senator, that this is an unclear area of law. There have been two Supreme Court decisions on it.

The fact, that the issues reached the Supreme Court is significant itself. The question here would be—and I am not suggesting this is going on, I am simply saying it is our opinion that the Federal Trade Commission and the Justice Department may want to look into the question of whether it is going on—whether six or seven major steel companies got together and sat around the table and said the best way we can control scrap prices is to go before the Senate Banking Committee and seek legislation to get those prices controlled.

I am not sure that would be considered under the Supreme Court decisions as a legitimate legislative interest on behalf of an industry group. I think if it were not a legitimate interest it could be subject to antitrust action.

Senator STEVENSON. You use the expression "joint efforts." By that do you mean the efforts of these nonintegrated users to support this legislation? Are there other joint efforts? What do you mean by joint efforts?

Mr. BOGGS. I think maybe Mr. Berman and Mr. Cutler can answer better than I. I think these efforts have been going on at the administrative level for quite some time. I also think this committee was formed and I think you have witnesses from the committee coming before you later today who can answer this.

I think the ad hoc committee was formed either because the trade association of the steel industry either did not consider this a problem that affected the entire industry, so it didn't take a formal position on it in these hearings, or for some other reason, I am not sure what, but a special group of the industry was formed for this purpose and I assume they can tell you about it better than we can.

Mr. BERMAN. Of course, the effort, in our understanding, this is not the first proposal for this piece of legislation; to our understanding this piece of legislation was proposed on the House side and there is a continuing effort to try to get this bill passed and, of course, as we say, we feel that passage of this bill would control prices for ferrous scrap.

How they go about getting it passed and what efforts are used, the continuing effort been going on for some time. I don't think there is any secret about the fact that this mechanism was first proposed in a trade publication some months ago and an effort was made to have it proposed and it didn't, to our knowledge, get any particularly great reception. Yet, here we are back again with the same proposal and again repeating ourselves to do our best to see to it that it does not become part of the law.

Senator STEVENSON. If you want to supplement that answer with any evidence of unlawful activity on the part of any segment of the steel industry we would be glad to consider it and refer it to the Federal Trade Commission and the Department of Justice.

At the present time I don't believe we have any such evidence which would enable us to follow that second recommendation. If you have it, give it to us.

Thank you very much, gentlemen. Your testimony is very helpful.
[Complete statements follow.]

**STATEMENT OF FRED BERMAN, PRESIDENT,
INSTITUTE OF SCRAP IRON AND STEEL, INC.
BEFORE THE SENATE BANKING, HOUSING
AND URBAN AFFAIRS COMMITTEE ON
SCRAP IRON AND STEEL EXPORT CONTROLS**

Mr. Chairman and members of the Committee, my name is Fred Berman. I appear as President of the Institute of Scrap Iron and Steel, Inc. (ISIS), a national trade association representing approximately 1,250 processors, brokers and dealers in the metallic scrap processing industry. Institute members process, ship or otherwise handle approximately 90%-95% of the iron and steel scrap purchased in the United States and handle equally impressive percentages of the many other metallic solid waste materials which are recycled in our economy. I am also President of Berman Bros. Iron and Metal Co., Inc., headquartered in Birmingham, Alabama, a scrap processing firm specializing in the preparation of ferrous metallics for recycling into iron and steel products.

Accompanying me this morning are the Executive Director of the Institute, Dr. Herschel Cutler, a professional economist, and Thomas N. Boggs, Jr., Washington Counsel to the Institute.

The Institute objects in the most strenuous terms possible to the export control mechanism set forth in S.2119. These controls are designed by the scrap consuming industry, one of the largest domestic industries, to permit it to exercise price control over a much smaller industry composed of many small companies processing iron and steel scrap.

The bill, as even its authors admit, would result in actually reducing total scrap sales by as much as three-quarters of a billion to one billion dollars over the life of this legislative proposal.

Congress is being asked to sanction industry efforts to regulate prices, regardless of the fact that this will reduce scrap processing industry sales by hundreds of millions of dollars, that it will prevent millions of junk automobiles and other obsolete metalics from being recycled, and that it will have a seriously detrimental effect on the United States balance of payments position. These statistics are not unsupported assertions, but are based upon the steel industry's own calculations of the effect of the legislation on ferrous scrap sales. The audacity of such a blatant special interest legislative request is startling, particularly when there is no demonstrated need for such legislation.

I. FERROUS SCRAP MARKET

Before discussing the Institute's specific concerns with S.2119, a bill which would expand vastly this country's use of export controls, it is essential that this Committee understand the operation of the ferrous scrap market. Once the forces in this market are understood, it will be clear to the Committee that the proposed expansion of export controls is not only unwarranted but is in fact detrimental to the ferrous scrap market.

A. The Scrap Market

Iron and steel scrap is sold in a market governed solely by supply and demand. The market historically has experienced numerous short term fluctuations reflecting these forces. Exhibit 1 shows a twenty year history of the price movement of No. 1 Heavy Melting and the price of finished steel during the same time period. It is obvious that the wide swings in scrap iron price, up and down, all tend to exhibit a long-run equilibrium around a narrow price range; the situation with regard to steel price is uni-directional, upward.

It would seem to be unnecessary to discuss basic economics and the role of price in establishing available supply for a commodity that is traded and for which an almost limitless supply exists. However, this bill requires such an exposition.

In times of high demand, the scrap processor must "pass on" any increased selling price which it receives to scrap collectors to entice them to bring to the processors' yards the necessary scrap to meet the orders of the mills and foundries. This is the critical concept.

In normal times, the collector, scavenger or peddler provides the scrap processor with the most easily obtained scrap materials to meet the demands of the mills and foundries. When scrap demand rises in response to an increase in steel demand, the scrap processor must be able to interest the

collection system in developing sources of metallic solid waste that normally and unfortunately are not recycled. The processor also must create the atmosphere in which persons and firms not otherwise employed in scrap collection will turn to that activity to increase the available metallics.

The only known vehicle to accomplish this end (short of governmental edict or voluntary citizen effort) is price. However, since the additional material sought is not part of the normal scrap flow, additional dollar sums are required to sponsor the outlying collections and the attraction of new collectors.

In simplest terms, scrap iron on the Eastern Shore of Maryland will move much faster if the price is high than it will when the price is low. There is need to sponsor such movement and the method is higher prices.

The irony of the position of the mills and foundries is that they are advocating, through S.2119, a procedure which will lower the price to the processor and thus to the collector, thereby creating the very shortage potential which they want to avoid. When the marginal collection of solid metallic waste is not profitable to the collector, he will not collect. At that point there is a real danger of a shortage. This danger cannot occur while price remains at levels that support the present extensive collection efforts.

B. The Steel Industry

Practically all steel produced, in the U.S. as well as abroad, is derived either from the smelting of iron ore or from the remelting of iron and steel scrap. In so-called integrated steelmaking, iron ore is smelted in a blast furnace, and the resulting hot metal is generally converted to steel via the basic oxygen steelmaking process. The proportion of scrap used in the basic oxygen steelmaking process is very nearly equivalent to the proportion generated within the steelworks during rolling, finishing and sizing of steel products. Accordingly, in terms of net finished steel shipped, the basic oxygen process neither generates nor consumes significant amounts of scrap. The tonnage of steel shipped from integrated plants is roughly equal to the tonnage of blast furnace hot metal smelted from ore.

In so-called non-integrated steelmaking, scrap iron and steel from various sources is remelted in an electric-arc furnace, then refined to steel. Generally speaking, no ore is used, and all of the finished steel leaving the plant has entered the plant as scrap reclaimed from industrial operations and the salvage of obsolescent steel devices and structures. As in integrated plants, there is an internal reflux of processing scrap.

Integrated steelmaking is characterized by large-scale operations, large unit increments to capacity and very high

long-term investments. As nominal figures, one might cite capacity changes in terms of units of 4000 tons per day, or 1.5 million tons per year, costing from \$300 to \$350 per annual ton of new capacity or \$450 million per step increment. A decision to increase integrated capacity by building new facilities has a cycle time of about two to four years, mainly engineering and construction time. Once built, new integrated capacity must be fully utilized owing to high fixed charges. If steel demand cannot absorb the new production in full, older operations (generally built in smaller increments) will be retired or temporarily idled. A decision to activate a blast furnace, new or old, is a definite long-term commitment because of high refurbishing and start-up costs. The campaign life of a blast furnace, once started, is four to seven years. Similarly, iron ore for smelting is developed in large increments and purchase of the ore is generally in terms of long-term commitments.

In contrast, non-integrated steelmaking is much smaller in scale and is characterized by much shorter decision/commitment cycles. In an existing plant, electric-arc furnaces may be started up or shut down on short notice and at very modest cost. Typical capacity increments range from 300 to 900 tons per day, or 0.1 to 0.3 million tons per year, thus are 1/15 to 1/5 of increments in integrated capacity. The capital cost of capacity increments is on the order of \$100 to \$130 per annual

ton, or even less if excess steel rolling capacity is present in the plant. The cycle time for engineering and construction is on the order of 14 to 18 months. Owing to lower fixed charges, the non-integrated steelmaker is not constrained to utilize all of the new capacity he installs.

Several factors are important in considering the effects of an increase in demand for steel. Until this increase shows itself to be permanent over a term of years, there is no basis for adding to integrated capacity. The first response of the industry is to make full and complete use of non-integrated capacity that can be put into production within a week or so. A second response is to stretch the output of both integrated and non-integrated capacity where possible. A third response is to bring idle integrated capacity into production, i.e. starting up smaller and less efficient blast furnaces that had been idled by previous installation of modern equipment. But until this third response takes effect, over a period of about two months, all of the increase in output is ultimately derived from increased use of scrap. A step increase in steel demand will not produce a permanent adjustment of integrated steelmaking capacity, in terms of modern, efficient equipment, for years. The pressure upon scrap markets and prices is substantial, and the effects upon scrap price provide the ultimate impetus toward construction of new integrated steelmaking capacity.

Turning to the scrap market itself, three components of scrap used in the production of steel must be recognized and distinguished. The first of these is the recycled or "home" scrap generated during processing of raw steel to finished steel within the mills. Home scrap is a more or less constant proportion of total raw steel production and it is clearly impossible to make an increase in finished steel output through the generation and use of home scrap. The second component of scrap supply is so-called "prompt industrial" scrap, that which is generated by the fabrication of finished steel into consumer goods, buildings, and equipment. Of course steel users try very hard to minimize their generation of prompt industrial scrap, with the result that the flow of prompt industrial scrap is very closely pegged to steel output and steel utilization. Again, there is no possible way to meet an increase in the demand for steel through increased flows of prompt industrial scrap. If it is desired to buy a larger amount of autos, structures, machinery, and other steel-containing products, the new steel must come ultimately from either iron ore or from recycled obsolescent scrap. Because new steel from iron ore cannot be obtained on a short-term basis, obsolescent scrap from salvage operations bears the entire brunt of increases in steel demand for several months, and, in the adjustment period, in decreasing proportion for up to several years.

To generalize the cause/effect relationship outlined, were the price of scrap to become fixed or artificially stabilized through artificial means, the inevitable result would be a proportionate loss in this nation's ability to respond promptly to changes in the demand for finished steel. Also, it is likely that the impetus for prompt investment in integrated capacity would be dampened or lost altogether. In short, an external and involuntary stabilization of scrap prices would amount to sand in the gears.

C. Domestic Demand

Domestic consumers of iron and steel scrap employ an historical buying practice whereby scrap is purchased on a 30-day basis in contrast to foreign consumers who buy at least 90 to 120 days in advance. Orders in the latter case allow the scrap processor to plan his raw material requirements, production, shipping, etc.; orders on the former basis force instability.

Although the domestic steel industry has boasted of heavy demands for its raw steel production in 1973, it generally continues to buy scrap on a 30-day basis, and, at the first sign of softening in the market, mills and foundries (1) again initiate the practice of cancelling orders the last day of the shipping month and/or (2) reject carloads of scrap in the falling market awaiting renegotiation at lower prices and/or (3) "stay out of the market" to further force the price downward.

These practices dramatically heighten scrap price swings.

While the steel industry demands immediate fulfillment of its requirements of scrap iron from the scrap processing industry, it is telling its customers that they can expect delays of 4 to 6 months on delivery of steel products. It is also saying to potential customers that regular customers have the first opportunity to buy their needs. In short, the steel industry cannot fill its domestic demand and is picking its customers; but this industry also has seen fit to export 1.5 million net tons of steel during the first five months of this year, a 36 per cent increase over the same period in 1972. Where is the concern for domestic users of steel who are truly experiencing a shortage of necessary material? Possibly a trigger mechanism for steel exports also is needed.

D. Mills and Foundries Have No Intention of Stabilizing the Price of Scrap Iron In a Narrow Band

Mills and foundries prefer to create the speculative swings in market price but they seek legislative control of the higher prices which their own actions have induced. The funds and time expended in this lobbying effort could properly be invested in the stabilization of the scrap market.

There is no disputing the fact that when prices rise the costs of operating mills and foundries goes up. But, likewise, when prices fall, the bargains found in the scrap market are astounding.

In the price decrease from 1970 to 1971, the steel mills enjoyed a profitable windfall of more than \$200-million though this Congress was not called upon to restrict the amount obtained. During the scrap price decrease from 1965 to 1966, the gain was at least \$125-million; and from 1966 to 1967 the total was at least \$100-million while from 1967 to 1968, the gain approached \$60-million. (See Exhibit 1.)

These "rewards" of the supply-demand market were enjoyed and welcomed by the steel industry; no cries were heard that more scrap should be purchased to make certain iron units were not wasted; no decreases in the composite price of finished steel occurred; no deflationary pressures were noted; the composite price of finished steel does not indicate whatsoever that steel reaching consumers in various forms experienced any reduction in price.

What happened to the windfall gains from these sharp reductions in scrap iron prices? If all the furor today is concerned with "precipitous price increases" for this "critical raw material", where did the benefit go when this same material had an equally "precipitous price decrease"?

E. Development of Scrap Exports

The export of ferrous scrap from the United States developed because the domestic consuming industries would not purchase all of the scrap iron that was available and other countries of the world needed this raw material. (Exhibit 2).

The first occurrence of international demand was in the early 1920's. Since the United States was (and remains) a scrap surplus nation, trade was undertaken.

Although the tonnages cannot be compared to more recent times, the historical relationship of domestic needs for iron and steel scrap and the scrap processing industry's ability to process and ship scrap are matters of record. There are only two domestic industries which consume significant volumes of ferrous scrap -- the foundry industry and the steel industry. Export, by necessity, provided a third market for scrap iron which could not be used in this country.

Even though the scrap processor then and now would prefer to have his product purchased domestically, U.S. consumers of ferrous scrap, heavily tied to owned or controlled virgin materials, did not choose to use the scrap available. Other nations of the world had a need for scrap, that scrap was not wanted by U.S. consumers, and to survive as an industry, the scrap processor had no alternative but to enter the international market.

The exportation of iron and steel scrap began to reach more substantial tonnages in the mid-1950's. Again, it was a case of supply and demand -- an excess of supply of scrap in the U.S. and a need for scrap by other nations of the world.

In the late 1950's and early 1960's, with the introduction of the basic oxygen furnace process of steelmaking, the domestic steel industry's need for scrap further declined. Whereas the open hearth furnace required 40% to 50% scrap, the BOF required 25% to 30% scrap, most of which originated in the mill as "home" scrap.

In 1956, domestic consumers purchased a then record 36.8 million net tons of iron and steel scrap; 6.3 million net tons were exported. It was not until 1969, 13 years later, that the domestic consumers purchased more scrap than in 1956 and that was only by 100,000 net tons. Raw steel production increased from 115 million net tons in 1956 to 141 million net tons in 1969.

It was during these years that the American scrap processing industry was able to survive, although many firms went out of business, because of the foreign demand for iron and steel scrap. In fact, if it were not for these years of export trade, the scrap industry today would not be prepared to meet the needs of even its domestic customers.

It also should be noted that in 1956, iron ore imported jumped from 26 million net tons in 1955 to 34 million tons, reaching a peak of more than 50 million net tons for the years 1965, 1966 and 1967 before declining to 46 million net tons in 1969.

What the scrap industry witnessed in those years was a definite drop in the domestic consumers' desire to purchase their product, a dramatic increase in the imports of iron ore and a need to cultivate world markets for ferrous scrap in order to stay in business.

It is most interesting that at no time during those years, did the scrap iron industry ask to curtail imports of iron ore to protect the domestic scrap industry. The Government was never asked to force the domestic steel-makers to rely first on scrap generated by the U.S. and only then to allow the importation of iron ore.

The tremendous tonnages of iron and steel scrap that accumulated in the form of obsolete automobiles alone was visible recognition of the metallic solid waste problems this country faced in the late 1950's and 1960's because there was a limited domestic market for the processed material. The scrap processing industry, has, by necessity, thus been forced to rely on a foreign market for its surplus scrap -- which, if not recycled, undermines our efforts to achieve environmental quality.

And it is important to stress that the scrap processing industry prefers to sell its material to domestic users for economic as well as political reasons. The political motive is obvious -- our appearance here this morning and our efforts since last December to protect and retain free world trade in scrap iron speak clearly enough to that subject.

The economic rationale may not be as apparent. The shipper of scrap domestically is faced with fewer credit, shipping and liability problems in contrast to the magnified difficulties in each of these areas when foreign trade is involved.

- (a) The average rail shipment is a car of 50 to 55 tons (even multiple car shipments amount to only 500 to 1,000 tons) whereas the typical ocean-going ship today is 20,000 to 25,000 tons of carrying capacity. The costs of capital involved in the gathering, processing, and concentration of such volumes is immense as is the storage problem and scheduling required to insure that the material is dockside when the vessel arrives.
- (b) The paperwork and documentation necessary to export is infinitely more complex than the simple bill of lading to ship to a domestic user.
- (c) Credit is more readily established in this country than in foreign transactions.
- (d) Inspection of the material sold (all scrap sales are subject to receivers' weights and inspection) occurs thousands of miles away where little can be done, in contrast to the domestic scene where the inspection may occur only a few miles or generally 100 or so miles from the origin.

- (e) Vagaries of the sea, including the possibility of late ship arrival or departure, delayed loading, etc., each of which is very expensive in terms of demurrage (\$3,000 per day per ship is not unusual) adds further hazards to the foreign trade area.

The recognition that the risks of trading overseas are greatly magnified has not stopped the export trade of scrap from this country. The reason for this is that the absence of viable domestic markets has required the development and maintenance of foreign markets to preserve the domestic scrap processing industry. In the absence of foreign demand, the scrap industry would be further atrophied and unable to perform as desired by the domestic consumers.

Moreover, like any buyers, the foreign consumers have a right to rely on the stability of their supply sources. They cannot be expected to provide a market when the exporter needs it and to rely on other sources when the "fair-weather buyers" of the exporter suddenly find it to their advantage again to enter the scrap market. The capriciousness of the legislation at issue would seriously harm the market for scrap iron and steel through the world, and might virtually destroy that market for the export shipper.

World trade is not something that can be turned on and off; one customer is a valued asset that is not exploitable at the whim and fancy of other customers.

The Institute has heard repeatedly that the domestic steel industry is supplying first and primarily those customers who have remained loyal to the domestic steel producers during the past years of low steel demand and only then is it considering the orders of those customers who had strayed from their doors.

The scrap industry is not setting such priorities; the scrap industry has met, is meeting, and will continue to meet the needs of its domestic and foreign consumers. All that is asked is that the industry be permitted to produce and sell to all of its customers.

The steel industry recognizes the need to protect loyal customers where steel is involved; S.2119 would reward the "opportunist" domestic customer and penalize the foreign customer who, more than his domestic counterpart, has been a mainstay in the American battle to preserve the environment and recycle obsolete metallics.

II. LACK OF DEMONSTRATED NEED FOR EXPORT CONTROLS

A. Inflationary Impact

S. 2119 states that prices of scrap iron can lead to "disruption of the economic stabilization program" now in being. This represents a significant change from the language of the Export Administration Act of 1969 which considered a serious domestic inflationary impact, not merely price rises. The reason for this change is critical to the understanding of the thrust of S. 2119.

Inflation is not a mere price increase. The Institute has shown repeatedly that scrap iron prices rise and fall as a result of steel mill and foundry buying practices, but the price of new steel moves only in one direction -- up.

The two charts attached hereto as Exhibits 1 and 3 indicate clearly and without challenge that there is no price inflation in the scrap iron market since even today scrap iron is selling for approximately what it sold for in 1956. Steel prices, however, are now more than double the price of twenty years ago.

Reviewing these two charts shows that there is no relationship between the price of scrap iron and the price of steel.

Moreover, if the premise inherent in S.2119 had even a fragment of truth, the price of steel would have fallen when the price of scrap fell. This obviously has not happened even once during the past 20 years

though, obviously, scrap prices have fallen sharply on many occasions.

Inflation cannot be sustained as a charge in the scrap iron market. Accordingly, the proponents of this bill found it necessary to shift from the more acceptable criteria of a serious domestic inflationary impact to one that is concerned only with price.

The truth of the matter is that little or no impact on consumer prices is traceable to the price of scrap iron. The recent increase in scrap prices translates into an additional cost of less than \$5.00 per car on a new automobile, 12¢ per new air conditioner and 50¢ per new refrigerator. And this presumes that all the costs would be passed forward. However, even this premise is unreasonable since it would be expected that consumers would share in the subsequent decrease in prices that always follow.

Yet, the mills and foundries argue that the price of scrap must fall at present. At no point do the mills and foundries agree to lower their prices when scrap prices fall. Nowhere in the bill is a safety mechanism provided to insure that prices will not fall to such low levels as to challenge the economic viability of the scrap processing industry.

B. The Concept of Scarcity

S. 2119 refers to a "strained supply-demand" balance in the marketplace for iron and steel scrap without anywhere discussing definitions of this "strain." The bill fixes 11 million tons of production in any one quarter as a "shortage" condition and 11.5 million tons of production in any quarter as a "critical shortage" without expressing any basis for the calculation or offering any support to evaluate the criterion employed or the figures used to establish the shortage.

Objective consideration of the shortage concepts in this bill should engender a rationale for the figures offered. No analysis can, in fact, demonstrate that the numbers have any significance other than to restrict production, especially the export segment, with the anticipated goal of lowering price. The philosophy is not one based on controlling shortage, rather it is one based on controlling price.

Reproduced below are the results of applying the trigger concept during the year 1969, 1970 and 1972. The calculations are taken from a widely circulated letter prepared for the Ferrous Scrap Consumers Committee explaining the function of the so-called "Bowman Trigger" which is the mechanism included in this bill.

	1969 ACTUAL			1969 CONTROLLED*		
	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL
1st	1044	9332	10376	1044	9332	10376
2nd	2478	9560	12038	2478	9560	12038
3rd	3051	8534	11585	840	8534	9374
4th	2603	9274	11877	840	9274	10114
	<u>9176</u>	<u>36700</u>	<u>45876</u>	<u>5202</u>	<u>36700</u>	<u>41902</u>

Second Quarter 1970

Exports in the third and fourth quarters of 1970 would have been restricted to 1/2 the previous five years average to a rate of 842,000 tons.

	1970 ACTUAL			1970 CONTROLLED*		
	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL
1st	2112	8948	11060	2112	8948	11060
2nd	3224	8942	12166	3224	8942	12166
3rd	2795	9295	12090	842	9295	10137
4th	2233	7890	10123	842	7890	8732
	<u>10364</u>	<u>35075</u>	<u>45439</u>	<u>7020</u>	<u>35075</u>	<u>42095</u>

Second Quarter 1972

Exports in the third and fourth quarters of 1972 would have been restricted to 1/2 the previous five years average to a rate of 795,000 tons.

	1972 ACTUAL			1972 CONTROLLED*		
	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTAL
1st	1439	9501	10940	1439	9501	10940
2nd	1736	10193	11929	1736	10193	11929
3rd	1966	8888	10854	795	8888	9683
4th	2243	10026	12269	795	10026	10821
	<u>7384</u>	<u>38608</u>	<u>45992</u>	<u>4765</u>	<u>38608</u>	<u>43373</u>

*Calculations will not necessarily agree with those presented in the statement of Mr. Thomas H. Boggs, Jr., for the technical reasons explained in Mr. Boggs' presentation.

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It is obvious that nothing is expected to change but the export volumes. There is no indication that any more material would have been purchased domestically. This certainly challenges the concept of scarcity. It is a reasonable expectation that, if a shortage existed and exports were curtailed, domestic consumption would have increased to reflect availability where previously there had been no supply. No such result is indicated by the mills themselves.

Moreover, the absurdity of the conclusion that supply is short is never better demonstrated than in the same paper which shows that in these three years alone, the ferrous scrap industry actually produced 10 million more tons (4.0 million more in 1969, 3.3 million more in 1970, and 2.6 million more in 1972) than would have been purchased by the mills with the trigger mechanism fully operative. Since the material was produced, clearly there was no shortage.

Why, then, the request for this legislation? In simplest terms, the trigger concept envisioned in S. 2119 is a subterfuge -- it is price-control legislation; self-serving legislation by one industry that is asking the Federal Government to protect it from the fallacy of its own ways. S. 2119 is special-purpose legislation of the worst magnitude since it would frustrate one industry that did not create the current situation facing the domestic mills and

foundries -- a problem of price, not supply -- to relieve the other industry which created (and will create again) the problems of current concern. In fact, these consumers are already engaging in the very same tactics that created the situation to begin with and from which they now are asking governmental relief.

If the mills do not intend to purchase more than they did without the export restrictions, there cannot have been a shortage. That is a reasonable, and the only logical, conclusion. The answer then is that the mills want the knowledge that millions of tons of scrap iron will be available without a viable market. The presence of that huge supply overhanging the market can only have one effect -- a sharp decline in price.

Other evidence of the lack of a scrap shortage exists. The Environmental Protection Agency, in conjunction with the Scrap Metal Research and Education Foundation, sponsored a study of iron and steel scrap problems. The research, conducted by Battelle Memorial Institute, Columbus Laboratories, developed two important conclusions:

- (a) Obsolete scrap in inventory as of 1969 totalled 750 million tons;
- (b) Only about 60 per cent of the new annual supply of obsolete metallics is recycled.

Both of these conclusions merit serious consideration by this Committee.

First the available metallics in 1969 clearly indicate that there is no shortage of ferrous units. In fact, if no new scrap iron were added to the cycle yearly, the available and existing inventory would meet the needs of the steel and foundry industries -- both foreign and domestic -- for approximately 15 years even at today's levels of scrap consumptions.

When the net result of the 60% annual recycling rate is added to the 1969 inventory, the effect is to increase the available metallics by approximately 30 million tons annually, thus increasing the available metallics to levels far in excess of 750 million tons.

It should also be stressed that the 750 million tons are only those units of iron which are obsolete -- none of this material includes the iron and steel products still in use in the form of buildings, railroad tracks, cars and trucks, etc. If the available metallics in the form of usable iron and steel is added to the obsolete inventory, the total available for eventual recycling amounts to an almost astronomical 2.1 billion net tons.

To avoid any possible misinterpretation of the Battelle conclusions, I have attached as Exhibit 4 the summary pages of the calculations which clearly indicate the vast reservoir of iron and steel scrap now available. This sophisticated analysis effectively destroys any notion that scrap iron might be in short supply.

C. Buying Practices of Mills and Foundries

The volatility of the ferrous scrap market rests with the purchasing practices of the steel mills and foundries. These buyers fail to follow the basic purchasing policies which characterize the procurement of essential materials in virtually all other manufacturing industries. Inventory control practices which would minimize the negative impact of wide price fluctuations generally are not used.

The opportunities for informed buying to flatten the peaks and valleys abound for the scrap buyer. It was possible to buy more than the required scrap at the low price levels which existed during the doldrums of the past two years. Some mills did, thereby insulating themselves to varying degrees from the recent price movement. The fact that such buying could have relieved the problem for those mills indicates that it is not the export of scrap that has caused the price rise, rather it is the buying practices of the majority of the domestic scrap purchasers.

Generally, the mills and foundries have not purchased with any concept of need to preserve a viable supply system; rather, they buy to meet crises and as such have created a crisis-controlled marketplace. They see no reason to buy when the price is low, ignoring entirely the value of adding

to inventory at low purchase price levels. The effect of this policy is to atrophy the scrap supply system to the extent that when the next boom in steel demand arises, the steel mills and foundries have very low inventory levels which necessitate fast and concentrated buying of scrap materials. This sudden burst of demand can have one effect -- an effect that all concerned recognize, namely, higher prices.

When, after long absences, virtually all the mills and foundries reenter the market at approximately the same time, at high volume levels, the immediate demand cannot be instantaneously met by the then available supply. The supply exists, but it is not processed; in many cases, it is not normally movable. The processor must pay a realistic and economically feasible price to the collector of obsolete scrap to encourage his participation in the scrap cycle.

In basic terms, when steel demand rises with the resultant increase in scrap demand, those firms and individuals who had been hauling farm products or other merchandise can be induced to collect junk autos and other metallic discards only if the price is higher than would have prevailed had the supply system been functioning properly. The firm or individual must be convinced to shift from other ventures to scrap iron collection. They do so, realizing that the scrap market will not continue to provide a reasonable living since scrap demand will soon be met and prices will fall. The scrap processor must pay more; the steel mill must pay more.

The problem is not exports or actions by the processors, the problem is the buying practices of the consumers.

Moreover, the commitment to flattening out the peaks and valleys of scrap buying practices does not envision necessarily a huge financial burden. To the extent that any mill or foundry would hold open and exercise the option of adding to inventory when prices are low and reducing purchases when prices rise, there is a necessary commitment of dollars, though such a posture is rewardable with large returns to scale. In those instances where funds are not readily available or where the funds have a higher potential in other investment alternatives, stability in the marketplace can likewise be attained through use of longer-term buying arrangements than the 30-day contracts now utilized.

D. Situation of Foundries

Much attention has been paid to the alleged plight of the foundries in this nation, with some extreme news items noting the perilous condition facing certain publicity-oriented foundries. In some instances the situation appears to threaten the very existence of these firms. In the main, the claims are either overstatements or false; in no case of which we are aware was a shortage of scrap proven.

Founders who have complained are generally very small firms. They have developed a pattern of single or dual source buying with no concept of the "market" and no concern with availability. Thus, in the case of one foundry, which had been buying a particular grade of scrap for years, the absence of supply from its long-standing source led to a formal complaint to the Government. It was quickly established that the supplier to that foundry was a steel mill -- not a scrap processor -- and the mill found it more advantageous to use the material itself. A non-customer of the scrap iron industry then complained that scrap iron exports should be controlled because he could no longer buy scrap iron from an industry with which he never did business anyhow.

A second case concerns a grade of foundry scrap iron that was the by-product of another steelmaking process. Such by-products no longer exist at that source, with the result that again a complaint urging scrap iron export restrictions was lodged. The grade in question is not exported so that a total embargo will be of no use to that foundry.

In a third case, the foundry required a most unusual, most demanding, and most costly grade of scrap material which, in many cases, was not accepted by the foundry after it had been prepared and shipped with the added freight cost now part of the delivered price. A rejection by a mill or foundry provides the scrap shipper with two options -- take the material back and bear a second freight charge or negotiate to sell the material at a lower price. In either case, the scrap shipper loses. Shipments are made under these conditions only so many times before the customer is no longer desirable. That was the reputation of this one foundry which also complained because allegedly no one would produce to its specification. The material thus was allegedly unavailable. In fact, it was offered the material it wanted at a price \$3 under the sellers freeze price, but only if it would inspect and accept the material at the shippers' yard. The offer was never accepted.

Another foundry quadrupled its demand of a particular scrap grade and when the scrap processor was only able to double its output virtually overnight to meet the new level of demand, the foundry complained to the Government, even though pig iron was readily available for it to melt into the identical product. It refused the pig iron suggestion choosing instead to complain to the Federal Government because pig iron was "too expensive".

Finally, special mention must be made of the cast iron and soil pipe foundries. Here the problem is somewhat different. There is simply a shortage of cast iron scrap. The reason is obvious -- how many persons have cast iron radiators or cast iron bathtubs in their homes or cast iron pipes for their plumbing? There is obviously very little cast iron scrap to be recycled. Thus, many progressive foundries are converting their charges from cast iron scrap to steel scrap and are producing the same products with the same quality. Obviously, Congress does not expect the scrap industry to create scrap case iron -- nor should this Congress condemn the scrap industry for being unable to provide one particular grade of scrap iron when countless other substitute grades are available. The Congress cannot permit a technologically inefficient "tail to wag the dog." Moreover, cast iron scrap is not exported in any significant amount, so the impact of controls on this grade would be minimal, if at all recognizable.

If foundries are in trouble it is not because of the price of scrap iron. The foundry industry is suffering from costly expenditures required to add air pollution control equipment, and many foundries are no longer functioning because the cost was something they could not bear. Other crippling factors are the escalation costs of coking coal and the true shortage of ferrous silicon, both of which have experienced escalating prices reflecting conditions of scarcity with the resultant inflationary impacts. Yet no hue and cry is raised about these products or their price or supply status.

E. Japanese Purchasers and Foreign Controls on Ferrous Scrap Exports

There are broadly-based misconceptions that only the United States permits the exportation of ferrous scrap and that the Japanese buy all of their scrap iron needs from the United States. Both of these concepts are incorrect.

First, Japan imports from many countries in the world.^f For example, during the first five months of 1973, the Japanese imported scrap iron from Australia, the Soviet Union, Canada and India to name but a few other nations exporting to the Orient. Admittedly, the tonnage is significantly higher from the United States than it is from the other nations, but review of the American location of scrap available for sale would indicate that this would be an expected result. Since the West Coast has far more scrap generated and available than can possibly be used domestically, exports to Japan are a natural consequence.

Second, the Institute has been able to develop a partial list of other exporting countries in the world, in addition to the United States, to meet the often stated incorrect allegation that only the U.S. permits scrap iron exports.

Included on the list of countries exporting ferrous scrap are West Germany, France, Italy, Holland, Belgium, Luxembourg, Ireland, Norway, Austria, Finland, Portugal, Sweden,

Iceland, Australia, Rumania, Yugoslavia, East Germany, Tunisia, Liberia, French Equatorial Africa, Canada and other nations, including many in South America.

Moreover, none of these tonnages is minimal, especially in relationship to the volume of scrap iron retained domestically in the nation for its internal use. Thus, the arguments about the uniqueness of American scrap iron exports is nothing but an illusion; American scrap iron competes throughout the world with scrap iron generated and sold, with the blessing of the national governments involved, in those foreign markets where iron units are desired.

F. Profitability of the Steel Industry

In light of the allegation that scrap prices are "critical inputs" to the steelmaking process, it is worthy of inquiry to establish what happens to steel profits when scrap prices are high. If the steel industry's premise is correct, steel profits should fall when scrap prices are high and should rise when scrap prices are low.

The facts of profitability are the exact opposite. When scrap iron prices move upward, steel industry profits move upward also, and when scrap prices fall, steel industry profits also fall. High scrap iron prices parallel high steel industry profits -- and this result is a reasonable expectation, not a coincidence.

Since the steel industry is one based on capital investment, when such capital is less than efficiently utilized, profits do not exist or they mount slowly. However, when operating levels approach peak efficiency, profits mount rapidly. Thus, rather than forecasting poor financial results, high scrap iron prices foretell significant improvement of steel industry finances since high scrap prices mean high steel demand, higher production levels, more efficient operating practice and more net income.

In fact, in the two years recording the highest scrap iron prices in recent history -- 1956 and 1957 -- steel industry profits were at record levels. The evidence clearly

supports the fact that high scrap prices are symptomatic of excellent financial news. To escalate further these profits to even higher levels by artificially lowering the prices of the scrap iron, clearly is not justified.

The indications are that 1973 will follow past trends. While the steel industry implores the Congress to legislate a sharp decrease in scrap iron prices because of the alleged effect these prices have on their financial ability to survive, that very same industry has reported a 78.6 per cent increase in net income during the first quarter of 1973, the second highest percentage improvement in profits of all industries reporting in a survey printed in the Wall Street Journal. (Exhibit 5).

Steel mills are reporting record first quarter profits in light of high scrap iron prices, as is expected. Moreover, those mills using only scrap iron as the metallic charge, are reporting major advances in their profit picture again fully in conformity with expectations.

While on the subject of profitability, it is also necessary to stress the influence of cost escalations facing all American industries. Everyone's cost of doing business in the United States has increased. However, the steel industry presents this case as if it were the only industry faced with increasing costs for labor, machinery and equipment, money, etc. The economy provides no insulation for the scrap processing

industry from these same forces. And, the price of scrap is only approximately what it was in 1956. Certainly, labor, equipment, money and the like are more expensive for everyone today than in 1956. During the 17 intervening years, this fact of business life was of no concern to the steel industry, which saw its prices continue to rise while scrap prices hit lows of \$25 per ton and less.

The scrap processing industry is capital intensive. The equipment which takes old automobiles and reduces them to grades of scrap is huge -- both in size and in cost relative to the size of the individual business firms. Certainly the decision to invest \$1 to \$4 million in an automobile shredder to increase scrap production is as critical to the scrap processor as the decision to invest \$150 million in new melting capacity is to a steel mill, when considering the relative economic base of each firm.

In short, the steel industry allegation that scrap prices must be lower because the steel industry is faced with higher costs of doing business is absurd. The scrap industry also is faced with higher costs of doing business and should not be expected to subsidize the steel industry with scrap prices below the levels of 17 years ago.

III. DETRIMENTAL EFFECTS OF S. 2119

A. Effects on the Domestic Economy

As Mr. Boggs will explain in more detail later, ISIS has calculated that if this proposal had been in effect since 1969, it would have reduced the gross sales of the scrap processing industry by \$750,000,000 to \$1,000,000,000 between 1969 and the present. This staggering loss of business obviously would be the difference between profitability and loss for numerous operators. It likewise would affect the profitability of the nation's railroads and port facilities and would lead to significant reductions in jobs in the scrap processing and supporting industries.

All of these sacrifices are demanded by the ferrous scrap consuming industry solely so that it can increase its control over scrap price and increase unreasonably its escalatory profits. Any unbiased balancing of equities in this situation must result in a determination that the controls sought are totally unwarranted.

B. Failure to Comprehend Regional Differences

S. 2119 fails entirely to appreciate the varying sources of metallic solid waste. Scrap iron is not generated uniformly throughout the country; it does not occur where scrap consumers would like it to be. Rather, scrap iron results wherever people work, play and live. Because of domestic freight rates, it generally must be processed at or near the place where it is found.

Thus, the bill does not recognize that millions of tons of solid metallic waste are lying on the West Coast and in New England (which are both experiencing sharp decreases in volumes of locally-produced steel) for which there is no conceivable American demand. The imposition of export controls on such material which cannot be used domestically means only one thing --those solid wastes will accumulate.

On the West Coast, 2-1/2 to 3 times the annual POSSIBLE consumption of scrap iron is generated. This scrap has no alternative destinations within the United States, since freight rates preclude movement of the scrap across the Rocky Mountains. The populated areas in the West would be inundated by mountains of junk automobiles, old refrigerators, and demolition materials that will rust and generate hygienic problems solely because S. 2119 prevents their exportation. (In fact, significant volumes of home scrap are exported by the mills in the area to this very day.) How

such an embargo assists the domestic mills and foundries one iota is nowhere explained in the bill.

The same is true for New England, Southern Florida, and many Gulf Coast cities, where the accumulations of solid waste soon would be the major problem in geographic areas which today rely almost exclusively on export markets to clear the countryside and city streets of the vast annual accumulations of ferrous waste. Again the bill is silent on the benefit to such communities of S. 2119. Certainly nothing will be gained by the nation as a whole or by these local areas when presently recycling metallics are precluded from the only viable market option available. For this reason alone, S. 2119 is confiscatory. Scrap processors will be deprived unreasonably of their only market, while no useful public purpose will result from this cavalier action.

C. International Trade and Monetary Effects

Export sales of iron and steel scrap during the past 20 years have ranged from a low of 0.4% (1953-54) of total scrap consumed domestically to a high of 14.7% in 1961. (Exhibit 6.) The numbers indicate clearly that scrap iron exports are NOT the determinative factor in the total scrap iron market. In fact, exports are far less significant with respect to total domestic consumption of scrap iron than they are in the case of a truly short commodity -- coal. Moreover, the Japanese also were and are the major factor in the purchase of export coal from this nation, but never is there any indication of the need for a coal embargo. No trigger bills are advocated to limit foreign purchase of coal.

The U. S. Government has been strongly advocating increasing world trade by American firms because of the overall impact which this has on the American economy. Yet, such unilateral actions as envisioned in S. 2119 could create serious international tensions with long-range detrimental implications. The damage to future scrap sales in the foreign area is so significant as to provide yet another basis for the defeat of S. 2119.

Export sales of scrap iron contribute positively to the U.S. balance-of-trade position by an amount in excess of \$500 million annually. Imports of iron ore account for approximately the same sum as a negative drain on the U.S. balance

of payments. It would seem that an industry which finds it necessary to import iron units while undertaking policies that force the export of other iron units does not need export controls to solve its problems. Why doesn't the steel and foundry industry agree to limit or ban imports of iron ore until it consumes the available iron units in the form of scrap iron? Why isn't the trigger concept tied to a procedure which would require the domestic purchase of available scrap iron before any import of iron ore is undertaken? Why doesn't the steel and foundry industry employ its huge purchasing power in the interests of helping the United States to produce a favorable balance of payments rather than fostering an unfavorable one?

D. Environmental Impact

No one can dispute that environmental considerations dictate a reduction in demand for irreplaceable natural resources such as iron ore, and the encouragement of as much recycling as possible. Every pound of scrap iron that can be collected, processed, shipped and remelted should be viewed as a positive contribution to the environment and the economy. World demand for steel has created a corresponding demand for ferrous scrap. Without this strong demand, the metallics now being melted by scrap consumers would contribute to the metallic solid waste problem. As a result, record levels of obsolescence grades of scrap are moving to processing plants from the countryside and remote areas of the nation.

The ability of this type of material to move is directly related to the price of prepared scrap. Abandoned and obsolete automobiles are being transported from fields and automobile graveyards because there is a demand for scrap. Farm implements left to rust are being collected and brought to market.

Since the early 1950's, the amount of ferrous scrap recycled as a percentage of scrap generated has declined. This year offers the potential for a change in that disappointing downward trend. The scrap industry's consumers in the U.S. and abroad want scrap. And, accordingly, the consuming industries, the scrap processing industry and the Federal Government

have the opportunity to witness and participate in environmental economics by allowing this total world demand for ferrous scrap to continue being met, the backlog of ferrous scrap will continue to move into the scrap cycle, lessening already overburdened solid waste pressures. To initiate artificial market controls would be an unfair, unwarranted and unjust blow to the nation's efforts to combat land pollution.

Iron and steel scrap is forced to compete in a market which allows discrimination against secondary materials. Discriminatory freight rates and tax policies provide a definite competitive edge to virgin materials used in the iron and steel making process. The impact of these negative artificial factors on the environment have been well-documented before this Congress and other departments, agencies and commissions of the Federal Government.

Although the Senate and House have received legislative proposals to end these discriminatory policies and have held public hearings on their merits, no Congressional action to eliminate the discrimination has occurred to date, although some relief may arise during this Congress.

It is ironic that while we strive to see these discriminatory policies nullified legislatively, we are here today in an effort to prevent yet another discriminatory policy -- a limitation of markets. What is sought is

legislation to limit the growth of the scrap processing industry. Both the economy and the environment are benefitting by the accelerated movement of ferrous scrap; both will suffer if that movement is reduced by still another Federal obstacle.

The effect on the quality of our environment would be one of continued deterioration. It would seem that before this Congress undertakes action with such potentially damaging environmental consequences, it should engage in the same type of environmental impact analysis as the 91st Congress wisely provided for in the National Environmental Policy Act of 1969 with respect to executive branch actions.

Among other things, such a study would indicate that this proposal, which establishes a growth limitation on the scrap processing industry, would increase dependence on virgin materials in steelmaking. Both the Environmental Protection Agency and The National Commission on Materials Policy have reported the significant energy savings realized by making new steel from scrap rather than virgin materials. EPA further documented other environmental savings realized by making steel from scrap. (See Exhibit 7)

Environmental economics dictate that rather than further impede this nation's ability to recycle its waste

every effort be made at least to allow these man-made resources to compete equitably with virgin materials in a free market.

To add a new market discrimination to freight rate and tax policy discrimination is totally unjustified.

July 17, 1973

STATEMENT OF THOMAS HALE BOGGS, JR., COUNSEL,
INSTITUTE OF SCRAP IRON AND STEEL, INC.
BEFORE THE SENATE BANKING, HOUSING
AND URBAN AFFAIRS COMMITTEE ON
SCRAP IRON AND STEEL EXPORT CONTROLS

This memorandum discusses some of the legal implications of the trigger mechanism contained in S.2119 which is designed to control the exports of scrap iron and steel. In summary, the thesis of this memorandum is: (1) that this legislative proposal is unwarranted because existing law adequately deals with any conceivable demand or supply problem; (2) that the proposal is too complex and unclear for Congressional sanction and provides too many opportunities for manipulation; and finally, (3) that the legislative effort culminating in this proposal raises serious antitrust questions. For these reasons, S.2119 does not merit the approval of this Committee and should not be reported to the Senate. If this special interest legislation nevertheless is adopted, the Congress should require that the price of finished steel be reduced by the total reduction in scrap cost achieved by these export controls. Additionally, import restrictions on foreign ore to the United States also may be appropriate to stabilize demand for scrap iron and steel.

I. PRESENT LAW IS ADEQUATE

Ample authority presently is vested in the Secretary of Commerce to regulate exports under the Export Administration Act of 1969. Under this legislation, export controls may be imposed by the Secretary of Commerce for any of the following reasons:

- A. to protect the domestic economy from the excessive drain of scarce materials and to reduce the inflationary impact of abnormal foreign demand;
- B. to further the foreign policy of the United States and to aid in fulfilling its international responsibilities; and
- C. to exercise the necessary vigilance over exports from the standpoint of their significance to the national security of the United States.

For purposes of this hearing, the only one of these criteria which is conceivably relevant is the imposition of controls to reduce the inflationary impact of abnormal foreign demand. None of the other grounds for controls exist at the present time. Specifically, it can easily be shown that no scarcity of supply exists. Steel mills and foundries have been able to obtain all of the ferrous scrap which they desire. Demand has not even begun to tax processing capacity of the scrap processing industry, as proven by the fact that the industry generally still is working a 5-day, single-shift week, despite the purported scarcity alleged by those interests

seeking these special controls. The Battelle Memorial Institute study discussed by prior ISIS witnesses estimated that in 1969 sufficient scrap then was available to meet all domestic and export demand for the next 15 years at current rates of demand without even considering the new scrap available each year. There, thus, is no scarcity requiring special legislation in the national interest and, even if such scarcity existed, any necessary controls already are authorized under the Export Administration Act.

As noted above, the only possible basis for export controls at the present time is the existence of abnormal foreign demand causing a serious inflationary impact. The Department of Commerce utilized this provision on July 2, 1973, to impose licensing and export controls (a) to prohibit new export orders in excess of 500 tons after July 2, 1973, and (b) to regulate and possibly to prohibit exports under orders existing on this date. Ferrous scrap processors now face an almost total embargo on new orders. Present law, in view of ISIS, thus, already has dealt severely and unfairly with scrap processors. Without conceding that the embargo was justified, it clearly demonstrates that adequate administrative authority now exists under the Export Administration Act to deal with the problem of abnormal foreign demand for ferrous scrap. No demonstrated need for S.2119 exists and the bill should be allowed to die by this Committee.

II. OPERATION OF EXPORT CONTROL MECHANISM

A. Description of Controls

The trigger mechanism is complex and is not adequately set forth in S.2119. It apparently would work as follows:

(1) As soon as total domestic receipts and export for any calendar quarter exceed 11.5 million net tons of scrap, the export limitation provisions of the bill become operative and the Secretary of Commerce is required within two months of the end of this quarter to impose export controls for a period of six-months. Total exports for this six-month period are not to exceed one-quarter of the preceding five-year annual average. It should be noted that even though exports during this preceding five-year period were considered reasonable, the trigger mechanism cuts the volume of these exports in half for the period of control.

One example of the confusing nature of this bill is that it is not clear how the five-year average is to be computed. If controls were to commence September 1, 1973, for example, would the five-year period be September 1, 1968 to August 31, 1973, or would it be some other period?

(2) Once export controls have been imposed, the Secretary of Commerce apparently is required at the end of each month that the controls are in effect to establish total

domestic receipts and exports for the preceding three months, although the first such determination is not required until four and one-half months after the imposition of controls. Once again the legislative proposal is unclear as to the period for which computations are to be made. If controls are imposed September 1, 1973, the first such determination is not required until January 15, 1974. The statute is unclear as to which three months are to be included in this determination.

If a determination is made during the period of controls that domestic receipts and exports for a three-month period computed pursuant to the preceding paragraph again exceeded 11.5 million, a total embargo on exports for a period of three months must be imposed. This embargo may be extended for succeeding one-month periods if domestic receipts and exports (prior to the embargo) continue to exceed 11.5 million net tons for the three-month period under consideration.

(3) The bill also provides that controls may be lifted if "during the calendar quarter" occurring during the six-month control period domestic receipts and exports did not exceed 11 million net tons. This bill does not take into consideration that in some six-month periods two calendar quarters will arise. In addition, the bill does not indicate

what is to happen upon termination of a total embargo. Are exports to be unrestricted at this point?

In summary, because of its complex and confusing nature, S.2119 is unsatisfactory from a technical viewpoint, thus adding further weight to the numerous and serious policy objections to this proposal.

B. Historical Perspective on Operation of Trigger Mechanism

In order that this Committee may understand the devastating and Draconian effect which this bill would have on the scrap processing industry, a review of the scrap market from September 1, 1969, until the present has been made, based on the assumption that this bill had been enacted on January 1, 1969. These calculations cannot be completely accurate since it is impossible to estimate what export demand would have been in periods after controls would have been removed.

If this legislation had been in effect in 1969, exports and domestic receipts in the second quarter of 1969, would have triggered controls commencing September 1, 1969, and would have continued through February 28, 1970. No total embargo would have resulted during this period. Exports would have been limited to 1,705,000 net tons in the control period (1/4 of the five-year average September 1, 1964 to August 31, 1969). Actual exports in this six-month period were 4,933,000.

Under this legislation, 3,228,000 less tons of scrap would have been processed by the scrap industry since demand for scrap would have been reduced by this amount.

Controls would have been triggered again in the second quarter of 1970 and would have commenced September 1, 1970, continuing through February 28, 1971. Again, no total embargo would have resulted. During this six month period, 1,618,000 net tons would have been exported, compared with the 4,117,000 tons actually exported. This legislation thus would have resulted in a decrease in total U.S. scrap production by two and one-half million net tons during this period.

The second quarter of 1972 once again would have triggered controls, which would have commenced on September 1, 1972, and would have continued for a period of nine months until May 1, 1973, when a total embargo would have been instituted. This embargo would extend, at a minimum, until September 30, 1973. During the nine-month period, September 1, 1972 to April 30, 1973, the proposed controls would have resulted in exports of 1,638,000 net tons compared with 6,218,000 net tons actually shipped, a reduction of 4,580,000 net tons.

The Department of Commerce has estimated a total export of 3,381,000 during the period May 1, 1973 through September 31, 1973. These exports would have been prohibited totally by the embargo under §207(e) of S.2119.

Thus, if this bill had been law during the past four years, it would have reduced total U.S. scrap processing by approximately 14 million net tons. This is a loss of between \$700-million and \$1-billion.

III. ANTITRUST IMPLICATIONS

The fundamental issue before the Committee appears to be whether Congress should enact special legislation which will benefit an industry whose member firms are large, powerful corporations and which will clearly harm an industry composed of small, and in many instances, family firms. In our estimation, serious antitrust questions surround not only the merits of the proposed legislation but the means and methods used by the small group of firms sponsoring the proposal.

The proposal stems from efforts by a small segment of the steel industry to set prices by securing legislation to limit demand for ferrous scrap. As this Committee is well aware, an agreement or conspiracy among competitors to limit demand is a per se violation of the antitrust laws. We recognize that certain joint industry undertakings have been held not to violate the antitrust laws under the so-called Noerr-Pennington doctrine. However, we submit that the actions in question by a small group of firms are clearly outside of the scope of that antitrust exemption. Accordingly,

we believe the Committee should at a very minimum obtain the views of the Federal Trade Commission and the Antitrust Division of the Department of Justice as to the legality of this situation under the antitrust laws.

In addition to the fact that the efforts to secure this legislation raise substantial antitrust issues, the trigger mechanism itself presents clear opportunities for abuse. The danger of collusion among U.S. purchasers to trigger export controls is great where an inflexible trigger figure can be easily manipulated. Concerted buying practices by a segment of scrap consumers when exports and domestic receipts approach the trigger figure easily could lead to the imposition of controls or a total embargo.

IV. TYING SCRAP EXPORT REDUCTIONS TO FINISHED STEEL PRICE REDUCTIONS

If, despite the numerous objections to S.2119 raised by ISIS, this special interest legislation nevertheless is adopted, at a minimum, this Committee should insure that the enormous sacrifice imposed on the scrap processing industry enure to the benefit of the American public in the form of reduced prices for finished steel and is not merely siphoned off by the steel industry in the form of increased profits.

This could be accomplished by adding a new section to S.2119 requiring that upon the imposition of export controls and for a three-month period after termination of these controls, any reduction in scrap price from the average scrap price in effect during the period upon which controls were triggered must result in a dollar-for-dollar reduction in the price of finished steel.

Because of the suddenness of the Committee's hearings on S.2119, time has not permitted the development of all technical details of this proposal. ISIS would be happy to work with the Committee staff to develop the necessary legislative language.

V. REDUCTION IN ORE IMPORTS

Among the purported goals of S.2119 are the encouragement of scrap utilization because it insures the most efficient use of energy in steelmaking and the stabilization of scrap iron prices. Carried to its logical conclusion, attainment of these goals suggests that import controls be placed upon iron ore whenever total scrap domestic receipts and exports fall below a specific level, perhaps 5 per cent below the scarcity level established in S.2119 (\$1 million net tons), an ore import licensing requirement automatically be instituted and if total receipts and exports

continue to remain below this target level that a total embargo on ore imports be instituted.

Such a proposal is consistent with the purposes of S.2119. It would encourage increased recycling in the United States, and would offset to a very limited degree some of the devastating effects which S.2119 would have on the U.S. balance of payments position.

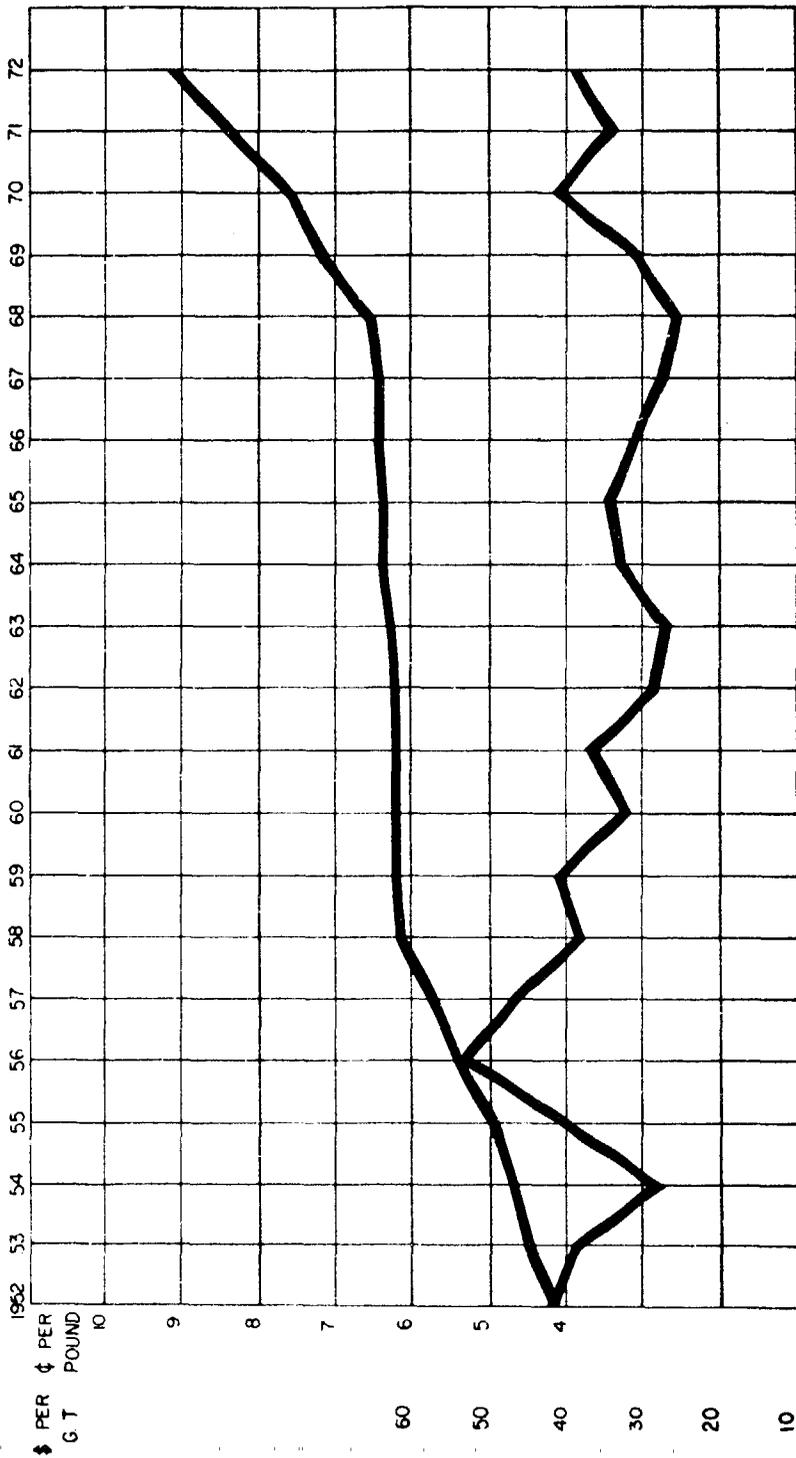
In summary, ISIS strongly recommends (1) that S.2119 be recognized for what it is -- an attempt by a segment of the steel industry to control prices; (2) that this Committee not adopt this special interest legislation; and (3) that the Federal Trade Commission and Department of Justice be requested to inquire into the steel industry activity in developing this proposal. If this Committee, nevertheless, decides to proceed with S.2119, the two additional provisions suggested will at least serve to offset a small portion of the burden placed on the scrap processing industry and should be included in any legislation reported by this Committee.

July 17, 1973

FINISHED STEEL - COMPOSITE PRICE (YEARLY AVERAGE)

HEAVY MELTING SCRAP - COMPOSITE PRICE (YEARLY AVERAGE)

(CHICAGO, PITTSBURGH & PHILADELPHIA)
(YEARLY AVERAGE)



	Increase in Composite Price Finished Steel Per Gross Ton	Decrease in Composite Price #1 Heavy Melting Scrap Reduction Per Gross Ton	Approximate Scrap Cost Reduction Millions of \$
1970 71	+ \$17.45		
1967 68	+ 3.05		
1966 67	+ 1.45		
1965 66	+ .70		

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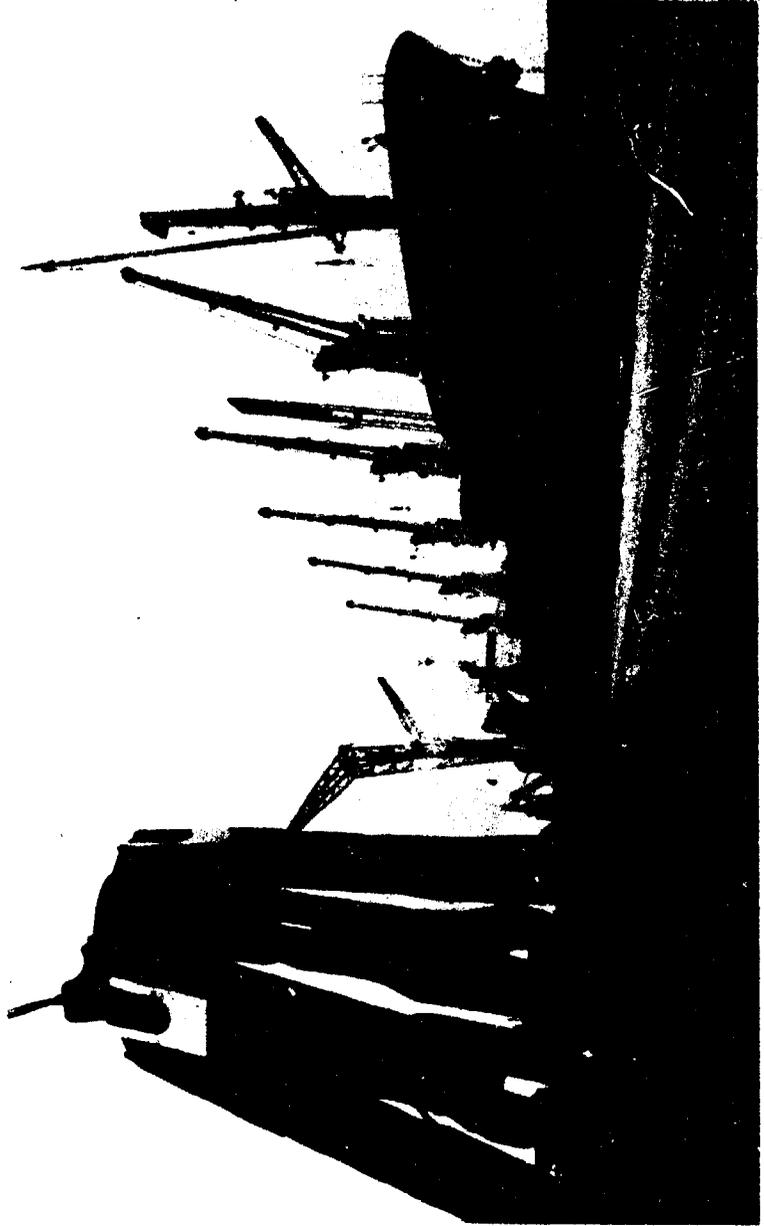


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This issue of PHOENIX QUARTERLY is devoted to the international aspects of iron and steel scrap. The United States is a scrap surplus nation—a nation which generates tremendous tonnages of metallic solid waste daily. Because domestic steel mills and foundries purchase far less than the tonnages made available, scrap processors found it necessary to cultivate and develop export markets for iron and steel scrap. Without these markets, the United States would face a land pollution problem even greater than it must deal with today.

Founded in 1928, the Institute of Scrap Iron and Steel is a national association made up of 1,300 member firms—predominantly processors and brokers of ferrous and non-ferrous scrap. A major objective of the Institute is to bring about an informed awareness of the vital role played by the scrap processing industry in conserving the future. For this reason, the quotation from or reprinting of articles from PHOENIX QUARTERLY is encouraged without prior permission from the Institute so long as proper credit is given.

Articles which appear in PHOENIX QUARTERLY, with the exception of those authored by representatives of the Institute, do not necessarily reflect the opinions of the Institute of Scrap Iron and Steel.

Cover: Via Port of New York

Iron and Steel Scrap— The Need for Exports

For more than three months, the steel and foundry industries have been opening a lot of doors in Washington alleging to all who will listen that there is a "critical shortage" of iron and steel scrap in the United States.

Their trade associations and individual company executives have met with Congressmen and officials in the Executive Branch to push one action: that the Secretary of Commerce invoke the Export Administration Act of 1969 to limit the export of iron and steel scrap to foreign countries. The Secretary of Commerce had received several "urgent" letters from members of Congress insisting that he take such action, and the pressure continues to mount. In fact, there is no shortage of iron and steel scrap in the United States.

The steel and foundry industries have also charged that the price of scrap is inflationary. The nation's recent price levels for iron and steel scrap are normal short-term fluctuations and are attributable to steel mill and foundry purchasing practices.

Both of these points were emphasized by Fred Berman, President of the Institute of Scrap Iron and Steel, on March 23, 1973 in a statement to the Subcommittee on International Trade of the Committee on Banking and Currency of the U. S. House of Representatives.

The institute was asked to testify on a proposed bill (H. R. 5769) to amend the Export Administration Act. As introduced, the bill would provide the Secretary of Commerce with sweeping new powers to control exports. While steel

mill and foundry representatives supported the proposed amendment, the Institute offered reasoned suggestions for change.

Mr. Berman pointed out to the Congressional subcommittee that steel mills and foundries are merely seeking price controls in the form of export controls.

He said, "in the case of ferrous scrap, viable alternatives to such legislation exist and are generally recognized. Purchasing by mills and foundries on the same basis used by all other industries would reduce substantially the fluctuation in scrap prices. The fact that is needed is an understanding by the buyer (steel mills and foundries) of his role in controlling his own market."

It is important to bear in mind that iron and steel scraps bought and sold in the free marketplace. The basic problems that mills and foundries do not engage in sound inventory practices buying only minimally when steel demand and scrap prices are low and buying large volumes of scrap when steel demand is strong. The instability of buying demand, not export shipments is the reason for volatility in the ferrous scrap market.

"Legislation imposing price controls on ferrous scrap would serve only to insulate mills and foundries from their purchasing mistakes, intended or unintended," Mr. Berman said.

Four detrimental side-effects of export controls on iron and steel scrap were detailed.

- 1. Such a measure would serve only to reduce the size of the scrap market and any

denial of export markets merely adds to the solid waste problems we already face as a nation.

- 2. Scrap iron and steel is a positive contributor to the U. S. balance of payments in the range of \$500,000,000 annually (the same steel industry that asks for export controls of ferrous scrap is importing iron ore at an annual rate of approximately \$4 billion tons, iron ore the direct competitor of ferrous scrap, each ton of which imported is a negative factor in our balance of trade position).

- 3. The steel and foundry industry made no proposal about what to do with the millions of tons of ferrous materials lying on the West Coast and New England for which there is no conceivable American demand. With the West Coast generating approximately two and one-half to three times the annual possible domestic consumption of scrap iron locally, how would export controls help when the freight rate from the West precludes any movement over the Rockies? With the New England states generating much more scrap than can be consumed locally and with high freight rates to potential buyers precluding its movement inland, how can export controls help move that material to a consumption point?

- 4. The environmental impact would be severe in the coastal areas, where few domestic scrap consumers exist, the inability to export on the free market would only increase metallic effluents, a major problem even with foreign trade channels open. The junk auto problem would become more acute, the dumps would

soon be filled with old refrigerators and stoves every auto trip would be marred by eyecores and metallic accumulations posing health and sanitation problems, and the will of Congress is expressed in National Environmental Policy Act would be degenerated, all in all short run price increases which would be removed by act action.

Concerning the question that there is a shortage of scrap, Mr. Berman said, "terrous scrap is available to anyone who wants to purchase it. Only one serious scrap will be available to anyone who wants to purchase it in the foreseeable future." (Baltimore Mercury and Tribune report to the U. S. Environmental Protection Agency) stated that 750 million tons of scrap iron were available but not being used in 1969. Berman also mentioned that only about 60 per cent of the metallic waste available for recycling in 1969 would be recycled. This adding to the 750 million tons of scrap iron and steel that has been bought for scrap in the world market has been bought for scrap because the material was not available.

To further emphasize that the shortage of scrap exists, Mr. Berman posed a series of questions.

How can there be a shortage of ferrous scrap when some domestic steel mills are selling for export the home scrap which they generate within their mills and the semi-finished steel which they produce?

How can there be a scrap shortage when neither the steel industry nor the Department



of Commerce and its Maritime Administration are striving to stop the proposed foreign sale of 20 Victory ships from the reserve fleet for use as water purposes instead of waiting to allow these ships to be scrapped for the 125,000 tons of fine scrap available in those hulks?

How can there be a scrap shortage when steel mills and foundries are cancelling orders for ferrous scrap?

How can there be a shortage when mills and foundries are not in the market even though scrap prices have fallen and continue to fall on a weekly basis?

The point is, there is no shortage of iron and steel scrap.

Concerning his statement to the Subcommittee on International Trade, the Institute president said, "the position enunciated by the ferrous scrap processing industry was never better stated than by Mr. E. F. Andrews, Allegheny Ludlum Industries, Inc., and at the time

Chairman, Committee on Critical Material Supply, American Iron and Steel Institute, who said on May 24, 1972 that

"While we have been taking the government to task for permitting excessive exporting of critical materials, this industry is not without some responsibility. The scrap industry has accused us in past years of refusing to purchase material when it was at very low cost and in plentiful supply due to low operating rates in our industry. It is only natural that, as materials backed up in substantial quantities in processors' yards, they turned to the inviting foreign markets. A restudy and reordering of our industry's investment policies may be needed in this way, perhaps we can make a contribution to the reduction in the rate of outflow of critical materials and in a lessening in the economic swings price-wise, on such materials.

That restudy is the answer, not legislation to control scrap exports."

Development of Scrap Exports

Joseph Schapiro

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The export of iron and steel scrap from the United States had its origin in two closely welded segments.

First, the domestic steel mills, which consumed all U.S. processed scrap, substantially reduced their buying requirements at the same time that the generation of scrap was on the upswing in this country. Increased scrap generation came as a consequence of a booming economy, obsolescence of outmoded equipment by reason of new techniques and the tremendous surge of automobile production lines.

Second, steel mills abroad were beginning production with little or no inventory of raw materials, facing a period of reconstruction following a war

In the first movement of scrap to overseas mills, United States industry had been through a period of high production during World War I (1917-1918) with the ensuing programs of helping war torn nations reconstruct in 1919-1922. The demand for these programs eased off in 1923, and the downward swing in domestic steel mill production caused the inevitable fall in their need for scrap.

At the same time, European countries had reached the point of return to a belated period of self sufficiency, with steel generally the first major industry to revive. Receiving a high priority, mills which initially entered the production cycle needed scrap as a primary raw material. A surplus of scrap existed in the United

States, and as soon as the two factors met supply and demand—there was good reason to pursue discussion.

Thus export of iron and steel scrap emerged because the basic law of supply and demand would not be denied.

The European cycle of steel production was followed four years later by the Japanese mills which reached a point that called for the importation of more raw materials than it had ever used before. Again, the economic, industrial and governmental committees decided that steel production must lead Japan's economic progress.

The United States was the leading nation with an excess of scrap—again the law of supply and demand took over.

This export-import relationship with Europe and Japan continued until 1939 when war embroiled all of Europe. Following the outbreak of the European conflict and with steel mill demand increasing to a peak in the United States, scrap exports were halted.

Following World War II and the Korean action, the law of supply and demand again prevailed. Only this time, 1946-1951, the route was reversed and Europe sent back surplus scrap to U.S. mills which were running full blast to supply the world's needs. European steel furnaces had not come back into production and the scrap that could be turned into valuable and much needed dollars was sent to the United States for steelmaking.

The Orient also sent ferrous and nonferrous



Shredded scrap from old automobiles being processed in a scrap plant at dock site. Via Port of New York

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material to the U.S. shippers in Hongkong, the Philippines, Guam, Saipan, and the territory of Hawaii sent cargoes to our West Coast ports.

In 1953 the tide changed 180 degrees. Japanese mills came into production and blast furnaces were few, so pig iron (made from virgin iron ore) and scrap were both at a premium. U.S. mills were experiencing relatively quiet markets and in certain areas a surplus of scrap was evident. The demand for scrap by foreign mills was present and scrap processors in this country had substantial inventories—the match was made again.

Prices for scrap fluctuate as the supply and demand curve dictates. The 1972 scrap prices were practically the same as those in 1952, with cyclical peaks and valleys during the 20 year period.

Historically, domestic steel mills have given foreign mills some advantage, even when their respective buying prices have been at parity. Domestic mills have adopted a month-by-month purchase policy while foreign purchasers are prone to adopt a more forward-looking agreement. Foreign purchases from three to four months are not uncommon, thus the processor of scrap has the opportunity to look ahead for his shipments and can buy his product ahead.

Mr. Schapiro is chairman of the Institute's Foreign Trade Committee.



The placement of scrap (storage plan) in the vessel is critical.

Shipping Scrap for Export

Gerard V. Bonomo

The physical handling of an export shipment of scrap iron and steel, or phrasing it in its more complete sense, the full execution of the export contract is undoubtedly one of the more complicated facets of a foreign transaction.

After the American seller has concluded his negotiation with the foreign buyer, he sets into motion an administrative process, the process which is carried through until the actual shipment time, involves the following:

1. The charter of an exporting vessel to transport the scrap iron and steel sold.
2. Obtaining of a Letter of Credit and/or arranging alternate methods of payment.
3. Purchase of the proper insurance policies and
4. Preparation of the many documents necessary for the export shipment.

In shipping scrap iron and steel domestically by rail, the transportation per ton is based on published freight rates. In export, by comparison, the price per ton paid to charter a ship to negotiate steel by ship and is dependent upon the size of the vessel, the stowage factor of the cargo, the length of the voyage from shipment point to destination, and the number of days needed to load and discharge the ship. The charter market is influenced directly by supply and demand and at times can be most volatile. In making the sale, the American exporter estimates the amount of freight he will pay per ton. Only after chartering does he know if his initial calculation was correct.

When selling to a foreign country, it is necessary during the negotiation to clearly define the method of payment as well as the terms of payment. The most ideal situation for the seller is to have the buyer open a confirmed, irrevoc-

able Letter of Credit payable through an American bank in U.S. dollars. Generally, speaking a seller receives 90 to 95 percent of the total invoice amount upon completion of loading and presentation of the accompanying bills of lading.

The balance 5 or 10 percent as the case may be, is payable within 30 days after completion of discharge and upon verification of weight and quality at the discharge port. In certain circumstances, a Letter of Credit is not used but shipment is made on an open account.

In shipping scrap iron and steel via ocean from an American port to a foreign destination there are many risks, such as: 1. Risk to the vessel, sinking of the vessel, the risks of war

and civil riots, burning of the cargo, loss of weight at final destination, etc. It is up to the shipper to determine how many of these risks he wishes to cover by the purchase of insurance.

Lastly, there are numerous documents which need to be drawn up for an export shipment. Somewhat, they are the shipper's commercial invoice, bill of lading, cargo stowage plan, draft weight certificate, stating the amount of cargo loaded, vessel's port log which details daily activity during loading and copies of any damage reports given to stevedores by the vessel.

While the administrative process continues, the actual physical movement of the scrap iron and steel sold is taking place. An average cargo today consists of approximately 20,000 gross tons, if shipped by rail, this tonnage movement would require some 400 to 500 individual railroad cars. It is most essential that this tonnage is brought to one point and is ready when the vessel arrives.

There are several types of scrap iron and steel loading terminals. The ideal terminal is the private one, which allows ground storage for the entire cargo and/or partial ground storage with the balance of the cargo arriving to coincide with the arrival of the vessel.

Another type is the public dock, which allows ground storage at a fixed cost of 50 many cents per ton per month, depending upon the individual terminal.

The third type is the loading dock where railroad cars are brought in to coincide with the arrival of the vessel. The scrap iron and steel is then unloaded from the railroad cars and loaded directly into the ship.

Obviously, the first type of terminal is preferred since it provides space for material to



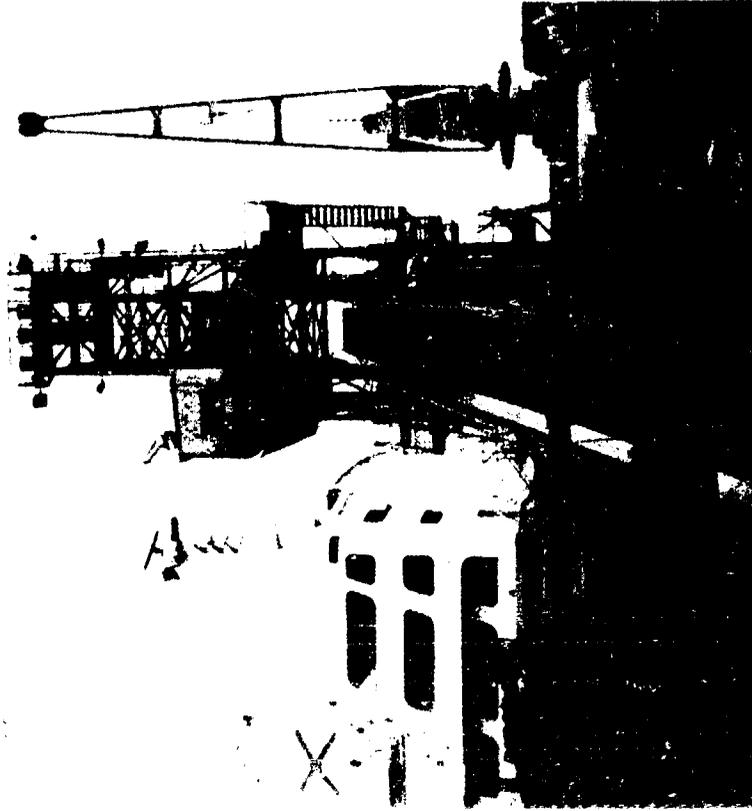
Large tonnages of scrap must be accumulated or be available when the vessel is ready for loading.

be slowly accumulated on the ground awaiting the arrival of the ship. It also can receive scrap iron and steel by truck and rail car, and in some cases by barge.

In each of the various terminals described above, the loading is done by large cranes utilizing either magnets or grapples. The amount of tonnage loaded per day not only varies terminal by terminal, but is also dependent on the type of terminal used. In the case of discharging railroad cars, approximately 1,500 gross tons per day should be loaded into a vessel. In cases where the loading is done from ground storage, railroad cars and trucks into the vessel on the inshore side, and from barges into the vessel on the offshore side, the tonnage per day loaded can be as much as 5,000 to 6,000 gross tons. In recent years there have been some attempts made to load scrap iron and steel by conveyor. These attempts, however, have been limited to only a few grades of scrap iron and steel which are suitable for this type of operation.

When the vessel completes loading, it proceeds to its destination where it is discharged, the weight and quality are verified and the final payment made. From the day of the sale until receipt of the final payment, generally four to six months elapse.

Mr. Bonomo is a vice-chairman of the Institute's Foreign Trade Committee.



Scrap motor blocks being loaded by conveyor; shredded scrap can also be loaded by this method.

Scrap—World Markets and Sources

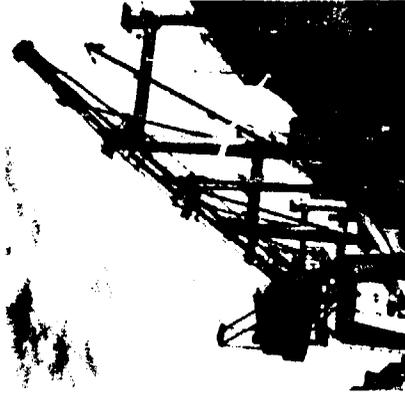
Ralph Michaels

The cradle of civilization? Ancient Egypt, of course. Conjure up thoughts and pictures of the Pharaohs, Sphinxes, the Pyramids, bright colored jewelry, copper, gold, and the oldest piece of iron in existence—an Egyptian sickle blade dating about 3000 B.C. Egypt was an agrarian society and it still is. Today the cotton-textile industry is its major manufacturer and iron and steel products its most important importation. So, in the '60's Egypt built a steel mill—an electric furnace mill. Its greatest need? Imported scrap.

Greece. The country first to develop the democratic way of life, who more than 2000 years ago originated the idea that every citizen should take an active part in the government and is regarded as the founder of Western Civilization. They too were an agrarian people who also mined copper, gold, lead and silver. But in iron in the ensuing centuries life changed little in Greece except today Greece wants to enter the industrial 20th Century. So they have built a steel complex—electric furnace. Its greatest need? Imported scrap.

Modern Turkey, for more than 500 years the center of the Ottoman Empire, where four out of every five persons work in agriculture, is striving by leaps and bounds to take advantage of its natural resources of copper, coal, iron, chromium and petroleum. In the '50's and '60's

* Author's Note Throughout the text of this article, the word "scrap" is meant to and refers only to iron and steel scrap.



major steel complexes were started. Their basic need? Imported scrap, as much as 300,000 tons in 1973.

These modernizing countries together with their neighbors in Iran, Yugoslavia, Lebanon, and other Asia Minor countries, including the planned electric furnace mill for Israel, need to import now and in the next few years come up to approximately 500,000 tons of scrap per year. From this oldest corner of the civilized world let's turn to a portion of the new world, South America. The first steel complex of any consequence was started in 1938 in Volta Redonda, Brazil. It began as an integrated mill with 1,000,000 ton capacity. Although this mill continues to grow, and other mills were established,

Brazil found itself with mixed blessings—plenty of iron ore, in fact, probably the world's richest reserves, plenty of cheap electric power, but expensive coastal freight, and practically no coal so vital to steelmaking. In 1972 Brazil produced in excess of 6,000,000 tons of steel and imported about 2,000,000 tons. The planned production for 1980 was within the past few weeks, revised upward from 20,000,000 to 25,000,000. A major share of this increased production is electric furnace or basic oxygen furnace with continuous casting, which, of course, means less home scrap. Although Brazil is the most industrial nation in the Southern Hemisphere, it is conservatively estimated that their imported scrap needs will be 2,300,000 tons by the end of this decade.

Argentina, land of the gaucho, beef and wool, had no steel industry worthy of the name until the '60's, imported nearly a pound of scrap until 1969. Mill expansion by 1972 necessitated importation from the U.S.A. alone of 176,000 tons, to be doubled in 1973.

For 200 years Venezuela was one of the poor relations South of the Border. All this changed in the 40's until the recent Brazilian discovery, Venezuela's Cerro Bolivar iron-ore mine opened by United States Steel in 1947, was believed to be the world's largest, containing over a billion tons. But income from ore export, including Bethlehem Steel's El Pao mine is miniscule compared to Venezuela's approximately \$3,000,000 per day income from oil exportation. Major import? Iron and steel products. So, like their

Lorraine. New techniques of production and transportation make this passe' Fairless Works of U.S. Steel was designed to take advantage of Venezuelan iron ore. Giant ore carriers transport Australian ore to Japan cheaper per ton than a catload of scrap moves across the city of Chicago. Italy, the scrap have-not nation of the EEC, imported 700,000 tons of scrap in 1972 from the U.S. of which 500,000 tons was shredded scrap, a scrap grade that has found only limited reception with American mills.

Canada and the U.S. have had a history of peaceful neighborliness for almost two centuries because we early learned to be the best of trading partners. The same was not always so true of our southern neighbor, Mexico, until we too learned to be trading partners. The nations of Europe, especially those composing the EEC, now realize that the warring factions of yesterday cannot produce the fruit of success that today's free trade will accomplish. I firmly believe that scrap, one of the truly free and independent commodities being merchandised in the old and newly emerging markets throughout the world, can and should be another instrument for preserving peace in this often troubled world by maintaining its freedom of movement.

Mr. Michels is president of the Ferrous Division, Bureau International de la Recyclation, International Association of the secondary materials industries.



will soon be importing a half million to a million tons per year.

Our neighbor to the North, Canada, is both an importer and exporter of scrap. Because certain mills are located near American scrap sources, Canada in 1972 imported 900,000 tons from the U.S. and exported about 300,000 of which, in excess of 100,000 tons went to the Peoples Republic of China. Our neighbor to the South, Mexico, last year took in 586,000 tons of scrap from our border states and in return shipped iron ore pellets north.

Scrap from Iceland has gone to Spain. Scrap from East Germany and Finland finds its way to Sweden. Scrap from Surinam, including a few snakes, went to Japan. Scrap from African countries including that of Madagascar, has gone to mills in Spain and Italy. Scrap from Curacao, Aruba, and Haiti has been shipped to The Peoples Republic of China and Venezuela. Scrap from The United Kingdom has gone to Mexico, and probably the strangest fact of all is that scrap from Germany has come to the United States. It is estimated in shipping circles, whose trampers carry this commodity around the globe, that scrap movement worldwide varies from 12 to 17 million tons annually.

The first consideration of early steel mill construction was its proximity to a source of coal and the second consideration was iron ore. Within a span of only 70 years, three great wars were fought in Europe where one of the prizes was the coal and iron deposits of Alsace and

ancestors in Asia Minor. Venezuela in the middle 60's built two major steel mills, both with imported scrap needs up from zero in 1966 to 300,000 tons in 1972.

In discussing the foregoing I have purposefully mentioned lesser known areas so far as steel production is concerned and avoided the obvious giants—the United States, Russia, Japan and now, as one The Common Market or EEC. The first two, the United States and Russia, are the giants whose economies each year spew out more and more scrap and are the major sources of this raw material for the have-not nations. Japan, as industrialized as she is, exports so much of her steel production that she creates her own scrap shortage and is now the major importer of U.S. scrap. Except for Italy, the EEC is fairly balanced scrap-wise with probably an exportable surplus. After the U.S. and Russia, the next biggest source of scrap is Australia which each year seems to have in excess of domestic needs between 500,000 and 1,000,000 tons that is exported to Far Eastern nations such as Japan, Taiwan, and Korea. Note these latter two. Before World War II they had practically no heavy industry, let alone steel works. Today these two countries each import about 500,000 tons of scrap per year. Now in the Orient, with the detente between the West and East, there looms a new giant of steel production and potential scrap import.... The Peoples Republic of China from whom no statistics are yet available. We can only surmise, but the best guess-estimates are that mainland China

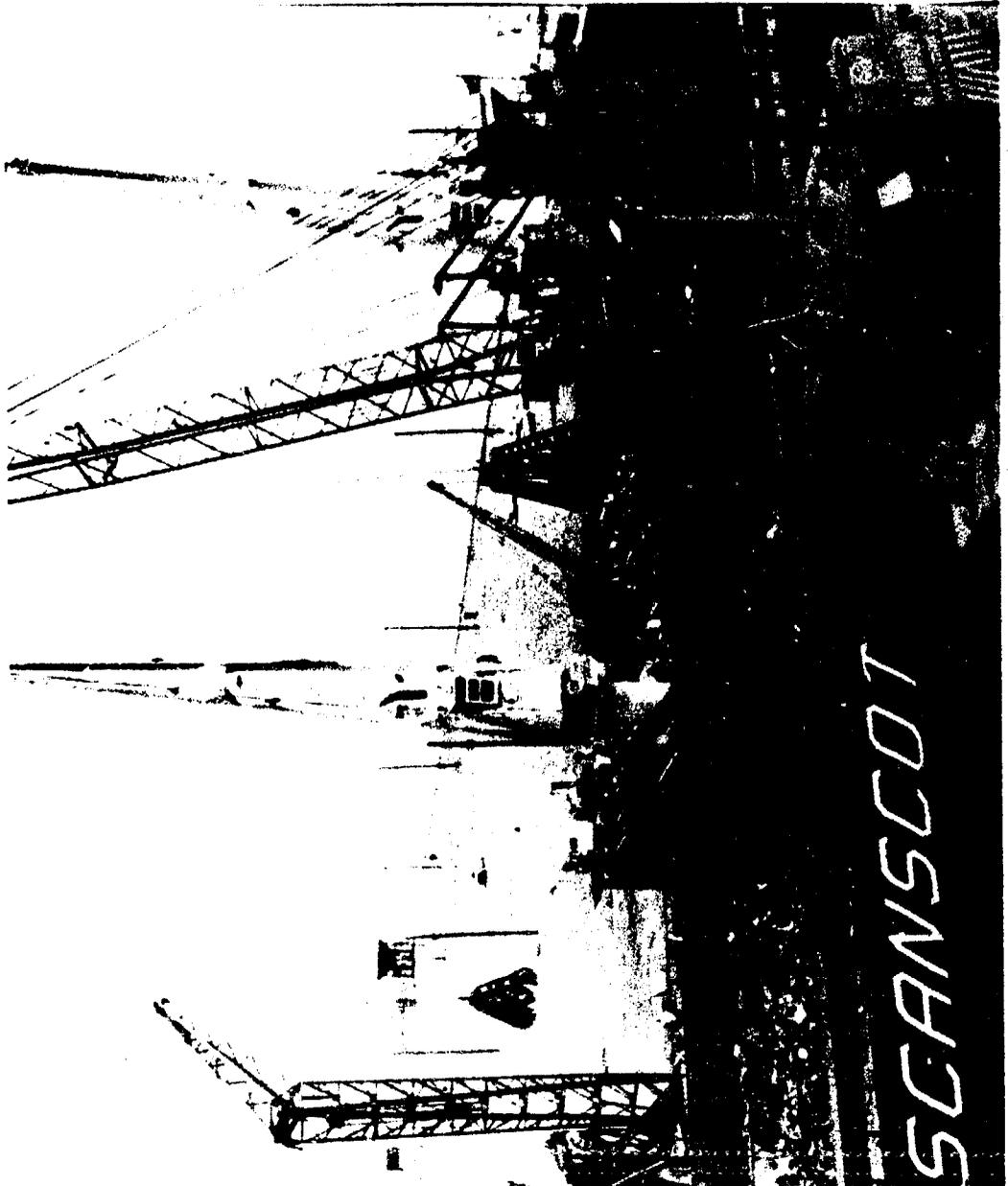


EXHIBIT 4

Year	Finished Steel Composite Price Per Gross Ton (Yearly Average)	Heavy Melting Scrap Price Per Gross Ton (Yearly Average)	% Heavy Melting Scrap Price to Finished Steel Price
1952	94.91	41.79	44.0
53	101.20	39.52	
54	105.64	28.58	
55	111.48	40.19	
56	120.02	53.81	
57	129.92	46.75	
58	135.74	38.08	
59	138.79	40.49	
60	138.79	32.95	
61	138.79	36.28	
62	138.79	28.23	
63	140.52	27.11	
64	142.64	33.67	
65	142.64	34.35	
66	143.34	30.87	
67	144.79	27.62	
68	147.84	25.85	
69	158.84	30.83	
70	171.36	41.06	
71	188.81	34.09	
72	201.33	36.86	
First 6 months 1973	209.73	49.82	23.7

Source: Iron Age

EXHIBIT 5

TABLE IV-25. IRON AND STEEL INVENTORY, 1969
(million net tons)

	1881-1955	1956-1969	1881-1969
Steel Shipments ⁽¹⁾	+2,202	1,113	3,315
Foundry Shipments ⁽²⁾	+ 712	223	935
Net Exports (Imports) ⁽³⁾	- 120	(54)	66
Total Iron and Steel Supply	+2,794	1,390	4,184
Prompt Industrial Scrap ⁽⁴⁾	- 332	243	575
Iron and Steel in Products	+2,462	1,147	3,609
Net Exports Fabricated Products ⁽⁵⁾	- 71	40	111
Domestic Consumption--Iron and Steel in Products	+2,391	1,107	3,498
Nonrecoverable Losses ⁽⁶⁾	- 351	166	517
Potential Recovery	+2,040	941	2,981
Obsolete Scrap Withdrawals ⁽⁷⁾	- 608	292	900
Inventory	+1,432	649	2,081
Inventory as of January 1, 1881	+ 60		60
Net Inventory	1,492	649	2,141
Still in Use ⁽⁸⁾	956		1,391
Obsolete	537		750

Sources: Pre-1881, 1881-1955. A survey and analysis of the supply and availability of obsolete iron and steel scrap. Columbus, Battelle Memorial Institute, Dec. 31, 1957.

1956-1969 - Battelle-Columbus estimates based on

- (1) AISI, Annual Statistical Reports
- (2) Bureau of Census
- (3) AISI, Annual Statistical Reports
- (4) 17.5% x Total Iron and Steel Supply; steel generation ratio at 20%, castings at 0.5%
- (5) This number is difficult to estimate, as trade statistics are based on dollar volume. In recent years, the values have tended to offset each other; however, even a substantial estimating error will have little effect on the analysis
- (6) .15 x Domestic Consumption; the Battelle study cited above estimated 15% of all potential obsolete scrap would be unavailable due to product size or usage; corrosion, abrasion, and process losses; and war and shipping losses
- (7) Purchased scrap, i.e., mill receipts less shipments + exports - .95 Prompt Industrial Scrap - scrap imports
- (8) .65 (Net inventory, 12/31/69); approximately 20-year cycle

TABLE IV-26. NEW SUPPLY IRON AND STEEL SCRAP POTENTIAL, 1970

Calculations	Life Cycle, years	Average for Years	Domestic Consumption, million net tons
NEW SUPPLY = Iron and Steel Products Available, for the first time, 1970			
I. Obsolescent Available			
A. Steel Mill Products			
from Agriculture Markets	15	1954-1956	1.2
Automotive	10	1959-1961	13.8
Construction	40	1925-1932	4.7
Consumer Durables	15	1954-1956	4.0
Containers	1	1969-1970	7.4
Machinery	20	1949-1951	5.2
Rail Transportation	25	1944-1946	4.8
All Other, excluding exports	20	1949-1951	22.2
Imports	20	1949-1951	<u>1.2</u>
			64.5
B. Iron and Steel Castings			
from Gray and Malleable Iron	15	1954-1956	14.4
Steel	20	1949-1951	1.6
Import (Export)	15-20	1949-1956	<u>(0.1)</u>
Balance			15.9
C. Product yield from shipments = Steel Mill Products at 80 percent; Ferrous Castings at .95 percent			
D. Unrecoverable Losses = 15 percent			
E. Calculated Obsolete Scrap Availability (Steel Mill Products + Iron and Steel Castings) (Yield from Shipments) (Recoverable) = [(64.5)(.80) + 15.9 (.95)] [.85] = 56.7 million net tons			
II. Prompt Industrial Scrap Availability			
A. Steel Mill Products = 1970 Domestic Consumption, 97.1 million net tons x Scrap Generation, Ratio (.20) = 19.4 million net tons			
B. Ferrous Castings = 1970 Domestic Consumption, 16.3 million net tons x Scrap Generation, Ratio (.05) = .8 million net tons			
C. Prompt Industrial Scrap Availability = 19.4 + .83 = 20.2 million net tons			
III. Total Scrap Availability, i.e., New Supply = 56.7 + 20.2 = 76.9 million net tons			
IV. Total Purchased Scrap (Receipts-Shipments) + (Exports) = 44.5 million net tons			
V. Available and Not Recycled = 32.4 million net tons, approx 40 Percent of Available.			

Source: Battelle-Columbus Estimates.

EXHIBIT 6

First-Quarter Profits of 655 Concerns Rose 27.3% From Level of Like '72 Period

The columns below show by industries earnings reported for the first quarter of 1973 and those for the like quarter of 1972, with percentage changes. Where individual company reports cover three-month periods other than calendar quarters, the nearest comparable periods have been used.

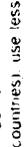
	First Quar. 1973	First Quar. 1972	% Change
11 Aircraft Makers	\$ 96,993,000	\$ 70,396,000	+ 37.7
14 Airlines	—38,815,000	—24,691,000	—
21 Autos & Equipment	1,366,165,000	1,016,898,000	+ 35.1
6 Broadcasting Companies	36,693,000	27,040,000	+ 33.2
24 Building Materials	146,789,000	97,441,000	+ 59.6
13 Building Supplies	136,942,000	88,693,000	+ 54.4
11 Cement Companies	9,838,000	8,748,000	+ 12.5
28 Chain Stores	179,189,000	167,829,000	+ 6.8
12 Chain Grocers	54,143,000	60,328,000	— 10.3
16 Drug & Variety	125,043,000	107,561,000	+ 16.3
24 Chemicals	514,383,000	370,801,000	+ 38.7
17 Department Stores	481,643,000	422,212,000	+ 14.8
5 Distillers	38,511,000	32,546,000	+ 18.3
18 Drug Manufacturers	376,498,000	312,045,000	+ 20.7
35 Electrical Equip-Electronics	385,397,000	262,581,000	+ 47.0
17 Broad-Line Companies	322,926,000	261,832,000	+ 22.0
18 Specialty Companies	63,001,000	—2,221,000	—
4 Farm Equipment	43,369,000	24,021,000	+ 101.4
32 Food Products	247,373,000	213,823,000	+ 15.7
5 Bakery Products	21,839,000	20,666,000	+ 5.9
5 Dairy Products	58,392,000	53,613,000	+ 8.8
16 General Food Products	149,567,000	125,799,000	+ 18.9
6 Meat Packers	17,623,000	13,759,000	+ 28.1
25 Mining & Metals	231,981,000	156,432,000	+ 50.2
6 Aluminum Companies	55,266,000	38,632,000	+ 42.9
19 Copper & Other Metals	179,778,000	117,800,000	+ 52.5
11 Office Equipment	445,577,000	377,267,000	+ 18.1
25 Petroleum Products	1,870,939,000	1,466,143,000	+ 27.6
9 Publishing Companies	25,219,000	17,316,000	+ 45.6
19 Pulp & Paper Products	241,078,000	123,599,000	+ 95.1
15 Railway Equipment	48,337,000	35,972,000	+ 34.9
14 Rubber Companies	1,237,000	81,674,000	+ 35.2
23 Shipbuilding	—	1,341,000	+ 18.1
17 Airlines	—	37,336,000	+ 31.1
6 Tobaccos	129,417,000	117,633,000	+ 8.0
31 Tools & Machinery	168,848,000	82,020,000	+ 32.7
159 Other Industrials	1,233,611,000	980,839,000	+ 22.7
Total 658 Industrial Cos	8,575,934,000	6,558,330,000	+ 39.4
14 Railroads	158,299,000	125,423,000	+ 16.6
63 Utilities	1,072,361,000	956,529,000	+ 12.1
Total 655 Concerns	9,806,594,000	7,670,871,000	+ 27.8

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EXHIBIT 7

Year	Ferrous Scrap Receipts and Mill Revert	Ferrous Scrap Exports	% Exports to Receipts and Mill Revert
1952		0.3	
53		0.3	
54		1.7	
55		5.1	
56		6.3	
57		6.8	90
58		2.9	51
59		4.9	74
60		8.0	122
61		9.4	117
62		5.2	79
63		6.4	86
64		7.9	94
65		6.2	68
66		5.8	63
67		7.5	87
68		6.6	76
69		9.0	96
70		10.4	120
71		6.0	73
72		7.2	75
73		-	

Environmental Impact Comparison for making 1,000 tons of a steel product as reported by the Environmental Protection Agency

Environmental Effect	Using Virgin Materials such as Iron Ore	Using 100% Waste such as Iron & Steel Scrap	Savings From Increased Recycling (%) ^a
 Virgin Materials Use	2,278 tons	250 tons	-89
 Energy Consumption	23,347 x 10 ⁶ BTU	6,089 x 10 ⁶ BTU	-74
 Air Pollution Effluents	121 tons	17 tons	-86
 Water Use	16.6 million gallons	9.9 million gallons	-40
 Water Pollution	67.5 tons	16.5 tons	-76
 Consumer Wastes Generated	967 tons	-60 tons	-105
 Mining Wastes	2,828 tons	63 tons	-87

When iron and steel scrap is used in place of virgin iron ore to make new steel, our total environmental benefits in many ways. We conserve diminishing reserves of iron ore, much of which must be imported from other countries; use less energy and water; reduce air and water pollution; cut down mining wastes; and reduce the problem of metallic solid waste each of us generates every day. The chart on the facing page shows just how much we save—how much the environment benefits when iron and steel scrap—a man-made resource—is used to make new products rather than melting more iron ore, an irreplaceable natural resource.

With all of these benefits, you would think that the Federal Government would encourage the use of iron and steel scrap or at least let scrap compete equitably with iron ore. That's not the case. Two examples of government policy which actually hinder the recycling of iron and steel scrap are:

1. Freight rates to haul scrap iron averaged 2 1/2 times more than the rates to haul iron ore. This discrimination in freight rates (being condoned by the Interstate Commerce Commission, an agency of the Federal Government) resulted in a \$4.21 higher cost than necessary to produce a ton of steel using scrap iron as the raw material. All that is asked to remove this distortion is equitable—

properly related—rates, not free or even equal rates.

2. Tax incentives, such as the 15% ore depletion allowance, are available to the producers of iron ore, but no such incentive exists to encourage steel mills or foundries to use iron and steel scrap. By denying an offsetting tax incentive to scrap materials, the virgin material enjoys a major advantage—a significant competitive edge.

Even with all the obvious environmental advantages to using scrap materials rather than virgin resources, the government is allowing such discrimination to continue.

We need your help so that we can do our part to help clean up the environment. For more information, write the Institute of Scrap Iron & Steel

Environmental Protection Agency—Report to Congress on Resource Recovery; Southwestern Research Institute Economic studies in support of policy formation on resource recovery. Unpublished date, 1972.

^aNegative numbers represent a decrease in that category resulting from recycling. For example, air pollution effluents are reduced by 86% when scrap iron is used instead of iron ore.

STATEMENTS OF EDWARD D. HEFFERNAN, DIRECTOR OF WASHINGTON AFFAIRS, CAST IRON PIPE RESEARCH ASSOCIATION; PAUL B. AKIN, PRESIDENT, LACLEDE STEEL CORP.; JOHN J. SHEEHAN, LEGISLATIVE DIRECTOR, UNITED STEEL WORKERS; CARL W. STUDENROTH, VICE PRESIDENT, INTERNATIONAL MOLDERS AND ALLIED WORKERS UNION; LANE M. CURRIE, PRESIDENT AND GENERAL MANAGER, MACAULAY FOUNDRY CO.; AND DONALD H. WORKMAN, EXECUTIVE VICE PRESIDENT, GRAY AND DUCTILE IRON FOUNDERS SOCIETY

Senator STEVENSON. Gentlemen, it would be helpful to us and also the reporter if you would identify yourselves. We are running late. I will ask you to have the other witnesses, where possible, summarize their statements. The full statements will be entered into the record (see p. 176).

Mr. Heffernan, why don't you proceed.

Mr. HEFFERNAN. Mr. Chairman, Senator Cranston.

If it please the chairman, my colleagues and I on the panel would like to submit full written statements and some supportive data to the subcommittee for the record.

Senator STEVENSON. Without objection, those statements will be entered into the record.

Mr. HEFFERNAN. Thank you, Mr. Chairman.

In the interest of time, we would like to present a brief summary of our position in the form of a panel and then take whatever questions you might have at the conclusion of the panel. We will proceed, not reading from the full statements, we will submit those, and go on a somewhat informal discussion basis.

With me is Paul Akin, president of Laclede Steel Corp., and chairman of the ferrous scrap consumers committee, which is made up of five medium-sized steel corporations.

Next to Paul is Don Workman. He is the executive vice president of the Gray and Ductile Iron Founders Society. He also is representing the Cast Metals Federation today.

We have another member of that federation in the audience today, Mr. Lane Currie. Lane is president and general manager of the H. C. Macaulay Foundry Co. of Berkeley, Calif.

On my right is Carl Studenroth, vice president of the International Molders and Allied Workers Union, AFL-CIO, from Lancaster, Pa.

And on his right is Jack Sheehan, legislative director, United Steel Workers.

I am Ed Heffernan. I represent the Cast Iron Pipe Research Association. I am also from Washington, D.C.

I would at this time like to mention, Mr. Chairman, that it was called to my attention that the American Iron and Steel Institute,

and I understand Mr. James Collins, the executive vice president of the institute is here, and they would like leave to submit to this subcommittee for the record some time in the immediate future, following this hearing, a statement in support of S. 2119. Mr. Collins is accompanied by Ed Phifer of Lukens Steel, who is chairman of the subcommittee on scrap of the American Iron and Steel Institute.

Senator STEVENSON. Without objection, that statement will be entered into the record.

Mr. HEFFERNAN. I would like to point out that our panel represents virtually all of the domestic users of ferrous scrap metal, including spokesmen for the great unions that represent nearly 1 million employees in the steel and foundry industries.

I believe it is very significant, Mr. Chairman, that both management and labor, both steel and iron foundry people, completely agree and share a common request today in asking you to favorably consider S. 2119.

I would also point out, with the exception of Mr. Akin, who is the chairman of the ferrous scrap consumers committee, all of the rest of the members of this panel are not members of that committee, yet, we certainly do advocate the passage of this bill.

To proceed, it is our intention in the time available to address ourselves to two essential underlying questions:

First, is the problem relating to ferrous scrap metal and exports, sufficiently great to require legislative activity:

Second, is the approach, S. 2119, a fair and equitable solution for everyone, including scrap collectors, processors, users, consumers, and ultimately, is it in the public interest?

Before I ask our panelists to develop the answers to these two basic questions, let me briefly describe the problem and our proposed solution.

Very simply, as the scrap institute itself has said, iron and steel scrap is sold in a market governed by supply and demand. Periodically, there are international steel shortages and we believe these are going to occur with increasing frequency during the balance of the 70's. We are in such a period right now. When such shortages occur, we find, of course, a high domestic demand for this basic raw material, ferrous scrap metal.

This domestic demand, accompanied by a very high export demand, puts a crunch on what is available for this year. Hence, you find escalating prices, very high prices. As the crunch continues, you find a poorer quality of scrap available, and if the crunch continues long enough, you are going to find outages, not shortages. You are going to find shutdowns and you are going to find unemployment.

Finally, it ought to be understood—and I want to emphasize this—it should be understood that other industrialized nations do, indeed,

impose strict controls when it appears that any kind of shortage may affect their needs.

Thus, in these periods of time there is no other market for substantial scrap besides the United States. Now I recognize there are instances when some scrap does flow. It flows in the Common Market perhaps between France and West Germany, other members of the Common Market. It is very difficult to make a flat statement that there is no export from another country, because if one cuts a water tank down somewhere and they happen to sell that, that is a scrap export. We are saying there are no other substantial scrap exporters besides the United States, and consequently, our drain is magnified.

What is the answer? Congress has already determined that this country should protect the domestic economy from the excessive drain of scarce materials, and it ought to reduce the inflationary impact of abnormal foreign demands. It created the Export Administration Act in 1969 to do just this. However, our experience under that act as regards scrap metal demonstrates the need for a more definitive control, to eliminate the kind of crisis condition which seems implicitly necessary before the administration will act and which makes any action they finally take more drastic and, in fact, more distasteful.

This bill, S. 2119, defines a critical shortage of iron and steel scrap and triggers mild restrictions on exports, only during those periods when a combination of high domestic and export demand for scrap reaches the critical shortage level. Its whole purpose is to dampen the export demand sufficiently to avoid crisis shortages and inflationary prices in the domestic market, while at the same time it seeks to protect against the need to totally embargo exports.

We believe this approach is fair and reasonable, and will also end these recurring crises.

Finally, let me add that I find the various statements issued by our Government and the Japanese Government, both jointly and individually, over the last several months, confusing, to say the very least. I realize there isn't time right now to detail all of these announcements and their inconsistencies at this hearing, but I would like to enter into the record a statement with accompanying data which analyzes the various announcements and news releases and points out the contradictions. Perhaps during the question and answer period, if there is time, we might wish to go into this, Mr. Chairman.

I would like to introduce this into the record.

Senator STEVENSON. It will be entered into the record.

[The information follows. Some of the tables and charts submitted by Mr. Heffernan were already inserted in the record with the statement from Commerce Department.]

JULY 17, 1973.

**INCONSISTENT DATA FROM THE COST OF LIVING COUNCIL AND FROM THE
DEPARTMENT OF COMMERCE REGARDING SCRAP IRON AND STEEL EXPORTS**

In late May the auction prices for the prompt industrial factory bundles made a sharp move upward and number one heavy melting steel scrap prices quickly followed. (See attached Metal Market graph). The May increase of approximately four dollars per gross ton followed the April auction price increase of over eight dollars per gross ton. The domestic scrap consumers had been urging the Secretary of Commerce from early in 1973 to impose export restrictions under the Export Administration Act. Obviously, in light of the May auction, something had to be done.

On June 1, 1973 the Cost of Living Council and the U.S. Department of Commerce made a joint announcement. The news release stated how much scrap iron and steel the Japanese would purchase from the United States in 1973 and in the first quarter of 1974.

On May 22nd Export Control Bulletin No. 84 was issued by the Department of Commerce. This bulletin required that all unfilled orders and new orders from scrap exports be reported to the Department of Commerce. Some felt that if export controls were ultimately instituted, export licenses would be prorated against reported orders. In short, Bulletin No. 84 might well be considered an incentive for exports to obtain quickly and to report as many export orders as possible.

On July 2, 1973, Secretary of Commerce Dent embargoed any *new orders* of 500 tons or more for scrap iron and steel exports for 1973. He did nothing to restrict the export of scrap for the month of July and made no commitment for the months that follow. On July 2nd, he also released information on how many tons of scrap would be exported to Japan in the balance of the year. The Secretary's data on scrap exports was dated June 17th, just over two weeks after the Cost of Living Council's and the Department of Commerce's joint news release. Unfortunately, the data from the two releases is completely incompatible. Tabularized, it is as follows:

1973 EXPORTS TO JAPAN

[In millions of net tons]

	First half	Third quarter	Fourth quarter	Total for 1973
CLC and Department of Commerce joint release of June 1, 1973	2.58	1.18	0.77	4.53
Department of Commerce release of July 1, 1973 (data as of June 17)	3.26	2.062	1.195	6.513

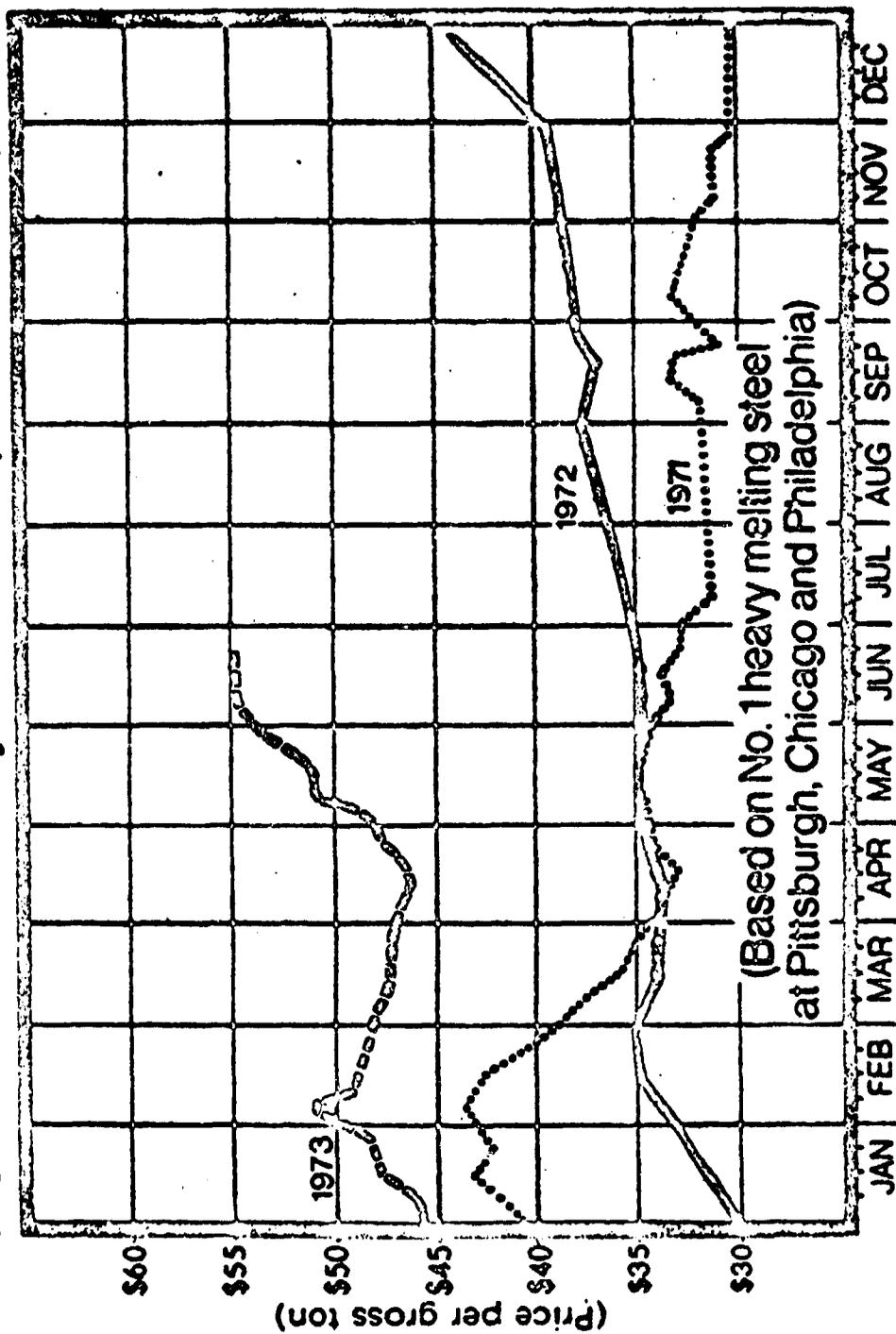
¹ Although this figure was not given in the release, it can be calculated by subtracting the third and fourth quarter figures from the annual total.

² On the previous page of the same packet, the estimated exports for Japan in 1973 was not 6.513 million net tons, but 6.9 million net tons. As a matter of fact, the graphs and tables of this report are quite contradictory.

In his prepared statement of July 2nd, (see p. 25 of this publication) Secretary Dent used the June 17th 6.513 million ton figure for 1973 exports to Japan, and announced that the Japanese Government had agreed to defer the receipt of one million tons of this until after the 1973 year-end. Seventeen days earlier, the Cost of Living Council and the Department of Commerce stated that the Japanese had agreed to take no more than 4.53 million net tons in 1973.

These statements do not inspire confidence.

Metal Market Weekly Steel Scrap Price Composite



[News Release—Economic Stabilisation Program]

JAPANESE IMPORTS OF FERROUS SCRAP FROM UNITED STATES TO DECLINE

The Cost of Living Council and U.S. Department of Commerce jointly announced today that they were informed through the Japanese Embassy that Japanese imports of ferrous scrap from the United States in the last six months of calendar year 1973 will be approximately 24 percent less than in the first six months. While continuing to express concern over recent price increases in ferrous scrap, COLC and Commerce officials regard this action as a positive step in reducing the inflationary pressure coming from this sector of the economy. A major factor in the reduction in scrap imports is the increased availability of pig iron in Japan resulting from the relighting of previously idle blast furnaces and the installation of new blast furnaces.

The same source also indicated that the Japanese had completed purchases for shipment through September of this year and were not purchasing at this time for delivery between October 1, 1973, and March 31, 1974. It was further stated that when buying is again started, an attempt will be made to spread purchases evenly throughout the six-month period.

Japanese imports of ferrous scrap from the United States are estimated by Japanese sources to be 1.18 million net tons in the third quarter of 1973, 0.77 million tons in the fourth quarter and 0.63 million tons in the first quarter of 1974. Total Japanese requirements for U.S. scrap in calendar year 1973 are estimated at 4.53 million net tons. In the first four months, U.S. exports to Japan were 1.9 million tons, 52 percent of total exports of 3.6 million tons.

The Washington Post carried a story datelined July 15 from Reuter's News Service quoting the Japanese as agreeing "to reduce its imports of American ferrous scrap by twenty-nine percent next month in a move designed to alleviate the world shortage of the metal." The U.S. government, according to the dispatch, "hailed the action and issued a statement expressing appreciation to the Japanese government. It said the problem was a temporary one."

On July 2, 1973, Secretary of Commerce Dent embargoed any *new orders* for ferrous scrap metal for 1973 and made no commitment for any *shipments* after July, explaining the situation would be reviewed at the end of July. As we earlier pointed out, figures announced by the Japanese government on June 1st amounted to plans to import 4,530,000 tons.

[From the Washington Post, July 15, 1973]

JAPAN TO CUT IMPORTS OF SCRAP FROM UNITED STATES

Japan yesterday agreed to reduce its imports of American ferrous scrap by 29 per cent next month in a move designed to alleviate the world shortage of the metal.

The U.S. government concerned by the inflationary effect of the shortage on scrap metal prices, hailed the action and issued a statement expressing appreciation to the Japanese government. It said the problem was a temporary one.

The U.S. government early this month introduced a licensing system for all exports of ferrous scrap.

[From the Evening Star and the Washington Daily News, July 16, 1973]

JAPAN'S IMPORTS FROM UNITED STATES SOAR

Tokyo (UPI).—Japan's imports from the United States licensed during the first half of this year totaled \$5.047 billion, a 95.7 percent gain from the same period of last year, the ministry of International Trade and Industry has announced.

Industrial raw materials, fuels and foodstuffs all recorded more than 100 percent gains in June over the same month of 1972, the ministry said.

Scrap iron and steel contracts jumped a whopping 1,000 percent in June over the corresponding month of 1972. The ministry blamed this on what is called an inevitable import rush before Washington's recently announced export curbs take effect.

Mr. HEFFERNAN. I would like to turn to the panel now to develop in some detail the rationale behind S.2119, and explain the seriousness of our situation. I would like to begin with Mr. Paul Akin.

Mr. AKIN. I am Paul Akin, and if it would be all right, I will just speak extemporaneously and submit a written text.

Senator STEVENSON. You anticipated my prayers, too. Your statement will be inserted in the record.

Mr. AKIN. My remarks this afternoon will be confined to these two major points.

First of all, does the ferrous scrap shortage problem warrant a specific legislation now?

And, point 2, if legislation is needed, would S. 2119 solve the problem fairly to all concerned?

In regard to the first point, who is getting hurt and how badly? In short, the people who are getting hurt are a segment of the steel industry that relies solely on ferrous scrap as a raw material. These particular companies go from minimills, and there are about 40 of them that are very small scrap consumers that produce reinforcing bar and other rolled steel products; and they include the medium sized steel companies. The Ferrous Scrap Consumer's Committee, of which I am president, consists of five but there are other medium sized steel companies. It also includes some of the largest steel corporations in this country. United States Steel Corp., at their Texas plant, is solely dependent upon scrap; Bethlehem Steel in California depends solely on scrap. They are so-called cold metal shops.

The Inland Steel Corp. has many operations in Illinois that are solely dependent upon scrap. Armco has an operation in Kansas City that is solely dependent upon scrap, as is their Sand Spring operation in Oklahoma.

So you have, in essence, the cold metal shops that constitute approximately 20 percent of the raw steelmaking capacity of this Nation.

Earlier this afternoon, Mr. Berman presented a chart that was an excellent one to demonstrate the point that I would like to make. He showed how much steel prices have increased. It was the first chart, you will recall, that he had. It showed how much steel prices had increased from the early fifties on through towards, I guess, 1972. I think that it is important to recognize that those steel prices are pretty well controlled, not by the 20 percent, but by the 70 percent who rely primarily on ore. So we must consider that the small steel companies cannot raise their prices higher than the large steel companies, particularly in times of international steel shortages. In these times we can't control our customers and say, "You can't buy steel from the big companies, you have to buy it from us," because as soon as that shortage is over, they would say goodbye to us in a hurry. So even in times like this the cold metal shops cannot raise prices higher than those of the big steel corporations. So the small steel companies are the ones that are hurt quite badly at a time like this.

In regards to that steady price increase that they showed for the big steel corporations, the First National City Bank of New York puts out annually a statement of return on equity, and the ranking of the 41 major industries in the United States. In the fifties, the

steel industry was in about the middle of that ranking. For quite some time now, the steel industry has had the anchor position. They have been 41 out of 41 on return on equity. So that indicates that although they did increase their prices during that entire period, they certainly did not get them up enough to cover the increased costs that were quite manifold in that whole period. That would be utilities, raw materials, labor, all of the rest.

That chart indicated also how the price of scrap moved around during that period. I might say that at the present time the price of scrap is quite high—I did not see their chart. The chart I show here is one that is taken from the American Metal Market, and it is their No. 1 composite price from Pittsburgh, Chicago, and Philadelphia. We have superimposed on his 1971. This happens to be the very tail-end of the last shortage period. Now I think it would be worthwhile at this time to mention whenever we have an international steel shortage, there is at the same time an international scrap shortage. We had an international steel shortage in the years 1955, 1956, and 1957. All through the sixties we didn't have one, until we got to 1969, towards the end of 1969. Then it started heating up quite a bit and really hit us quite hard in 1970.

Now, we are in another one. There is good evidence we will have a continuing number of international steel shortages during the seventies. In the supplementary data that has been supplied to you, there is a treatise on this in a periodical called "Center Lines." Father Hogan, an economics professor from Fordham University, has treated that quite thoroughly. In 1971, the price moved around between 30 and 35. In 1972, it moved up as is fairly common in January, and then we see it start—we see the start of a price increase and here it has come up to the 55 level.

Laclede, the company I am with, we averaged \$35 per ton for all types of scrap last year. Now we have hit a \$55 level. For the cold metal shops, that means they must absorb that \$20 increase. This is quite painful. We cannot pass that on. That has to come out of our hide.

In 1970, the scrap price increase cost Laclede Steel Co., \$7 million. We lost \$5 million that year. Cold metal shops cannot take that kind of a pasting—pardon my language—that kind of a beating. The present indication is if we end up \$10 a ton more than last year, will mean a \$6,500,000 penalty for our company. It is \$20 higher now. If this were to stay at this level, it would mean \$13 million we would have to pay above and beyond. What do we get for this premium? The scrap isn't really as good as it was before. What I have illustrated here is who is getting hurt, this is the point I am trying to make. The steel companies that cannot pass this price increase on are getting hurt.

Senator STEVENSON. May I interrupt you at that point?

Mr. AKIN. Certainly.

Senator STEVENSON. Why can't you pass it on? Leave aside the freeze, which may end shortly. You mentioned there is a worldwide shortage of steel. If that is the case, won't their prices rise to meet yours?

Mr. AKIN. To illustrate that, suppose you were buying steel from me, but your competitor, right next to you, is buying from one of the big integrated plants. So I go to you and I say:

You can't go to the big integrated plant and get your steel, because of the shortage, you have to buy it from me. I can cost justify, so please pay me \$10 more a ton, which puts you in a terrible position with your competitor. As soon as that shortage is over, you are going to say goodbye to me, because you will want to get in with the integrated company. That is the market. As soon as the world shortage is over, you will leave me and we will lose our customers.

Senator STEVENSON. I see; that answers the question.

Mr. HEFFERNAN. I would like to break in for a moment, Paul. I know Senator Cranston has to leave shortly and I know he is particularly interested in some California problems. I would like to break for a moment and ask Lane Currie to address himself peculiarly to the problems the foundries are facing in California.

Senator CRANSTON. Thank you very much. I appreciate that.

Mr. CURRIE. Mr. Chairman, and Senator Cranston, I am sorry for the interruption here. I am here today not only representing H. C. Macaulay Foundry, but representing some 37 foundries on the west coast, including those from the States of Washington, Oregon, and California.

The data I am going to be speaking to today was collected and correlated Wednesday afternoon. The data with reference to cost factors and so forth have been presented in the past for the record.

I would like you to know that on the west coast, the foundries are seeing basically three problems.

No. 1, there definitely is a scrap shortage, and that the level of scrap we are receiving today is inconsistent with that which we have been accustomed to over the past 10 or 20 years.

Second, the scrap dealers are not taking the time, and do not have the consideration to go ahead and prepare the necessary metallurgically controlled materials which we must have for our recycling process of metals.

And third, we are very seriously confronted with a price increase, price increases of our commodities, inasmuch as our customers are not desiring to accept any of these price increases due to the costs that we have involved here.

Fourth, it also will reflect an inflationary ripple effect which will be borne by the American consumer when it is passed through on a compounded basis in the future.

I should note that the requirements for foundry scrap are somewhat different than that of the steel mill. The foundry requires a selected, sorted, and in most cases sheared or broken steel or iron material. Chemistry and certain other requirements must be met. Most foundries cannot use bundles or baled scrap, nor can we use the general classification of borings, shovelings or turnings. In essence, our requirements are for selective scrap and we are dependent upon the dealer to process accordingly.

This west coast survey of which I am speaking will reflect—there are seven pages of collected data—price data which are being paid on three items. It will reflect over the past year an increase to some foundries of over 70 percent in scrap shearings or scrap iron, broken

or unbroken, and it will reflect in some cases price increases in excess of 100 percent within a 24-month period of time.

Probably one of the problems which has caused this is the proximity of the area of harvest to the port of export. On availability of scrap, surveys were taken from these 37 foundries—a couple of comments on that.

"Material is available at a price"; "One dealer does not want to take orders until he can determine what changes in regard to phase III or phase IV will be"; "As far as availability, we are somewhat hand-to-mouth, never sure when a dealer will have scrap because of scarcity"; "Availability has gotten worse"; "Beginning in June 1972, the supply started to diminish."

There are many, many other comments on availability that are noted in my report. In general, the summary of availability for foundry grade processed iron and steel is fair to poor in all of the geographical areas. Let me note again foundry grade. That is different than 10-foot sections of steel that can be dropped in a hold on a ship for shipment overseas.

In reference to inventories, there are some foundries who have gone out on long term purchases. I personally have gone out and endeavored to establish purchases of materials for 3 months and so forth, and I cannot get a scrap dealer to come in. Some foundries who normally maintain a 6 to 8 month level of scrap in their shop are down to 2 months. Others, keeping the same, are down to a month or month and a half. Some shops are down to 3 or 4 days.

I will cite a couple of shutdown instances later on.

The quality of scrap is down. Let me note that the quality and segregation is very, very important in this material for a recycle process.

On quality, numerous foundries are having to put considerable more time into hand segregation; they are having to recut material; they are having to throw material out because it does not meet specification; they are losing heats of iron, because the metallurgical composition does not meet the standards on which the material supposedly was bought. Foundries are overlooking certain aspects of quality, because of availability.

It should be noted the foundry industry produces products to specifications which relate to landing gears on airplanes, and if you have got poor material in there, and one casting cracks, sorry about it.

We have component parts that go into the aerospace industry. This relates to the steel foundry and to the iron foundry. We necessarily have to have quality material and we are not getting the service on the coast.

Some foundries are also accepting material which normally a year ago, 8 months ago, they would have returned.

Geographically, most of the material is being supplied locally at higher prices. In Washington certain foundries have gone as far as Idaho and Montana, also Oregon, the same area.

California is buying as far east as Salt Lake City and the southern California area is buying in Nevada and Arizona, which is not their normal purchase area.

With reference to shutdowns, our survey indicated that numerous foundries have found themselves at a point of supply of 1 or 2 or 3

days. One foundry borrowed material from a competitor just so he would not have a shutdown. I have specific data on that if the committee would like to have it. That was a Los Angeles foundry.

Senator CRANSTON. Would you submit that material you referred to for the committee file, please?

Mr. CURRIE. All right. I will need somebody to photocopy what I have.

Senator CRANSTON. Thank you.

Mr. CURRIE. Two Oregon foundries curtailed swing-shift operations, one since last May, the other one in July. A southern California foundry shut down on three occasions because of inability to get electric furnace prepared scrap iron.

We of the west coast foundry industry and the foundry industry in general believe there is a scrap shortage of foundry-prepared materials; and that we have been forced to take substandard material in lieu thereof.

Also concurrently with our belief, the Department of Commerce recently acknowledged a scrap shortage and implemented a temporary licensing requirement on the export of scrap.

In view of the national problems, I urge the passage of S. 2119 which will guarantee service to the domestic needs as first consideration for preserving the economy of this Nation.

Thank you, Mr. Chairman.

Mr. HEFFERNAN. Senator, could I add as a footnote, one of my member companies, U.S. Pipe & Foundry Co., maintains a plant at Union City, Calif., and this morning they said, they normally try to keep an inventory to run them approximately 2 months, and they have been down to a 2-week inventory. And the quality problems they have are so severe that they have told me they spin molten metal in a mold to make a ductile iron pressure pipe and anneal that pipe when it comes out of the mold. They have had to reanneal pipes at tremendous cost in terms of the energy involved, simply because the quality of scrap was so bad, they couldn't get the right ductility on the first run.

It is very severe in terms of this question of quality of the scrap.

Thank you, Lane.

Senator CRANSTON. If I may briefly ask a couple of questions before I leave, and I will leave some more with the chairman, if I may, Mr. Currie, Mr. Berinan estimated an export ban would leave the west coast with a huge surplus and price would fall drastically.

Could you in fact absorb what is not exported?

Mr. CURRIE. My support of S. 2119 does not involve an embargo; it involves a continual flow of surplus scrap out of the area. Our plea here is to have the available grades and quality of material necessary to perpetuate growth of our industry and maintain levels of employment on the coast.

Senator CRANSTON. What is your response to the Battelle Report that was submitted to the EPA? Among other things it stated there is an adequate supply, but recycling of some sort is required.

Mr. CURRIE. There is an adequate supply of what, sir?

Senator CRANSTON. Of scrap, but recycling is required to make it fit your needs. Perhaps that is not the proper question to ask you.

Mr. CURRIE. No; I would like to pass on that.

Mr. AKIN. Mr. Senator, if it is all right, I would like to include in the minutes a statement that was made by the American Iron and Steel Institute that refuted that particular Battelle Report and the way it was done.

I do not have a copy of it with me, but it was a statement of March 23, I believe.

Senator CRANSTON. If you would submit that, that would be fine. [The following was received for the record:]

AMERICAN IRON AND STEEL INSTITUTE,
Washington, D.C. July 26, 1973.

Senator ADLAI E. STEVENSON III,
Chairman, Subcommittee on International Finance, Committee on Banking,
Housing and Urban Affairs, Washington, D.C.

DEAR MR. CHAIRMAN: The enclosed statement of American Iron and Steel Institute in support of proposed amendments to the Export Administration Act of 1969 is submitted for the record in connection with the hearings of July 18, 1973 on Senate Bill S 2119.

Also enclosed is a copy of the Supplementary Statement on the Need for Ferrous Scrap Controls to which Mr. Paul B. Akin, President, Laclede Steel Company, referred during the July 18 hearings. You asked then that the supplementary statement be made available to your Subcommittee. The supplementary statement was filed with the House Subcommittee on International Trade in connection with its hearings of March 23, 1973 on HR 5739.

Very truly yours,

WILLIAM H. STAPLETON,
Chairman, Committee on Critical Materials Supply.

SUPPLEMENTARY STATEMENT OF THE AMERICAN IRON AND STEEL INSTITUTE BEFORE
THE SUBCOMMITTEE ON INTERNATIONAL TRADE OF THE HOUSE COMMITTEE ON
BANKING AND CURRENCY, MARCH 1973

Testimony was presented to the Committee on March 23, 1973 by the American Iron and Steel Institute (AISI) and the Institute of Scrap Iron & Steel (ISIS) engendering questions by Committee members who requested additional information.

Set forth below are ISIS statements with responses by AISI:

ISIS statement.—There is no shortage of obsolete scrap.

AISI response.—ISIS states that a report by Battelle Memorial Institute "found an inventory of scrap iron in this nation in 1969 in excess of 750 million tons." This is clearly a misinterpretation of the Battelle report. Actually, the 750 million tons were an estimate of the amount of steel in use in the country which could eventually be expected to return to the steel mills and foundries as scrap. It included new and old automobiles, machinery, buildings, etc. Most of this tonnage will not be available for recycling for periods ranging from 10 to 50 years. The steel, 60 of which would eventually be recovered as scrap and recycled, according to the Battelle analysis, was estimated by excluding the portion in forms or uses which do not lend themselves to recovery and reuse. Therefore, the ISIS statement that "only 60% of the newly available scrap is being recycled so that this massive inventory is being added to at a huge rate every year" is totally inaccurate.

The only proper definition of available scrap is scrap at steel mills or in dealers' yards either processed or capable of being processed within the period the potential user wants delivery. If such scrap is not in short supply, why is the scrap price so high relative to normal levels over the past decade.

ISIS statement.—Changes in scrap prices result from changes in scrap purchasing rates by domestic rather than foreign buyers.

AISI response.—The domestic steel industry has not opposed the exportation of ferrous scrap when it is in ample supply. Obviously rising domestic demand has an impact on scrap prices. But when high domestic demand is coupled

with high export demand, as occurred in 1969-70 and currently, the scrap price impact on the steel industry can only be described as disastrous.

It is clearly established that export prices are higher and lead domestic prices during periods of high domestic and foreign demand. Japanese scrap buying cartels who purchase for their major steel companies can afford higher prices for ferrous scrap as they use considerably less scrap per ton of steel produced in their basic oxygen furnaces than do U.S. mills. If foreign scrap users pay a premium of \$10 per ton for 12 million tons in 1973, the cost impact of \$120 million is considerably less than that absorbed by U.S. consumers who must pay the \$10 premium set by export demand but in 1973 spread over 41.5 million tons of domestic demand. Thus the impact on U.S. consumers is \$415 million, and the impact on steel companies relying completely on scrap as their basic raw materials is catastrophic.

ISIS statement.—Scrap price increases are not inflationary.

AISI response.—Changes in the price of any commodity entering into the production of another commodity (as scrap does in the production of steel) has an effect on the cost of that commodity and, ultimately, on its price. Scrap is no exception. The reason there is no apparent correlation between scrap prices and steel prices, is that for the steel industry, labor, other raw materials, and capital costs are considerable. Thus scrap costs are one element in total costs. This does not mean that scrap costs do not have a serious impact on the steel industry.

The cost of purchased scrap is by no means an insignificant factor in steel industry production costs, although its significance varies widely from company to company. The steel industry consumes about .3 tons of purchased scrap for every ton of finished steel shipped. At this rate, a \$10 per gross ton increase in the price of scrap would raise the average cost per ton of finished steel shipped by about \$2.70. This is a serious cost increase for the steel industry whose profit after taxes in 1972 was approximately \$8.24 per ton of finished steel shipped.

Additionally, the preliminary estimate of the steel industry's return on equity in 1972 is less than 6%.

ISIS statement.—Purchasing by mills and foundries on the same basis used by all other industries would reduce substantially the fluctuation in scrap prices.

AISI response.—The context of this statement is that "all other industries" buy more in slack periods when prices are low and less in peak consumption periods when prices are higher. This is not typical purchasing policy. Most materials, including steel, are brought as needed, inventories are kept to a minimum through controls, and companies resist having substantial amounts of capital tied up in materials they cannot use in the operating year. Most steel companies in the world operate in this way. If we are to provide valuable iron units to foreign users, why does not ISIS suggest to foreign users that they stockpile U.S. scrap when both our home demand and theirs is low. The fact is that both foreign users and domestic users buy more U.S. scrap when their demand increases. The difference is that foreign governments impose tight controls on their scrap exports when their home users require the material.

ISIS statement.—Scrap iron and steel is a positive contributor to the U.S. balance of payments in the range of five hundred million dollars annually.

AISI response.—In 1972, scrap exports totalled \$244 million. This was 7,382,554 tons at an average price of \$33 per ton. To reach \$500 million in 1973 would require 12,000,000 tons at an average price of \$41.67. This is possible, but it would require exports of scrap at a level which ISIS apparently does not consider likely.

Moreover, the additional iron units which foreign purchasers acquire during a period of high U.S. demand for steel, return to the U.S. in the form of finished steel mill products to satisfy the demand, at quadruple the value of the scrap exports.

Our steel trade deficit was \$2.2 billion last year. Under the circumstances described above, scrap exports unfavorably impact the balance of trade rather than the reverse.

ISIS statement.—No abnormal foreign demand is present, since exports in 1973 are not expected to exceed previous years.

AISI response.—Exports in 1973 are expected to exceed every year in the past ten. That is not normal.

ISIS statement.—The huge inventories of available obsolete scrap iron continue to accelerate on a daily basis.

AISI response.—There are no huge inventories of available obsolete scrap either at the mills or in the yards of scrap dealers. In fact inventories are probably lower than normal. If ISIS is referring to all steel in use which will become scrap over the next 10 to 50 years, it is in no sense available.

ISIS statement.—U.S. steel mills and/or foundries export scrap.

AISI response.—On rare occasions, mills may sell surplus scrap at certain plants which for one reason or another cannot consume it, rather than absorb shipping costs to other company plants. Scrap dealers, on occasion, may purchase such scrap and export it. This is not a common occurrence in the steel industry.

STATEMENT OF AMERICAN IRON AND STEEL INSTITUTE

The interest of a concerned Congress, "to protect the domestic economy from the excessive drain of scarce materials and to reduce the serious inflationary impact of abnormal foreign demand" manifested itself in the passage and subsequent renewal of the Export Administration Act of 1969.

Enactment of this legislation reaffirmed earlier intentions of Congress that exports of a scarce U.S. commodity be controlled in situations where abnormal foreign demand results in substantial disruption in the normal supply and price of the commodity in this country. However, whereas in theory the Export Administration Act seeks to protect U.S. industry and the economy from both the outflow of scarce materials and subsequent inflationary impact, it has accomplished neither objective to date in the case of ferrous scrap, with one exception. The exception pertains to the imposition of quantitative limitations on the export of nickel-bearing steel scrap for approximately 12 months beginning September 9, 1969 due to an acute shortage of primary nickel metal in that period.

The Act did not prevent record-high exportation of other grades of ferrous scrap in 1969 and 1970, nor the inflationary impacts on domestic scrap prices in those years. Similarly, authority granted by the Act has been used only sparingly in 1973 to date, despite the prevalence of serious supply and price problems across the United States as the result of abnormal foreign demand.

Domestic steel mills and foundries have witnessed a rise in ferrous scrap exports from an average monthly rate of 615,000 net tons in 1972 to an average monthly rate of 1,100,000 net tons in the first half of 1973. They have seen the composite price of No. 1 Heavy Melting Scrap, their key grade, increase from an average of \$36.63 per gross ton in 1972 to \$55.00 per gross ton at the present time. Based on combined purchases of about 40 million gross tons in 1973, the \$18.37 per ton increase will add \$735 million to operating costs of steel mills and foundries this year.

Past failures of the Department of Commerce to use lawfully granted authority to limit the outflow of ferrous scrap resulted, we believe, from fundamental conceptual differences between it and the Congress with regard to the intentions or the objectives of Section 3, Paragraph (2) (A) of the Export Administration Act. Congress has declared that excessive drains of scarce materials and resultant inflationary impact shall be prevented. The Commerce interpretation of its authority to implement restraining actions substantially weakens that declaration. This is due to the long, time-consuming processes it employs in documenting the fact that the excesses to be prevented are indeed actually occurring.

Unfortunately, the polarization that develops while awaiting the availability of hard statistical evidence, leads to a reluctance to undertake even the most rudimentary actions of an exploratory nature. In the way of a case history on this point, it can be noted that Commerce did not request until May 22, 1973 that exporters furnish continuing data on new and unfilled export orders for ferrous scrap. Information gained through this rather simple elementary step is believed to have contributed heavily to the decision of Commerce to require licensing of exports as of July 2, 1973. That decision followed by many months the September, 1972 embargo on scrap exports by the United Kingdom; announcements by the Japanese steel industry in late 1972 of plans to sharply increase purchases of U.S. ferrous scrap; the request of American Iron and

Steel Institute in December, 1972 that export limitations be established; and finally, the availability of its own data reflecting the export upsurge starting in the fourth quarter, 1972.

The accelerating growth in the demand for steel which is foreseen for both the United States and the rest of the world in the next decade will make necessary substantial additions to this country's steelmaking capacity. Failure to add this capacity will lead to increased dependency on imported steel and a further worsening of the \$2.2 billion dollar steel trade deficit suffered in 1972.

The already heavy demands of the steel industry for capital funds to maintain existing capacity and to meet new environmental standards dictates that a substantial portion of needed new capacity be filled through the installation of electric furnaces. Capital investment is considerably less for electric furnaces than for basic oxygen furnaces which must be supplemented with blast furnaces, coke ovens and other high-cost auxiliary facilities. Production of steel in electric furnaces has risen by 64 percent in just the past five years, from 16.8 million net tons in 1968 to an estimated 27.5 million net tons in 1973.

Aside from the problems of availability of capital and electric power, decisions to install new electric furnace capacity must necessarily be based on anticipated future availability and cost of ferrous scrap. Electric furnaces, unlike the basic oxygen and open hearth furnaces, depend almost 100 percent on scrap as their source of raw material. The argument now being heard that scrap is always available "at a price" lends no assurance to the company which must market its finished product in competition with other domestic steel mills, foreign steel mills and other materials.

Prevention of excessive exportation of scrap to competing steel mills abroad is therefore a long-term as well as a short-term concern of the domestic steel industry. In view of the deteriorating position of the United States in world trade, it should be a matter of national concern as well.

The steel industry therefore urges the passage of S 2119 and S 2053 to amend the Export Administration Act of 1969.

Further, the steel industry recognizes that serious problems may soon arise in connection with the exportation of low-sulphur, metallurgical-grade bituminous coal and in the exportation of non-ferrous metals in which the United States has become a "have not" nation. It therefore encourages Congress to provide precise definitions of language used in Section 3, Paragraph (2) (A) of the Export Administration Act, particularly with reference to such terms as "excessive drains", "serious inflationary impact", and "abnormal foreign demand".

SENATOR CRANSTON. What is the relationship between the price of scrap and the price of finished steel? In your opinion, would an export embargo bring about a significant reduction in the price of finished steel?

MR. CURRIE. Are we directing this to castings or to steel? They are two subjects really. Steel I would pass to Mr. Akin.

SENATOR CRANSTON. Let's hear it on both.

MR. CURRIE. As far as cast products are concerned, certain grades of cast products, there undoubtedly would be a reduction of cost of these commodities. There are certain castings that sell for 10 cents a pound, 11 cents a pound, ingot molds are up to 10 or 20 cents a pound and so forth. The price of those castings would be reduced considerably.

MR. HEFFERNAN. Could I just make one comment, Senator, because I think it cuts across the point, in terms of that 750 million reservoir. What Battelle was referring to is finished steel that has gone into finished product. That includes your automobile new, my automobile, your refrigerator, my refrigerator, the beams in this building. Someone said we could take the dome, that is cast iron, because it is included in the reservoir.

I think we would have a hard time taking that away from the Architect right now. I think we should understand when we talk about

the reservoir, that is the reservoir we are talking about, that which may some day become available as scrap. We are talking about a period that may run for 50 years.

Thank you.

Mr. AKIN. In regard to the price of steel, if you recall a little earlier I mentioned that the 20 percent of the steel industry are the ones that use scrap exclusively, and that our costs have gone up essentially the same as the rest of the integrated plants in regard to our utilities, labor, brick, refractory costs and all. So that the great bulk or the combination of the two are pretty close in more normal times.

Now we hit this high scrap price, the one that caused, for example, my company that huge loss. If we reduce the price, if we don't hit that, if the price is on a more sane basis, then we can compete with the big companies.

Senator CRANSTON. Thank you very much.

I want to express my regret that I can't remain for the balance of your testimony. I do have a staff assistant who will be here and I will review the record.

Thank you very much.

Senator STEVENSON. Mr. Akin, let's continue where you left off.

Mr. AKIN. I have been advised by Mr. Heffernan to hurry up.

Senator STEVENSON. That is good advice.

Mr. AKIN. So I will skip three graphs and get right to the trigger mechanism, how it functions, what it does.

Mr. HEFFERNAN. Could I interrupt you again?

There is one thing I wanted to mention before you leave, Senator Cranston. The purpose of this bill is only to dampen exports, as we pointed out, during that brief period of time when you have this combination of high domestic and high export demands.

We recognize there is a peculiar problem on the west coast. And we would favorably consider the possibility of language, either in the bill itself, or language as legislative intent, that would require the Secretary to take into consideration whatever special needs might be involved in a computation of that total tonnage that would cover this problem of the west coast.

Senator CRANSTON. Thank you.

Mr. HEFFERNAN. Excuse me—Paul.

Mr. AKIN. Sure; I just finished earlier pointing out where the need is, who is getting hurt. I was about to mention the foundries, but that was covered perfectly adequately. So then the question of how should this be controlled?

If you could pick out those objectives that you could have in a bill, what would you like to have? It seems to me that for the total benefit of the Nation, one of the first things you would want is the ability to export as much scrap as you possibly could, short of depriving the workers in the United States of material to work with and the industry's material to work with, and short of doing irreparable economic damage because of extremely high prices of that raw material which cannot be recovered in the marketplace. So we would like to ship as much as we could.

We recognize that when it comes to ferrous scrap, as has been mentioned earlier, there are two places that scrap goes once it has

been gathered within United States. It either goes to the domestic consumers, the small steel companies, and the foundries, or it goes into export. It is the combination of those two things that make up the total market. In view of that, we thought the best thing to do would be to—this is in a general consideration if we were going to select something like this—use that total figure as the governing amount.

We looked at the figures in the past. The greatest amount of scrap that has been generated in this Nation is approximately 46 million tons. We hit 45.9 million tons last year; we hit 45.4 million tons in 1970; and 45.8 million tons in 1969. We have not seen a period when it was above that. We do know that in each of those years, certainly at the end of last year, we got quite a jump in prices in scrap. In 1970 it showed distressingly high prices in scrap.

It is our opinion, when you see those high prices, it is illustrating that the supply/demand ratio is being strained. So at a time like that we feel we are getting to a shortage situation. And when it gets up to the 46 million that we haven't yet exceeded, that is a critical shortage.

So if we could have a bill that would permit the export of scrap when it is not being used domestically, and one that would dampen exports when it starts getting into a runaway situation, we could perhaps preclude the necessity of an embargo.

The best way to illustrate is that under the present circumstances with the Export Administration Act, we don't know what the administration is going to do. We have no clear guidelines. We know that in 1969 and 1970 they did nothing. We don't know at the present time, with prices going sky high and this block of the steel industry being severely jeopardized, what they are going to do. What will they do in August?

There has been no comment along that line. Meanwhile we must bid on jobs, for example, the Illinois highway system that will take place next year. What will the raw material cost be? We have no idea.

Yet we have to give a firm contract. This is an extremely difficult position for business to operate in.

One of the things we would like in legislation would be a clearcut definition of where we stand. I think it would be worth mentioning that in this bill had been passed in 1960, it would have triggered in 1969, with the mild restriction, it would have triggered again in 1970 with the mild restriction, it would have triggered in 1972 and it would have triggered this year.

At no time, contrary to what the scrap people said, would we have had a total embargo. I think it might be worthwhile now to show what would happen if this bill were in effect this year. I have indicated several times, and Ed has too, that this is a mild restriction.

One of the first things is to consider the operating procedure for the bill. Section 207(a) states that the Secretary of Commerce will examine each calendar quarter. He does so a month and a half after the close of the quarter when the data becomes available to him. He has to determine if a shortage, critical shortage, or no shortage occurred.

In this particular year he would have seen that a critical shortage occurred in the first quarter. After he determines that, Section 207(c) states he is to impose the mild restriction on exports at the start of the next month.

I have indicated that that is a mild restriction.

Let's consider how strong that is for this particular year. The 5-year annual average of exports is about 8 million tons. One quarter of that is 2 million. So it means during this particular period there would be 2 million tons of exports that could leave the country.

During this critical shortage period we had about 2.7 million tons that left the country. In the following 2 months we had about 2 million tons that left the country. So we have 5 million tons so far.

Now we are allowed 2 more, which is 7 million tons. We have a free month at the end of the restriction period that would probably be a relatively heavy one. It could easily be a million tons in that month, which would mean 8 million tons that would go into export this year.

The Department of Commerce has estimated that we would have 42½ million tons of domestic consumption. So we would then have the 8 million on top of the 42½, or over 50 million.

We have never been close to that before. The closest we have gotten is 46 million. So what this bill would essentially state or what the effect of it appears to me to be is that when we have an international steel shortage we will not allow our export of scrap to double or come close to that in such a period. But 8 million tons in a period with this bill in effect is certainly not a violent restriction, it certainly is quite a challenge to the scrap people to come up with the amount of scrap that this bill would allow.

The year 1961 is an excellent year to take a look at. In 1961 our exports were 9,780,000-some tons; it was an extremely high year. Domestic consumption in that year was extremely mild. If we look at that 11½ million ton triggering point, you would know that with extremely high exports that bill would not have touched it.

The bill would permit those exports to go out when the domestic industry was not using it. The triggering device on this bill is a gamble on the high side. Depending on how the total effort occurred during the year, you could come very close to 46 million. Every time we have been close to it there have been very high prices. But you could come close to it and this bill would never go off.

There is another point of this bill that is quite important. As soon as those restrictions are on, there is another requirement of the Secretary of Commerce; that is section 207(e).

As soon as we have 3 months of this restriction, the Secretary of Commerce must determine if there is a critical shortage after the restrictions have been imposed?

In the event he were to find such a critical shortage, he would have to put the total embargo on.

There is also section 209, that states he is to use his judgment to carry out the will of Congress. He is allowed, for example, to impose tighter restrictions than those called for on this particular section. Certainly at this point he would be taking a very close look at how much is going out as well as at the domestic consumption. He

might very well, in the second month of these restrictions, might decide to go ahead and put close to a total embargo on, because if he were to do a total embargo at that point he might avoid a 8-month embargo later.

The approach is to put the brakes on gently. Last year we would have one 6-month period of braking action. So with that much braking action, I think we would have had more scrap available this year. And then with the knowledge that it can happen again, that knowledge would be available to all of the foreign buyers, it would be available to the domestic buyers, and we would know exactly where we stand.

We have a very good chance that this will be controlled slowly and we won't have a runaway situation.

This concludes my presentation unless you would like to go through some more demonstrations of how the bill would work.

Senator STEVENSON. Thank you very much. Let me, instead, just ask a question: What effect would the controls under this bill, in your hypothetical case, have on the balance of payments? Do U.S. exports of scrap return to the United States in the form of imported finished steel products? Would we be making ourselves, as a result of this bill, more self-sufficient and less dependent upon imports of finished steel products? What would be the effect on the balance of payments?

Mr. AKIN. Sir, if the domestic steel industry saw that there was a reasonable approach towards preventing these scrap shortages, there would be quite an inducement to put in more electric furnaces in this country.

I think there is another chart that I skipped that you might like to see very much. We have an enlargement of a graph that was in the President's economic report. I have a copy of that right here. I do not know whether you are familiar with that.

Senator STEVENSON. Oh, yes.

Mr. AKIN. Now, let us consider a little bit about the balance of payments. On that report, products with a declining trade balance trend, and you can see the steel products right here, the blue line, all of a sudden everything got a lot better in here and then it dropped down. That was an international steel shortage. We were at around 17 million tons of imports of steel in that year. This gave us relief to the extent of 3 to 4 millions tons and—bingo!; when it was over; down the campaign.

The administration speaks of this as 1.0. They are taking credit for AID sales. We think of it more as \$2.3 billion deficit in steel.

It was also here in 1971 that steel trade deficit alone was greater than the national trade deficit. Now, we do not make enough steel in his Nation to meet the needs of the Nation. We have not, as a matter of fact, since 1958. We could, if we had the equivalent of this bill. It would encourage the installation of more steel facilities. That is how the bill could affect the balance of payments.

Senator STEVENSON. Are you saying that the imposition of the controls contemplated by this bill would not create a greater trade deficit in all steel?

Mr. AKIN. As far as steel goes; this bill would, in the course of time, improve our balance of payments. We would not be shipping

the scrap out, but we would be in a position to supply more of our needs, our own steel needs.

Senator STEVENSON. You are saying that notwithstanding the imposition of controls, the reduced exports of scrap—

Mr. AKIN. It is going to improve in the course of time. I will also put it the other way—

Senator STEVENSON [continuing]. It makes us less dependent on steel imports, does it?

Mr. AKIN. Yes. And it puts us in a better position to have the exports.

Now, by having no legislation in this area, the present Export Administration Act as has been demonstrated, gave us no protection in 1969; 1970; nothing this year. My company and the other small cold metal shops, cannot continue to take that kind of a loss. We desperately need new soaking pits. They cost about \$3 million. What we lost in the premium that we paid in 1970 would have bought them. And what we are losing this year would have bought them. We still do not have them. So this whole block of industry, this 20 percent is becoming less and less competitive.

They are struggling for survival. This may be against the anti-trust approach, but we are working very hard, because, if we do not, if we cannot get some help here, they will not have anyone to sue anyway.

Senator STEVENSON. The last person who showed me that chart was Mr. Peter Flanigan of the White House.

Mr. AKIN. I was delighted when I saw it, because I thought I could use it. Mr. Heffernan, we had better keep moving.

Mr. HEFFERNAN. Yes, I would like to turn to Jack Sheehan to give you briefly a steelworker's view.

Mr. SHEEHAN. Mr. Chairman, in recent years our union has become increasingly concerned about the impact of steel scrap exports upon those mills and foundries which are dependent upon such scrap. In other congressional forums we have been urging that our total trade policies be subjected to a review or perhaps a reorientation, if you wish, because of its influence upon our domestic manpower policies.

Today, however, we are relating to one aspect of that trade policy, the export of materials which can cause either an inflationary pressure or acute shortages or both.

We have been witnessing high export levels, as Paul Akin indicated here, at times of high demand, both domestically and abroad.

Our domestic scrap consumers, the smaller steel mills he referred to, are put in an extremely difficult bind if they try to compete at higher prices with overseas consumers. Such domestic mills would cut back on production, because of high prices which they can not pass on, due to domestic competition from more integrated steel mills.

Others will absorb the increase, to the detriment of needed expenditures for modernization or simply for replacement of equipment.

Smaller plants thereby fall behind in their battle to remain competitive and to retain their share of the market.

For them the boom in steel may become a bust, because of the high cost of their raw material, namely scrap. The export policies becomes an engine for distress, preventing them from fully utilizing the advantages that can occur from a good market.

There is one point in my statement I would like to emphasize. You should bear in mind that some of these plants are among those which must make a large financial commitment to meet their obligations under the pollution control standards of EPA and occupational standards of OSHA.

The occupational health of our members requires the investment, sometimes nonproductive, in abatement equipment. We should not deprive the industry of the advantages of the good market periods to make those expenditures.

In a study released this month by the Department of Commerce, it is projected that the 1973 exports of steel scrap will increase 67 percent over the 1972 levels to a total of 12.4 million tons. The resulting employment problem in the steel industry is twofold:

First as increasing tonnage of steel scrap is exported, the domestic price is pressed upward. Those steel producers whose scrap inventories are low and who can neither pass on nor absorb the price increase may be required to cut back or shut down production.

Second, even for those domestic producers who can absorb the soaring prices the available supply may be seriously threatened by the unprecedented levels of ferrous scrap exports. The industry estimates that current demands will not be met by the scrap industry and the shortages will be aggravated by the excessive exports.

The present situation is not entirely unique. In 1969 and 1970 there were similar pressures in the ferrous scrap industry. We can validly anticipate that future crises will arise with regard to the steel scrap situation unless effective corrective factors are now put into force.

In 1969 and 1970 the U.S. Department of Commerce failed to act on authority granted it under the Export Administrative Control Act.

As a consequence there was considerable disruption in the industry. In the present crisis, only recently and under great urging has the Commerce Department used its discretionary authority to monitor the outflow of steel scrap. The Department may argue that it is controlling or regulating exports but it is doing so at levels which are already described by the industry to be above the crisis level and at which shortages will occur.

Furthermore, the Department waited too long before it exercised these controls. It first ordered mandatory reporting of scrap exports so as to ascertain the gravity of the situation. While we do not disagree that there should be orderly progression in the imposition of controls, we do find it unrealistic that the aspect of total discretion in the initiation of each step is left in the hands of the Department.

The efficacy of the steps already taken may already be vitiated by the inordinate timelag which transpired before the Department reached its decision.

Mr. Chairman, as far as our union is concerned, it is precisely because of that total discretion that we appear before you today. We are not ourselves developing data as to whether there is or there is

not a shortage in steel scrap. But it is precisely because there is a void in the current implementation of the export control system that we come before this committee.

The intent of the partial embargo now in effect is to prevent the further acceleration of scrap exports to higher levels. Whether shutting off further exports over and above those already projected will provide sufficient supply to satisfy our domestic consumption remains to be seen. There is, however, no prescribed mechanism whereby there will be an orderly evaluation of that situation.

It is precisely because of that void in the current implementation of the export control system that we have come before this committee.

We are seeking a legislative determination for the definition of critical shortage. S. 2119 provides that definition. It triggers a progressive approach of mild controls and restrictions on exports so that the imbalance of supply and demand will not have to reach such critical stages that total embargoes will be necessitated. Many in the industry feel the situation today requires such a total embargo. Enactment of the triggers in this bill will obviate such drastic measure in the future.

Therefore a trigger mechanism, identifying the levels for quantitative limitations on the export of ferrous scrap, is necessary to eliminate the recurring crises in the industry and to curtail inflationary pressures. We know that the present price freeze has prevented the spiraling of steel scrap prices. But it had also put a freeze on the domestic availability of scrap as dealers were attracted to the uncontrolled higher price markets abroad.

In times of serious demands for ferrous scrap, priority should be given to the domestic producers in securing the scarce metal—not to their foreign counterparts. The American industry and work force should not have to suffer economic hardship because of scarcities caused by the export to our competitors of necessary production ingredient.

S. 2119 incorporates a logical and orderly basis of monitoring and regulating export of steel scrap. The United Steelworkers of America join with steel and foundry interests to seek your consideration and support for the adoption of this measure.

Mr. HEFFERNAN. I would like to make a comment following Jack's, because there have been some myths created, and I would like to lay some of those to rest.

The argument was made to explain sudden short supply that all of the foundries and mills, after a long period of layoff, come in and buy at the same time.

Now in our own case, the purchasing of scrap runs generally from the 30-day cycle down to a daily purchasing of scrap.

One company indicated to me—it surprised me—that they buy scrap virtually every day.

But in any event, it ranges up to mills buying on a 30-day cycle, and they are buying year in and year out. There is no long period when suddenly we all rush in and buy on the same day. That is absurd. There is a constant purchasing.

In order for a foundry to have hedged against the current price siege, it would have been necessary to build a scrap inventory of about 10 months' supply to weather this.

Is this realistic? Aside from the practical problem of making available the space to store such an inventory, there must be considered the time value of money,

An astute pipe foundryman keeps one eye on the anticipated future market for pipe and the other on the prime rate. No foundryman can be expected to tie up his assets in a vast supply of raw material for which he has no reasonable assurance of short term profitable use.

In short, the scrap industry is suggesting that the iron and steel industry follow an inventory practice which they themselves do not follow.

I think that is patently absurd.

I would like, if I could, now, to have Carl Studenroth give an iron workers' view of this problem.

MR. STUDENROTH. Thank you, Ed.

Mr. Chairman, I admire your patience.

The other proponents of S. 2119 no doubt have outlined to you here today the dramatic need for help in protecting what I feel is one of our most vital resources: scrap iron and steel.

In other submitted briefs and presentations here you have been provided with many facts and statistics to warrant your full support in the passage, without delay, of S.2119.

I will presume to be the conscience of the supporters of S. 2119 and try briefly to convey to you a plea from the little people involved.

We are a small union of 80,000, dealing mostly with small employees of 150 workers or less, in the iron and steel foundries.

This is an invisible industry to most people, but an indispensable one to big industry, for without the steady supply of castings from these small, mostly family-owned shops, the wheels and machine tools of our mighty assembly lines would grind quickly to a halt.

To paraphrase an old cliché: "For want of a few cast nuts, all the wheels fell off."

We have been anxious and frustrated observers as the number of iron foundries declined from 3,000 in 1947 to 1,670 in 1969, and now HEW and Commerce are making educated guesses that it will be less than 1,000 by 1980.

Scrap iron is the lifeblood of these producers of castings and anything affecting the price or supply of scrap has an immediate, frightening effect on these small, helpless foundrymen.

In a few words, they are at the complete mercy of their scrap supplier on supply and price.

The people who work in these shops have no one to speak for and to represent them in Washington, D.C.; no lobbyists to go over to the Hill to talk to you and your staff; no large pressure groups to support their cause in a time of need.

The small owners likewise have no visible clout I can see, similar to that the scrap dealers display. We are very thankful for this type

of occasional forum to present our pleas for relief and help from you in the form of legislation.

It is a sad commentary on our way of life and economic system when we see a foundry of 100 male workers in Chicago shut down and we find the 50 skilled workers from that shop getting other jobs while 48 unskilled, and in the main unemployable for other industries, end up on the relief rolls, and two get jobs in the scrapyards in Chicago helping to prepare scrap iron for shipment to Japan—the very scrap that this closed foundry used in providing 100 American male jobs, the very scrap that will be returned to the United States as castings and sold more cheaply than they can be made by another operating foundry in the United States, and thus put another foundry out of business and cause more unemployables to be added to the relief rolls.

I tell you, gentlemen, it is a vicious cycle and I earnestly ask you all to first read our short written submission to you and then grant us your help and indulgence on one of the major problems facing this industry and its workers by passing S. 2119. We leave the matter to your best judgment.

Thank you.

Mr. HEFFERNAN. I would like Don Workman to take a few minutes to sum up some of the problems of foundries nationally.

Mr. WORKMAN. Mr. Chairman, I had a summary of my statement. I am now going to give a summary of my summary.

I think most of it has been said. The Cast Metals Federation does represent about 2,100 ferrous foundries.

Over normal prices for scrap last year, our industry, the ferrous foundry industry, is now paying about \$0.5 billion more for scrap. That amounts to about a 4 to 5 percent increase in foundry costs.

We were alarmed at this situation back in January and we presented a projection for this year. We looked at the 47 million tons, the highest generating scrap area, when we had the last shortage in 1969 and 1970, and we projected 12 million tons this year of exports, we projected 41.5 million tons of domestic use in foundries and mills.

When that rate was reached, Mr. Dent of the Department of Commerce did put an embargo on scrap, which adds credibility to our alarm.

I know that our industry firmly supports the provisions of S. 2119, because we do need something more than judgment, deliberation, and review to trigger some control over the unleashed export of scrap.

It has caused undue injury to our small foundries, it has led to frustration and they look to Congress for some relief.

Thank you, Mr. Chairman.

Senator STEVENSON. Thank you.

Mr. HEFFERNAN. Finally, Paul there have been some doubts raised about the bill, some doubts about the conditions that face us. I wonder if you could briefly touch on some of those?

Mr. AKIN. Sir, there are a number of questions that came up, but I think what it might be well to ask is if there were any of the statements that were made that you would like answers to?

Senator STEVENSON. The principal question, I suppose, is whether in fact there is a shortage, a scarcity, an outage. I don't know whether these are semantic differences or whether they are real differences of opinion on that question. I don't think we need to pursue that any longer. I think that is one of the threshold questions that we are going to have to face before we reach the question of what, if any, kind of controls are required.

Of course we also have to decide if in our opinion, if controls are required, they should be statutorily enacted controls. That raises other questions, of course.

I don't think we need to get into the particulars of the bill. We know what is in the bill.

I do have two questions left with me by Senator Cranston; one, I believe, we have already covered, and that dealt with the impact of import controls on the balance of payments.

He also asked what other countries still permit the export of scrap. Is United States in fact the only major producer of scrap that has not enacted export embargoes?

Mr. AKIN. To answer that question, Japan does export scrap. It exports scrap to Taiwan and South Korea.

It is my understanding that they own the operations in Taiwan and in South Korea, so that it is almost as though it were their common market.

In Europe, France exports scrap to Germany; and Belgium to France; and back and forth within the common market.

It is my understanding that a very small amount of scrap, to wit, about 400,000 tons per year, less than half a million tons, is allowed to leave the common market.

This information I received from the American Iron and Steel Institute.

Senator STEVENSON. Some non-EEC countries were mentioned earlier, I believe, Australia, Canada, Eastern European, South America.

Mr. AKIN. I wish I knew how much scrap they allow to leave their own countries. Some of those countries of course may not have a large cold metal shop type operation.

Mr. SHEEHAN. I have a note here, Mr. Chairman, on the EEC countries.

They do have a trigger identifying the levels of critical shortage. And when exports out of the common market reach 300,000 tons, the EEC then imposes a strict quota allowing exports to reach no more than 400,000 tons a year.

So we would not be alone in pursuing this course and perhaps the staff could check out how this breaks down country-by-country within the common market.

But we would not be unique.

Senator STEVENSON. I do have one further question on that issue of shortage.

I understand that the 1969-70 shortage was due in some part to a shortage of hot metal. Is that the case now? And if so, can the so-called shortage of scrap be relieved by making alternatives available or through development of more technology?

Mr. AKIN. I think there are a couple of points there that would be well worthwhile to speak to.

First of all, the business of shortage and whether there is one or whether there is not.

Mr. Cook said earlier that the information along this line on the availability of scrap was extremely soft information. There happens to be also some very hard information.

For example, what did the domestic industry use or the buyers of scrap use in the first quarter of this year. It was around 10,600,000. That happens to be about a half million tons higher than anything we have used in the past.

I think the second quarter of 1972 was 10.1 million. So that we know also that the steel industry is operating at peak levels and probably will continue to do so all year.

So one firm guess would be to take that 10.5 million times four and that would be a 42 million ton domestic consumption a year. That is a pretty hard figure.

It is about as good a guess as I know of as to what will happen this year.

As to the figure for exports, we made some projections on that early in the year. As far as the steel industry went, we weren't too far off. I think the American Iron and Steel Institute guessed between 11 and 12 million. We were told earlier in the year we were way off, but that seems to have been pretty well confirmed, now that we are at the 11 to 12 million.

Mr. HEFFERNAN. I might add that orders as of July 1 for the 6 months of the year were 12.5 million. That is orders booked for one half of the year.

Mr. AKIN. This is data from the Department of Commerce, July 2 release.

Mr. HEFFERNAN. If I could add a footnote. The problem with this shortage **Mr. Chairman**, the position we have taken, is that figures like 750 million tons in a reservoir are meaningless as far as the problem we are facing this year, and perhaps the next 2 years, which would be the life of this bill.

We don't know what can be collected, processed and delivered within 1 year exactly. Nor has anyone that we know of ever offered solid statistics or figures. We are just unwilling to take simple assurances, particularly from those who have a tremendous vested interest in selling outside of the country, that they may be able to meet that level.

So we have said almost the only figure you can revert to is the history, the immediate history of the last 10 years. What has happened, what was generated.

We recognize, and one of the reasons we didn't make this bill indefinite in length, that perhaps 5, 10, 15 years from now a different substantive trigger may be realistic.

What we have said is for the foreseeable future the only thing we can look to is the past. We know every time in the last 10 years we have gotten close to 46 million, it has been accompanied with tremendous pressures on price, serious problems of quality, et cetera.

This was the reason for that trigger level, and why we have so much difficulty with this question of whether there is or is not a shortage.

The projections are pretty much in common agreement at this stage, that the demand will be at least 53.5 million for 1973. That is, we pointed out, considerably above the highest ever recorded before, 46 million.

Mr. AKIN. I would like to add one point to that.

The Export Administration Act does not refer to outages. It talks about shortage. So often we have one substituted for the other. If there is no outage, therefore there is no shortage.

Mr. HEFFERNAN. Mr. Cook indicated earlier that one of the indicators was that they had not heard of a foundry unable to obtain scrap at any price.

Of course you know all of us feel that the ball game is over when that occurs. It is too late when you finally are shut down for lack of availability of scrap, because there is no way you will be able to close the gap in a reasonable period of time.

Of course that would be a disaster. It is that very situation, outages, that we are attempting to prevent with this bill.

Senator STEVENSON. What I was getting at is whether increased use of pig iron might take the pressure off the scrap.

Mr. CURRIE. You are asking about pig iron and things of that nature in lieu of scrap?

Let me note that in the production of ductile iron, which is undoubtedly the fastest growing material in the ferrous industry for castings in the past 10 years, sored metal is used. That is a specially processed material.

This material is produced in Canada, and recent prices have taken it to \$97 a gross ton. There is no material on the west coast. Japan came in and took a bit out of Quebec recently. The material is available at the west coast for \$116 a gross ton delivered from Brownsville, Tex., and we are to allow 3 to 6 weeks for delivery.

There is a \$85 to \$116 material that has come from Canada to supplement scrap iron or scrap steel, material that goes out of San Francisco. It is unfair and unreasonable, sir.

Mr. HEFFERNAN. Let me add in our own industry we are increasingly and we look forward to the day when we will be making only ductile iron pipe, and that would be one hundred percent scrap usage, we won't be using pig iron at all.

Senator STEVENSON. Gentlemen, our time has expired. Thank you very much.

[Thereupon, at 5:15 p.m. the hearing was concluded.]

[The complete statements of the panel of witnesses follow:]

STATEMENT OF EDWARD D. HEFFERNAN,
DIRECTOR OF WASHINGTON AFFAIRS,
CAST IRON PIPE RESEARCH ASSOCIATION

TO THE

SUBCOMMITTEE ON INTERNATIONAL FINANCE
COMMITTEE ON BANKING, HOUSING AND URBAN AFFAIRS
UNITED STATES SENATE

Mr. Chairman and members of the Subcommittee, my name is Edward D. Heffernan. I represent the Cast Iron Pipe Research Association, a national trade association of manufacturers of cast and ductile iron pressure pipe. CIPRA consists of seven members who operate pipe foundries employing more than 15,000 people, with a high percentage of minorities represented. These pipe foundries are located in nine states: Alabama, California, Illinois, Ohio, New Jersey, Tennessee, Texas, Utah and Virginia.

The cast iron pressure pipe and fittings industry annually ships about 2,000,000 tons of castings. Most of these castings are used in community water and sewer systems, and so the role our industry plays in maintaining the public health of the nation is evident.

Our industry has a low profile because its product is generally installed below ground, or in water treatment and sewage disposal plants and seldom seen by the average citizen. Therefore, a brief description of the manufacturing and marketing practices of the industry is in order.

/In a

In a typical cast iron pipe foundry, scrap metal is mixed with coke and limestone and melted in a cupola furnace. The molten iron is poured into rotating (centrifugal) molds where the pipe is formed to its finished dimensions. Unlike the static casting foundry, there are no foundry returns in a pipe foundry--except for pipe rejected for not meeting quality control standards. And, unlike the steel industry, there is no "home scrap" in a pipe foundry. Therefore, the cast iron pressure pipe industry is heavily dependent on ferrous scrap as a material for manufacturing. The metal charge of a cupola may range from seventy percent scrap and thirty percent pig iron to one hundred percent scrap, depending on the melting practices of the foundry.

The trend today is for more pressure pipe to be cast from ductile iron, instead of gray cast iron. High quality ductile iron, suitable for pressure pipe manufacturing, can only be made from ferrous scrap.

The type of scrap commonly used consists of shredded automobiles, chunks of old structural steel, mining machinery, farm and construction equipment, etc. Scrap iron castings, such as old radiators and old cast iron columns are also utilized when available, but this type of scrap is fast disappearing from the scene. Our industry, and others in the iron and steel manufacturing area are truly the recyclers of waste iron and steel.

/ Most

Most cast and ductile iron pressure pipe is sold by the manufacturer directly to the user of pipe--the local water or sewer utility, or to a general contractor who is constructing a water or sewer system. Very little cast or ductile iron pressure pipe is sold to jobbers for stockpiling or warehousing. In this sense, pipe foundries are custom casting shops. Orders are taken and production is scheduled for delivery by agreed upon dates.

The price of the pipe is established at the time the order is taken--it is not priced at time of shipment. Therefore, the pipe producer cannot pass on to his customer a sudden increase in scrap prices which may occur between the time an order is booked and the time that the pipe is shipped.

Pipe foundries purchase scrap on a continuing basis with frequencies ranging from monthly to daily. It is customary for pipe foundries to maintain a scrap inventory sufficient to meet their anticipated needs of one to two months. During this current period of scrap shortage and unrealistic prices, the foundries have had to draw heavily from their inventories. Many now report having less than a two-week supply on hand. One foundry recently depleted its scrap inventory to a low of twenty-four hours supply.

The Institute of Scrap Iron and Steel (ISIS) faults the iron and steel industry's inventory control practices. They state: "It was possible to buy more than the required scrap at the low price levels which existed during the doldrums of the past two years. Some mills did, thereby insulating themselves from the recent price movement." Can this be the statement of an informed businessman?

In order for a foundry to have hedged against the current price siege, it would have been necessary to build a scrap inventory of ten months or more supply. Now we ask, is this realistic? Aside from the very practical problem of making available the space to store such an enlarged inventory, there must also be considered the time value of money. An astute pipe foundryman keeps one eye on the anticipated future market for pipe and the other on the price of scrap. No foundryman can be expected to tie up his assets in a vast supply of raw material for which he has no reasonable assurance of short term profitable use. In short, the scrap industry is suggesting that the iron and steel industry allow an inventory practice which they themselves do not follow.

ISIS further contends there is no shortage of scrap. Since the scrap industry is not a regulated industry, but an industry subject to all the forces of the classic law of supply and demand, what, other than an unprecedented

/demand

demand could account for the escalation of scrap prices that has occurred in the past twelve months? In a recent survey, our membership reports an increase in scrap prices of forty to sixty percent since late August-early September, 1972.

Even when an increase in the price of scrap is anticipated, the manufacturer of cast and ductile iron pressure pipe is dissuaded from passing on these increased manufacturing costs to its customer. Setting aside any discussion of federal price controls, since this is a temporary situation at best, the cast iron pipe manufacturer is confronted with an ever increasing problem--competition from substitute materials. This industry has intense competition across its entire range of product size--from 2 inch to 54 inch diameter pipe. There is competition from plastic pipe, asbestos-cement pipe, prestressed concrete pipe and steel pipe. None of these substitute materials can match the enviable service record of cast iron pipe, hence the preference of many buyers for cast iron pipe. However, an increase in the price of cast iron pipe to cover the inflated cost of scrap metal only serves to destroy the industry's competitive stance. The users of cast iron pipe will pay only so much of a premium, and then they will begin considering seriously the substitution of some other piping material in their utility systems.

The precipitous increase in the price of scrap is not the only factor affecting our members' manufacturing cost. The deteriorating quality of the presently available scrap is

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also adding to production costs. Foundrymen today are forced to accept scrap of a quality that two years ago they would have rejected at first sight. To reject such scrap today is to invite production shutdowns.

Several of our members report damage to their air pollution control equipment caused by burnable trash in shredded scrap. If this trash is allowed to get into the cupola, it is blown off in an incendiary state by the cupola blast, picked up by the air pollution control devices and carried over into the bag house where it can set the bags on fire. Foundrymen using the wet process of air pollution control report difficulties with plugging of their equipment by blown off trash. These increased maintenance costs serve only to increase production costs.

Manufacturers of ductile iron pipe report that the forced use of poorly processed scrap is causing metallurgical problems which require them to re-anneal their product. With an energy crisis at hand, is there any justification for doubling the use of natural gas in order to properly anneal a ductile iron casting?

Even more serious than the problem of absorbing inflated scrap prices, is the problem that can be caused by a shortage of scrap. Failure of a cast iron pipe manufacturer to meet a scheduled delivery of pipe because of a slowdown or shutdown in production can have dire consequences for both the user

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and the manufacturer. Delay of construction while the user re-engineers the project to accommodate a substitute material adds to the overall cost of the project; the customer is forced to accept a piping material which he did not originally want; and, the manufacturer has lost a customer. Such is the chain reaction of events which can occur when the manufacturer of cast iron pipe is unable to obtain the quantities of scrap he requires. The possibility of such events occurring this year are very real indeed.

Again we must address ourselves to the ISIS contention that there is no shortage of obsolete scrap. In testimony before the House Subcommittee on International Trade on March 23, 1973, ISIS stated that a Battelle Memorial Institute report "found an inventory of scrap iron in this nation in 1969 in excess of 750 million tons". A close reading of the report will reveal that the 750 million tons was an estimate of the amount of steel then in use which could eventually be expected to return to iron and steel mills as scrap. The figure included both old and new automobiles, machinery, buildings, etc.--a large amount of which would not be available as scrap for periods of up to fifty years or more. Furthermore, ISIS stated: "Only sixty percent of the newly available scrap is being recycled so that this massive inventory is being added to at a huge rate each year." According to the report, however, Battelle based their 750 million ton figure on the assumption that only sixty percent of the steel in use would eventually

/be

be recovered as scrap and recycled, the balance being in forms or uses which did not lend themselves to recovery.

These statements by ISIS are clearly a misrepresentation of the Battelle report. Can we, therefore, place any credence in their continued assertions that "there is no shortage of scrap metal"? Are we to sit idly by until the shortage becomes so severe as to cause plant shut-downs before it becomes evident that these assertions of adequate supply are without basis in fact? Where are the believable statistics? The only proper definition of "available scrap" is scrap in the user's inventory or in the scrap dealer's yard--either processed or capable of being processed within the period the user wants deliver. To date neither ISIS nor the Department of Commerce has published any such figures which could allay the fears of the iron and steel industry.

No other industrialized nation in the world permits the uncontrolled export of ferrous scrap in substantial quantities. It is the lack of a definitive export policy that has brought us to the current state of short supply and grossly inflated scrap prices. And this is not the first time. We have had similar situations in 1956, 1969-70 and 1973. If the United States continues with a policy of no control, the increasing recurrence of international steel shortages will cause similar shortages of scrap metal, attendant inflationary prices, and

/eventual

eventual permanent damage to our domestic iron and steel industry. The simple fact is that this nation can not always afford a policy of largesse and extravagance in the exporting of ferrous scrap--a critical resource.

The Export Administration Act of 1963, as amended, provides the Secretary of Commerce with the authority to use export controls "to the extent necessary to protect the domestic economy from the excessive drain of scarce materials and to reduce the serious inflationary impact of abnormal foreign demand". In short, the Act provides for guarding against the very situation which now exists in ferrous scrap--abnormal foreign demand resulting in an inflationary impact. However, there has been a reluctance on the part of the Secretary of Commerce to exercise his authority under the Act--short of a crisis situation. This begs the question: is the intent of Congress being carried out? We do not believe that it is.

We believe the Secretary of Commerce is hampered by the lack of specific guidelines to follow. The "trigger mechanism" proposed in S. 2119 would give him the necessary guidelines, and would serve to prevent these crises occurring in the future.

Continuance of a policy of uncontrolled exports of ferrous scrap can only lead to repeated disruptions in the market place--heavy draws by foreign buyers over short time periods in anticipation of undefined export restrictions by our government.

The instituting of an embargo as crisis proportions mount, and the inability to fill foreign orders with the consequences of damaged foreign relations, all accompanied by inflationary domestic scrap prices are indicative of the lack of an adequate export control mechanism.

What are the consequences of the Secretary of Commerce's most recent restrictions on ferrous scrap exports? The Japanese government now suggests that the U. S. exercise more discipline in managing its economy. They are correct indeed. Discipline is needed in the management of our exports. We fail to see how the Japanese, or any other scrap importing foreign nation, could object to the provisions of S. 2119. The ground rules would be known before the game was played. With domestic demand normal or lagging, foreign buyers could place orders for scrap without fear of restrictions. An increase in domestic demand would provide ample warning for foreign buyers that they hold their U.S. purchases in check, or that they cast about elsewhere in the world to supplement their purchases of scrap.

Essentially, there are two questions which Congress must decide:

First, is the problem relating to ferrous scrap exports sufficiently great to require legislative action; and,

Second, is the approach to the problem, S. 2119, a fair and equitable solution for all the parties involved.

/scrap

scrap collectors and processors, the scrap users, the consumer, and, ultimately--is it in the public interest?

We believe that our testimony, taken in context with that of all the other scrap users, supports our position that these questions deserve an unqualified affirmative answer.

**Supplementary Data to Support
the Joint Statement of the
Cast Iron Pressure Pipe Research Association
Cast Metals Federation
International Molders and Allied Workers Union
United Steelworkers of America
and the
Ferrous Scrap Consumers Committee
Regarding
S-2119
to the
Subcommittee on International Finance
of the
Senate Committee on Banking, Housing and Urban Affairs**

July 18, 1973

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ENERGY AND THE U.S. STEEL INDUSTRY

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Geologic time can be divided into four energy epochs. First, there was the great energy transformation during creation—the nature and extent of which are clouded in biblical and astrophysical uncertainty. Second, there was the long period in geologic history when animal and vegetation remains were confined under conditions of incomplete oxidation and over millions of years were transformed into the world supply of fossil fuels. Mankind then entered a period of industrial energy resource depletion. During most of this period which extended from the beginning of recorded time to the middle of the twentieth century, industrial energy consumption was increasing at what now appears as an almost im-

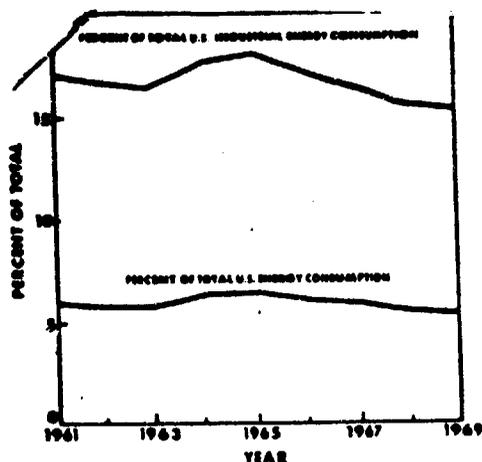
exploited during this third period ranged from solar radiation to water power, wood, coal, lignite, petroleum, gas and, finally, nuclear energy. In the fourth stage of this arbitrary time-energy spectrum (the last quarter century) the rate of industrial energy consumption rose exponentially, and more industrial energy was produced and consumed than in all previously recorded time.

The recent explosion in industrial energy demand has strained the available supply. On short term, there is a need to develop an orderly plan for the allocation of available energy resources. Over a longer time span, it is necessary to recognize that fossil fuel supplies have definite limits, and it becomes apparent that mankind cannot sustain its energy-dependent culture without a substantial revision of the attitudes on which its complex technical, social and economic structures are based.

Present shortages naturally introduce competition for selected fuel supplies. In this situation, nations, industries and individuals must compete for the proven energy resources that best meet immediate requirements. The disposition of energy reserves to meet these needs often conflicts with what might be man's best overall interest. The proper resolution of such conflict will require a massive effort to manage the world's energy resources that will extend well beyond the life span of those who are just now beginning to attack the problem. Inevitably, this effort must be integrated into the broader program which is needed to guarantee man's survival on earth.

This brief report is concerned with isolated and perhaps minor aspects of this long-range problem—the energy situation in the steel industry of the United States. At present, the United States is the greatest consumer of industrial energy of all developed nations. Figure 1 shows that over recent years about 17 percent of the industrial energy consumed in the United States was used by its steel industry (1). While it is likely that steel manufacturing technology will change so as to improve its energy usage efficiency, there is no immediate prospect that the steel industry's posture as a major energy consumer will change.

The assignment of this report is to assess the energy situation in the steel industry of the United States with particular emphasis on future requirements for electric furnace steelmaking. In responding to this assignment, consideration is given to all energy forms available to the steel industry and the manner in which these resources are used in the steel manufacturing sequence. An effort is also made to provide a basis for identifying energy considerations that will influence the manner in which the steel industry in the United States expands



Steel industry energy resources

The information in this report was derived from many sources. For the most part, such references are noted in the manuscript. Special acknowledgement should be given to the statistical reports of the American Iron and Steel Institute and the private report, "Energy Use by the Steel Industry of North America", recently issued by Battelle Memorial Institute. These documents provided general perspectives on the steel industry energy situation as well as specific data that were important in the development of the present report.

Energy resources readily available to the United States steel industry reside principally in domestic reserves of fossil fuels. As shown in Figure 2, fossil fuels—coal, oil and natural gas—are historically the dominant energy source in the United States steel industry, comprising over 95 percent of the approximately 3,500 trillion BTU's¹ of energy consumed annually in recent years.

Coal

Coal is by far the major energy source for the steel industry. In 1969, the steel industry used over 84 million net tons of coking coal and nearly six million tons

¹ The energy unit most commonly used in the United States is the British thermal unit (BTU) which is the unit that will be used in this report. The authors apologize to the advocates of Systeme International and suggest that a simple, rough conversion to joules may be obtained by multiplying the number of BTU's by one thousand.

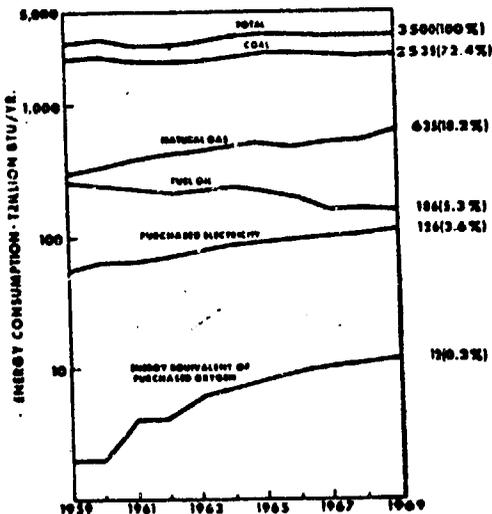
serve this dominant position for some years.

TABLE I
ESTIMATED RESERVES OF COKING COALS
(JANUARY 1, 1969)

	Coal Reserves, Million Net Tons (2)		
	Metallurgical Grade	Marginal and Uncertain Grade	Total
High Volatile	69,392	121,971	191,363
Medium Volatile	16,750	17,499	34,249
Low Volatile	15,031	9,411	24,442
	101,173	148,881	250,054

Since 1950, there has been a marked increase in steam coal consumption by the electric utility industry in response to a great surge in energy demands. This demand surge has been accompanied by restraints on sulphur contents imposed by recent air pollution regulations. In addition, there has been a hesitancy on the part of coal producers to commit large amounts of capital to the facilities required to expand production. This reluctance reflected the prediction of a more rapid adoption rate of nuclear power operation than proved to be the case. The delay in committing capital, problems related to environmental protection legislation, and

FIG. 2. — Total consumption of energy by the steel industry of the United States, 1959-1969 (1).



substantial increases in coal exports all contributed to the recent much publicized energy crisis in the United States.

Producers have now responded to the coal shortage through a program to develop new and existing mines and to improve the efficiency with which the product is transported to markets. Work is also in progress aimed at developing techniques for overcoming the objections to the use of higher sulphur coals. Thus, the long-term coal supply available to the United States steel industry appears adequate. It seems inevitable, however, that coal prices will increase in the coming years to amortize the capital expenditures required to carry out an expanded production program and to offset increasing operating and transportation costs.

Natural gas

Because of its cleanliness, versatility and convenience, natural gas is a most attractive fossil fuel for many applications. Over 18 percent or 635 trillion BTU's of the steel industry's energy needs were supplied by natural gas in 1969. Proven reserves of natural gas are now placed at about 275 trillion cubic feet (280,000 trillion BTU's) which is only about 13 times the 1969 production rate. The future supply of natural gas has been adversely affected by the sharply increased demand as well as a slowdown in the rate of exploration for new reserves in the United States. As a result, the ratio of reserves to annual production in the United States decreased from 22.9 in 1953 to 13.3 in 1969.

Figure 3 shows a projection of the natural gas demand and supply situation in the United States [3]. On the basis of this analysis, a definite shortage can be predicted within the next decade. From this figure, it appears that natural gas will have a decreasing availability for industrial purposes and, even then, at sharply increased prices.

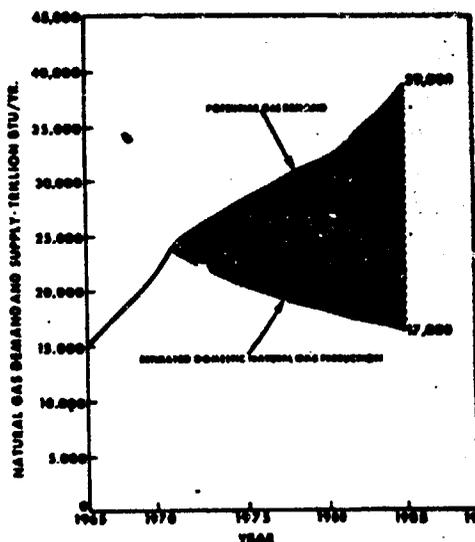
While liquefied natural gas competes with pipeline gas at some coastal locations and its inroads are expected to increase in the future, it is not a significant energy source for the steel industry.

Similarly, other developments, such as coal gasification, are receiving considerable attention, reflecting the high priority assigned to the need for additional gas supplies. The importance being assigned to high-quality gas could cause a shift from industrial uses which exploit its potential as a heat source to those which use it as a raw material for specialized chemical processing.

Fuel oil

Heavy fuel oil supplied about five percent of the total energy needs of the steel industry in 1969 [1]. This per-

FIG. 3. — Projection of United States natural gas demand and supply situation [3].



centage has decreased slightly over the past decade, largely reflecting the drop in the proportion of steam made by the open-hearth process during that period. The overall demand for residual fuel oil, on the other hand, has increased rapidly since 1965 to meet the sharply increasing power demand imposed on the electric utility industries.

For many years, the price of fuel oil was relatively constant and in many areas was competitive with other prices. Recently, however, crude oil production in the United States has exceeded additions of readily available reserves. During the next decade, it is likely that there will necessarily be increased reliance on imports [4]. In addition, extensive auxiliary installations will probably be needed to meet rigid sulphur emission standards imposed on fuel oil consuming industries. Thus, while the supply of fuel oil appears adequate for the next two decades [5], there will necessarily be an increase in the cost of this energy source to the consumer.

Electric power and steam

Integrated steel plants are large consumers and generators of both electrical power and steam. It is estimated that the equivalent of about 4.3 million BTU's per raw steel ton of steam is required in the average steel plant, with about 1.5 million BTU's of that ton devoted to electric power production. Total electri-

has been little change in the amount of internally generated electrical power in the steel industry of the United States since 1959. Purchased electrical power, on the other hand, has more than doubled in that period. In 1969, 126 trillion BTU's, or 75.8 percent of the total electrical power used in the United States steel industry, was purchased. This represented about four percent of the industry's energy needs in that year.

Operating nuclear generating capacity currently amounts to less than three percent of the total United States power generation capacity, but its proportion is expected to grow rapidly in future years and will reach significant levels by the late 1970's. This growth will be in response to the continuing surge in the demand for electrical power. Table 2 summarizes the status of nuclear power plants—operating, under construction or planned as of March 31, 1971—as reported by the Atomic Energy Commission [6].

TABLE 2
STATUS OF NUCLEAR POWER PLANTS
(APRIL 1, 1971)

Number of Plants		Capacity Kilowatts
21	Operable	8,306,800
36	Under Construction	47,102,000
37	Planned (Reactors Ordered)	36,727,000
		<hr/> 92,135,800

(Total U.S. Power Generating Capacity is 359,000,000 kW [7].)

Though the entire electrical power requirements for a steel plant or group of steel plants could be completely furnished by a single nuclear power station, no effort in this direction has yet been made in the United States. Such a venture could conceivably be a reasonable undertaking in large, integrated steel plants, since the economics would be favored by the use of the by-product steam.

Oxygen

Oxygen represented slightly less than 0.5 percent of the industry's energy needs in 1969. Oxygen usage by the steel industry has increased approximately sixfold in the period between 1959 and 1969. This was caused primarily by the large expansion of oxygen steelmaking—a trend which is expected to continue.

industry's energy requirements, only those items were included in Figure 2.

Steelmaking process energy usage

Figure 2 indicates that the steel industry consumed about 3,500 trillion BTU's in 1969. This energy consumption is principally associated with the major processes used in the conversion of raw materials into finished steel products. Table 3 gives a breakdown showing the estimated energy consumption in the major steps of the steel manufacturing sequence.

TABLE 3
UNITED STATES STEEL INDUSTRY ENERGY USAGE
(1969)

	Energy Usage Trillion BTU's			
	Input ^a	Output ^b	Net Total	Per Cent of Total
Raw materials preparation	195	—	195	5.6
Direct reduction	3	—	3	0.1
Cokemaking	2,478	1,830	628	17.9
Ironmaking	1,979	755	1,224	35.0
Open hearth steelmaking	311	24	287	8.2
Electric furnace steelmaking	58	8	50	1.4
Oxygen furnace steelmaking	149	24	125	3.6
Primary rolling	228	7	221	6.3
Continuous casting	4	—	4	0.1
Finished product rolling	398	—	398	11.4
Other ^c	365	—	365	10.4
			<hr/> 3,500	<hr/> 100.0

^a Input energy includes the potential energy and sensible heat in the charged materials plus the fuel and electrical energy used in carrying out the process.

^b Output energy includes the potential energy and sensible heat in the products and by-products of the process.

^c "Other" includes energy consumed in producing lime, ferroalloys, merchant coke, merchant iron, services, etc.

Table 3 indicates that over 75 percent of the 1969 net energy consumption was used in the processes involved in converting raw materials into semi-finished sections. Most of this energy was consumed in the production of molten iron. Analysis of the data used in preparing Table 3 reveals that substantial energy (over one-third) is lost because of the sequential nature of steel manufacturing technology. Process changes aimed at reducing the steps in the steel producing sequence and novel techniques for recovering the heating values of waste

gases provide promising opportunities for impressive improvements in the energy usage efficiency of the steel industry.

Table 4 was prepared to show the 1969 energy consumption per product ton for the major steel manufacturing processes. This table demonstrates that of the processing steps listed, direct reduction, cokemaking and ironmaking consume the largest amount of energy per ton of product. It also shows that of these three processing steps, direct reduction consumes the greatest amount of energy.

TABLE 4
ENERGY USAGE PER PRODUCT TON
FOR THE MAJOR STEEL
MANUFACTURING PROCESSES (1969)

	Production, Million Tons	Net Energy Use, Million BTU's/ton
Raw materials preparation	221.3	0.9
Direct reduction	0.2	15.0
Cokemaking	58.3	10.8
Ironmaking	89.8	13.6
Open hearth steelmaking	60.9	4.7
Electric furnace steelmaking	20.1	2.5
Oxygen furnace steelmaking	60.2	2.1
Primary rolling	136.8	1.6
Continuous casting	4.5	0.9
Finished product rolling	89.1	4.5

Tables 3 and 4 can be misleading since they do not readily reveal the total energy used to produce a ton of steel product via the different steel manufacturing routes. Table 5 shows that the total energy requirements difference is greatly influenced by the proportions of material used in the respective steelmaking processes and the manner in which the charge metallics are prepared. On this basis, the open hearth sequence was a marginally lower total consumer of energy than was the oxygen steelmaking sequence.

The table also shows that the external fuel requirements in open hearth steelmaking are offset by the energy required to produce the higher proportion of molten iron essential to the operation of the oxygen steelmaking processes. Thus, the higher proportion of hot metal required in oxygen steelmaking carries with it the higher proportional energy losses in the raw materials preparation, cokemaking and ironmaking processes. Per ton of product, oxygen steelmaking was the highest total energy consumer in 1969 by a small margin. The very low total process energy shown in Table 5 for electric furnace steelmaking reflects its very low consumption of hot metal and the fact that losses in purchased power generation were not considered as process energy in this analysis.

Table 4 also compares the energy requirements per ton of product for casting semi-finished sections as opposed to rolling these sections from ingots. This table indicates that the continuous casting route consumes about one half the energy required for conventional processing. Most of the energy used when rolling ingots is consumed in heating the raw steel to temperatures at which it can be rolled readily into semi-finished sections. The continuous casting operation, on the other hand, functions simply as a vast cooler. Most of the energy supplied to the process is in the form of sensible heat in the liquid steel, and all of this is lost as the cooled, solidified section is delivered from the casting machine.

Discussion of future trends

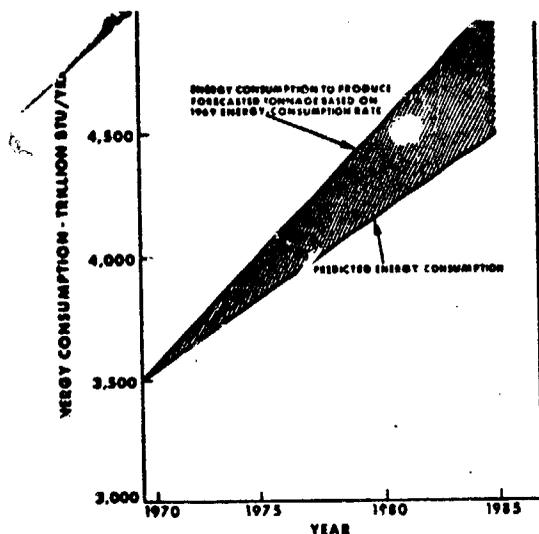
It has been estimated [8, 9] that steel consumption in the United States will grow at a rate of about 2.5 percent per year for the next 15 years. Assuming that the United States steel industry production increases proportionately, annual steel production could reach 200 million net tons in 1985.

Figure 4 represents an attempt to show the manner in which energy consumption could change as steel production is increased. The upper line in Figure 4 represents the energy usage, assuming there is no change in requirements for the major processing steps. An analysis of the improvements in steel manufacturing techniques and processes that are likely to be effected in the next 15 years indicates opportunities for substantial reduction in overall energy requirements. Obviously, these opportunities will be best exploited in new facilities built to meet the demand for added capacity. It is

TABLE 5
PROCESS ENERGY CONSUMED
UNITED STATES STEEL INDUSTRY (1969)
RAW MATERIALS THROUGH STEELMAKING
Energy Required for Various Processes, Trillion BTU's

	Open Hearth	Electric Furnace	Basic Oxygen	Total
Raw materials	85	1	109	195
Cokemaking	272	5	351	628
Ironmaking	532	8	684	1,224
Steelmaking	287	50	125	462
Total Energy Used	1,176	64	1,269	2,509
Raw Steel Produced, Net Tons	61,000,000	20,000,000	60,200,000	141,200,000
Energy Usage, Million BTU's/ Net Ton Raw Steel	19.3	3.2	21.1	17.8

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estimated that these energy savings could average 10 percent of total energy consumption by 1985. The lower curve in Figure 4 projects the near-future energy requirements assuming that the 10 percent saving is attained.

The energy savings used in developing Figure 4 are expected to result from such improvements as:

1. Reduced coke rates in blast furnace

In the 1960's, the average coke consumption decreased from 0.72 net tons of coke per ton of molten iron to 0.63. With further improvements in blast furnace practice, the average coke rate in existing blast furnaces should decrease further to about 0.50 tons per ton of molten iron and the rates in new furnaces, to some level well under the 0.50-ton figure.

This further reduction in the coke rate will, in part, be the result of increased use of blast furnace fuel injection. Injectants will include coal, fuel oil, gas, tar, oxygen and moisture. Such practices will affect process economics as well as the overall energy requirements.

2. Increased use of continuous casting

As stated earlier, the energy required to produce one ton of semi-finished product by continuous casting is about one-half the amount required for conventional rolling. In addition, continuous casting provides im-

percent of total semi-finished product that 19 million net tons of continuous casting capacity will be installed in the United States by the end of 1971 [10]. Some major improvements in steel quality, process reliability and operating flexibility will undoubtedly be achieved in the next few years that will increase the attractiveness of continuous casting. On this basis, it is unlikely that many new large primary mills will be built in the next decade and this transition will have a significant effect on energy requirements.

3. Further replacement of open hearths with oxygen steelmaking and electric furnaces

The decline of open hearth steelmaking in the 1960's will continue as the older shops are abandoned. It has been estimated [11] that about 25 million net tons of the existing capacity is sufficiently modern to be adaptable for continued efficient operation.

For many years the electric arc furnace was used almost exclusively for alloy and stainless steelmaking. The replacement of open hearth capacity with basic oxygen furnaces in the late 1950's and early 1960's had the effect of creating surplus scrap. With favorable scrap prices in the early 1960's, many electric furnaces were installed to take advantage of this opportunity to expand capacity at relatively low cost. The adoption of ultra-high power in the mid-1960's has favorably affected productivity, operating costs and energy requirements, thus adding to the attractiveness of the electric furnace steelmaking option.

Electric furnace economics has reflected fluctuations in the scrap supply situation. As a hedge against such fluctuations, careful consideration is being given to the installation of ore metallization plants, to augment the supply of metallics. As shown in Table 4, however, the substitution of metallized ore for scrap imposes a huge energy burden on the electric furnace process. The principal elements necessary for a competitive metallized ore process are ample sources of low-cost, high-quality fuels and high-purity, low-cost iron ore concentrates. Experience indicates that high-grade metallized ore can be used effectively as a scrap substitute in the electric furnace. It is, therefore, likely that metallized ore plants will be constructed as adjuncts to electric furnace steelmaking in locations with favorable fuel and ore situations.

4. Preheat of scrap for the basic oxygen shop

Basic oxygen steelmaking is now the principal steelmaking method in the United States. In recent years,

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scrap preheating techniques have been developed to increase the scrap consuming capability of the process, thus adding flexibility in metallics utilization. The net effect of scrap preheating is to reduce the energy consumption in steelmaking because the energy requirement for preheating is less than energy input into the production of an equivalent amount of molten iron.

5. Use of basic oxygen furnace gas recovery systems

Gas collection hood systems have been developed and applied to recover the chemical heat in a sulphur-free off-gas. It is reasonable to expect that there will be wider use of gas collection systems as the cost of energy and the demand for low-sulphur fuels increase.

Energy influence on future steelmaking

The trends described in the preceding section of this report lead to the conclusion that future steelmaking expansion will be in oxygen furnace and electric furnace capacity, that some form of metallized concentrates will be needed to support the added electric furnace capacity and that semi-finished sections will be cast directly from liquid steel. Within this framework, it is interesting to speculate how energy considerations will influence the nature of such process changes in the next 15 years.

Over the time span to 1985, there will be increasing activity directed toward providing optimum combinations of electric furnace steelmaking and oxygen steelmaking capacities. This prediction is made in anticipation of heavy future reliance on nuclear power and coal as the major future sources of energy for steelmaking. To support a major growth in electric furnace steelmaking capacity, it will be necessary to reduce the vulnerability of the process to the availability and cost of scrap. This will require new technology in ore beneficiation to reduce gangue content to acceptable levels. In the case of direct reduction, new technology will be needed to permit the economic production of metallized

ore, low in sulphur, from readily available solid and liquid fuels.

As previously projected, the United States raw steel production is expected to reach 200 million net tons in the mid-1980's. Assuming that 36 million tons of the 1969 open hearth capacity will be abandoned in the period being considered, a total of 90 million net tons produced from new steelmaking capacity will be required. It is assumed that this 90 million tons will be comprised of varying proportions of electric furnace and oxygen furnace steelmaking.

To predict the proportion of the two steelmaking processes that will comprise the 90 million ton new capacity to be installed in the period being considered, it is necessary to make some additional assumptions. These assumptions are made, not as predictions but rather to provide a base from which deductions can be made regarding problems related to the options considered. These assumptions are:

1. By 1985 a total of 109 million net tons of raw steel production will be continuously cast and 91 million tons will be cast as ingots. This breakdown is derived by assuming that practically all new raw steel capacity will be continuously cast.
2. The electric furnaces will utilize scrap to the extent it is available and the balance of the all-cold metallic charge will be made up by metallized iron ore. This assumption serves to minimize the requirements for hot metal capacity additions and imposes a 30 percent average hot metal charge on the 25 million net tons of open hearth capacity.
3. The final assumption concerns scrap steel supply. For conventional ingot practice, 35 percent of raw steel production will be returned to steelmaking from internal company sources, and about 22 percent of raw steel production will be returned as purchased scrap. For continuously cast steel, these proportions will be 25 percent and 22 percent respectively. On this basis, the total scrap availability will be about 110 million tons.

TABLE 6
MATERIALS AND ENERGY REQUIREMENTS FOR PRODUCTION OF RAW STEEL
BY VARIOUS PROCESS COMBINATIONS

Case	Raw Steel Produced (Million Net Tons)				Materials Demand (Million Net Tons)			Energy Demand (Trillion BTU's)	
	O. H.	Elec.	BOF	Total	Scrap	Hot Metal	Metallized Ore	Gas	Total
1969	61	20	60	141	76.7	89.8	0.2	635	2,737
1985 - I	25	40	135	200	110	117.7	0.5	624	3,664
1985 - II	25	50	125	200	110	110.6	6.2	693	3,582
1985 - III	25	60	115	200	110	103.4	14.0	815	3,560
1985 - IV	25	70	105	200	110	96.3	20.8	923	3,513

ulate the total materials and energy requirements for four different steelmaking combinations by which the predicted 200 million raw steel net tons can be produced (ingots and continuously cast sections). The four cases considered here involve 40, 50, 60 or 70 million annual tons of electric furnace production, respectively. The results of this calculation are summarized in Table 6.

Table 7 translates these data in terms of demands for new sources of metallics and for additional energy. The additional gas needs were computed assuming a decrease of 36 million tons of open hearth steelmaking, and increase in gaseous fuel usage for external scrap preheat in oxygen steelmaking and the use of gas for direct reduction of ore. It might be argued that ore metallization processes are not restricted to the use of natural gas as a reductant. The status of the direct reduction technology is such that other reducing agents generally add to the sulphur content of the metallized ore and thus introduce restrictions in the use of the product.

TABLE 7
PROJECTION OF METALLIC AND ENERGY DEMAND
(1969 to 1985)

Case	Electric Furnace Capacity Net Tons	Demand for New Metallics Over 1969 Requirements Million Net Tons		Demand for Additional Energy Over 1969 Requirements Trillion BTU's	
		Hot Metal	Metallized Ore	Gas*	Total
1969	20	0	0	0	0
1985 - I	40	27.9	0.3	(-11)	927
1985 - II	50	20.8	6.0	68	845
1985 - III	60	13.6	13.8	180	823
1985 - IV	70	6.5	20.6	288	776

In addition, Table 7 shows that as electric furnace steelmaking exceeds 40 million tons, the total energy requirements decrease at a modest rate but the gas demands increase at a relatively rapid rate. As shown in Table 7, the conditions assumed in Case IV would increase the steel industry's demand for gas nearly 50 percent. Such an increase is not consistent with the projections for a decline in the future domestic natural gas supply as projected in Figure 3.

It would appear that in order to attain the higher electric furnace production levels shown in Table 7, it will be necessary to augment the available supply of charge metallics with metallized ore. Furthermore, new schemes for direct reduction which do not depend on

must be developed. Alternatively, it would be possible to increase scrap steel supplies as improved systems are developed by means of which materials not now being recycled are collected and re-used (in that case, the numbers given in the scrap column of Table 7 would be changed correspondingly).

In addition to energy considerations, the extent to which electric furnace steelmaking will exceed the 1969 production level of 20 million net tons, will be influenced by factors such as investment costs, operating costs and availability of metallized ore. Other studies [12, 13] have indicated that the net effects of investment and processing cost considerations give a slight edge to the modern blast furnace, oxygen steelmaking route over the metallized ore, electric furnace route for expansion, provided the raw steel requirement from a given plant is large enough to consume the production of a large blast furnace. Expansion of electric furnace capacity is, therefore, most likely to occur where the additional steel demand is small and where suitable low cost metallized ore can be supplied or produced.

The deductions given here emerge from relatively arbitrary assumptions regarding technical aspects of existing major steelmaking processing sequences. Obviously, such assumptions can be attacked and other defensible technical concepts and basic assumptions proposed. It is suggested, however, that the foregoing analysis is useful, since it provides a base from which to make projections and also allows recognition of some problems that must be faced in meeting future steel requirements in the United States.

Conclusions

This review demonstrates the manner in which the steel industry contributes to and is affected by the trends in consumption of vital energy resources in the United States. Coal reserves in the United States appear adequate but, in common with other segments of the economy, the steel industry will be affected by impending shortages of natural gas and significantly higher prices of fuel oil. The greater availability of electrical energy expected as the technology of nuclear power generation attains its full potential will be an important factor contributing to decisions regarding future steel manufacturing installations.

Energy requirements must be considered in planning future steelmaking expansion. The report points out that ironmaking and steel refining are the major energy consuming processes in the steel manufacturing sequence. Accordingly, these are the processes most

likely to be influenced by trends in the availability and character of energy resources.

Adequate energy reserves should be available to support substantial growth in oxygen steelmaking. Economic and energy considerations attendant to such growth could dictate a simultaneous expansion of high powered electric furnace steelmaking. Such electric furnace steelmaking growth will require an expanded supply of high-quality metallic charge materials. In this respect, the steel industry could benefit from efforts directed toward recovering metallics which, for economic and technical reasons, are not now being recycled. In addition, there is a need to develop direct reduction techniques using fuels other than natural gas and which produce high-quality metallized ore suitable for general use in future steelmaking processes. Without such improvements, a finite restraint will be imposed on electric furnace steelmaking expansion in the United States.

Finally, energy considerations make it desirable to increase the emphasis on energy conservation in steel manufacturing processes. This requires that greater effort be directed to recapturing thermal and chemical energy now being wasted within the elaborate steel manufacturing system. The report indicates some opportunities for such energy conservation. It is reasonable to expect that these opportunities will be exploited and that there will be a substantial reduction in energy consumption per ton of steel product. Projections in this report assume that there will be a modest improvement in energy requirements of existing facilities and a substantial energy usage improvement in new plants built to meet demands for new capacity. Such trends toward improved energy usage efficiency generally represent sound economic practice. Of greater significance, perhaps, is the recognition that a major industry would be acting to preserve some

critical energy resources for yet undisclosed uses by future generations.

ACKNOWLEDGEMENT

The authors thank Messrs. W. R. Wilson, W. R. Gray, G. L. Landsly, N. A. Robins and P. K. Strangway who assisted in the preparation of the manuscript.

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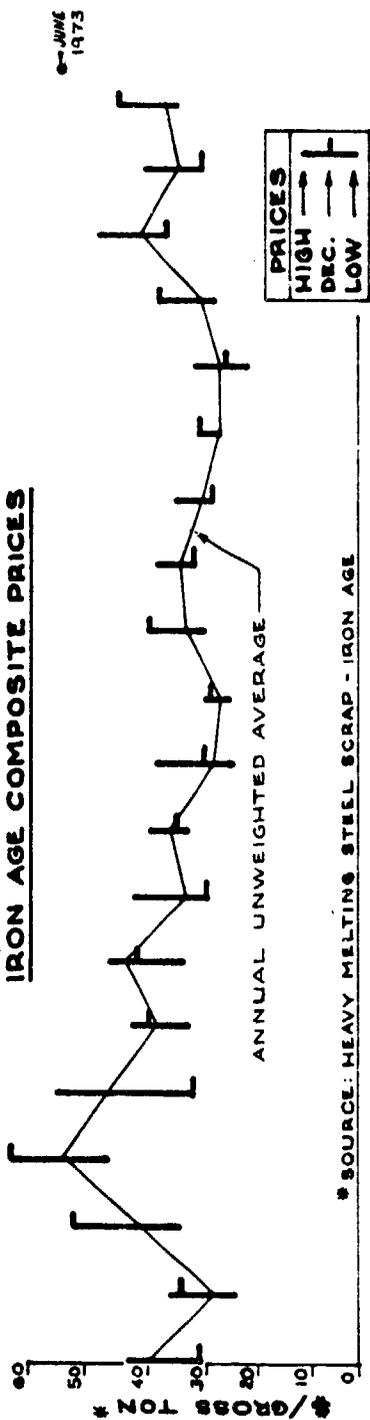
Questions and Answers

Mr. Marchesi: *Thank you very much, Mr. Tenenbaum, for your extensive speech, which has covered the problem of the energy requirements in the United States in the next years.*

We have tried to sort the questions that have been put and they are split between pre-reducing problems and general and technical problems.

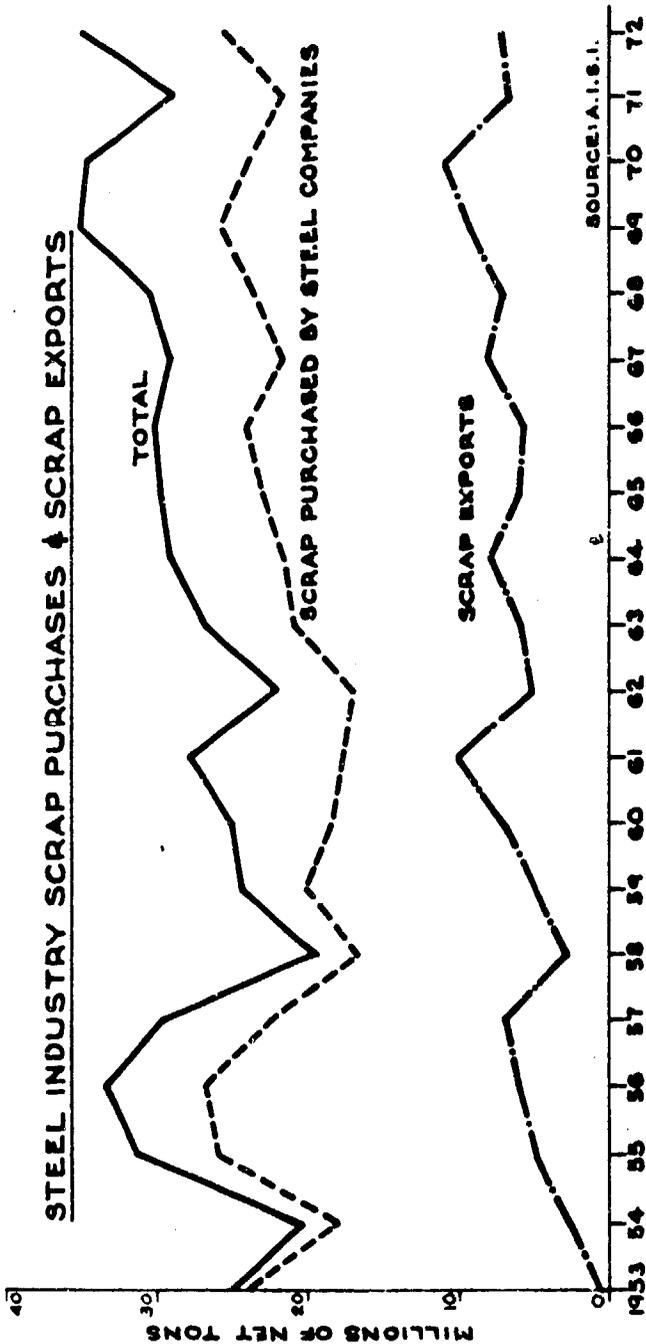
Question to Mr. Astlers: *I should like to know the future prospect for availability of natural gas in Western Europe. Do you think that the steel industry in Western Europe will be able largely to depend upon natural gas for iron ore reduction?*

IRON AGE COMPOSITE PRICES



* SOURCE: HEAVY MELTING STEEL SCRAP - IRON AGE

STEEL INDUSTRY SCRAP PURCHASES & SCRAP EXPORTS



SOURCE: A.I.S.I.

STEEL INDUSTRY SCRAP PURCHASES, SCRAP EXPORTS AND SCRAP PRICES

	Scrap Purchases 1,000/Tons	Scrap Exports 1,000/Tons	Total Col(1) & Col(2)	Average Scrap Prices
1953	24,703	317	25,020	39.52
1954	18,711	1,606	20,317	28.50
1955	26,367	4,992	31,359	40.19
1956	27,500	6,279	33,779	53.01
1957	22,632	6,864	29,496	46.75
1958	16,360	2,937	19,297	38.00
1959	19,925	4,849	24,774	40.49
1960	18,173	7,190	25,363	32.95
1961	17,890	9,716	27,606	36.28
1962	16,801	5,113	21,914	28.23
1963	20,634	6,364	26,998	27.11
1964	21,273	7,899	29,172	33.67
1965	23,107	6,170	29,277	34.35
1966	24,038	5,858	29,896	30.87
1967	21,300	7,635	28,935	27.62
1968	23,514	6,572	30,086	25.85
1969	25,985	9,176	35,161	30.83
1970	24,012	10,365	34,377	41.08
1971	21,824	6,256	28,080	34.09
1972	26,006	7,475	33,481	36.86

Source: Heavy Melting Steel Scrap - Iron Age
A.I.S.I.

(Refer to graph on next page)

July 18, 1973

FERROUS SCRAP EXPORTS - FOUNDRY AND STEEL PRODUCER RECEIPTS
 QUARTERLY DATA
 (THOUSANDS OF NET TONS)

	QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTALS		QUARTERLY EXPORTS	QUARTERLY RECEIPTS	QUARTERLY TOTALS
<u>1961</u>				<u>1968</u>			
1st	2,147	5,336	7,483	1st	1,367	9,401	10,768
2nd	3,184	6,788	9,972	2nd	1,423	9,301	10,724
3rd	2,540	6,267	8,807	3rd	1,867	6,863	8,730
4th	<u>1,845</u>	<u>6,913</u>	<u>8,758</u>	4th	<u>1,916</u>	<u>8,006</u>	<u>9,922</u>
Total	9,716	25,304	35,020	Total	6,573	33,571	40,144
<u>1962</u>				<u>1969</u>			
1st	1,180	7,217	8,397	1st	1,044	9,332	10,376
2nd	1,390	6,252	7,642	2nd	2,478	9,560	12,038
3rd	1,448	5,251	6,699	3rd	3,051	8,534	11,585
4th	<u>1,097</u>	<u>6,565</u>	<u>7,662</u>	4th	<u>2,603</u>	<u>9,274</u>	<u>11,877</u>
Total	5,115	25,285	30,400	Total	9,176	36,700	45,876
<u>1963</u>				<u>1970</u>			
1st	1,122	7,105	8,227	1st	2,112	8,948	11,060
2nd	1,612	8,624	10,236	2nd	3,224	8,942	12,166
3rd	2,086	6,465	8,551	3rd	2,795	9,295	12,090
4th	<u>1,544</u>	<u>7,238</u>	<u>8,782</u>	4th	<u>2,233</u>	<u>7,890</u>	<u>10,123</u>
Total	6,364	29,432	35,796	Total	10,364	35,075	45,439
<u>1964</u>				<u>1971</u>			
1st	1,881	7,561	9,442	1st	1,573	8,853	10,426
2nd	2,157	8,075	10,232	2nd	1,747	9,333	11,080
3rd	2,104	7,609	9,713	3rd	1,785	6,951	8,736
4th	<u>1,738</u>	<u>8,364</u>	<u>10,102</u>	4th	<u>1,151</u>	<u>7,790</u>	<u>8,941</u>
Total	7,880	31,609	39,489	Total	6,256	32,927	39,183
<u>1965</u>				<u>1972</u>			
1st	1,395	8,818	10,213	1st	1,439	9,501	10,940
2nd	1,692	9,739	11,431	2nd	1,736	10,193	11,929
3rd	1,822	8,317	10,139	3rd	1,966	8,888	10,854
4th	<u>1,260</u>	<u>8,446</u>	<u>9,706</u>	4th	<u>2,243</u>	<u>10,026</u>	<u>12,269</u>
Total	6,169	35,320	41,489	Total	7,384	38,608	45,992
<u>1966</u>				<u>1973</u>			
1st	1,108	9,522	10,630	1st	2,703	10,608	13,311
2nd	1,476	9,645	11,121	**2nd	3,791	10,630	14,421
3rd	1,653	8,598	10,251	**3rd	3,381	10,630	14,011
4th	<u>1,620</u>	<u>8,841</u>	<u>10,461</u>	**4th	<u>2,045</u>	<u>10,630</u>	<u>12,675</u>
Total	5,857	36,606	42,463	**Total	11,920	42,498	54,418
<u>1967</u>							
1st	1,811	8,073	9,884				
2nd	2,257	8,205	10,462				
3rd	2,152	7,567	9,719				
4th	<u>1,414</u>	<u>8,866</u>	<u>10,280</u>				
Total	7,634	32,711	40,345				

Sources- U.S. Department of Commerce Business Statistics, except as noted below

* Bureau of Mines

** Department of Commerce Estimate of July 1, 1973.

STATEMENT OF PAUL B. AKIN
PRESIDENT AND TREASURER OF
LACLEDE STEEL COMPANY
before the
SUBCOMMITTEE ON INTERNATIONAL TRADE
UNITED STATES HOUSE OF REPRESENTATIVES
March 23, 1973

Mr. Chairman, my name is Paul B. Akin. I am the President and Treasurer of the Laclede Steel Company. Laclede is a midwestern steel producer with steelmaking facilities in Alton, Illinois, and general offices in St. Louis, Missouri. Laclede has approximately 3,500 employees. Net sales for the past two years have been over \$100 million, and we were listed as number 682 last year in Fortune magazine's list of United States corporations. In 1972 we produced 750,000 tons of raw steel or about 1/2 of 1% of the raw steel that was made in the United States.

I want to thank you for giving me an opportunity today to express my thoughts about the Export Administration Act, and about the proposed amendment to it. I recognize that you are now in your third day of hearings on this subject, so I will make my presentation brief and very direct.

Today I will state initially what I think Congress is trying to accomplish with the Act, and with the amendment. I will then attempt to show why the intent of Congress is not being executed, and what I think must be changed before the legislation will be effective.

ASSUMPTIONS:

1. It is my opinion that Congress recognizes the following:
 - A. that some industries do not own, but must purchase in the market the raw materials that they process,

- B. that a shortage of such raw materials can economically damage such a processing industry,
 - C. that exports of these raw materials can aggravate a shortage, and
 - D. that the export of raw materials helps this nation's international balance of payments.
2. It is my opinion that Congress passed the Export Administration Act, and is considering the present amendment to accomplish one objective. The objective is: if a domestic raw material shortage develops, exports of that raw material are to be curtailed to the extent necessary and possible to eliminate the domestic shortage.

Discussion

If the above assumptions are correct, is the intent of Congress being fulfilled? In my opinion, if we consider the raw material ferrous scrap, the intent of Congress was not fulfilled when we had a shortage in 1970, and it is not being fulfilled in the shortage that is occurring now. I believe that the primary cause of this failure is that the Act does not define its terms. Some problem areas are: What is "inflationary" and what is a "serious inflationary impact"? What constitutes proof that a shortage exists? What is "abnormal foreign demand"? What combination of events must be established before export controls can be instituted?

To understand more fully what I am referring to by this criticism, let me describe the frustrations many of us experienced in 1970 when we tried to get the Department of Commerce to impose ferrous scrap export controls.

By way of background, Laclede had incurred losses from its operations in 1968 and 1969. The loss in 1969 was just over three million dollars. By early February of 1970 scrap prices had jumped 46% over the ten year average, or 64% over the year earlier price. It was apparent that if these prices held, Laclede would have to earn an additional \$7 million in 1970 if it was to have a loss for the year no greater than the \$3 million loss of 1969. In 1955, 1956, and 1957, the last time scrap prices had reached these levels, the price of steel products increased more than enough to offset scrap prices, and Laclede had three of the most profitable years in its history. In 1962, however, President Kennedy imposed an informal but firm price restraint on the steel industry. Subsequently, President Johnson did the same. Early in 1970 it was obvious that the big steel companies were in no position to justify much in the way of price increases. The amount of scrap purchased by most of the large integrated steel companies is a relatively small percentage of their total raw material mix. Therefore, the scrap price increase did not have as drastic an economic impact on the big companies as it did on the small "cold metal" shops that rely entirely on scrap for raw material. If the small companies tried to pass through the cost increase, they would lose their customers.

Obviously, the Export Administration Act appeared to be the exact piece of legislation to correct the domestic scrap shortage problem. Hence, on February 10, 1970, a group of steel company presidents met and decided to try to have ferrous scrap exports curtailed. On February 17, 1970, representatives from twenty-seven steel companies, a representative from the United Steelworkers of America, and one from the American Iron and Steel Institute met with representatives of the Department of Commerce and made the request that ferrous scrap exports be curtailed. The steel company representatives were thanked for bringing the matter to the attention of the Department, and we were assured that they would study the situation.

In the months that followed, we had numerous meetings with the Department of Commerce. I also met with the Deputy under Secretary of State for Economic Affairs, at the State Department, and later with Dr. Hendrik S. Houthakker of the Council of Economic Advisors. In meeting after meeting, the steel companies large and small and the foundries argued and urged that the Act be used to grant relief. On August 20, 1970, I was one of four steel company presidents that met with the Secretary of Commerce. We informed him of the ferrous scrap shortage and requested that he impose ferrous scrap export controls. He thanked us very much for bringing the matter to his attention, and advised us that he would study the matter.

In retrospect, I have wondered why we were unable to convince the Department of Commerce to use the Act. The price

of scrap reached levels that had not been attained since 1957. In the first half of the year scrap prices averaged 56% above year earlier prices. Many of us felt that certainly this was prima facie evidence that a scrap shortage existed.

We recognized that the "abnormal foreign demand" was difficult to establish early in the year; but before many months passed, we saw month after month of very heavy exports.

In view of the prices mentioned above, we thought that "inflationary impact" had been clearly illustrated. Our present national goal is to contain inflation to a 3% level. In Phase II labor increases could not exceed 5.5%. We learned in 1970, however, that those in the Department of Commerce have a different concept of the Export Administration Act and when it should be applied. We learned that if ferrous scrap prices jump 28% above the ten year average (1961 - 1970), as they did in January of 1970, and to a level of 46% above the ten year average as they did in February of 1970, this is inflationary and "warrants study." When the price dropped slightly as it did in March of 1970 to 41% above the ten year average, it is apparently no longer inflationary. We were told then, just as we have been advised now, that "we are merely experiencing a temporary imbalance. The price has peaked. The supply is now catching up to demand. The situation has stabilized, and it would be inappropriate to institute ferrous scrap export controls at this time." As mentioned above, the "stabilized" price was stabilized 40% above the ten year average.

In September of 1970 Laclede borrowed an additional three million dollars to meet expenses. Later in the year we renegotiated the terms of our long-term Note Agreement, and our percent of debt to invested capital reached 54.8%.

In 1971 and 1972 Laclede had modest earnings and late in 1972 we made our first major payment on our long-term debt. In December of 1972 and in January of 1973, the price of scrap again increased rapidly to levels even higher than in 1970. The Department of Commerce indicated that they were considering export curtailments. In February the price of scrap dropped slightly, and Commerce backed off at once to study the situation.

Conclusion

There is no doubt in my mind that the United States has an urgent need for an Act such as the Export Administration Act. I am delighted that you are making an effort to improve it, as it has proven to be of little value in its present form to the steel industry and to the foundries. The amendment you propose helps clarify the intent of the bill, and the "forecast indices" will undoubtedly help many commodities. The second part of page 2 describing technical advisory committees will probably also be of great help to many commodities.

As mentioned in my account of 1970, however, we had no difficulty arranging meetings and studies. We had no trouble obtaining indices as they appeared regularly in the trade journals.

We just could not get in 1970, nor can we now, get a decision to use the Act.

Thank you again for letting me express my opinions to you today, as you can see Laclede's "domestic welfare has been affected."

Respectfully submitted,

Paul B. Lakin

U.S. EXPORTS OF FERROUS SCRAP BY MONTH, 1973¹

	(000 Net Tons)		
	JAPAN	ALL OTHER COUNTRIES	TOTAL
Exports, January-June	3,256	3,238	6,494
ORDERS, ²			
" July	683	649	1,332
" August	801	390	1,191
" September	578	280	858
" October	421	404	825
" November	482	319	801
" December	292	127	419
" July-December	3,257	2,169	5,426
TOTAL, 1973	6,515 ³	5,407	11,920

1. Includes data as of June 17, 1973; June includes reported exports, plus orders.

2. As reported.

3. Includes 500,000 tons purchased by Japanese trading companies and destined for other countries, principally Taiwan and Korea.

Source: Bureau of the Census
DIB-632P
1A-1094

July 1, 1973

U.S. EXPORTS OF FERROUS SCRAP BY MAJOR IMPORTING COUNTRY, 1973¹

	(000 Net Tons)			TOTAL
	Exports		Orders	
	January-June	July-December ²		
JAPAN	3,256	3,257		6,513 ³
SPAIN	507	503		1,010
CHINA	191	619		810
KOREA	339	220		559
TAIWAN	338	104		442
ITALY	174	237		411
ALL OTHER COUNTRIES	<u>1,689</u>	<u>486</u>		<u>2,175</u>
TOTAL	6,494	5,426		11,920

1. Includes data as of June 17, 1973; June includes reported exports, plus orders

2. As reported.

3. Includes 500,000 tons purchased by Japanese trading companies and destined for other countries, principally Taiwan and Korea.

Source: Bureau of the Census
DIB-632P
LA-1094

NUMBER 89
(ECB-OEC-89)
July 2, 1973

- SUBJECTS:
- I. Revision of the Commodity Control List to Impose Validated License Requirements on Exports of Ferrous Scrap.
 - II. Saving Clause.
 - III. General Provisions.
 - IV. Licensing System for Exports of Ferrous Scrap Against Orders of 500 Short Tons or More for Export in July.
 - V. Licensing System for Exports of Less Than 500 Short Tons.
 - VI. Reduction of Shipping Tolerance Allowance.

PURPOSE AND EFFECT:

Export Control Bulletin No. 84 of May 22, 1973, established a reporting requirement on exports and unfilled or partially filled accepted orders for export of 500 short tons or more of ferrous scrap. This requirement remains in full force and effect. The data submitted pursuant to this requirement have resulted in the following actions:

I. Revision

The Commodity Control List is revised, effective 3:30 P.M. EDT July 2, 1973, to require a validated license for export of ferrous scrap to all destinations, including Canada. Previously, a validated license was required only for shipment to Country Groups S and Z (Southern Rhodesia, Communist-controlled areas of Vietnam, Cuba, and North Korea).

The new validated export license requirement applies to all shipments of the commodities listed below, regardless of the value of the shipment and of whether the shipment is made against an order accepted on or before the effective date of this Bulletin. The commodities are the following:

<u>Schedule B Number</u>	<u>Commodity Description</u>
282.0010	No. 1 heavy-melting steel scrap, except stainless
282.0020	No. 2 heavy-melting steel scrap, except stainless
282.0030	No. 1 bundles steel scrap, except stainless
282.0040	No. 2 bundles steel scrap, except stainless
282.0050	Borings, shoveling and turnings, iron or steel, except stainless
282.0060	Stainless steel scrap
282.0065	Shredded steel scrap
282.0078	Other steel scrap, including tin-plated and terne-plate
282.0080	Iron scrap, except borings, shoveling and turnings
282.0090	Rerolling material of iron or steel

II. Saving Clause

Shipments of commodities removed from general license as a result of the revision in the Commodity Control List set forth in Part I above, which were on lighter destined for an exporting vessel or for which loading aboard an exporting vessel had actually commenced as of 3:30 P.M. EDT July 2, 1973, may be exported under the previous general license provisions. Any other shipment of such commodities requires a validated license for export.

III. General Provisions

Except as provided in Part V below, no licenses will be issued for exports of ferrous scrap against an order which was accepted after July 1, 1973, and no application for a validated license to export ferrous scrap will be considered until further notice, unless it is against an unfilled or partially filled order calling for exportation during the month of July 1973, which was accepted by the exporter on or before July 1, 1973, and reported by him pursuant to the reporting requirement established on May 22, 1973, under Export Control Bulletin No. 84. The licensing system for exports of ferrous scrap against reported orders of 500 short tons or more calling for exportation after July 31, 1973, which were accepted on or before July 1, 1973, will be announced in a subsequent Bulletin.

IV. Licensing System Against Orders of 500 Short Tons or More for Export in July

A. Submission of application with supporting documentation:

All exporters who reported unfilled or partially filled orders accepted on or before July 1, 1973, for exportation during the month of July 1973, of 500 short tons or more of the commodities listed in Part I above, and who wish to be considered for the issuance of validated licenses for export of such commodities, must file with the Office of Export Control (Attention: 546), U. S. Department of Commerce, Washington, D. C. 20230, an application with the following supporting documentation: (1) Photocopy or certified copy of each contract of sale for export to a foreign buyer, accepted by the applicant on or before July 1, 1973; and (2) a sworn affidavit by the applicant as to the amount previously exported against each such contract, if any. The application shall be submitted on forms FC-419 and FC-420.^{1/} The above mentioned documentation will serve in lieu of the form FC-842, Single Transaction Statement by Consignee and Purchaser, that would otherwise be required pursuant to §375.2 of the Export Control Regulations.

^{1/} Forms FC-419 and FC-420 are available from the Office of Export Control (Attention: 547), U. S. Department of Commerce, Washington, D. C. 20230, or the nearest Department of Commerce District Office.

B. Issuance of Licenses for Exportation During July

The Office of Export Control will verify the authenticity of the application and supporting documentation described in Part A above, and if it meets the requirements set out therein, will issue a validated license for the unfilled balance of the accepted order.

C. Special Terms

Each license issued under this procedure will only be valid for shipment against the particular contract and during the particular month specified, allowing shipment during a period of seven days following the end of each month, to provide for unavoidable delays. Any cancellation of a contract automatically revokes the license that was issued against it. In the event of the cancellation of a contract, the applicant is required to file a report of such cancellation with the Office of Export Control no later than five days from the date of cancellation. If a license has been issued against such contract, the license shall be returned to the Office of Export Control with the notice of cancellation.

V. Licensing System for Exports of Less Than 500 Short Tons

Until further notice, applications for licenses to export ferrous scrap against accepted orders for less than 500 short tons, which are submitted on Forms FC-419 and FC-420, will be considered by the Office of Export Control, irrespective of the date on which the order was accepted, if accompanied by a photocopy or certified copy of each contract of sale for export to a foreign buyer, together with a sworn affidavit by the applicant as to the amount previously exported against each such contract, if any. The copy of the contract will serve in lieu of the Form FC-842, Single Transaction Statement by Consignee and Purchaser, that would otherwise be required pursuant to §375.2 of the Export Control Regulations. After verification of the authenticity of the documentation submitted by the applicant, licenses will be issued for exportation during the month specified in the contract for the total amount of the contract or the unfilled balance, whichever is the lesser amount. The period of validity of such licenses will be twenty-one days from the date of issuance.

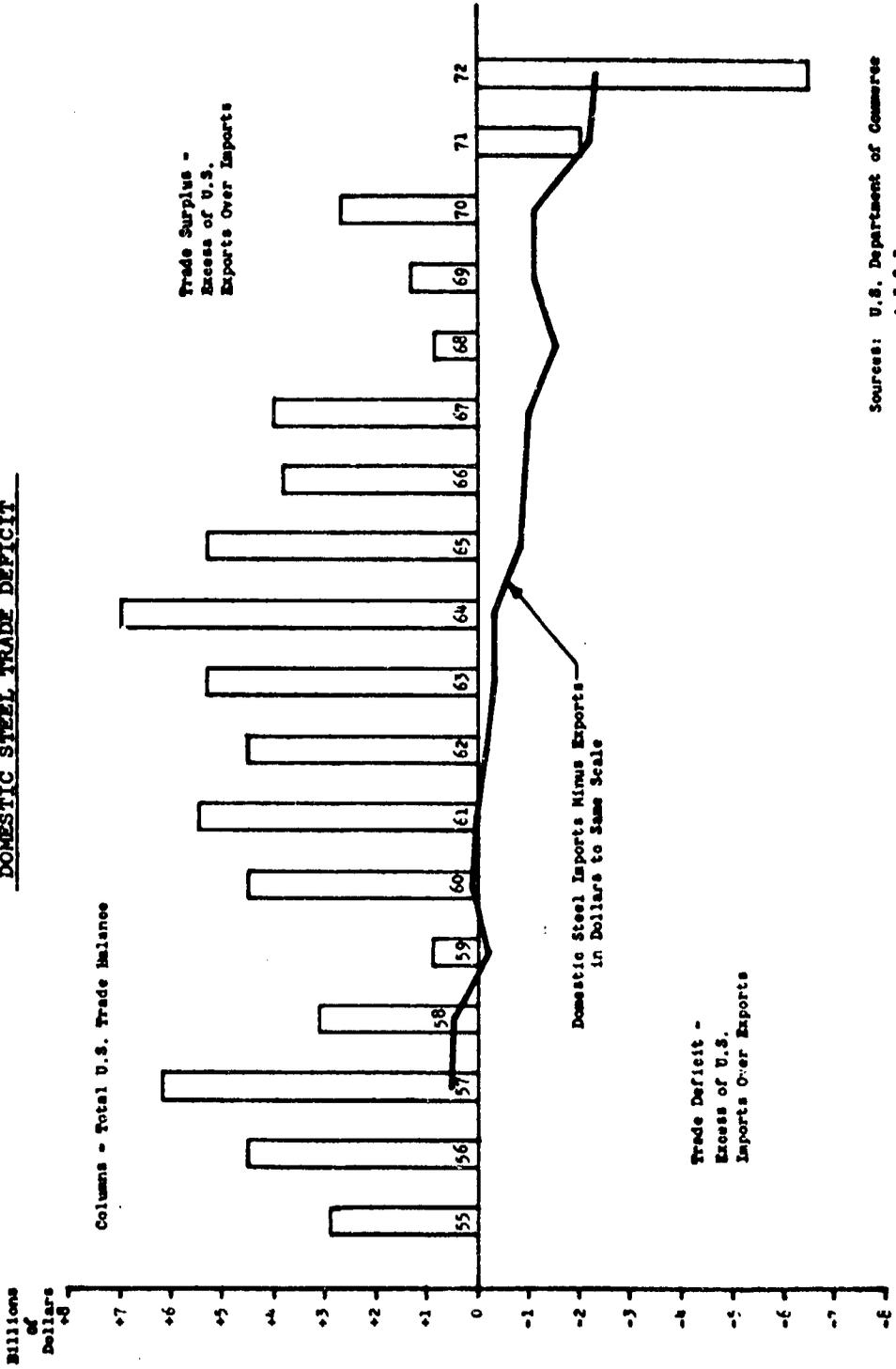
Any cancellation of the contract automatically revokes the license that was issued against it. In the event of the cancellation of a contract, the applicant is required to file a report of such cancellation with the Office of Export Control no later than five days from the date of cancellation. If a license has been issued against such contract, the license shall be returned to the Office of Export Control with the notice of cancellation. Exporters are hereby placed on notice that in the event the volume of exports under this licensing procedure reaches an unacceptable level, further restriction may be imposed on exports against orders of less than 500 short tons.

VI. Reduction of Shipping Tolerance Allowance

Paragraph 386.7(b)(1) of the Export Control Regulations states, in part, that a shipping tolerance of 10 percent is allowed on the unshipped balance specified on a validated license for shipments of any commodities licensed in units of short tons. For licenses issued under the procedures set forth above, this shipping tolerance allowance is reduced to 2½ percent.

Section 399.1 and Supplement No. 1 to Part 377 of the Export Control Regulations are amended accordingly, and a new §377.4, "Ferrous Scrap," is established. Replacement pages will be published in a forthcoming Export Control Bulletin.

**U.S. INTERNATIONAL TRADE RECORD
AND
DOMESTIC STEEL TRADE DEFICIT**



Sources: U.S. Department of Commerce
A.I.S.I.

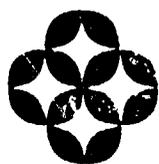
**U. S. INTERNATIONAL TRADE RECORD
AND
DOMESTIC STEEL TRADE DEFICIT**

	(1) Trade Surplus or (Deficit) Millions of Dollars		(2) Domestic Steel Exports (Minus) Imports Millions of Dollars	
	Exports	(Imports)	Exports	(Imports)
1955	14,290.5	11,490.7	N/A	N/A
1956	17,332.5	12,773.7	N/A	N/A
1957	19,495.0	13,254.7	717	544
1958	16,367.3	13,255.3	544	352
1959	16,394.7	15,627.2	352	(163)
1960	19,608.7	15,017.5	585	136
1961	20,152.2	14,713.0	379	(3)
1962	20,944.9	16,389.1	302	(182)
1963	22,424.9	17,141.6	291	(342)
1964	25,620.2	18,684.6	425	(324)
1965	26,699.5	21,365.6	357	(820)
1966	29,379.2	25,542.2	330	(878)
1967	30,934.4	26,812.3	301	(991)
1968	34,062.8	33,226.3	337	(1,639)
1969	37,331.7	36,042.8	679	(1,063)
1970	42,659.3	39,963.2	893	(1,074)
1971	N/A	N/A	**447	*(2,189)
1972	N/A	N/A	**474	*(2,320)

Source: (1) Department of Commerce
(2) A.I.S.I.

*Aid Financed Exports are Estimated

**U. S. News and World Report - Feb. 26, 1973



Center Lines

Published by Steel Service Center Institute, Vol. VIII, May, 1973

THE STEEL BOOM: A SIGN OF THINGS TO COME

The long awaited steel boom has finally arrived — and it couldn't have developed at a more opportune time. It follows a protracted period of frustration during which steel companies installed new facilities at a record pace only to watch the steel needed for their profitable operation rolled on foreign mills. In recent years, under the onus of heavy fixed cost burdens and poor returns, steel investment, excluding that for pollution control, has been scaled down appreciably. Now, as never before in the steel industry's 100-year-plus history, its plans for expansion are extremely inadequate in relation to the expected growth of demand. The steel boom, therefore, has developed at a time of unprecedented need for improved steel profits. Just to what extent the boom's spur to revenues and earnings will bring forth investment capital remains to be seen. In any event, steel companies will find it difficult to accomplish the expansion needed to head off an impending shortage of steel.

The nation's current steel capacity, considered strictly on a total tonnage basis, is adequate in relation to current demand. However, varying degrees of demand activity are affecting the markets for individual steel products, and combined with scattered operating, maintenance, and transportation problems, this has led to an extension of lead-times and supply problems on a spot basis. At least for the boom's duration, therefore, the quick availability of steel has become a thing of the past, and this fore-

shadows the likelihood of more serious supply difficulties as early as four to five years from now. At that time, barring the not too strong possibility of adequate capacity additions, steel users in increasing numbers will find that steel is unavailable no matter how long the wait, and in this sense, the boom now in progress is a sign of things to come.

Today's Boom and Tomorrow's Shortages

The ongoing expansion of steel demand has been so strong and so rapid in recent months that steelmakers have been pulling out all stops in what, so far, has been a vigorous, but a somewhat losing effort to keep pace with customer orders. In effect, the boom has been testing the limits of the industry's productive capacity, and current levels of output and shipments are providing a good indication of just how much steel demand the industry can or cannot satisfy.

As the boom gathered steam during the first quarter, the nation's steel mills stepped up their production schedules and by the second week in April were pouring steel at a record annual rate of 156 million net tons. Shipments, meanwhile, also attained a record annual rate approximating 118 million net tons. But even though steel mill activity has been pushed to an all-time high, the rate of new orders has been such that backlogs have been piling up and lead-times have been extended to as much

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He has lectured widely throughout the world and is a member of President Nixon's Task Force on Business Taxation. He is an economic consultant to the Steel Service Center Institute and participates in many SSCI programs.



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as 20 weeks on some products. The following list indicates the approximate lead-times on orders placed during the third week in April.

Steel Product Lead-Times

Product Category	Average Lead-Times ¹
Galvanized Sheets	20-22 weeks
Cold-Rolled Sheet and Strip	16-20 weeks
Hot-Rolled Sheets	12-16 weeks
Strip-Mill Plate	12-16 weeks
Concrete Reinforcing Bars	12-15 weeks
Stainless Sheet and Strip	10-14 weeks
Mechanical Tubing	8-10 weeks
Seamless Drill Pipe	8-10 weeks
Lightweight Structural Sections	6-10 weeks
Alloy & Heat Treated Plate	6-8 weeks
Stainless Plates	5-8 weeks
Stainless Bars	5-8 weeks
Hot-Rolled Bars	5-6 weeks
Standard Plate	5-6 weeks
Cold-Finished Bars	3-5 weeks
Small Structural Sections	2-3 weeks

¹) Averages for orders placed the week of April 15, 1973.

As lead-times have stretched out, steel marketing has become more and more a process of allocation, posing supply problems even for regular customers. Last month, for example, one firm's standing \$2 million annual order was cut back to \$1 million, while another firm, which last fall had been asked to double its regular monthly purchases, was cut back to its original tonnage, this at a time when its steel requirements were on the increase. Such are the supply problems now faced by some regular steel customers, while others with non-existent or limited mill connections, including recent heavy users of imported steel, have had their orders turned down by some mills.

Considering that the rate of new orders could well support a significantly higher level of steel shipments, there is a good reason to conclude that the peak rates of activity recently registered have been crowding the steel industry's maximum capabilities, for if steelmakers could in any way do so, they would produce and market even more steel. Theoretically, at least, the industry could melt more steel; its annual raw steel capacity is some seven to ten million net tons more than its current annual production rate of 156 million net tons. But raw steel must be transformed into salable products, which in turn must be shipped to customers, and in the process a number of unavoidable limitations and bottlenecks are encountered, particularly at peak periods of operation.

Demand vs. Rolling Capacity: At peak levels, the demand for individual steel products very often does not evolve in direct proportion to the various types of rolling mill capacity available for their production. This discrepancy, which is reflected in the wide disparity in product lead-times, results in varied utilization rates on finishing facilities.

Geographic Pattern of Demand: Another discrepancy, this between the geographic pattern of demand and the location of steelmaking facilities, also inhibits the industry's raw steel production. During the current boom, demand pressure on most mills

in the Midwest and South has been more intense than on mills in the East and Far West, which, consequently, have been quoting shorter than average lead-times on most products.

Short-term Capacity Imbalances: The process of integrating new, technologically superior facilities into the production lines of long-established steel plants leads to short-term capacity imbalances and bottlenecks, the effects of which are most apparent at high levels of production activity. The simultaneous use of new and relatively obsolete facilities not only limits finished product output, but also precludes capacity melting operations, particularly in plants with new steelmaking furnaces. In recent years, steel companies have done much to balance their facilities by rounding out capital programs initiated in the 1960's. However, because steel plant modernization is a continuing process, the industry must contend with some inevitable degree of capacity imbalance, and this is one factor limiting its maximum effective capacity.

Marginal, High-Cost Capacity: Despite the need for additional raw steel to help meet demand requirements, some of the industry's capacity remains idle, either because it requires upgrading and improvement to permit its economic operation, or because it does not comply with pollution control regulations. Many of the furnaces involved eventually will be brought into production as modernization programs move forward.

Other Limits to Production: Finally, once raw steel production reaches 95 per cent or more of rated capacity, a variety of problems make it difficult to achieve higher levels of output on a sustained basis. Limitations arise in shipping and preparing additional raw materials, in boosting fuel consumption, and in obtaining additional rail cars to ship a higher volume of finished products.

Significantly, these limits to production have arisen under boom conditions, so that current problems and what have been termed "shortages" are temporary in nature. True, this is little consolation to steel users who need steel now. Nevertheless, it is somewhat invalid to construe longer than usual lead-times as shortages, particularly in view of the fact that steel industries overseas, even during periods of slack demand, customarily quote long lead-times with the purpose of accumulating orders to permit more efficient rolling schedules. However, the current tight supply situation does indicate the likelihood of real shortages in four to five years. It has confirmed most conclusively that the steel industry's current rated capacity is a maximum 165 million net tons of raw steel per year, which means that a substantial expansion of capacity is needed to meet demand toward the end of the decade.

Steel's Developing Supply Deficit

For some time now, there has been widespread anticipation in steel circles of a dramatic increase in steel demand and production activity. But, while steel companies have been in universal agreement that substantial capacity additions must be made to meet demand in the years ahead, adverse economic circumstances, particularly in 1970-1971, dictated a reappraisal of their investment policies and plans for future expansion. The result was a much more conservative approach to spending, one that continues to dominate the investment outlook, even though steel earnings improved somewhat in 1972, and activity this year has been shattering all previous records.

By 1980, if the steel industry is to accommodate market requirements, it will have to boost its annual raw steel production to approximately 175 million net tons. To achieve this level of output, allowing for demand during peak periods of operation, the industry's rated capacity will have to increase from its current maximum level of 165 million net tons to at least 190 million net tons. Consequently, if steel shortages are to be averted, a minimum expansion of 25 million net tons must be accomplished, which is over and above a replacement requirement covering some 25 million net tons of obsolete capacity, principally open hearth furnaces. This adds up to some 50 million net tons of capacity — a massive investment that steel companies thus far have been unable to justify.

**Raw Steel Capacity Required to Maintain U.S. Supply-Demand Balance
(1973-1979)**

	Net Tons
Raw steel production requirement in 1980	175,000,000
Raw steel capacity requirement in 1980	190,000,000
Minus current U.S. capacity	165,000,000
Expansion requirement (1973-1979)	25,000,000
Plus replacement and modernization (1973-1979)	25,000,000
Total capacity to be installed (1973-1979)	50,000,000

Despite the obvious need for an intensive capital spending effort to maintain the nation's supply-demand balance in steel, very few plans have been announced for making substantial additions to capacity. For an explanation, one has only to look at steel company profit and loss statements and balance sheets going back over a number of years. The picture that emerges from a review of the period 1962-1971 is one of heavy capital spending at a time when revenues and earnings were seriously restricted by an influx of imported steel. Capital expenditures over these years totaled \$17 billion, exceeding cash flows by \$1.8 billion. As a result, the industry's reliance on debt financing increased substantially, and with \$2.3 billion in new obligations incurred, total debt by the end of 1971 was in excess of \$5 billion. This raised the fixed costs of steel production, particularly when volume declined in 1970-1971, and with simultaneous increases in a variety of operating costs, steel profits fell to their lowest level in 20 years, even without considering the dollar's declining value.

In both 1970 and 1971, steel company profits, on average, amounted to only 2.8 per cent on sales and approximately 4.5 per cent on equity. Based on this performance, the steel industry ranked 41st out of 41 industries covered by the First National City Bank in its annual analysis of earnings in manufacturing. This unenviable position was in marked contrast to steel's best ranking of 14th achieved during the mid-1950's, the last time many steel companies are generally agreed to have earned equitable returns.

As poor as steel financial performance was during most of 1962-71, it could have been significantly worse had it not been for investment tax credits, which were in force over most of the period. At the present time, with additional capacity needed to avert a shortage of steel, tax credits have taken on added importance as a vital determinant affecting decisions to undertake a new round of capital spending.

In order to justify sizeable investments to expand their capacities, steel companies will have to achieve results in 1973 and 1974 that will be somewhat comparable to those of mid-1950's. This means that total industry profits will have to exceed \$1 billion per year and generate a return on sales of 6 per cent or better, which is about double what the industry earned in 1970 and 1971. A move in the right direction occurred in 1972, when profits reached \$759 million, but this resulted in a yield of only 3.5 per cent on sales. This year, as evidenced by first-quarter reports just released, the steel boom is fueling a marked improvement in earnings, which eventually should increase the flow of much needed investment capital. However, while earnings have moved sharply higher, yields have not as yet reached satisfactory levels, and, at least temporarily, this will limit the boom's stimulus to increased capital spending.

The problem is that steel demand won't wait for earnings and yields to improve, and even if an adequate performance is achieved this year and is extended into 1974, thereby inducing steel companies to make expansion commitments, the amount of new capacity that can be brought into production will be limited by the inescapable influence of time. It takes two to three years to move new steel capacity from the drawing boards to actual production, and, consequently, the longer investment decisions are postponed, the greater become the chances of a serious supply deficit.

Although steel shortages loom on the horizon, the government has voiced little, if any, concern over the lack of plans for new capacity. This is unlike the situation that developed after World War II, when President Truman threatened to put the government into the steel business to help meet the needs of the economy. In fact, in his State of the Union message in 1949 he spoke of the possibility of using public tax dollars to install 10 million tons of new capacity. The reason the industry's current capacity problems have evoked no such pressure or significant concern is the prevailing sentiment that any deficit in domestic supply can be alleviated by an increase in imports, which certainly was not the case 25 years ago. This would mean that imports would increase substantially — perhaps to 30 million tons or even more. However, even if the nation's balance of payments could stand the heavy dollar drain this would involve, and it most definitely cannot, steel industries overseas will not be able to provide such a supplement to the U.S. supply, precisely because they face steel shortages of their own. This becomes apparent from an examination of future supply-demand balances around the world, which point to the likelihood of a world steel shortage by the end of the decade.

Prospects for a World Steel Shortage

In the May 1970 *Center Lines* supplement, annual world steel output was projected at 1 billion net tons by 1980, an assessment that has since been concurred in by a number of other independently conducted studies. But steelmakers understandably formulate their investment policies not only with an eye on the future, but also within the context of prevailing economic circumstances. Consequently, when 1971 saw the first slump in world steel activity since 1958, producers overseas, like their counterparts in the United States, started to reappraise their expansion programs. With the international steel market in the doldrums and ongoing investment projects continuing to augment capacity,

many foreign steelmakers were faced with a substantial surplus over short-term demand. The slump lasted until the middle of 1972, and by the time it was over, many of their plans to expand capacity had been scaled down appreciably.

The recent revival of steel demand has placed world output back in line with its long-term trend of annual growth. World raw steel production rose from its depressed 1971 level of 644.5 million net tons to a record of 692.4 million net tons in 1972, and expectations for the current year range from 728 million to 739 million net tons. At current levels of output demand is already taxing the limits of capacity in many countries, and this raises the important question of whether or not the combined steel industries of the world will be able to satisfy market requirements in the years ahead, particularly in view of their continuing reluctance to embark on major new rounds of plant and equipment spending.

If world steel production is to increase in line with world demand, it will have to reach 1 billion net tons by 1980, or in other terms, will have to be 50 per cent greater than last year's record of 692.4 million net tons. The world's raw steel capacity as of January 1972 was approximately 790 million net tons, and excluding net capacity additions completed during the year, which were subject to the usual limitations imposed by start-up and break-in, it can be concluded that the world industry compiled an operating rate of 89 per cent last year. As previously mentioned, the recession in world steel activity in 1971 extended to the middle of 1972, so that the world operating rate climbed well above 90 per cent during the second half of last year.

During 1972 new steelmaking facilities, principally basic oxygen converters and electric furnaces, were completed at 16 plants around the world. A number of these were additions to capacity, while others were replacement for obsolete open hearths and Bessemer converters. As a result, current world capacity, reflecting last year's additions and deletions, is a maximum of 790 million net tons per year. Thus far in 1973, world demand has been such that many producers have been operating at close to full capacity, and with world production for the year projected at a minimum of 728 million net tons, the world industry's annual operating rate is expected to reach a high level of about 93 per cent.

To meet demand requirements by 1980, total world capacity will have to reach a minimum level of 1.150 billion net tons. This requirement recognizes the extreme improbability that all of the steel facilities distributed throughout the world will operate simultaneously at, or extremely close to, their full potential. It assumes an average worldwide operating rate of 90 per cent to achieve a production slightly in excess of 1 billion net tons and requires that the world's current capacity be increased by 360 million net tons. In addition to this required expansion, essential and continuing programs of plant and equipment modernization will involve the replacement of a minimum 250 million net tons of existing capacity. Consequently, 610 million net tons of capacity must be put in place over the remainder of the 1970's, an average of approximately 87 million net tons per year during the next seven years.

It now appears very unlikely that the world steel industry will undertake investment programs of sufficient magnitude to maintain the world balance of supply and demand, and this makes it highly probable that a world shortage of steel will develop in the later years of the current decade. The principal reason is a lack of profitability in the steel industry on a worldwide basis. There is no shortage of raw materials, but there is competition for capital, and with the returns that steel companies have posted, they will be hard pressed to command the funds required. A staggering investment will be needed to install 87 million net tons of steelmaking facilities annually, and the total cost will be inflated

substantially by pollution control requirements in the years ahead. Therefore, steel producers overseas will find it difficult, if not impossible, to keep up with demand in their own domestic markets, much less provide substantial supplemental tonnages to alleviate shortages in this country.

Raw Steel Capacity Required to Maintain World Supply-Demand Balance

(1973-1979)	
	Net Tons
Projected world steel demand in 1980	1,035,000,000
Raw steel capacity requirement in 1980	1,150,000,000
Minus current world capacity	790,000,000
Expansion requirement (1973-1979)	360,000,000
Plus replacement and modernization (1973-1979)	250,000,000
Total capacity to be installed (1973-1979)	610,000,000

Consequences of a Steel Shortage

The prospect for a steel shortage has far-reaching implications for the steel industry and its suppliers, for the steel consuming industries, for the manufacturers of materials that can be substituted for steel, and for the entire economic system. There is, of course, the possibility that steel companies would realize short-term benefit if their products are in scarce supply. Supposedly, this would result in a seller's market with an upgraded price structure and increased earnings. However, sooner or later, a steel shortage would likely bring on some sort of government intervention, possibly a system of price controls and rationing, which would suspend the workings of the free market and eliminate whatever short-term market advantage steel companies might otherwise experience. Further, the priorities established by a rationing system would downgrade many of the newest uses or markets for steel, those not yet established as essential, which, nevertheless, represent a substantial expenditure of research and promotional dollars. As a result, new product development, an objective accorded increased emphasis in recent years, would become a thing of the past, and much of the industry's prior efforts in this regard would be nullified.

A steel shortage four to five years from now would mean that steel investments had been scaled down or postponed, which could have an adverse effect on the manufacturers of steel mill plant and equipment. Their skills and capacity to produce the massive, highly technical facilities essential to steel output would be seriously diminished, and perhaps even lost in one or two cases. As a result, the steel industry eventually would become dependent, at least in part, upon mill builders overseas, a development not particularly favorable from the industry's point of view or in relation to the balance of payments, considering the substantial dollar outflow that would be required to obtain facilities for one of our basic domestic industries.

While a steel shortage could yield some short-term market benefit to steel companies, it would work to their definite disadvantage over the longer term by forcing many steel consumers to use substitute products. Even though a shift away from steel would result in difficult and costly production modifications,

many steel users would have to endure a changeover, particularly since the alternative would be a reduction or shutdown of their operations. To steelmakers, this would, to a great extent, mean a permanent loss of business, for consumers could not be expected to readily undertake a difficult switch back to steel if and when the short supply situation becomes rectified.

In the final analysis and most importantly, the impact of a steel shortage would be felt throughout the economic system. Because steel is essential to virtually every type of manufacturing activity, its shortage and the consequent disruption of output would place serious limitations on economic growth and, in turn, on the growth of employment and productivity. For these reasons, when it comes to steel company investment decisions, the stakes are extremely high, not only in terms of the dollars required to accomplish an adequate expansion of capacity, but also in terms of the consequences that a lack of investment and a steel shortage would entail.

The Biggest First Quarter in Steel's History

If there were any doubts during the early part of the year that a genuine steel boom had arrived, they were dispelled convincingly once first-quarter production and shipments were totaled up. Most forecasts for 1973 have now been upgraded, and barring an auto strike or other major disturbance, annual steel shipments are an odds-on bet to surpass 100 million net tons for the first time.

This year's first quarter was the biggest in steel's history—bigger than in 1971, when activity was inflated by building strike-hedge inventories, and more significantly, bigger than in 1969 when steelmakers poured 141.2 million net tons of raw steel and shipped 93.9 million net tons of steel mill products, both all-time yearly records. Ever since the week ending March 17, raw steel output has been at an annual rate close to 155 million net tons, and during the week ending April 14 it made history by topping the never before attained three-million-ton mark. Compared to the first quarter of 1969, output in this year's first quarter was 8.5 per cent greater, while shipments were up a sizeable 22.2 per cent.

Steel Output & Shipments: First Quarters 1969 vs 1973

	1969		1973	
	Output	Shipments	Output	Shipments
January	9,843	7,280	11,085	9,111
February	10,712	7,092	11,552	8,665
March	13,933	8,199	14,766	9,800
Totals	34,488	22,571	37,403	27,576

What are some of the factors behind the boom, or more specifically, behind the soaring demand for steel? Primarily, a general upswing in the economy has boosted requirements over a broad spectrum of steel-consuming industries, particularly those engaged in the production of automobiles, appliances and capital goods. Measured in terms of "real" output, the nation's gross national product (GNP) increased at an 8 per cent annual rate during the last two calendar quarters, while in current dollar terms, which also show the effect of inflation, it was up 14.3 per

cent in this year's first quarter, compared with a gain of 11.0 per cent in the fourth quarter of 1972. A rundown of major developments in a number of steel market areas provides an indication of just where all the steel has been going:

Automobiles: Sales in the first quarter of 1973 totaled 2,931,000 units, compared to 2,443,000 a year ago. Purchases were up \$4.8 billion over the fourth quarter of 1972, with new car sales for all of 1973 projected at approximately 12.5 million units, including about 1.5 million imports. Truck sales are expected to increase by about 23 per cent in 1973, to a total of 2.2 million units. The industry's steel consumption for the first two months of 1973 (3.9 million net tons) represented an increase of 32.8 per cent over the same period last year.

Construction: While 1972's record total of 2.4 million starts will probably not be matched this year, expenditures on construction can be expected to remain high owing to strong non-residential activity and inflationary pressures on construction costs. Although the number of housing starts was down in February and March, expenditures on residential construction in the first quarter were still \$2.2 billion more than in the fourth quarter of 1972. In addition, spending for non-residential construction rose by \$2.6 billion. Steel consumption by the construction industry in the first two months of 1973 was 31.3 per cent greater than in the same period last year.

Service Centers: Many steel service centers are operating at levels which are 20 to 30 per cent above those experienced last year. Temporary shortages of certain products are beginning to develop, and it is now almost certain that 1973 will set industry records. Shipments to service centers in January and February of this year were 34.1 per cent above those made in the first two months of 1972.

Appliances: Consumer spending on durable goods in the first quarter of 1973 rose by \$9.3 billion over the fourth quarter of 1972. This increase was more than four times the size of the one achieved in the last period (\$2.2 billion).

Capital Goods: Business fixed investment in the first quarter increased \$6.2 billion over the fourth quarter of 1972, with a \$3.7 billion rise in purchases of durable production equipment leading the way. It is estimated that machine tool sales in 1973 will total 25 per cent more than in 1972, while purchases of machinery for mining, oil-field work, and construction will increase by 10.8 and 6 per cent, respectively.

A number of other, more difficult to substantiate, factors have likely been contributing to the record steel demand. To some extent, the current rash of orders may be borrowing from the future, since some consumers have probably gotten on mill schedules either to hedge against higher steel prices in the months ahead, or to hedge against what have thus far been lengthening lead times. Further, there are indications that consumers formerly relying on foreign supply sources have switched to domestic steel, either because imports no longer afford a suitable price advantage, if any, or because foreign mills, given the recovery of steel demand in most parts of the world, are no longer able to meet their requirements. Although imports in the first quarter exceeded those in the like period last year, their share of the booming steel market declined from 13.9 to 12.6 per cent, and because of a variety of influences the import tonnage is expected to ease somewhat in the months ahead.

Apparent Supply of Steel Mill Products (net tons)

	1st Quarter 1972	1st Quarter 1973	Per Cent Change
Shipments	21,161,314	27,576,076	+ 30.3
Plus Imports	3,318,015	3,856,510	+ 16.2
Minus Exports	690,112	832,000	+ 20.6
Apparent Supply	23,789,217	30,600,586	+ 28.6

Import pressure traditionally has subsided during periods of strong overseas demand, and right now steel markets around the world are very active, so much so that foreign producers have been looking to purchase American semi-finished steel and hot-rolled bands to supplement their supply capabilities. Meanwhile, with the dollar devaluations and subsequent realignment of currencies, domestic steel has been placed in a much better competitive position. Reflecting recent monetary changes, for example, Japanese price quotations early in April were either on the same level or higher than domestic mill prices, and imported plates were being sold in Texas markets at \$3.00 per ton above the domestic price. Also contributing to an improved foreign trade outlook are "Buy American" clauses in numerous government contracts, a stricter enforcement of anti-dumping regulations, and the recently concluded labor agreement designed to avoid the cyclical build-up of strike-hedge inventories, including heavy import tonnages, which was slated to begin later this year and extend through the first half of 1974. As a result, the balance of trade in steel mill products this year should show a significant improvement over that in 1972, when a record steel trade deficit of nearly \$2.2 billion accounted for more than one-third of the nation's total trade deficit.

Comparing raw steel output and product shipments in the first quarters of 1972 and 1973, they were sharply higher this year, by 21.2 per cent and 30.3 per cent respectively. This, however, should not be taken to mean that 1972 was a poor steel year. True, the first quarter was somewhat depressed, but, taken as a whole, the year provided a welcome relief to steelmakers after the boom-and-bust pattern of activity and disastrous second half in the labor negotiating year, 1971. Raw steel production last year, buoyed by a strong fourth quarter, totaled 133.1 million net tons, 10.5 per cent more than in 1971, while shipments rose 5.5 per cent to 91.8 million net tons. But more important in view of the industry's need for investment capital was the 37.2 per cent average increase in steel company earnings—a rate that was accelerated in the first quarter of this year.

Steel Earnings Up Sharply — But Yields Lag

Eighteen out of the top 20 steel companies chalked up increased sales in 1972, and 17 achieved a growth in income. This upturn stemmed from a variety of factors, including a surge in fourth-quarter business and improvements in efficiency due largely to a more consistent pattern of demand, as well as an increased balance of facilities. At the same time, higher labor and other costs were incurred, and although steel mills were authorized to increase prices by about four per cent at the start of last year, published prices, under pressure from imports, rose by less than two per cent. These offsetting influences were reflected in less than satisfactory yields, which, on an industry-wide basis, amounted to only 3.5 per cent on sales and about 4.4 per cent on investment.

Steel Industry Profits for 1971 and 1972: Top 20 Companies According to Sales
(Sales and Income in Millions of Dollars)

	1972			1971			% Change 1971-1972	
	Sales	Income	Income As A % Of Sales	Sales	Income	Income As A % Of Sales	Sales	Income
U.S. Steel	\$5,428.9	\$157.0	2.89%	\$4,963.2	\$154.5	3.11%	+ 9.38%	+ 1.62%
Bethlehem	3,113.6	144.6	4.32	2,969.1a	139.2	4.69	+ 4.87	- 3.30
Armco	1,910.8	75.6	3.96	1,696.2a	50.7	2.99	+ 12.65	+ 49.11
National	1,660.2	71.2b	4.29	1,522.1	45.8	3.01	+ 9.07	+ 55.46
Republic	1,595.7	43.1	2.70	1,384.8	0.1c	0.01	+ 15.23	+ 4,300.00
Inland	1,469.8	65.9	4.48	1,253.6	47.8	3.81	+ 17.25	+ 37.87
Jones & Laughlin	1,189.4	39.3	3.30	1,074.0	20.5e	1.91	+ 10.74	+ 91.71
Lykes-Youngstown	1,018.9	25.6f	2.51	921.2	9.3g	1.01	+ 10.61	+ 175.27
Colt	707.3	16.3	2.30	636.7	12.7	1.99	+ 11.09	+ 28.35
Wheeling-Pittsburgh	607.8	15.2h	2.50	528.0	5.4j	1.02	+ 15.11	+ 181.48
Allegheny-Ludlum	571.7	17.7	3.10	484.0	1.0	0.21	+ 18.00	+ 1,760.00
Kaiser	447.2	57d,k	*	469.9	0.4	0.09	- 4.83	*
Cyclops	414.0	7.7	1.86	338.8	4.1	1.21	+ 22.20	+ 87.80
Interlake	387.7	13.0	3.35	352.1	12.5	3.55	+ 10.11	+ 4.00
NVF	341.4	8	2.58	300.4	5.4m	1.80	+ 13.65	+ 62.96
McLouth	292.0	4.5	1.54	259.0	10.6d	*	+ 12.74	*
CF&I	262.0	6.4	2.27	261.7	8.6n	3.29	+ 7.76	- 25.58
Northwestern ¹	203.5	23.4	11.50	161.5	17.4	10.77	+ 26.01	+ 34.48
Copperweld	184.4	9.7	5.26	147.3	6.8	4.62	+ 25.19	+ 42.65
Lukens	152.8	6.5	4.25	156.1	3.1p	1.99	- 2.11	+ 109.68

¹ Sales and net income figures shown are for periods February 1, 1971 through January 31, 1972, and February 1, 1972 through January 31, 1973. a—Restated, b—Includes a gain of \$8,400,000 from the sale of property and a loss of \$4,300,000 due to a three-month strike at 17.6% owned Iron Ore Co. of Canada. c—Includes income tax credit of \$18,400,000. d—Loss. e—Includes special credit consisting of a gain of \$12,500,000 from the sale of a subsidiary. f—Includes a gain of \$7,400,000 from write-off of certain assets. g—Includes special credit of \$8,018,000 resulting from the sale of interest in Ozark-Mahoning Co. h—Includes the loss of \$1,990,000 resulting from company coal mine fire. i—Includes special credit of \$2,000,000 from investment tax credit carry forward from 1968. j—Includes special credit of \$716,000 from sale of securities of \$1,248,000 and investment tax credit carry forward of \$500,000, less charge for mine determination of \$1,032,000. k—Includes special charges of \$5,199,000 from the write-downs by Kaiser Resources Ltd., a 75% owned subsidiary, in value of certain equipment and coal preparation plant facilities at its Canadian coal operation. l—Includes special credit of \$691,000. m—Includes special credit of \$394,000 from sale of subsidiary's operating assets. n—Includes special charge of \$468,000 from disposition of interest in Falsman Sugar Corp. *Percentage figure omitted since its calculation involved a deficit.

	1st Quarter, 1977			1st Quarter, 1973			% Change, 1977-1973	
	Sales	Income	Inc. As A % of Sales	Sales	Income	Inc. As A % of Sales	Sales	Income
U. S. Steel	\$1,175.0	\$19.0	1.7	\$1,520.0	\$49.0	3.2	+35.1	+157.9
Bethlehem	704.1	25.0	3.6	960.5	40.5	4.2	+36.4	+ 62.0
Armco	442.7	15.0	3.4	531.9	24.1	4.5	+20.3	+ 60.7
National	397.5	14.9	3.7	525.6	19.7	3.7	+32.2	+ 32.2
Republic	370.6	9.4	2.5	499.2	20.5	4.1	+34.7	+118.1
Inland	342.4	17.7	5.2	431.6	19.4	4.5	+26.0	+ 9.6
Jones & Laughlin	263.2	8.6	3.3	365.9	12.6	3.3	+39.0	+ 39.5
Lyles-Youngstown	N.R.	N.R.	*	N.R.	N.R.	*	*	*
Cott	164.5	3.0	1.8	208.1	5.6	2.7	+26.5	+ 50.0
Allegheny-Ludlow	145.2	4.6	3.2	188.6	7.9	4.2	+29.9	+ 7.17
Wheeling-Pittsburgh	134.2	3.2	2.4	178.8	2.6	1.6	+33.2	- 18.8
Kaiser	71.8	9.9d	*	134.1	2.6	1.9	+86.8	*
Cyclops	89.7	0.2a	0.2	122.3	3.1	2.5	+36.3	+145.0
Interlake	92.3	2.9	3.1	111.3	3.0	2.7	+20.6	+ 3.4
NVF	N.R.	N.R.	*	N.R.	N.R.	*	*	*
McLouth	70.3	1.0	1.4	88.0	3.6	4.1	+25.2	+260.0
CF&I	63.8	1.1	1.7	76.5	1.0	1.3	+19.9	- 9.1
Northwestern ¹	48.0	5.5	11.5	N.R.	N.R.	*	*	*
Copperweld	42.8	2.0	4.7	56.8	2.8	4.9	+32.7	+ 40.0
Lukens	34.2	1.2	3.5	34.7	1.1	2.8	+13.2	- 8.3

N.R.—Not reported as of publication.

a—Includes special tax credit of \$648,000.

*—Percentage omitted as its calculation involved a deficit or unavailable data.

d—loss

¹—Includes period from February 1, 1972 through April 30, 1972. Similar period for 1973 not yet available.

Steel company reports for the first quarter of this year reveal the steel boom's powerful stimulus to sales and earnings. As of this publication, seventeen of the top twenty steel firms had reported all showing considerable increases in sales, and all but two, Lukens Steel and Wheeling-Pittsburgh, also showing higher profits. Lukens' first quarter fell victim primarily to a runaway increase in the price of steel scrap, the companion principal raw material, which has been under intense buying pressure from overseas users, while Wheeling-Pittsburgh encountered a variety of operating difficulties, including the need to reline its major blast furnace, which, consequently, was idle for the entire quarter.

Unfortunately, despite some sharp increases in earnings, the return on sales for all of the companies reporting continued to be inadequate. Out of seventeen companies, ten made less than 4.0 per cent on sales; seven of these earned less than 3.0 per cent, and yields for the remaining seven were in the range 4.1 to 4.9 per cent. To place these returns into perspective, consider that General Motors in issuing its first-quarter report complained that its yield on sales slipped to 8.5 per cent, down from more than 10.0 per cent in the mid-1960's. Steelmakers almost universally attribute the lag in steel yields to a widening disparity between costs and the prices they have been able to charge for their products. However, there is reason to be optimistic that yields will improve considerably, based on the expectation that a more suitable price structure will come with continued strong demand, both in the United States and abroad, and that the new labor agreement will foster stability in future demand and operations.

Labor Peace Assures Increased Stability and Efficiency

To its great credit, the steel industry continues in the forefront in labor-management relations. In 1971 a new dimension was

added to the collective bargaining process when the United Steelworkers of America (USW) and the steel companies agreed to establish a joint advisory committee on productivity in each of the nation's steel plants. Now, the USW and the ten largest steel firms have concluded another historic agreement aimed at eliminating the costly process of crisis bargaining. The parties well remember that the last labor negotiating year, 1971, produced some disastrous results for the industry and its employees: 100,000 steelworkers laid off (40,000 permanently), a record annual import tonnage, and the waste and inefficiency caused by unstable production. The new agreement, announced in late March, is designed to prevent a replay of these circumstances in 1974.

The agreement, which employs voluntary arbitration to avoid an industry-wide strike, calls for an early start to 1974's labor negotiations; for a guaranteed three per cent annual wage boost, plus cost-of-living adjustments; and for a bonus of \$150 per steelworker, payable in October, 1974. Any national issue still unresolved by April 15, 1974, will be turned over to a five man arbitration panel to include three members from outside the industry, and while steelworkers can still strike over certain local issues, strike decisions are subject to approval by the USW's international president.

Reaction to the new agreement has been largely favorable. Customers, no longer fearful of a strike cutting off their steel supplies, are pleased with not having to build large inventories, while most of the smaller steel firms are expected to seek similar pacts of their own. By avoiding the boom-and-bust cycle of steel activity, the new agreement enhances the possibilities for progress in improving steel productivity, provides a constructive response to foreign competition, and holds great promise for a stronger, more profitable steel industry.

THE APPLICATION OF S-2119 DURING THE FERRUCS SCRAP SHORTAGE OF 1969 - 1971

YEAR	1969												1970												1971											
	2			3			4			1			2			3			4			1			2			3								
QUARTER	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S						
TOTAL N.T. IN (000)	12038			10815			10126			10297			12166			11532			8712			9873			11080			6736								
207 (a) FINDING DATE OF FINDING	CRITICAL SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }			CRITICAL SHORTAGE } }			CRITICAL SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }			NO SHORTAGE } }					
ACTION	NO RESTRICTIONS			RESTRICTIONS			RESTRICTIONS			NO RESTRICTIONS			NO RESTRICTIONS			NO RESTRICTIONS			RESTRICTIONS			NO RESTRICTIONS			NO RESTRICTIONS			NO RESTRICTIONS			NO RESTRICTIONS					
207 (e) FINDING	NO			NO SHORTAGE			NO			NO			NO			NO			NO SHORTAGE			NO			NO			NO			NO					
TOTAL N.T. IN (000)	CALCULATIONS			10086			10086			CALCULATIONS			CALCULATIONS			CALCULATIONS			8986			CALCULATIONS			CALCULATIONS			CALCULATIONS			CALCULATIONS					
DATE OF FINDING	REQUIRED			}			}			REQUIRED			REQUIRED			REQUIRED			}			}			REQUIRED			REQUIRED			REQUIRED					
	1969 (000)												1970 (000)												1971 (000)											
ACTUAL EXPORTS	= 9176												ACTUAL EXPORTS = 10364												ACTUAL EXPORTS = 6256											
RESTRICTED EXPORTS	= 6655												RESTRICTED EXPORTS = 7632												RESTRICTED EXPORTS = 5703											
AMT OF RESTRICTION	= 2521												AMT OF RESTRICTION = 2732												AMT OF RESTRICTION = 553											
ACTUAL ANNUAL TOTAL	= 45876												ACTUAL ANNUAL TOTAL = 45439												ACTUAL ANNUAL TOTAL = 39183											
RESTR'D ANNUAL TOTAL	= 43355												RESTR'D ANNUAL TOTAL = 42707												RESTR'D ANNUAL TOTAL = 30630											

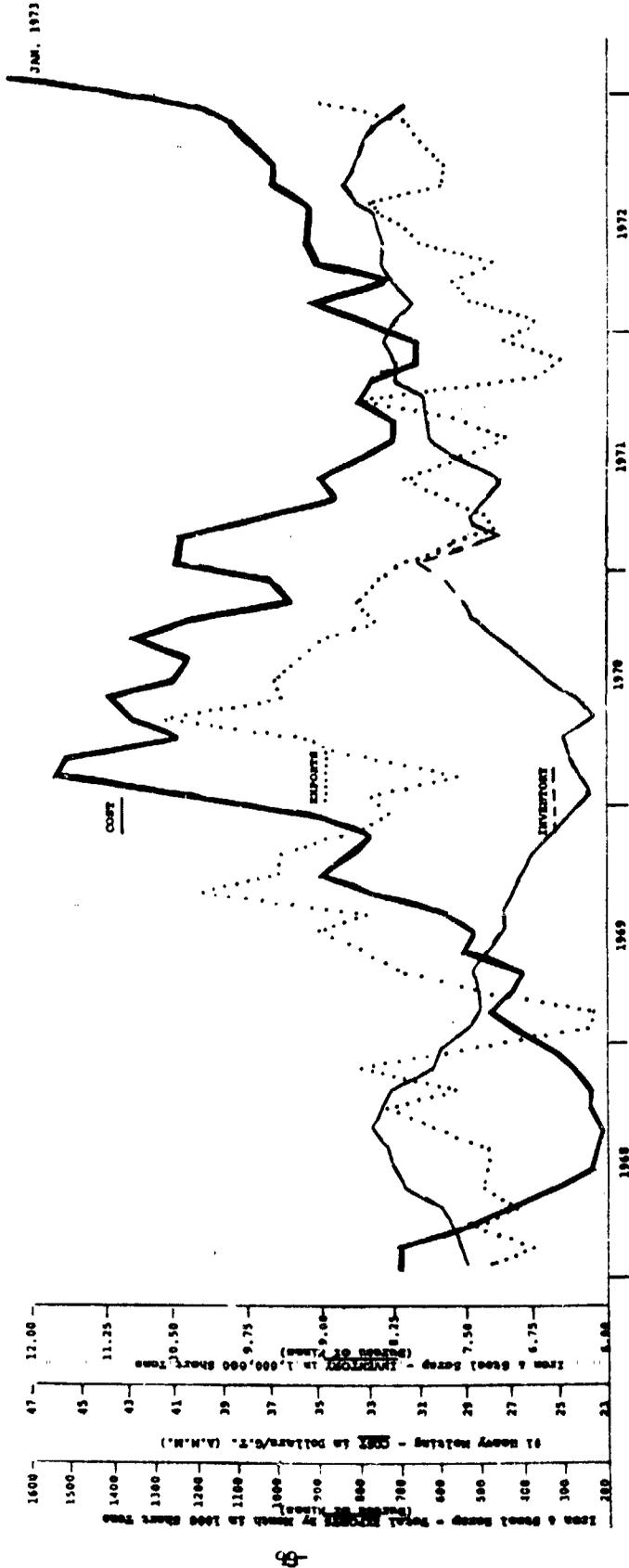
THE APPLICATION OF S-2119 DURING THE
FERROUS SCRAP SHORTAGE OF 1972 - ON

YEAR	1972												1973												1974											
	2			3			4			1			2			3			4			1			2			3								
QUARTER	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S						
TOTAL NT. IN (000)	11929			10528			10881			12315																										
207 (g) FINDING	CRITICAL SHORTAGE			NO SHORTAGE			NO SHORTAGE			CRITICAL SHORTAGE																										
DATE OF FINDING	}			}			}			}			}			}			}			}			}			}								
ACTION	NO RESTRICTIONS			RESTRICTIONS			RESTRICTIONS			NONE			RESTRICTIONS																							
207 (e) FINDING	NO			NO SHORTAGE			NO			NO			?			?			?			?			?			?								
TOTAL NT. IN (000)	CALCULATIONS			10828			10828			CALCLNS			?			?			?			?			?			?								
DATE OF FINDING	REQUIRED			}			}			REQD			}			}			}			}			}			}								

1972
(000)

1973
(000)

ACTUAL EXPORTS : 7384
 RESTRICTED EXPORTS : 5670
 AMT OF RESTRICTION : 1714
 ACTUAL ANNUAL TOTAL : 45992
 RESTRD ANNUAL TOTAL : 44278



8

**METAL MARKET STEEL SCRAP PRICE COMPOSITE
BASED ON NO. 1 HEAVY MELTING STEEL
AT PITTSBURGH, CHICAGO AND PHILADELPHIA**

(Dollars Per Gross Ton)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>
JAN.	31.62	26.68	40.45	40.81	33.09	47.31
FEB.	31.54	28.11	46.03	40.66	35.29	49.43
MARCH	29.06	26.86	44.57	37.15	32.32	-
APRIL	26.87	26.33	40.92	34.30	35.12	-
MAY	25.23	29.12	42.97	34.92	35.64	-
JUNE	23.60	28.58	43.72	33.43	35.42	-
JULY	23.30	29.97	40.75	31.94	35.57	-
AUG.	23.11	32.90	40.40	32.16	37.38	-
SEPT.	23.66	34.90	42.76	33.44	37.28	-
OCT.	23.49	33.75	40.37	32.85	38.22	-
NOV.	24.48	32.91	35.95	31.08	38.96	-
DEC.	25.30	35.36	36.51	30.81	41.97	-
AVERAGE	25.94	30.54	41.25	34.46	36.63	

**IRON AND STEEL SCRAP - TOTAL EXPORTS
BUREAU OF MINES' STATISTICS**

**MONTHLY EXPORTS
(Thousands of Net Tons)**

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Jan.	473	262	773	694	347
Feb.	362	233	541	465	534
March	520	530	804	490	595
April	407	713	957	591	454
May	497	823	1,279	696	664
June	491	906	999	563	698
July	479	790	1,052	433	774
Aug.	618	1,185	952	571	601
Sept.	749	1,038	905	816	596
Oct.	565	1,023	767	382	640
Nov.	812	810	819	302	675
Dec.	592	724	767	471	896
TOTAL	6,565	9,037	10,615	6,474	7,474

**ANNUALIZED EXPORTS
(Millions of Net Tons)**

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
Jan.	5.7	3.1	9.3	8.3	4.2
Feb.	4.3	2.8	6.5	5.6	6.4
March	6.2	6.4	9.6	5.9	7.1
April	4.9	8.6	11.5	7.1	5.4
May	6.0	9.9	15.3	8.4	8.0
June	5.9	10.9	12.0	6.8	8.4
July	5.7	9.5	12.6	5.2	9.3
Aug.	7.4	14.2	11.4	6.9	7.2
Sept.	9.0	12.5	10.9	9.8	7.2
Oct.	6.8	12.3	9.2	4.6	7.7
Nov.	9.7	9.7	9.8	3.6	8.1
Dec.	7.1	8.7	9.2	5.7	10.8

IRON AND STEEL SCRAP - INVENTORY

BUREAU OF MINES' STATISTICS

(1,000,000's of net tons)

	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>
JAN.	7.5	7.5	6.2	8.0	8.3
FEB.	7.7	7.5	6.3	7.4	8.2
MARCH	7.8	7.5	6.4	7.5	8.3
APRIL	7.9	7.5	6.4	7.3	8.3
MAY	8.1	7.4	6.3	7.2	8.2
JUNE	8.2	7.2	6.4	7.6	8.4
JULY	8.4	7.2	6.7	7.8	8.6
AUGUST	8.4	7.0	6.8	7.9	8.8
SEPT.	8.3	6.9	7.0	7.9	8.7
OCT.	8.3	6.9	7.3	8.3	8.6
NOV.	8.0	6.5	7.6	8.2	8.4
DEC.	7.9	6.4	7.7	8.3	8.1

STATEMENT

OF

JOHN J. SHEEHAN
Legislative Director

UNITED STEELWORKERS OF AMERICA

on

Mandatory Export Controls of Ferrous Scrap (S-2119)

BEFORE THE

SUBCOMMITTEE ON INTERNATIONAL FINANCE

of the

SENATE BANKING, HOUSING AND URBAN AFFAIRS COMMITTEE

July 18, 1973

My name is John J. Sheehan, Legislative Director of the United Steelworkers of America. Our union represents 1.4 million workers, about one-third (1/3) of which are employed in the production of steel mill products.

In recent years we have become increasingly concerned about the impact of steel scrap exports upon those mills and foundries which are dependent upon such scrap. In other congressional forums we have been urging that our total trade policy should be subjected to a complete review reorientation if you will -- because of its influence upon our domestic manpower policy.

Today, however, we are relating to one aspect of that trade policy -- the exporting of materials which can cause either inflationary pressures or acute shortages, or both.

We have been witnessing very high export levels at times of high demand for steel abroad and at home. Our domestic scrap consumers are put in an extremely difficult bind as they try to compete at higher price levels with overseas consumers. Some domestic plants will cutback on production because of high prices which they cannot pass on due to domestic competition

from integrated steel mills. Others will absorb the increased costs to the detriment of needed expenditures for modernization or simply a replacement of equipment. Smaller plants thereby fall further behind in their battle to remain competitive and retain their share of the market. For them, the boom in steel may become a bust because of the high cost of their raw material - scrap. The export policy becomes an engine for distress, preventing them from fully utilizing the advantages that can occur from a good market. You should bear in mind that some of these plants are among those which must make a large financial commitment to meet their obligations under the pollution control standards of EPA and occupational standards of OSHA. The occupational health of our members requires the investment - sometimes non-productive - in abatement equipment. We should not deprive the industry of the advantages of the good market periods to make those expenditures.

In a study released this month by the Department of Commerce, it is projected that the 1973 exports of steel scrap will increase 67% over the 1972 levels to a total of 12.4 million tons. The resulting employment problem in the steel industry is two-fold:

First, as increasing tonnage of steel scrap is exported, the domestic price is pressed upward. Those steel

producers whose scrap inventories are low and who can neither pass on nor absorb the price increase may be required to cut-back or shutdown production.

Second, even for those domestic producers who can absorb the soaring prices, the available supply may be seriously threatened by the unprecedented levels of ferrous scrap exports. The industry estimates that current demands will not be met by the scrap industry and the shortages will be aggravated by the excessive exports.

The present situation is not entirely unique. In 1969 and 1970 there were similar pressures in the ferrous scrap industry. We can validly anticipate that future crises will arise with regard to the steel scrap situation unless effective corrective factors are now put into force.

In 1969 and 1970 the U. S. Department of Commerce failed to act on authority granted it under the Export Administrative Control Act. As a consequence, there was considerable disruption in the industry. In the present crisis, only recently and under great urging has the Commerce Department used its discretionary authority to monitor the outflow of steel scrap. The Department may argue that it is controlling or regulating exports but it is doing so at levels which are already described by the industry to be above the crisis level and at which severe shortages will occur.

Furthermore, the Department waited too long before it exercised these controls. It first ordered mandatory reporting of scrap exports so as to ascertain the gravity of the situation. While we do not disagree that there should be orderly progression in the imposition of controls, we do find unrealistic the aspect of total discretion in the initiation of each step. The efficacy of the steps so far taken may already be vitiated by the inordinate time lag which transpired before the Department reached its decision.

The intent of the partial embargo now in effect is to prevent the further acceleration of scrap exports to higher levels. Whether shutting off further exports over and above those already projected will provide sufficient supply to satisfy our domestic consumption remains to be seen. There is, however, no prescribed mechanism whereby there will be an orderly evaluation of that situation.

It is precisely because of that void in the current implementation of the export control system that we have come before this committee. We are seeking a legislative determination for the definition of critical shortage. S-2119 provides that definition. It triggers a progressive approach of mild controls and restrictions on exports so that the imbalance of supply and demand will not have to reach such critical stages that total embargoes will be necessitated. Many in the

industry feel the situation today requires an embargo. Enactment of the triggers in this bill will obviate such drastic measure in the future.

Therefore a trigger mechanism, identifying the levels for quantitative limitations on the export of ferrous scrap, is necessary to eliminate the recurring crises in the industry and to curtail inflationary pressures. We know that the present price freeze has prevented the spiralling of steel scrap prices. But it had also put a freeze on the domestic availability of scrap as dealers were attracted to the uncontrolled higher price markets abroad.

In times of serious demands for ferrous scrap, priority should be given to the domestic producers in securing the scarce metal -- not to their foreign counterparts. The American industry and workforce should not have to suffer economic hardship because of scarcities caused by the export to our competitors of necessary production ingredients.

S-2119 incorporates a logical and orderly basis of monitoring and regulating export of steel scrap. The United Steelworkers of America join with steel and foundry interests to seek your consideration and support for the adoption of this measure.

* * * * *

STATEMENT

BEFORE THE SUBCOMMITTEE ON INTERNATIONAL FINANCE, OF THE SENATE COMMITTEE
ON BANKING, HOUSING AND URBAN AFFAIRS

IN SUPPORT OF S. 2119

BY CARL STUDENROTH, VICE PRESIDENT, INTERNATIONAL MOLDERS AND ALLIED WORKERS
UNION

GENTLEMEN: It is an honor and a privilege to present this statement to you on behalf of the International Molders and Allied Workers Union, which I am proud to serve as Vice President.

For many years we have been anxious observers of the decline of employment opportunities in metal foundries in the United States, and witness of the painful efforts of displaced workers as they attempted to find employment when their company closed down. We are closer to the scene than any other group, for it is our Union, which just celebrated its 114th birthday, that represents the workers in smaller foundries. We find the statistical information prepared by the United States Departments of Labor, Commerce and Health, Education and Welfare invaluable in our work, but cold facts do not describe the painful adjustments which families have to make.

Such facts as

- * The number of iron foundries has declined from 3,200 in 1947 to 1,670 in 1969 and it is an "educated guess" that there will be fewer than 1,000 by 1980
- * 71 per cent of the existing foundries employ fewer than 100, and 50% under 50 employees
- * Approximately 25% of all iron foundries are large, captive operations, and the remainder are independent, producing in the main, jobbing type castings

* Approximately 50% of the workers in the metal castings industry are
non-white

are useful to you but only those with an intimate knowledge of the industry can realize the full impact.

The industry has had to make improvements in recent years which entailed the expenditure of large sums of money. Emphasis upon environmental problems made a culprit of the foundry industry because it is a highly visible "polluter". Although it is a well known fact that the transportation industry in all its aspects is the major cause of pollution, manufacturing, and especially foundries, are concentrated violators, and therefore controls were imposed. The health of the communities is important but the installation of equipment is costly.

Secondly, the passage of the Occupational Safety and Health Act has forced the industry to make drastic changes in order to protect the health and safety of employees. We believe that it is just as important to protect the welfare of the in-plant workers as well as the surrounding community and we enthusiastically support efforts at OSHA enforcement. We only remind you that equipment costs are high and the double burden, although right and proper, has been heavy upon the large number of small foundries.

We can expect some of the marginal foundries to cease operation when environmental control devices and OSHA inspired equipment are required, especially if the plant facilities are old and obsolete. But we sincerely believe that the overwhelming majority of foundry operators will continue to produce metal castings, as long as they can compete economically.

Our nation is in a period of economic expansion at the present time and a majority of the workforce is enjoying a period of prosperity. However, the unavailability of scrap iron and steel at a price which the foundry industry can afford is proving to be a bottleneck. In some areas of the country foundry workers are on short work-weeks

and announcements of plant shut-downs and permanent closings are not unusual. Apparently prices remain at a high level as a result of unusual amounts of scrap iron and steel being exported. You might say that this is an unusual situation when our domestic users must compete with foreign users, especially when the finished products developed in another country from American scrap, are returned to sell cheaper than those produced here.

We do not present ourselves to you as experts in the metal casting business. We are content to let those who sit on the opposite side of the bargaining table take the leadership in this regard.

However, we do not hesitate to appear before you to plead the cause of the workers in the foundry industry for they are always the real sufferers in any dislocation. We are always on hand when workers find themselves unemployed through no fault of their own. It hurts when you are called on to help workers who are skilled only in foundry work and sense the hopelessness which surrounds them. Rehabilitation is a long and costly process for the family as well as for the breadwinner.

The most skillful of the displaced usually find employment, but often this requires pulling up stakes and beginning life all over in a new community. But we remind you that at least half of the foundry workforce is non-white. The unemployment level of this group is at least twice the level of the white workforce and since a much larger percentage are unskilled, the situation is compounded.

Although we differ with our employers on many occasions, when it comes to the welfare of the industry which provides employment for our members, we do not hesitate to join them. We have appeared before when corrective legislation has been proposed and we have jointly pleaded our case before Governmental agencies. We join with industry in this instance because we are convinced that something must be done to save the small foundries which are unable to stockpile scrap and must buy it at the prevailing price.

For many months now the price level has remained high because export commitments have depleted the supply.

We are impressed with S. 2119 which was submitted by Senators John J. Sparkman and Adlai E. Stevenson, III and consider it eminently fair. It would amend the Export Administration Act of 1969, and provide "trigger" dates based upon the needs of domestic scrap users. The Secretary of Commerce is instructed to determine if no shortage, a shortage, or critical shortage exists at each calendar quarter, and this becomes a matter of public record. Curtailment of exports or total embargo can be ordered based upon the supply available. It seems to us that a market for the sale of scrap is assured.

We hope that the Committee on Banking, Housing and Urban Affairs reports S. 2119 favorably, and that speedy enactment of the bill will be the result.

Thank you for your kind attention and consideration

Submitted by



Carl Studenroth
Vice President
International Molders and Allied Workers
1225 East McMillan Street
Cincinnati, Ohio 45206

Statement by Lane M. Currie, President, H. C. Macaulay Foundry Co.

Mr. Chairman and Members of the Sub-committee; My name is Lane M. Currie. I am President of H. C. Macaulay Foundry Company, Berkeley, California and am appearing here today representing the West Coast segment of the Cast Metals Federation.

I shall address the subject of the need for Ferrous Scrap Export Controls relative to specifics on the West Coast within our Foundry Industry. I shall not overlap data which has been submitted by others in our behalf.

Problem

I would like to define our problem of scrap shortage as the inability of the Scrap Industry to maintain Domestic home needs of selective prepared ferrous foundry scrap consistent with the level of quality customary to our industry. And secondly, define the lack of desire by some scrap dealers to process Foundry grade scrap because they can export this scrap without preparation or segregation. And, thirdly, I wish to note the serious inflationary ripple effect which will be borne by the American Consumer when a compounded pass through of recent scrap increases reach his market.

Foundry Grade, Scrap:

I should state that the Iron & Steel Foundry requirement of ferrous scrap differs somewhat from those of the Steel Mills. The Foundries require selective, sorted and in most cases sheared

or broken scrap Steel or Iron. In many cases certain chemistry must be met either with a maximum or minimum level of certain elements.

It should also be noted that most West Coast Foundries cannot use bundles or bailed scrap nor can we normally use the general classification of borings, shovelings or turnings. In essence our requirements are for selective, prepared foundry scrap and we are dependent on the scrap dealer to process accordingly.

West Coast Scrap Survey, July 16, 1973:

The following pages and charts will reflect current information gathered from West Coast Foundries within the week on:

Scrap costs, Iron and Steel; Availability; Inventory; Quality; Most distant Geographical area of purchase; and, curtailment or shutdown due to lack of scrap materials.

The Geographical Areas surveyed and companies participated are as follows:

Southern California (SC)

Ace Foundry Ltd. Huntington Park
 Alhambra Foundry Co. Ltd. Alhambra
 Bell Foundry Co. South Gate
 Centrifugal Products, Inc. Long Beach
 Covert Iron Works Huntington Park
 Dayton Foundry Co. South Gate

Southern California (SC) Continued.

Globe Iron Foundry Inc. Los Angeles
 Gregg Iron Foundry El Monte
 Lincoln Foundry Corp. Los Angeles
 Renfrow Foundry Los Angeles
 Steel Casting Co. Los Angeles
 Westelectric Castings, Inc. Los Angeles

Northern California (NC)

American Brass & Iron Foundry Oakland
 Atlas Foundry & Mfg. Co. Richmond
 DeLaval Turbine, Inc. Oakland
 Lodi Iron Works, Inc. Lodi
 H. C. Macaulay Foundry Co. Berkeley
 Metalloy Steel Foundry Sacramento
 Pacific Steel Casting Co. Berkeley
 Phoenix Iron Works Oakland
 Pinkerton Foundry Lodi
 U. S. Pipe & Foundry Co. Union City
 Vulcan Foundry Co. Oakland
 Vulcan Steel Foundry Oakland

Oregon (O)

Northwest Foundry & Furnace Co. Portland
 Salem Iron Works Salem
 Valley Iron & Steel Co. Eugene
 West Coast Alloys Co. Troutdale

Oregon (O) Continued

Western Foundry Co. Portland

Washington (W)

Atlas Foundry & Machine Co. Tacoma

Pick Foundry Co. Tacoma

Long Foundry Co. Hoquiam

Meltec, Inc. Seattle

Olympic Foundry Co. Seattle

Pacific Car & Foundry Co. Renton

Rogers-Olympic Corp. Seattle

Spokane Steel Foundry Co. Spokane

SCRAP PRICE COMPOSITE

Review of this Price Composite Exhibit #1, clearly indicates that scrap prices are still accelerating sharply, commencing back in the 3rd and 4th Quarters of 1972 and even into July, 1973. These prices in some cases represent over a 70 percent increase within the past year and over 100 percent increase the past 2 years. One should note that the West Coast prices most likely exceed those of most other geographical areas, mainly due to the closeness to sea ports and potential export areas.

The format for this exhibit is similar to that of a Northern California report submitted upon request to San Francisco Office

SCRAP PRICE COMPOSITE continued

of the Cost of Living Council in March of this year.

AVAILABILITY

The availability of Foundry Grade Processed Iron and Steel Scrap varies from fair to poor within each geographical location. A summary of comments would indicate that scrap still is not abundant. Some direct quotes on the subject are as follows:

- O - Scrap is very tight, we have been forced to assign one man to search by phone and mail.
- O - Operating on two (2) day supply.
- O - Availability has gotten worse. Beginning in June of 1972, the supply has started to diminish.
- NC - Must work harder to maintain supply.
- NC - Available at a price. One dealer does not want to take orders until he can determine what he can charge based on Phase 3½ or 4.
- NC - Scrap dealer claims he has difficulty in buying sufficient amount.
- NC - Difficult to obtain.
- NC - Hand to mouth, never sure when dealer will have scrap because of scarcity.
- NC - Difficult to acquire.
- NC - Must scramble for it.
- SC - Short supply. Traded with another foundry so we would not have to shut down.

AVAILABILITY continued

- SC - Very scarce.
- SC - Poor. Have supplemented pig iron due to lack of scrap iron.
- W - Tough!
- W - If one pays the price, material available.
- W - Harder to get, but available at a price.
- W - Four times as hard to get.
- W - Tough, even at a top price.

FOUNDRY SCRAP INVENTORIES:

The question was asked as to the amount of scrap inventory the foundries had on hand. Again, various answers with few foundries satisfied with their low inventory and declaring the situation varied from critical to fair.

A few quotes and comments on "the amount of inventory on hand".

- O - Day to day, critical.
- O - No Problem.
- O - Fair.
- O - Operating on two day's supply.
- O - Unable to keep an inventory. We have been cut off by the local scrap yards. Portland area appears to control outlying sales.
- W - Inventories down. Dealers told us to take it or they will sell it elsewhere.
- W - Down.

FOUNDRY SCRAP INVENTORIES: continued

- W - Only one month's supply. Normal inventory about six (6) month's supply.
- W - Inventory way down at about one and one-half months' supply. Normally six (6) to eight (8) months.
- W - Dealer with "take it or leave it attitude."
- SC - 30 day supply, only.
- SC - Able to maintain about 20% of normal.
- SC - One hour. Numerous scrap dealers unable to purchase because of price paid by exporters. Ready to melt building!
- SC - One week's supply on hand.
- NC - Four (4) to five (5) weeks supply.
- NC - Two (2) days.
- NC - Two - three (2-3) months' supply.
- NC - Less than 1 month.
- NC - Less than two (2) weeks supply.
- NC - Two (2) day supply.
- NC - Two and one-half (2½) week's supply. 50% off normal.

QUALITY OF SCRAP:

The quality of scrap for most foundries is of major importance since scrap is the major component of this re-cycle process. Unfortunately, this survey notes that a general down grading of processed scrap exists on the West Coast causing additional processing and segregation costs to the foundries.

QUALITY OF SCRAP: continued

Comments on the subject were:

- W - Requires more inspection; not prepared properly.
- W - Down.
- W - Having problems maintaining quality. Must check carefully.
- W - Still fair.
- W - Watch it like a hawk!
- W - Must watch quality of steel shearings.
- O - Have overlooked quality because of shortage.
- O - Below standard. Have been forced to buy from dealers not familiar with foundry requirements.
- O - Poor. Must hand pick scrap after load is dumped.
- O - Scrap remains good.
- NC - Poor quality, not properly sorted, many contaminants. Some dealers do not want to prepare Electric Furnace grade scrap. "Take it, or leave it basis."
- NC - Foundry quality control expenses doubled because of poor scrap.
- NC - Worst we have ever had, must spend much time cutting.
- NC - Unchanged.
- NC - Poor quality.
- NC - Dealer is putting in a quality of scrap in each load which we would not ordinarily take. They probably feel we will not complain due to the scrap situation.

QUALITY OF SCRAP: continued

In the past, some of the scrap we are now accepting, we would send back.

- NC - Have to buy lower grades and mixes at maximum prices. Must separate and process.
- NC - Requiring considerable additional preparation and sorting. Increases costs considerably.
- SC - Poor.
- SC - Good (reports from this area indicate 50-50 good to poor quality).

GEOGRAPHICAL AREAS OF PURCHASE

This portion of our survey indicated that most foundries were still buying the majority of their scrap needs locally due to fact that reduced quality, increased prices and availability problems existed throughout the entire West Coast.

Some Foundries in Oregon were also buying in Idaho; Montana; Seattle and San Francisco/Oakland. Northern California Foundries were buying as far east as Salt Lake City, south to Arizona and north to Portland and Seattle. Southern California Foundries indicated mostly in-state and limited Nevada purchases.

FOUNDRY SHUTDOWN OR CURTAILMENT

This phase of the survey did indicate that curtailment of operations and occasional shut downs did exist in the foundry industry during the past three to four months. Also, numerous

FOUNDRY SHUTDOWN OR CURTAILMENT continued

other foundries found themselves at inventory points of only a day or so supply. One Southern California foundry acquired scrap rail from a competitor to avert a shutdown. Two Oregon foundries have curtailed swing (2nd) shifts operations due to lack of scrap; one of the operations has been cut back since May.

A Southern California foundry has had three shut downs the past month in their electric furnace section due to lack of prepared steel scrap.

The majority of the foundries reporting in this survey indicated no shutdowns. However, it is noted they are purchasing scrap at any price and quality to continue operations.

CONCLUSION

We, in the Foundry Industry, are convinced that a shortage of scrap materials does exist and our industry has been forced to take sub-standard quality scrap at high prices to meet the home demand for Iron and Steel castings.

Concurrently with our belief, the Department of Commerce has recently acknowledged this scrap shortage and implemented a temporary embargo on the export of scrap metals.

Also, on the subject, the State Assembly of California recognized this scrap problem and recently passed Assembly Joint Resolution No. 47 (Exhibit #2) "memorializes the President and the

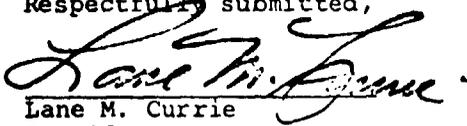
CONCLUSION continued

Congress of the United States to instruct the Secretary of Commerce to exercise his powers to forbid the export of ferrous scrap metal for a period of a minimum of 45 days during which time a study should be made of the available scrap and the needs of West Coast steel mills". This bill is now in the Senate Rules Committee.

In view of this National problem, I urge the passage of SB-2119 which will guarantee service of Domestic needs as first consideration, thus preserving our growth and economy.

Thank you, Mr. Chairman.

Respectfully submitted,



Lane M. Currie
President

H. C. MACAULAY FOUNDRY COMPANY

EXHIBIT #1 - Page 1.
SCRAP PRICE COMPOSITE

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
FROM JULY, 1971 THROUGH JULY, 1973

TIME PERIOD	CAST IRON SCRAP, TYPE OF SCRAP: (UNBROKEN)			DELIVERED BY			BY TRUCK			PRICES ARE \$/GT DELIVERED		
	0 - 1	NC - 9	0 - 2	NC - 1	0 - 1	NC - 1	0 - 1	NC - 1	0 - 1	NC - 1	0 - 1	NC - 1
July 14 thru Aug. 16 1971		\$ 38.75	-		\$ 29.50							
July Aug Sept. Oct. Nov. Dec. 1972	\$ 32.80 30.55 33.55 36.70 38.50 43.65	\$ 42.00 42.00 42.00 42.00 43.00	\$ 35.85 35.84 35.84 35.84 40.32 40.32		\$ 32.50 34.50							
Jan. Feb. Mar. Apr. May June July 1973	\$ 46.00 48.00 50.15 45.50 48.20 52.45	\$ 55.00 55.00 55.00 55.00 55.00 55.00	\$ 40.32 44.80 44.80 50.40 50.40 56.00 56.00		\$ 39.48 40.32							
PERCENTAGE PRICE INCREASE JULY '72 JULY '73	60%	31%	31%		87%							
PERCENTAGE PRICE INCREASE JULY '71 JULY '73	-	42%	-		103%							

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES EXHIBIT #1 PAGE 2
 FROM JULY, 1971 THROUGH JULY, 1973
 SCRAP PRICE COMPOSITE

TYPE OF SCRAP: (BROKEN)	DELIVERED BY RAIL							FOUNDRY IDENTIFICATION CODE			PRICES ARE \$/GT DELIVERED
	NC - 1	NC 3	B	W - 7	W - 5	0 - 1	0 - 3				
July 14 thru Aug. 16 1971	\$ 41.75	\$ 41.00		\$ 45.35	\$ 42.00	-	-				
July 1972	\$ 40.32	\$ 47.00		\$ 52.00	\$ 45.00	\$ 32.78	\$ 35.84				
Aug		47.00		52.00	INCREASE	30.57	36.40				
Sept.		47.00		52.00	EACH	33.54	36.40				
Oct.	42.56	49.00		52.00	MONTH	36.72	36.40				
Nov.		51.00		52.00	TO	38.52	37.52				
Dec.		51.00		52.00	50.00	43.67	37.52				
Jan. 1973	\$ 45.50	\$ 55.00		\$ 52.00	\$ 52.00	\$ 46.03	\$ 41.50				
Feb.	52.60	60.00		INCREASE	INCREASE	48.07	42.50				
Mar.		60.00		EACH	EACH	50.10	47.50				
Apr.		60.00		MONTH	MONTH	45.48	49.50				
May		60.00		TO	TO	48.18	56.50				
June		64.00		64.05	57.00	52.46	59.50				
July		64.00		-	57.00	-	60.20				
PERCENTAGE PRICE INCREASE JULY '72 - JULY '73	-	36%		23%	27%	60%	68%				
PERCENTAGE PRICE INCREASE JULY '71 - JULY '73	-	56%		41%	36%	-	-				

EXHIBIT 1 PAGE 3
SCRAP PRICE COMPOSITE

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
FROM JULY, 1971 THROUGH JULY, 1973

TYPE OF SCRAP: (Broken)	DELIVERED BY TRUCK										FOUNDRIES IDENTIFICATION CODE			
	NC - 11	NC - 10	SC - 11	SC - 10	SC - 6	SC - 5	SC - 7	SC - 8	SC - 9					
July 14 thru Aug. 16 1971	\$ 42.00	\$ 50.84	\$ 45.00	\$ 38.18	\$ 60.82	\$ 47.00	\$ 47.00	\$ 49.00	\$ 56.00					
July 1972	\$ 47.00	\$ 58.24	-	\$ 39.36	\$ 61.60	\$ 47.00	\$ 50.00	\$ 51.00	\$ 56.00					
Aug	47.00	58.24	-	39.36	61.60	47.00	50.00	51.00	56.00					
Sept.	48.00	62.72	\$ 53.00	39.36	61.60	47.00	50.00	51.00	58.24					
Oct.	48.00	64.96	53.00	39.36	61.60	47.00	50.00	49.00	61.60					
Nov.	48.00	66.53	53.00	39.36	61.60	47.00	50.00	55.00	61.60					
Dec.														
Jan. 1973	\$ 48.00	\$ 72.80	\$ 53.00	\$ 44.32	\$ 64.96	\$ 52.00	\$ 55.00	\$ 55.00	\$ 64.96					
Feb	52.00	77.28	53.00	44.32	67.20	58.00	61.00	60.00	67.20					
Mar.	60.00	75.04	60.00	44.32	67.20	58.00	61.00	60.00	67.20					
Apr.	60.00	75.04	60.00	44.32	67.20	58.00	61.00	60.00	67.20					
May	60.00	-	60.00	44.32	72.80	63.00	63.00	65.00	67.20					
June	60.00	-	60.00	Not Avail.	76.16	63.00	67.00	65.00	70.50					
July	60.00	-	70.00	61.00	76.16	67.00	67.00	70.00	70.50					
PERCENTAGE PRICE INCREASE JULY '72 JULY '73	28%	-	-	-	23%	36%	34%	37%	26%					
PERCENTAGE PRICE INCREASE JULY '71 JULY '73	43%	-	55%	60%	25%	59%	42%	43%	26%					

PRICES ARE \$/GT DELIVERED

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
FROM JULY, 1971 THROUGH JULY, 1973

STEEL SHEARINGS DELIVERED BY TRUCK LOADS PRICES ARE \$/GT DELIVERED

TYPE OF SCRAP:	FOUNDRY IDENTIFICATION CODE										
	NC - 1	NC - 4	NC - 5	NC - 6	NC - 7	SC - 1	W - 4	0 - 4			
TIME PERIOD											
July 14 thru Aug. 16 1971	\$ 41.00	\$ 42.00	\$ 42.00	\$ 52.65	\$ 38.00	\$ 46.00	\$ 60.00	\$ 66.00			
July 1972											
July	\$ 49.80	\$ 49.00	\$ 49.00	\$ 57.10	\$ 49.50		\$ 54.00	\$ 66.00			
Aug.	49.90	49.00	49.00	57.10	53.00		54.00	66.00			
Sept.	49.40	49.00	49.00	58.25	55.00	\$ 51.00	54.00	66.00			
Oct.	54.10	55.00	55.00	63.85	55.00	49.00		66.00			
Nov.	54.10	55.00	55.00	64.95	55.00	52.00		66.00			
Dec.	53.60	57.00	57.00	66.65	57.00		60.00	66.00			
Jan. 1973											
Jan.	\$ 58.75	\$ 57.00	\$ 57.00	\$ 76.15	\$ 70.00	\$ 58.00	\$ 60.00	\$ 66.00			
Feb.	69.85	74.00	74.00	80.65	70.00	66.00	Increase	66.00			
Mar.	69.60	74.00	74.00	78.40	70.00	64.00	each	66.00			
Apr.	69.80	75.00	75.00	78.40	70.00	66.00	month	72.00			
May	69.90	75.00	75.00	78.40	75.00	71.00	↓	72.00			
June	76.85	75.00	75.00	84.00		75.00	83.00	72.00			
July						76.00	83.00	82.00			
PERCENTAGE PRICE											
INCREASE JULY '72	52%	54%	53%	47%	51%	49%	54%	24%			
JULY '73											
PERCENTAGE PRICE											
INCREASE JULY '71	85%	83%	79%	60%	97%	65%	38%	24%			
JULY '73											

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
 FROM JULY, 1971 THROUGH JULY, 1973

EXHIBIT 1 PAGE 5
 SCRAP PRICE COMPOSITE

TYPE OF SCRAP: STEEL SHEARINGS DELIVERED BY TRUCK	FOUNDRY IDENTIFICATION CODE										PRICES ARE \$/GT DELIVERED	
	SC - 2	SC - 5	SC - 9	SC - 11	SC - 12	NC - 10	NC - 12					
TIME PERIOD												
July 14 thru Aug. 16 1971	\$ 38.00	\$ 49.00	\$ 44.80	\$ 38.00	\$ 40.00	\$ 50.34						
July 1972		\$ 49.00	\$ 44.80	\$ 38.00	\$ 45.00	\$ 58.24						
Aug		49.00	44.80	38.00	45.00	58.24						
Sept.		53.00	44.80	38.00	45.00	59.36						
Oct.		53.00	49.28	41.00	45.00	64.96						
Nov.		53.00	52.64	41.00	45.00	64.96						
Dec.	\$ 47.00	55.00	52.64	45.00	47.00	66.53						
1973												
Jan.		\$ 62.00	\$ 56.00	\$ 45.00	\$ 50.00	\$ 75.04						
Feb.		68.00	67.20	45.00	60.00	77.28						
Mar.	\$ 58.00	68.00	67.20	60.00	60.00	77.28					\$ 68.00	
Apr.		68.00	67.20	60.00	60.00	77.28					71.00	
May	64.00	73.00	69.44	60.00	65.00	77.28					73.00	
June		73.00	72.80	60.00	70.00	82.88					76.00	
July	72.00	77.00	72.80	68.00	70.00	76.00					76.00	
PERCENTAGE PRICE INCREASE JULY '72 JULY '73	-	57%	62%	79%	55%	42%						
PERCENTAGE PRICE INCREASE JULY '71 JULY '73	47%	57%	62%	79%	75%	63%						

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
 FROM JULY, 1971 THROUGH JULY, 1973

EXHIBIT 1 PAGE 6
 SCRAP PRICE COMPOSITE

TIME PERIOD	RAIL						FOUNDRY IDENTIFICATION CODE	
	NC - 2	NC - 3A	SC - 1	NC - 8	W - 1	W - 2		
July 14 1971 thru Aug. 16	\$ 34.70	\$ 32.81	\$ 46.00	\$ 41.00	\$ 54.00	\$ 45.00		
July 1972	\$ 48.65	-	\$ 47.00	\$ 50.00	\$ 57.50	\$ 53.00		
Aug	50.90	\$ 46.50	47.00	50.00	INCREASE	EACH		
Sept.	52.55	45.60	51.00	50.00	EACH	MONTH		
Oct.	58.50	-	51.00	52.00	MONTH	TO		
Nov.	58.50	47.00	53.00	48.00	TO			
Dec.		48.00	54.00	54.00				
Jan. 1973	\$ 73.75	\$ 54.00	\$ 61.00	\$ 65.00	\$ 64.00			
Feb.	78.40	61.50	67.00	68.00	INCREASE	\$ 56.00		
Mar.	78.40	60.50	67.00	67.00	EACH	59.00		
Apr.	78.40	65.00	67.00	68.00	MONTH	62.00		
May	78.40	70.60	72.00	65.00	TO	65.00		
June	84.40	70.60	76.00	68.00	\$ 79.00	68.00		
July		70.60	76.00	-	\$ 82.00	76.00		
PERCENTAGE PRICE INCREASE	73%	52%	62%	36%	42%	43%		
PERCENTAGE PRICE INCREASE	143%	115%	65%	66%	52%	69%		
		*						
		Greater Than 2'						

TYPE OF SCRAP: STEEL SHEARINGS DELIVERED BY RAIL PRICES ARE \$/GT DELIVERED

DATA ON SCRAP PRICES PAID BY WEST COAST FOUNDRIES
FROM JULY, 1971 THROUGH JULY, 1973

EXHIBIT 1 PAGE 7
SCRAP PRICE COMPOSITE

TIME PERIOD	TYPE OF SCRAP: STEEL SHEARINGS DELIVERED BY RAIL						FOUNDRY IDENTIFICATION CODE				
	W - 3	W - 6	NC - 3C	W - 8	0 - 5	MC - 5					
July 14 - 1971 thru Aug. 16	\$ 40.00	\$ 38.00	\$ 38.00	\$ 48.00	\$ 40.00	\$ 42.00					
July 1972	\$ 56.00		\$ 45.00	\$ 52.00	\$ 42.00	\$ 49.00					
Aug	56.00		45.00	52.00	42.00	49.00					
Sept.	56.00		45.00	53.00	44.00	49.00					
Oct.	56.00		50.00	53.00	44.00	55.00					
Nov.	56.00		54.00	54.00	44.00	55.00					
Dec.	56.00		50.00	55.00	44.00	57.00					
Jan. 1973	\$ 56.00	\$ 77.00	\$ 59.00	-	\$ 58.00	\$ 57.00					
Feb.	INCREASE		64.00	-	58.00	74.00					
Mar.	EACH		63.00	\$ 72.00	58.00	74.00					
Apr.	MONTH		64.00	72.00	58.00	75.00					
May	TO		68.00	72.00	58.00	75.00					
June	\$ 72.00		72.00	72.00	-	75.00					
July	\$ 82.00	\$ 81.00	72.00	82.00	-	75.00					
PERCENTAGE PRICE INCREASE JULY '72 - JULY '73	46%	-	60%	58%	38%	53%					
PERCENTAGE PRICE INCREASE JULY '71 - JULY '73	105%	113%	89%	71%	45%	78%					

PRICES ARE \$/GT DELIVERED

Assembly Joint Resolution**No. 47**

Introduced by Assemblymen Boatwright, Bill Greene, Alatorre, Beverly, Fong, Garcia, Gonsalves, Gonzales, Holoman, Ingalls, Ray E. Johnson, Keene, Lancaster, McCarthy, Meade, Miller, Papan, Seeley, Thurman, and Z'berg

(Coauthor: Senator Holmdahl)

April 26, 1973

REFERRED TO COMMITTEE ON RULES

*Assembly Joint Resolution No. 47—Relative to the
exportation of ferrous scrap metal.*

LEGISLATIVE COUNSEL'S DIGEST

AJR 47, as introduced, Boatwright (Rls.). Ferrous scrap metal.

Memorializes the President and Congress of the United States to instruct the Secretary of Commerce to forbid the exportation of ferrous scrap metal for a period of 45 days to permit a study to be conducted, and to place an embargo limiting tonnage to be shipped from the West Coast.

Fiscal committee: no.

- 1 WHEREAS, The exportation of ferrous scrap metal from
- 2 West Coast ports during 1972 was in excess of 1,500,000
- 3 tons, and the trend indicates an increase for 1973 of 100
- 4 percent export to the Orient; and
- 5 WHEREAS, The demand during the past number of
- 6 years has widely fluctuated, based upon internal needs of
- 7 the countries involved, over which the United States has

AJR 47

-- 2 --

1 no control; and

2 WHEREAS, Because of the varying demands, there have
3 been substantial fluctuations in the price of ferrous scrap,
4 so that the price has increased in excess of 50 percent
5 during the last six months; and

6 WHEREAS, Steel manufacturers on the West Coast, and
7 particularly in the State of California, are almost totally
8 dependent upon ferrous scrap for their production; as
9 compared to steel manufacturers in the Orient, where
10 scrap constitutes a relatively insignificant percentage of
11 materials used for production; and

12 WHEREAS, Because of the dependence of California
13 steel manufacturers upon scrap, it is necessary that any
14 increases in the cost of scrap must be directly and fully
15 passed on to the consumers of California manufactured
16 steel products, so that these products can no longer
17 compete with products imported from the Orient; and

18 WHEREAS, These wide fluctuations in price have begun
19 to seriously affect the California steel industry, which
20 employs nearly 25,000 workers, and supports a
21 \$250,000,000 annual payroll; and

22 WHEREAS, The United States is the only country in the
23 free world which currently permits the export of scrap
24 metal; and

25 WHEREAS, Continued increases in the price of scrap,
26 resulting from uncontrolled foreign exports, will shortly
27 put out of business the California steel industry, because
28 of its dependence upon scrap and because of its inability
29 therefor to compete with either imports from foreign
30 countries or with domestic sources of supply that do not
31 use scrap; and

32 WHEREAS, The Export Control Act provides the
33 Secretary of Commerce the authority and responsibility
34 to control the exportation of materials in short supply,
35 when a drain of such materials exists or where foreign
36 demand exerts an inflationary impact on such materials;
37 and

38 WHEREAS, The conditions necessary for action by the
39 Secretary of Commerce, under the provisions of the
40 Export Control Act, exist in California and throughout

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1 the western United States on a scale which promises
2 massive unemployment and hardship for the people of
3 these regions; now, therefore, be it

4 *Resolved by the Assembly and Senate of the State of*
5 *California, jointly,* That the Legislature of the State of
6 California respectfully memorializes the President and
7 the Congress of the United States to instruct the
8 Secretary of Commerce to exercise his powers to forbid
9 the export of ferrous scrap metal for a period of a
10 minimum of 45 days, during which time a study should be
11 made of the available scrap and the needs of West Coast
12 steel mills. Following this 45-day period, a partial
13 embargo should be imposed, limiting the tonnage to be
14 shipped from the West Coast of the United States, not
15 only in terms of the total amount of tons, but further
16 breaking down said shipment by port of embarkation;
17 and be it further

18 *Resolved,* That the Chief Clerk of the Assembly
19 transmit copies of this resolution to the President and
20 Vice President of the United States, to the Secretary of
21 Commerce, to the Speaker of the House of
22 Representatives, and to each Senator and Representative
23 from California in the Congress of the United States.

0
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Compliments of
SENATOR JOHN W. HOLMDAHL
Eighth Senatorial District

STATEMENT ON FERROUS SCRAP EXPORTS
Presented to
THE U.S. SENATE SUBCOMMITTEE ON INTERNATIONAL FINANCE

By
Donald H. Workman, Executive Vice President
GRAY AND DUCTILE IRON FOUNDERS' SOCIETY INC.

on behalf of
CAST METALS FEDERATION
20611 Center Ridge Rd., Rocky River, Ohio 44116
July 18, 1973

My name is Donald H. Workman. I am Executive Vice President, Gray and Ductile Founders' Society and I represent the Cast Metals Federation, which also includes the Malleable Founders Society, Steel Founders' Society of America, National Foundry Association and the Non-Ferrous Founders' Society. Today we are representing the serious concerns of the ferrous foundries in the United States regarding unleashed exports of iron and steel scrap which has created short supply and spiraling prices for domestic users.

Sketch of Industry

Today's 2100 ferrous foundries are predominantly small businesses, employing about 235,000 workers, many of whom are of minority races. Their products, vital as they are, are generally "invisible" because they serve as components of automobiles and trucks, railroad locomotives and cars, machine tools, general machinery, farm equipment, ordnance, electrical generators and motors, refrigeration, internal combustion engines, household appliances and scores of other durable goods.

The multi-billion dollar foundry industry ranks sixth among all manufacturing industries. Everything in this room, even your tie, required machinery made of casting components to produce. There are over 600 pounds of ferrous castings in your automobile, including the engine, brakes and many other vital parts. Even the magnificent dome of our U.S. Capital Building is gray cast iron! If foundries were closed down, even for a short period, practically all U.S. manufacturing would surely grind to a complete halt.

The ferrous foundry industry has already suffered a financial one-two punch with the need for substantial capital investment in non-productive air pollution controls plus even greater expenditures to meet OSHA requirements. Because of various economic factors, the gray iron foundry industry alone, with over 3000 foundries in 1948, has experienced a reduction of 50% in numbers of units in the past 25 years, and more are closing each week, mostly because of the lack of capital to meet these new, stringent federal regulations.

Ferrous Scrap Problem

In late 1972, ferrous foundries began reporting sharp increases in prices of iron and steel scrap at the time the Japanese were placing orders for their needs in the first half of 1973. On January 24, 1973, representatives of the steel mills and ferrous foundries met with Department of Commerce officials to officially request a limitation on uncontrolled exports of ferrous scrap coupled with an already dramatic rise in domestic mill and foundry scrap consumption. Because of the obvious inflationary aspects, Cost of Living Council officials attended this meeting.

At this January meeting we estimated 1973 exports of 12 million tons of ferrous scrap, which on top of the estimated 41.5 million tons needed for mills and foundries would require 53.5 million tons of scrap for the year 1973. We noted that during the last scrap shortage of 1969-70, only a total of 46 million tons of scrap were generated to meet domestic demand and to fill export orders. The 1973 estimate of 53.5 million tons appeared to us to be an impossible task, surely leading to shortages and greatly inflated prices for scrap. This has happened.

At that time scrap exporters made no secret of the fact that the Japanese and other nations would be in our market for considerably more scrap than ever before in recent history. Based on the above forecasts, we officially asked the Department of

Commerce to use its authority under the Export Administration Act to limit the export of ferrous scrap to 7 million tons in 1973.

On February 21, 1973, over 40 ferrous foundry executives, alarmed at continued spiraling scrap prices, met with Department of Commerce officials asking for consideration, but again, to no avail.

On March 22, another meeting of steel mill and foundry representatives with Commerce officials netted no action. This "inaction" demonstrates the need for legislated, definitive criteria to curb exports of vital raw materials and other resources to avoid chaos in domestic markets.

On March 23, steel mill representatives and the Cast Metals Federation presented the above-mentioned 1973 projected forecast on scrap exports and domestic demand tonnages to your sister committee in the U. S. House of Representatives for consideration in amendments to the Export Administration Act.

In 1973 iron and steel foundries will pay out at least an additional 3/4 billion dollars for ferrous scrap over normal prices in 1972. When the additional cost of scrap to the steel mills is added, the inflationary and economic impact is overwhelming to say the least. Current scrap prices have already added at least 4 to 5% to foundry costs. The competitive nature of our industry and customer resistance under Phase II and III, sets realistic limits on passing through all of these increased costs. Most scrap processors have been exempt from such price controls.

Conclusion

The Cast Metals Federation strongly supports S. 2119, which provides a "red flag" trigger mechanism to impose scrap export licenses when definite criteria are met, based on total scrap exports plus domestic scrap consumption in any calendar quarter. This will avoid the foot dragging "deliberation and review" by the Administration (see attached telegram of May 3) which has gotten domestic users

untenable price--supply situation at this time. In finally announcing a 30 day export embargo on July 2, 1973, The Secretary of Commerce more than confirmed our earlier warnings when he announced that expected purchases of scrap, including 12.4 million tons of exports, were projected to total 54.4 million tons in calendar 1973--18% above any previous high year. He further noted that domestic prices for most grades of scrap were at their highest level in 16 years.

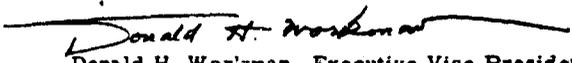
The Secretary's own statements, based on current facts, confirm the credibility of our earlier predictions.

We can appreciate that high level "deals" with foreign nations interfere with our government's normal course of action in situations such as this. On July 16, 1973, Japan's Foreign Minister, in the presence of our Secretary of State in Tokyo, stated Japan was "greatly embarrassed" by recent U.S. export curbs. He further urged the U.S. to "exercise an increasing degree of discipline in managing its own economy" and to refrain from further actions against Japanese imports and to continue to provide to Japan a stable supply of logs, iron and steel scrap, wheat, soybeans and feed grains.

Only the Congress can decide what is in the best interests of this country of ours. To many citizens, our give away policies are completely incomprehensible, especially as the U.S. becomes more of a "have not" nation in so many resources and domestic prices continue to rise.

We believe it was the intent of Congress, under the Export Administration Act of 1969, to give the Commerce Department authority to act quickly when a collision course becomes obvious. Only the provisions of S. 2119 will make Congressional intent meaningful, and will provide necessary relief for domestic users of scrap before irreparable damage is done.

For the CAST METALS FEDERATION


Donald H. Workman, Executive Vice President
Gray & Ductile Iron Founders' Society Inc.

COPY - Telegram sent May 3, 1973

The Honorable Frederick B. Dent, Secretary
U. S. Department of Commerce
Washington, D. C. 20230

On March 20, representatives of your Department and the Council of International Economic Policy assured representatives of the foundry and steel mill industries that some action under the Export Administration Act would be taken if (1) ferrous scrap prices rose (2) supply worsened and (3) if exports soared, or if Japan alone came in for over one million tons of scrap for their second half requirements. Scrap prices started upward again two weeks ago. Over one million tons of ferrous scrap was exported in March and many foundries now cannot secure firm tonnage contracts from scrap dealers. These factors are known to your Department. Accordingly we again request that you use the authority already vested to license ferrous scrap exports to a maximum of seven million tons in 1973. The present critical situation was forecast by industry spokesmen in January, February, March and April. Our domestic economy is seriously affected and the inflationary impact is of concern to foundrymen who have been pleading with their Congressmen to do something about it. Copies of this telegram are being sent to 2100 ferrous foundries in the United States with the suggestion that they continue their efforts to restrict exports of this vital raw material.

CAST METALS FEDERATION (Gray &
Ductile Iron Founders' Society; Malleable
Founders Society; Steel Founders' Society
of America)

(accompanies D. H. Workman's Statement July 18, 1973)

Statement by Paul B. Akin
President of Laclede Steel Company
St. Louis, Missouri

for the
Ferrous Scrap Consumers Committee
Regarding
S-2119
to the
Subcommittee on International Finance
of the
Senate Committee on Banking, Housing and Urban Affairs
July 18, 1973

Mr. Chairman, my name is Paul B. Akin. I am the President and Treasurer of the Laclede Steel Company and I am also the President of the Ferrous Scrap Consumers Committee representing five medium sized steel companies. I am glad to be here today, and to have the opportunity to discuss with you the merits of S-2119.

I INTRODUCTION:

The following statement addresses itself to two major points. They are:

Point I: Is the present alleged ferrous scrap shortage and export problem of sufficient magnitude to warrant specific legislation now?

Point II: If the need expressed in Point I is established, would S-2119 accomplish this objective in a manner consistent with the public interest? That is, would it be fair and equitable to the scrap processing industry, to scrap consumers and to the general public?

As I am convinced that the answers to the above two questions are affirmative, I will attempt today to establish that this position is well based in fact. The following statement contains three additional sections. First, the question raised in Point I is developed to show the magnitude and the import of the several problems that are a direct result of the present ferrous scrap shortage. In the next section, I will attempt to show why S-2119 will correct the

problems that have been created by repeated ferrous scrap shortages, and in the final section I will make four suggestions. As I feel that any recommendation presented to this Subcommittee on International Finance should be supported by data and documentation, I have attached to the record copy of this testimony such supplementary data and documentation.

II THE MAGNITUDE OF PROBLEMS CAUSED BY THE PRESENT SCRAP SHORTAGE AND WHY LEGISLATIVE ACTION IS NEEDED

A. Background: To better understand the present series of problems it is helpful to know a little about scrap iron and steel itself, where and how it is gathered, who uses it, and for what, and finally to review the total volume of scrap that has moved through the scrap market in recent years.

Scrap iron and steel is divided into numerous grades to delineate its quality, first in regards to purity, and second in regards to density or the physical size of the pieces. Perhaps the finest grade of scrap comes from the manufacturing of automobiles and other new equipment. After the parts have been cut or stamped out of the cold rolled sheets of steel the trimmings are squeezed into a block referred to as a "factory bundle." This "factory bundle" is pure steel that has already been refined. It only needs to be remelted, cast, and rolled to make it a prime steel mill product once more. Old bridge and building girders and old machinery are other excellent sources of scrap. Although this scrap usually has some rust,

paint, and dirt on it, these impurities are either burned off readily or float up into the slag in the remelting process. Other grades of scrap have impurities such as the elements copper, nickel and chromium present in undesirable amounts. These "tramp" alloys cannot be removed by remelting, hence scrap containing undesirable amounts of these alloys is used for less demanding steel products or is blended with purer scrap to dilute the concentration of alloys. As a whole, however, scrap iron and steel should be considered this nation's purest "iron ore." It contains well over 90% iron while most iron ores must be beneficiated to reach over 60% iron content. As scrap is in essence steel that needs only remelting and a small amount of refining to once again become "raw steel," it is easy to see why this is our nation's least expensive method, from an energy standpoint, for producing steel. Scrap is an "ore" that does not have to be beneficiated. It does not have to go through a blast furnace that requires large amounts of metallurgical coal before getting to the open hearth or to the basic oxygen steelmaking furnaces. It is, accordingly, easy to understand why raw steel made entirely from scrap in an electric-arc furnace requires only 16% as much energy as steel made from iron ore. This subject is treated in considerable detail in an article entitled, "Energy and the U. S. Industry," which is included in the supplementary data accompanying my prepared testimony.

Let us now consider the business of collecting and preparing scrap iron and steel. The individuals who collect and prepare the scrap are called "scrap dealers." They obtain scrap in several ways. Some have trucks that self-load and unload large containers. A dealer will have empty containers for scrap at various small or medium size steel consuming factories on a contract basis, and will remove the containers when they are full. A dealer may have a contract with the city dump to take old refrigerators, freezers and other bulky steel objects. He may buy scrap from demolition companies that take down old buildings and bridges. In many cases people in allied businesses will deliver scrap to him.

One common business of this type is the used automobile part business. Many believe that the old cars in a field or a lot full of old and wrecked cars are scrap. Such is not the case in most instances. These cars are an inventory of spare parts. After the owner of such an establishment has recovered as much as he feels he can from an old hulk he will haul the remains off to sell to a scrap dealer, and thereby make room on his lot for a "new" old car.

Some stores that sell new electrical appliances have a contract with an individual or a small hauling company to pick up old refrigerators and freezers and haul them to a scrap dealer.

There are numerous other ways that scrap gets to the dealer's yard, but gone is the horse and wagon approach of former years. Naturally, when scrap prices are high a few opportunists will move in and quickly gather up scrap that might not have gotten to the market under more normal conditions until a somewhat later date. These opportunists do not create scrap; they merely accelerate somewhat the gathering of scrap. There is no way of knowing or measuring precisely to what extent changes in scrap price can accelerate scrap gathering.

Once the scrap reaches the dealer's yard it is separated by grade and prepared for the scrap consumer. The preparation can be done with torches, shears, baling machines or fragmentizers depending upon the material that is to be processed.

Scrap brokers merely maintain an office (in the case of the larger scrap brokers, a series of offices) and a staff. There are a few broker-dealer organizations, but these are the exception. The scrap broker maintains contact between a number of scrap dealers and a number of scrap consumers. In short, he is the "go-between." The broker will take an order from a scrap consumer for a block of tonnage of, for example, #2 bundles. He may then divide the order and distribute it to several dealers for shipment.

The automotive industry scrap or so called "prompt industrial bundles," are handled entirely by the scrap brokers. Monthly each automobile manufacturing plant estimates from

the number of cars that they are scheduled to produce how many tons of scrap they will generate. Brokers are then notified how many tons will be auctioned and the date on which the auction will take place. These auctions are generally in the last week of every month. When the bids are opened the amounts become public knowledge. Although the amount of scrap that is sold in this manner is small, the auctions are very significant as they are a prime indication of supply-demand pressure in the scrap market.

The next point to consider is the amount of scrap that moves in the market. This annual tonnage is sold either to domestic scrap consumers, or it is sold for export.

All scrap sold in export is reported on a U. S. Department of Commerce form, the "Shipper's Export Declaration." A copy of this form must be filed with the local U. S. customs officer prior to a ship's or train's departure. These forms are forwarded to the district customs office, and once a month all such forms are sent to the Bureau of Census office in Jeffersonville, Indiana. The data is key-punched there onto magnetic tape and sent by wire to the main computers for the Bureau of Census at the Federal Buildings in Suitland, Maryland. The results are made public approximately one month after the close of the month in question.

The Department of the Interior Bureau of Mines, in conjunction with the Department of Commerce, Bureau of the Census, collect data on domestic scrap usage on form M-33-AM. Although the

filing of this form is on a voluntary basis at present, those in charge of the data at the Bureau of Mines are confident that the total amounts are reasonably accurate.

From these two reporting systems we have a record of the amount of scrap that was consumed domestically and of the amount that went into export. The lower graph of Appendix I shows a history of the scrap market from 1953 to 1972. The lowest line on the chart shows how exports varied during this period. The second line shows how much scrap the steel industry alone purchased, and the top line indicates the size of this entire market during the twenty-year period. The graph at the top of the page shows the composite price range of this important scrap grade during the 1953 - 1972 period. The blip on each year's price range indicates how the year ended, and the straight line connects the unweighted annual averages for the period.

The first short period to be noted on these graphs occurs during 1955, 1956, and 1957. An international steel shortage took place at the time, and there was, accordingly, a heavy demand for scrap iron and steel. Scrap exports were abnormally high, domestic consumption was heavy, and the total, naturally, was very high. The upper graph shows that the supply-demand ratio was strained as prices soared.

The next year worth noting was 1961. Scrap exports that year were just short of ten million tons, well above the exports of the preceding few years and the years that followed.

Domestic scrap consumption was mild and normal that year. On the upper graph prices made only a slight response to the abnormal foreign demand. 1961 clearly illustrates that abnormal export demand alone did not cause a scrap shortage in the United States. It is a combination of heavy exports plus high domestic demand that has caused the only scrap shortages that we have experienced in the United States in the last twenty years.

It is interesting to note that we did not have an international steel shortage after the one in 1955, 1956, and 1957 for more than twelve years. A world steel shortage hit in 1969 and lasted well through 1970. Again scrap responded to the steel shortage. Scrap exports and domestic demand became heavy in the second quarter of 1969 and remained high for the balance of that year. In 1970 demand peaked in the second and third quarters.

The sad aspect of all of this is that in 1972 and 1973 we are again experiencing a world steel shortage with the accompanying scrap shortage, and that we have every prospect of having several more shortages during the Seventies. In the supplementary material that accompanies this report is the May 1973 issue of Center Lines, a Steel Service Center publication. In the May issue the Rev. William Hogan, S.F., of Fordham, an economist who has specialized in the steel industry, discusses the world steel supply situation in great detail and concludes that repeated world steel shortages are inevitable.

Appendix II provides more complete data than is shown in Appendix I as the domestic scrap receipts include the tonnage purchased by the foundries as well as by the steel industry. The data in Appendix II starts with 1961 and continues through the first quarter of 1972. Exports, receipts, and quarterly net tonnage as well as annual totals are shown. The data from this table is the key to the trigger mechanism of S-2119.

B. How Scrap Shortages Affect Steel Producers

In Section A, I mentioned what scrap is, how it is collected, and how it is moved to the scrap consumers. At this point it would be worth mentioning who buys the scrap. It is purchased by steel companies and by foundries. As the foundries are well represented here today, I will confine my remarks to the steel industry.

The steel companies that buy scrap in the market use it primarily in electric-arc furnaces and in open hearth furnaces to produce "raw steel" that is molten steel. The molten steel is then "teemed" or poured into molds to form ingots or it is taken to a continuous casting machine to produce slabs, blooms or billets. There are about forty very small steel companies called "mini" mills in this country that rely entirely on scrap as their raw material. There are several larger steel companies that also rely solely on scrap for their raw material. These are the so-called "midi" mills. Both "mini" and "midi" mills are also called "cold-charge" or "cold-metal" shops to

differentiate the cold scrap charge from the molten-iron-charge operation of the basic oxygen or open hearth process. Not all "cold charge" shops are small operations, however, as two of the largest scrap purchasers are among the largest fully-integrated steel corporations in this country, Armco Steel Corporation and Inland Steel Corporation. Both of these large steel companies have separate steelmaking operations that rely solely on purchased scrap for their operation.

It should also be noted that in a period of high steel demand the blast furnaces that produce molten iron from iron ore are pushed to capacity to supply iron to the steelmaking furnaces. In the United States 80% of our steel is produced via the iron-ore blast-furnace process. The iron ore mines are often owned by the larger steel corporations that need the ore, but in those instances when iron ore is sold to steel companies, it is normally done so on a long-term contract of twenty years or more. This is an understandable procedure as the mine owner who has drilled his property and knows the amount and the quality of the ore he owns, needs a long-term contract to amortize the cost of drilling the shaft and of developing the mine. Steel mills do not mind signing long-term contracts for ore as the mine owner is not "selling short." He owns the ore that he'll ship this year now as well as the ore that he'll ship on the last year of the contract. Hence, international steel and scrap shortages can come and go without making any noticeable change in the price of the iron

ore. This, incidentally, also explains why steel mills will not sign long-term contracts with scrap brokers or dealers as these suppliers seldom have more than a thirty day supply of scrap on hand. If a scrap broker signed a long-term contract at today's prices, and the market price went up, the broker would not be able to deliver without taking an enormous loss. There are some so-called long-term scrap contracts signed by mills and foundries that have floating prices based on one of the published composite price indices. The reasons that such long-term scrap contracts are unsatisfactory are numerous, and the fact that few such contracts exist, aptly illustrates how unacceptable this concept is to the scrap consumers. The long-term scrap contracts signed by the Japanese of approximately a year or more duration are based on a concept of cartels and involvement by their national government. As this is an approach legally prohibited in this country, it is not germane to this report.

With this general background, it is not difficult to understand what takes place when an international steel shortage occurs. Blast furnaces are pressed to capacity and when they can no longer supply enough iron for the steelmaking furnaces, the scrap iron and steel portion of the charge is increased in the open hearths and basic oxygen furnaces to produce the additional raw steel required. In fact, an open hearth furnace, like an electric-arc furnace, can operate on a 100% scrap charge. The practice of getting additional raw

steel production by increasing the amount of scrap iron and steel charged is common practice abroad as well as domestically and accounts for the fact that abnormally high scrap exports occur during international steel shortages.

The heavy demand for scrap in the domestic market to meet our national needs in conjunction with the demand for scrap exports strains the scrap supply-demand relationship and prices increase 60 to 70% as they did in 1970 and as they have done this year. Although the integrated steel producers purchase large amounts of scrap during such periods, their scrap costs are insignificant when compared to the costs for their prime raw material, iron ore. Hence, with little change in the price of its major raw material, the larger steel mills are in no position to cost justify and pass through to their customers a price increase for steel mill products.

The prime raw material for the "cold-charge" shop is scrap steel, however, and when an international steel shortage occurs and the price of scrap soars, they are in a very difficult position. A cold-charge shop could pass his increased costs on to his customers, as they would not be able to buy steel elsewhere while the steel shortage lasts. These customers would then be at a disadvantage with their competitors who bought from the larger steel companies, and naturally as soon as the steel shortage was over they too

would place their business with the large mills. Hence, the cold-charge shops must absorb the full brunt of the violent scrap price increases that accompany a shortage. An exception to this would be the case of a local "mini" mill that is able to pass the cost on to the local construction industry in higher prices for reinforcing bars.

The next question is, "Can they absorb it and what if they can't?" It is not difficult to measure the impact of scrap price increases on cold-charge shops. The amount of scrap that they need is a little more than the tonnage of steel products that they ship; hence, the annual product tons shipped times the scrap price increase equals approximately the scrap cost impact. Present scrap prices would amount to about a 10% pretax cost increase for these cold-charge shops. For some this would cause losses, for all it would mean poor financial returns. If this occurred only once in ten years, it would not be of major significance. When in fact it has happened twice in three years, and with every prospect of its continuing frequently during the Seventies, it practically eliminates serious consideration for further investment in this steelmaking process.

C. Conclusion to Point I Regarding the Magnitude of the Problem and the Need for Legislation

To summarize the foregoing the following points should be considered:

1. The United States steel industry does not produce enough steel to meet the needs of this nation, and has not for more than a decade. (See Appendix III of this statement and U. S. International Trade Record and Domestic Steel Trade Deficit Graph and Table in the Supplementary Data attached.)

2. The international balance of payments deficit for the steel industry in 1971 was greater than our national deficit.

3. The steel tonnage produced by the cold-metal shops is about 20% of the steel produced in this country and that without it the steel trade deficit of 2.3 billion dollars would almost double.

4. The cold-charge steel mills are the primary recyclers of ferrous solid waste and that they use approximately 1/6 of the amount of energy to produce a ton of raw steel that the iron ore-blast furnace requires.

5. The cold-charge steel mills employ almost 1,000,000 management and hourly-paid workers.

6. The unrestricted exporting of scrap iron and steel in periods of high domestic consumption forces scrap prices to levels that cause irreparable economic damage to cold-charge steel manufacturers.

In view of the above six points, I believe that it has been clearly established that there is an immediate need for legislation to control the export of scrap iron and steel.

III WHY S-2119 IS AN ADEQUATE AND FAIR LAW TO CONTROL THE EXPORT OF SCRAP IRON AND STEEL

A. Desirable Features Sought

One method of evaluating whether S-2119 is a good solution to the problem of scrap iron and steel exports is to consider first what features would be desirable in such a bill. Five major criteria that should be present in a bill would include the following general provisions:

1. The law should permit the unrestricted export of scrap iron and steel during periods in which domestic consumption is moderate or low.
2. When scrap exports and domestic demand both become heavy, the law should place a mild restraint upon exports initially; and if the shortage remains critical after the imposition of the mild restraint has been tried, a sterner restriction should be provided.
3. The law should be fair to the scrap processing industry, the scrap consuming industry, and to the general public.
4. The law should be as simple as possible to administer and to operate.
5. The law should make it perfectly clear to all concerned when and by how much scrap exports will be curtailed.

B. General Discussion of S-2119 vs. Desirable Features

In this part of my statement, I will discuss only the five general features listed in III A. above. A detailed discussion of S-2119 is included as Appendix IV.

1. In regards to the first feature sought, i.e., the unrestricted export of scrap iron and steel during periods in which domestic consumption is moderate or low, S-2119 meets the objective fully. If S-2119 had become law at the end of 1960, the first restriction that would have been imposed would have occurred in 1969. It is interesting to note that in the year 1961 when exports were exceedingly heavy, but domestic shipments were low, the bill would not have imposed export restrictions by a wide margin. A bill that would impose a fixed maximum amount on scrap exports would certainly have triggered unnecessarily in 1961. Hence, by examining how the export-plus-domestic-demand trigger would have operated in the years since 1960, we can readily determine that S-2119 meets this criteria.

2. The second criteria gets to the heart of the problem as it requires a mild restraint when exports and domestic demand are both high simultaneously, and that a harsher restriction will be imposed if the first restraint fails to contain the critical shortage. Again, we can see when S-2119 would have been applied during the Sixties and Seventies to determine whether it would have triggered prematurely late, or not at all. We find that the bill would have called for a mild restraint in 1969, 1970, 1972 and in 1973. At no time, however, would an embargo or harsh restraint been called for. I have referred to the restraint as a mild one and recognize

full well that many might call the initial export restraint of S-2119 severe. The objective is to provide enough scrap to the domestic consumers to prevent economic damage from occurring to the domestic industries. Certainly in times of shortage we do not want to double our exports. A study of S-2119 shows that exports would have been heavy even in those years of restrictions, and that if it were applied during 1973, allowable exports might well be at or above the five year export average. The total embargo provision of S-2119 is in reality a type of fail-safe that is more imaginary than real as it has a very high trigger point that the Secretary of Commerce can readily void by taking timely action as provided for in Section 209 of the bill.

3. The third criteria sought in the bill is that it be fair to all parties concerned. It would be very nice if we could meet the needs of the domestic consumer without imposing export controls at all. Scrap iron and steel is a commodity, however, that does not permit such a laissez-faire approach without damaging the scrap consumer and ultimately the general public. Hence, scrap exports must be imposed, and the big question is, "Does S-2119 impose the restrictions too frequently?" Again we can look to the Sixties and Seventies to see when S-2119 would have operated. In 1969 the first restraint would have taken place before the shortage caused the price jump late in the year. In 1970 the law would have

restricted exports after price jumps that took place in the early part of the year. By acting promptly S-2119 would have prevented the severe price fluctuation that occurred during these two shorta periods and still would have provided the scrap processors record shipment years. S-2119 meets this criteria accordingly as well as any bill could.

4. The fourth criteria desired is to have a bill that is simple to operate and to administer. All too often complex problems have solutions proposed that are short, simple and wrong. I do not believe that such is the case with S-2119. The alternatives can be complex indeed. Let us consider for a moment a trigger based upon price. The question comes up -- what price, for what grade, and where? Some have suggested the published composite prices. Often those who suggest that such a bench mark be employed do not know that these are generally unweighted averages that a reporter works out after talking with several consumers and brokers. The scrap prices quoted for various cities are a constant source of irritation for brokers and consumers alike. These figures are not overly reliable now without an export policy swinging on them or with millions of dollars in the balance.

If reliable price data could be obtained, the next problem would be to fix and hold a grade of scrap for the price. Anyone who has purchased scrap knows how futile a task this can be.

The approach used in S-2119 by comparison is simple as it does not attempt to fix either price or grade, but relies wholly upon the total effort of the scrap processing industry. As all of the scrap processed in this country goes either to the domestic consumer or into export, the sum of these two for a year is an indication of the total annual effort. In the three years when this annual effort exceeded 45 million tons, the increased prices illustrated adequately that the supply-demand relationship had been strained. The two gross numbers are not too difficult to obtain, and we have a relatively good history of what they have been. The very magnitude of the numbers make them impossible for either the consumers or the processors to manipulate. Accordingly, by its very grossness, the trigger mechanism of S-2119 is simple. The rules for operating the trigger are straightforward and readily comprehensible.

5. The final requirement is that the law makes it perfectly clear to all concerned when and by how much scrap exports would be curtailed. As mentioned above the controls and rules of S-2119 are readily understandable. If such a law were passed, it would be clear to everyone that scrap shortages would be a thing of the past, and there would be no cause for further wild price swings. The stabilizing effect would be a benefit to the scrap processor as he would be sure that his scrap consumer would be able to stay in business.

C. Conclusion to Part III Regarding the Adequacy
of S-2119

The ability of S-2119 to meet the desirable features that a law should have to control scrap has been discussed in general terms. A more detailed analysis of the bill is included in Appendix IV.

There is no question in my mind that S-2119 fully meets the basic fundamentals that are prerequisite for a scrap iron and steel export control law.

IV SUGGESTIONS

At this time after having made a detailed study of S-2119 and after numerous conversations about it, I would like to make several suggestions.

In my opinion the bill would be improved if the Secretary were given a ratio to determine how much scrap should be permitted to leave the West Coast states, and how much should be permitted to leave the balance of the country when restrictions are imposed. This would be in recognition of special West Coast scrap problems.

A second suggestion would be to exclude all stainless steel scrap from the bill, as this is an entirely different market.

A third suggestion would be to fix a starting date so that the bill could be put into effect promptly on a calendar basis

My final suggestion would be to require the Secretary of Commerce to collect his raw data in much the same way as this data has been collected in the past, as it is well recognized that by changing the way the data is collected the bill can be made either much stricter or much looser.

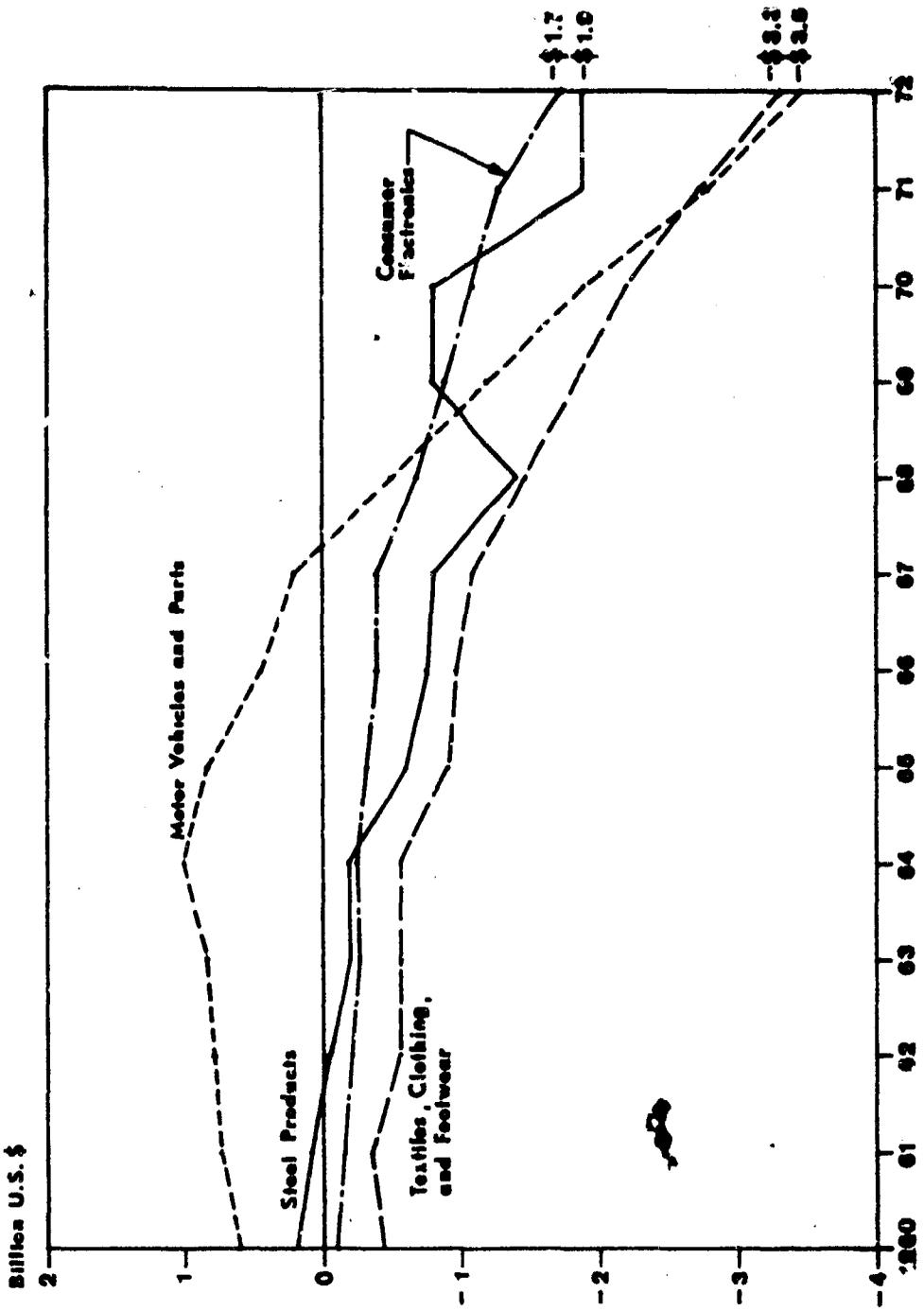
This concludes my statement except to thank you for permitting me to express my opinion of S-2119.

Respectfully submitted,


Paul B. Akin

Products with a Declining Trade Balance Trend

Appendix III



Appendix IV -

A Detailed Discussion of S-2119

SCRAP IRON AND STEEL EXPORT
ADMINISTRATION ACT OF 1973

REPORT

To amend the Export Administration Act of 1969 (Title 50 App. §2401), as amended, to control the export of iron and steel scrap during periods of shortage.

PURPOSE OF THE LEGISLATION

The purpose of this bill is to permit as much scrap iron and steel to be exported as possible without harming the domestic foundry industry and a large segment of the domestic steel industry. The bill places no restraint on scrap iron and steel exports when domestic demand for this material is moderate. When, however, both domestic and export demands for scrap are high at the same time a moderate restriction on exports is imposed. Although it is unlikely that a supply-demand imbalance would persist after the installation of these first restrictions, the bill does provide for the imposition of a total embargo in the eleventh month after the start of such a critical scrap shortage, and then only if the shortage had remained at the critical level through the sixth, seventh, and eighth months. Thus only if a critical shortage of scrap iron and steel persists for a sustained period will the quantitative limitations in the bill -- the so-called "trigger mechanism" -- become operative. Because export controls are a strong action that conflict with other national objectives,

we do not want to restrict scrap iron and steel exports unless such restrictions are clearly required to prevent material disruptions in the domestic supply of scrap, which shortages -- unless monitored and regulated as this bill provides -- could cripple the domestic foundry industry and a large segment of the domestic steel industry by causing "outages" and other disruptions in the supply of steel to this nation's economy.

SECTION-BY-SECTION ANALYSIS OF THE BILL

The bill divides into two parts. Section 1 of the bill redesignates the existing Export Administration Act of 1969 as title I of the Export Administration Act under the heading of "General Provisions." Section 2 of the bill establishes a new title II under the Export Administration Act under the heading of "Scrap Iron and Steel Export Controls."

Section 201 of title II designates the title: the Scrap Iron and Steel Export Administration Act of 1973.

Section 202 states the findings of Congress which underlie the development of the Act. These are as follows:

- Section 202(a) recognizes that the United States is a highly industrialized nation that has a considerable demand for foundry castings and for steel to fill the needs of industry and new construction. This finding is self evident when we consider the numerous castings, steel forgings and steel shapes in automobiles, farm equipment, trucks, tractors, trains and construction equipment as well as the reinforcing bars used in highways, bridges, and buildings.

- Section 202(b) recognizes the fact that the domestic foundry industry relies almost entirely on cupola or the electric arc furnace processes and that a large segment of the steel industry relies on open hearth and electric arc furnaces for their supply of raw steel. All of these processes can use a 100% scrap iron or steel charge. The steel works that rely entirely on scrap for their raw material, often referred to as "cold metal shops," produce from 15% to 20% of the raw steel made in the United States. The "cold metal shops" include the so-called mini-mills or tiny steel companies; the "midi" or medium-sized steel companies, and various separate operations of some of the largest steel corporations.

- Section 202(c) refers to the fact that the foundries and the cold metal shops are the primary consumers of the secondary grades of scrap. Although this is ferrous recyclable waste, it contains over 90% iron and is in many respects a very high quality ore. Since scrap is steel that has already been refined once, remelting, cleaning and the addition of a few final chemicals is all that is required to produce new raw steel. It is easy to see that these processes would not require as much fuel to remelt scrap as would be needed to beneficiate ore, refine it in a blast furnace and then refine it in either an Open Hearth or in a Basic Oxygen Furnace. In a paper presented at the International Iron and Steel Institute, at Toronto, Canada, in October 1971, entitled "Energy and the U.S. Steel Industry," Mr. Michael Tenenbaum and Mr. Frank W. Luerssen compared the energy usage in millions of BTU's per net ton of raw steel for open hearths, electric furnaces, and basic oxygen furnaces. Their data showed that the electric furnace on a scrap charge used only

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15.2% of the energy required by a basic oxygen furnace to produce a net ton of steel. Their comparison credited the open hearth furnace with a molten iron charge that is common practice for the larger integrated companies, hence the cold charge of scrap iron for the electric furnace required only 16.6% of the energy that this open hearth furnace needed to produce a net ton of steel.

- Section 202(d) recognizes the fact that there was a very heavy demand for scrap in this country as well as for export in 1969 and 1970, and that scrap prices increased sharply. Furthermore, during 1972 and thus far into 1973 the same heavy demand for scrap has continued and even intensified, with the result that scrap prices have increased even more sharply during recent months.

- Section 202(e) refers to the fact that if unlimited iron and steel scrap exports occur during a period of high domestic consumption, such unlimited exports can result in several undesirable consequences. First, of course, the price of scrap increases sharply. (Present prices are 50% to 70% higher than those of one year ago) Phases II and III of the Economic Stabilization Program permitted such material cost increases to be passed on -- and presumably Phase IV will also -- hence foundries without long-term contracts and some steel companies will be able to continue to pass these costs on through to their customers when the present freeze ends August 12, 1973. Many of the cold metal shops, however, can only increase their prices to the levels established by the large integrated mills. Because many of these companies don't use scrap, the little mills must often absorb all or a large portion of the rapidly

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escalating scrap prices because of the competitive realities confronting them. The disastrous adverse economic effect that this cost-price squeeze has had on many small steel companies makes further investment in this type of operation by such companies extremely unlikely, hence the cost-price squeeze caused by the domestic scrap shortage has the undesirable effect of precluding the very expansion of plant and steel-making capacity our domestic economy so greatly needs.

Section 203 declares that it is the policy of the United States to alleviate the harmful effects of the excessive exportation of iron and steel scrap during periods of high domestic demand so as to preclude critical scrap shortages. Implicit in this Congressional declaration is the realization that a ten to fifteen dollar a ton increase in domestic scrap prices will cost the foundry and cold metal shops almost one half a billion dollars more than would be spent if such a shortage and resultant price increase had not occurred, and that ultimately the American consumer will have to pay this bill. The declaration also reflects the realization that when too much scrap is exported so that outages occur, such work stoppages will produce unemployment not only in the basic foundry and steel mills but also in most of the casting and steel consuming industries as well.

A further basic finding implicit in the above declaration is the fact that violent price swings in the price of a raw material such as scrap will tend to economically damage precisely those foundries and steel companies that are using a low-energy process to produce raw steel from recycled ferrous waste. Permitting such economical damage to precisely

those companies which are helping further this nation's conservation of energy goals will not only preclude expansion by them of their present facilities, but will also discourage others from investing in such equipment.

Section 204 provides that Title II shall be effective upon enactment. Implementation of Title II can be achieved at the outset using information that is readily available, hence the bill contains no built-in period of "regulatory lag," and there is no need to postpone the effective date of the bill.

Section 205(a) defines the term "scrap" as referred to in this bill. It should be noted that rerolling railroad rails, car axles, and like scrap that often goes into a product without melting would be included in this definition. These items are included in the same series of Office of Export Control Schedule B seven digit commodity numbers as iron and steel scrap.

Section 205(b) defines the term "domestic consumer" so that domestic foundries, steel companies and any other firms using scrap to make iron and steel products would be included.

Section 205(c) defines the term "receipts." The thrust of the definition is to determine how much total scrap tonnage a company purchased on the open market less any scrap that was produced by the domestic consumer's firm. Such scrap, often referred to as "home scrap," does not affect the scrap supply-demand equation unless it is sold and thereby enters the market.

Section 205(d) defines the term "exporter" in some detail so as to avoid imposing any unnecessary reporting requirements on exporters.

As the delivery of a Shipper's Export Declaration form is mandatory prior to the exporting of a commodity, and as only one of these forms is made out for any one export shipment, the definition is framed in terms that relate to the individual who makes out the applicable Shipper's Export Declaration form, and defines him as the "exporter."

Section 205(e) defines the term "exports" as the total volume of scrap exports measured by the figure that is the highest among the three that the Department of Commerce might publish.

Section 205(f) defines the term "Secretary."

Section 205(g) defines the term "shortage of scrap" to mean a total volume of scrap receipts plus scrap exports that exceeds 11 million net tons or more during a period of three consecutive months. Implicit in this definition is the additional finding that forty-four million net tons per year (11 million per quarter x four quarters) is a rate of consumption that would create a short supply situation. Historically the United States has experienced only three years in the last decade or so in which the total has exceeded this forty-four million ton total. (This occurred in 1969, 1970, and 1972. (See Attachment I)) In these three years the totals ranged from 45.4 to 45.9 million net tons. The next higher net ton year, 1966 was over three million tons lower, at 42.5 million net tons. The years 1969, 1970, and 1972 saw sharp scrap price increases. In 1966 the total of 42.5 million net tons, although higher than the years on either side produced no noticeable price reaction. Hence the premise of the bill is that a shortage situation occurs somewhere

between 1966's 42.5 million net tons and the shortages of 1969, 1970, and 1972 of 45.4 million and over net tons that caused sharp price increases.

Similarly, the term "critical shortage of scrap" is defined as 11.5 million net tons for a three month period. This rate of domestic consumption plus exports would amount to an annual total of 46.0 million net tons, a total this country has never attained in a calendar year, although it has been surpassed in twelve successive months.

Section 205(h) defines the "United States" to include the territories, dependencies and possessions of the United States. The intent here is to make sure that all scrap exports are recorded.

Section 206 provides that the Secretary of Commerce shall promulgate such additional rules and regulations as may be needed to carry out the purposes of title II. In particular, the Secretary shall issue rules to make the reporting of domestic consumption mandatory (which reporting is at present done on a voluntary basis); adopt such report forms as may be necessary, and to promulgate regulations regarding his duty under title II to make the requisite findings and declarations imposing scrap iron and steel export controls, should such controls become mandatory under the provisions of title II.

Section 207 provides the method in which the export restraints are to be imposed and removed; as follows:

- Section 207(a) provides that the Secretary shall determine whether there was (1) no shortage, (2) a shortage, or (3) a critical shortage within forty-five days after the close of each calendar quarter and that he shall publish this determination in the Federal Register. Under present reporting

procedures, export data by commodity classification is available within thirty days after the close of each calendar month, but domestic receipts information is not available as soon, due largely to the voluntary nature of such reporting under present procedures. The bill authorizes the Secretary (see §206, described above) to correct this reporting lag regarding domestic receipts data, hence the requirement that the Secretary make his determination within a forty-five day period is more than adequate.

- Section 207(b) provides that the Secretary need take no restrictive action on exports if he determines that no shortage or critical shortage existed in the prior quarter. The six month and three month minimum restriction periods of Sections 207(e) and (f) are indirectly referred to here (i.e. the reference to "earlier curtailment"), as it is conceivable that a finding of "no shortage" could be made prior to the end of one of these minimum periods.

- Section 207(c) provides that the Secretary will impose scrap export restrictions in the event that a critical shortage exists. The initial six month export restriction that goes into effect five months after the start of the shortage limits exports to a volume equal to one-quarter of the preceding five year annual export average. Although this limitation will not drop exports much below those of non-shortage years, it will prevent a doubling of exports in a year when the domestic industry has heavy needs. Furthermore, the reporting system and the possibility of controls should discourage anticipatory buying.

- Section 207(d) provides for either a continuation or a removal of the export limitations after the initial six month period. In the

event that a shortage continues after the restriction has been imposed, the bill provides for additional three months restrictive periods until a calendar quarter is found to be below the shortage level. Example one on Attachment 2, illustrates how this section would operate at a minimum level. Example two, on Attachment 3, illustrates how the three month extension provision operates.

- Section 207(e) provides that a monitoring procedure be established at the same time that the initial export restrictions are imposed to prevent the possibility of domestic outages in a period of sustained high domestic demand. The monitoring procedure consists of a continuing rolling three months average of export and receipt totals during periods that restrictions are in effect to determine whether a critical shortage develops in spite of the restrictions. The bill provides that should such an event occur a total embargo on scrap exports would be imposed. Example 3, on Attachment 4, illustrates how this provision of the bill operates in its shortest application. It should be noted that a total embargo would not be imposed until the eleventh month after the start of a critical shortage.

- Section 207(f) provides for one month extensions of the total export embargo if a critical shortage should persist after this final step had been taken. Since a total embargo is an extreme measure the bill provides for monthly reviews to enable the Secretary to remove the embargo just as soon as a lower demand situation will permit. Example 4, on Attachment 5, illustrates how the bill provides for an extension of the embargo and for its ultimate termination.

Section 208 provides that remedial action may not be foreclosed by data or regulatory lag problems or other delays at a time when a shortage may be close to the critical stage. It should be noted that since the quantitative limitations in the bill are based on calendar quarters, they cannot be triggered by one or even two erratic months. Thus the bill does not call for action by the Secretary until well after a clear need has been indicated. For example, the initial quantitative limitation on exports is so flexible that it could permit exports in a critical shortage year of a greater amount than the previous five year average. In view of this quite limited initial export restraint and of the delayed timing for the imposition of further export restraints, this section does not provide the Secretary any additional time within which to make his determination.

Section 209 provides the Secretary with the opportunity to exercise his enlightened judgment in the public interest to carry out the will of Congress as articulated in Section 203. In the event that an unforeseen change in the reporting system should occur, or for any other reason the trigger mechanism becomes inoperative from a practical standpoint, the Secretary has the authority to take appropriate remedial action. If this initial export restraint has been imposed and the Secretary can see that a high domestic demand will push the export-receipt total to a point that a total embargo would be required, he may elect to impose heavier export restrictions than are called for in §207(c) and by so doing avoid the triggering of an embargo. Section 209 does not, however, grant the Secretary authority to lessen the provisions of Section 207.

Section 210 provides the Secretary access to the records and information he needs to fulfill the provisions of title II.

Section 211 provides for penalties to be levied in the event of any violations of the provisions of title II; specifically, for false reporting, refusing to provide information, or for exporting scrap in violation of title II. Upon conviction for any willful violation, a fine of not more than \$10,000 or a prison term of not more than one year, or both, shall be imposed.

Section 212 provides that title II will terminate in three years, unless extended by Congress. This does not mean that the machinery in title II may not be needed after that date, but rather that it is simply not possible now to predict what levels should be used to trigger the quantitative limitations on and after mid-1976. For this reason title II is terminated after three years.

Example #1 - Illustrates Section 207(c) and (d)

QUARTER	1			2			3			4			1			2		
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
EVENT DETERMINE		①																
EVENT DETERMINE				②														
EVENT DETERMINE						③												
EVENT DETERMINE										④								
EVENT DETERMINE											⑤							

1. Total exports and receipts exceed 11.5 million net tons in the first quarter.

2. The Secretary determines and makes a matter of public record that a critical shortage occurred during the first quarter in accordance with the provision of §207(a).

3. The Secretary imposes a six month restriction on the export of scrap commencing June first in accordance with §207(c).

4. The Secretary determines in mid-November that no scrap shortage occurred in the third quarter. In this case the third calendar quarter was the quarter that occurred during the six month restriction period. The determination was made in accordance with the requirements of §207(d).

5. The Secretary removes all export restraints at the end of November which concluded the six month requirement of §207(c).

Example #2 - Illustrates Section 207(c) and (d)

QUARTER	1			2			3			4			1			2		
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
EVENT	①																	
DETERMINE				②														
EVENT					③													
DETERMINE										④								
EVENT											⑤							
DETERMINE														⑥				
EVENT																		⑦
DETERMINE																		

1. Total exports and receipts exceed 11.5 million net tons in the first quarter.
2. The Secretary determines and makes a matter of public record that a critical shortage occurred during the first quarter in accordance with the provision of §207(a).
3. The Secretary imposes a six month restriction on the export of scrap commencing June first in accordance with §207(c).
4. The Secretary determines in mid-November that a scrap shortage occurred in the third quarter. The determination was made in accordance with §207(d).
5. The Secretary continues export controls for an additional three month period in accordance with §207(d).
6. The Secretary determines in mid-February that a shortage did not occur in the fourth quarter.

7. The Secretary removes all export controls at the end of February as February was the last month of the three month period imposes in step 5 above.

Example #3 - Illustrates Section 207(c), (d), and (e).

QUARTER	1			2			3			4			1			2		
MONTH	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J
EVENT	①																	
DETERMINE				②														
EVENT					③													
DETERMINE									④									
EVENT										⑤								
DETERMINE										⑥			⑦					
EVENT														⑧				
DETERMINE																		

1. Total exports and receipts exceed 11.5 million net tons in the first quarter.

2. The Secretary determines and makes a matter of public record that a critical shortage occurred during the first quarter in accordance with the provision of §207(a).

3. The Secretary imposes a six month restriction on the export of scrap commencing June first in accordance with §207(c).

4. The Secretary determines in mid-October that a critical shortage occurred during the months of June, July, and August in spite of the export restrictions that were in effect during that period. The Secretary made this determination in accordance with §207(e).

5. The Secretary imposes a total embargo on scrap exports for a three month period starting on November 1st. This action was taken in accordance with §207(e).

6. The Secretary determines by mid-November that no shortage occurred during the third quarter. The determination was made in accordance with §207(a), (c) and (e).

7. The Secretary determines in mid-January that a shortage did not exist during the months of September, October and November. The determination was made in accordance with §207(e).

8. The Secretary removes all export controls at the end of February. This action was taken in accordance with §207(e).

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