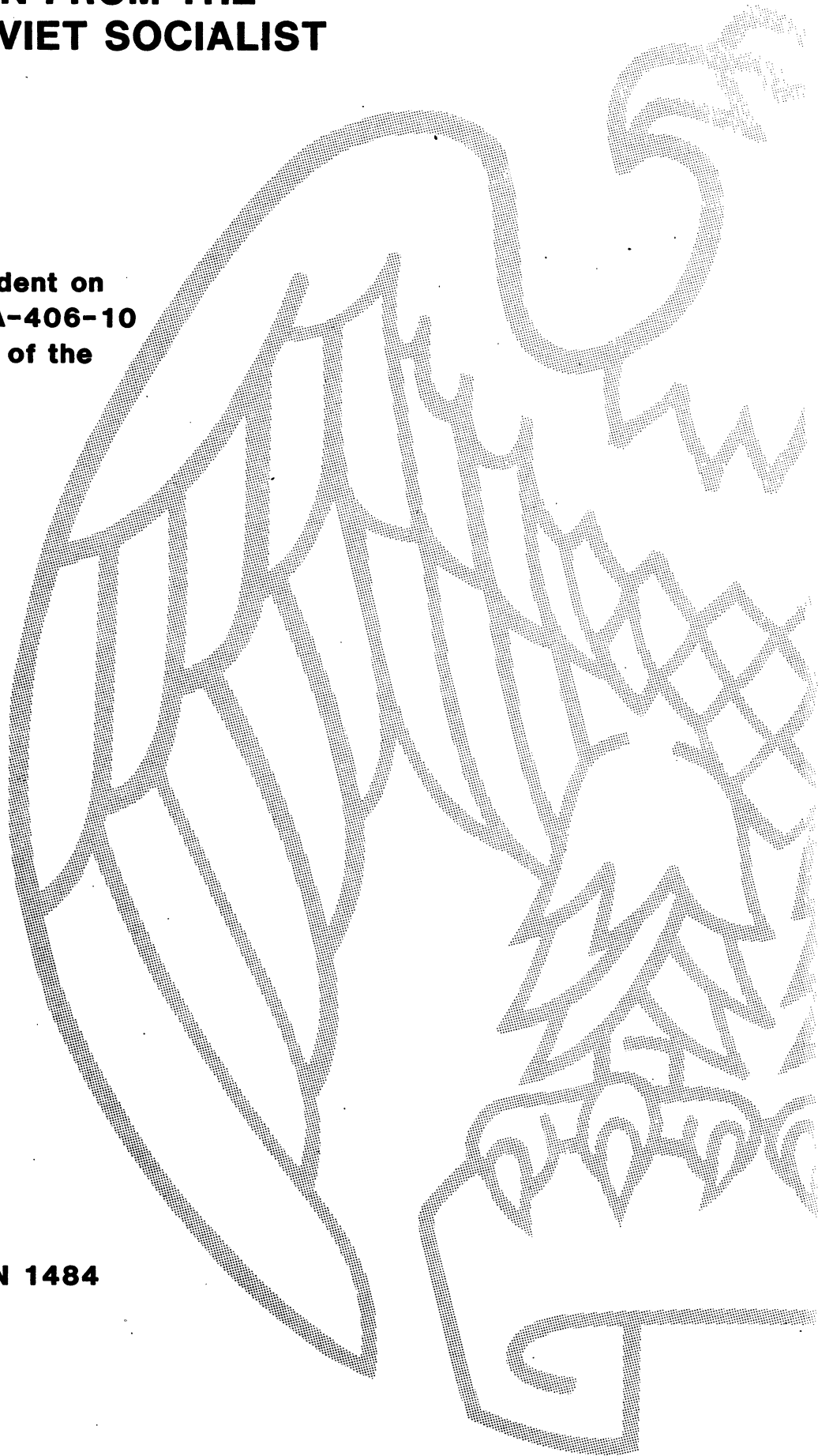


FERROSILICON FROM THE UNION OF SOVIET SOCIALIST REPUBLICS

**Report to the President on
Investigation No. TA-406-10
Under Section 406 of the
Trade Act of 1974**

USITC PUBLICATION 1484

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UNITED STATES INTERNATIONAL TRADE COMMISSION

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Note.--Data which would disclose confidential operations of individual concerns may not be revealed and, therefore, have been deleted from this report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, D.C.

Investigation No. TA-406-10

FERROSILICON FROM THE UNION OF SOVIET SOCIALIST REPUBLICS

Determination

On the basis of information developed in the course of investigation No. TA-406-10, the Commission (Chairman Eckes dissenting) has determined, with respect to imports of ferrosilicon which are the product of the Union of Soviet Socialist Republics and are provided for in items 606.35, 606.36, 606.37, 606.39, and 606.40 of the Tariff Schedules of the United States, that market disruption does not exist.

Background

This report is being furnished pursuant to section 406(a)(3) of the Trade Act of 1974 (19 U.S.C. 2436(a)(3)) and is based on an investigation conducted under section 406(a)(1) of the Trade Act. The Commission instituted the investigation on November 16, 1983, following receipt of a request received on November 2, 1983, from the United States Trade Representative.

Notice of the institution of the Commission's investigation and of a public hearing was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and by publishing the notice in the Federal Register of November 25, 1983 (48 F.R. 53187).

A public hearing in this proceeding was held in the Hearing Room of the U.S. International Trade Commission Building in Washington, D.C., on January 6, 1984. All interested parties were given an opportunity to be present, to present evidence, and to be heard.

The information in this report was obtained from field work, questionnaires sent to domestic producers and importers, the Commission's files, other Government agencies, testimony presented at the hearing, briefs filed by interested parties, and other sources.

IEWS OF COMMISSONERS PAULA STERN, VERONICA A. HAGGART,
AND SEELEY G. LODWICK

In this investigation, the Commission is required to determine whether imports of ferrosilicon from the Soviet Union cause market disruption. The term "market disruption" is defined in section 406(e)(2) of the Trade Act of 1974 as follows:

Market disruption exists within a domestic industry whenever imports of an article, like or directly competitive with an article produced by such domestic industry, are increasing rapidly, either absolutely or relatively, so as to be a significant cause of material injury, or threat thereof, to such domestic industry. 1/

Section 406 thus requires that the following three criteria be satisfied in order for market disruption to exist:

- (1) imports the product of a Communist country are increasing rapidly, either absolutely or relatively,
- (2) a domestic industry producing an article like or directly competitive with the imported article is materially injured or threatened with material injury, and
- (3) such rapidly increasing imports are a significant cause of the material injury or threat thereof.

In the present case, we have determined that imports of ferrosilicon from the Soviet Union are increasing rapidly and that domestic ferrosilicon producers are suffering material injury, but we have found that such imports are not a significant cause of material injury or threat thereof. Because we are unable to find the requisite causal connection between the rapidly increasing imports from the Soviet Union and material injury or threat thereof, we have made a negative determination.

1/ 19 U.S.C. § 2436(e)(2).

Domestic industry

The concept of domestic industry under section 406 is identical to that under section 201 of the Trade Act of 1974. Section 406(a)(2) specifically adopts the definitions of industry set forth under section 201(b)(3). Thus, section 406 defines the domestic industry in terms of domestic facilities producing articles "like" or "directly competitive" with the imported articles subject to investigation.

The legislative history of section 201 provides useful guidance in defining the terms "like" or "directly competitive" as used in the context of section 406. The report of the Senate Committee on Finance defines the terms as follows:

"[L]ike" articles are those which are substantially identical in inherent or intrinsic characteristics (i.e., materials from which made, appearance, quality, texture, etc.), and "directly competitive" articles are those which, although not substantially identical in their inherent or intrinsic characteristics, are substantially equivalent for commercial purposes, that is, are adapted to the same uses and are essentially interchangeable therefor. 2/

Accordingly, in both section 201 and 406 cases the Commission generally follows a "product-line" approach, finding the domestic industry to consist of all domestic facilities producing an article like the imported article or, in the absence of a like product, a product directly competitive with the imported article.

The present investigation covers ferrosilicon provided for in items 606.35, 606.36, 606.37, 606.39, and 606.40 of the Tariff Schedules of the United States. 3/ The various types of ferrosilicon can be differentiated

2/ S. Rep. No. 93-1298, 93d Cong., 2d Sess. 212 (1974).

3/ Report, at A-4.

based on their silicon content. For purposes of analysis, the following four categories of ferrosilicon based on silicon content will be discussed: (1) ferrosilicon containing over 8 percent but not over 30 percent by weight of silicon [hereinafter referred to as 8-30 percent ferrosilicon]; (2) ferrosilicon containing over 30 percent but not over 60 percent by weight of silicon [hereinafter referred to as 30-60 percent ferrosilicon]; (3) ferrosilicon containing over 60 percent but not over 80 percent by weight of silicon [hereinafter referred to as 60-80 percent ferrosilicon]; and (4) ferrosilicon containing over 80 percent but not over 96 percent by weight of silicon [hereinafter referred to as 80-96 percent ferrosilicon]. 4/

Imports of ferrosilicon from the Soviet Union have consisted solely of 30-60 percent ferrosilicon during the period of investigation. Imports within this category have consisted entirely of 50 percent grade ferrosilicon of "regular purity." 5/

Domestic producers manufacture ferrosilicon falling within the first three categories listed above, but they do not manufacture 80-96 percent ferrosilicon. 6/ Substantially all domestic production consists of 30-60 and 60-80 percent ferrosilicon. The bulk of production within these two categories consists of 50 percent and 75 percent grade of "regular purity." 7/

4/ Report, at A-3-A-4.

5/ Report, at A-6. This grade of ferrosilicon and the 75 percent grade of "regular purity" are commodity grades which are generally sold in large quantities and at lower prices than the specialty grades, such as magnesium ferrosilicon, calcium silicon, calcium-magnesium silicon, and ferrocalcium silicon. Prehearing brief of the Ferroalloy Association, at 7-9. See also report, at A-5-A-6.

6/ Report, at A-15.

7/ Report, at A-5.

Although there is no dispute in this investigation that domestically produced 50 percent grade ferrosilicon is "like" the imported 50 percent grade ferrosilicon, the issue has been raised as to whether the imports are also like or directly competitive with the domestically produced 75 percent grade ferrosilicon. We have concluded that the domestically produced 50 and 75 percent grades of regular purity are substantially identical to the imported product subject to investigation. Although the 50 percent and 75 percent grades differ to a certain degree, both grades can be and are used interchangeably as a deoxidizing agent in the production of steel. 8/ According to the domestic industry, the Soviet imports compete directly with domestically produced and imported 50 percent and 75 percent grade regular purity and affect prices of all grades of ferrosilicon. 9/ All eight of the domestic firms producing ferrosilicon in 1983 produced both 30-60 percent and 60-80 percent grade ferrosilicon. 10/ Producers can shift from production of 30-60 percent grade ferrosilicon to 60-80 percent grade ferrosilicon or vice versa relatively easily. 11/

In the context of this investigation, an additional issue has been raised as to whether it is appropriate to define the domestic industry as consisting of the domestic production facilities devoted to the production of the 8-30, 30-60, and 60-80 percent grades of ferrosilicon. In determining what

8/ Iron foundries could use the 75 percent grade of ferrosilicon as well as the 50 percent grade of ferrosilicon, but they have traditionally preferred to use the 50 percent grade of ferrosilicon. Prehearing brief of the Ferroalloys Association, at 10-11.

9/ Prehearing brief of the Ferroalloys Association, at 10-11, 14. See also hearing transcript, at 79-80, 107-08.

10/ Report, at A-15.

11/ Report, at A-4-A-5.

constitutes the domestic industry, the Commission has considered the nature of the domestic productive facilities affected by imports. ^{12/} If the Commission finds that the same facilities are being used to produce several different but closely related products largely utilizing the same equipment, processes, workers, and skills and that separate employment and financial data are not maintained on a product-by-product basis but only on a plant or multi-product basis, it generally groups the related products together and finds the productive facilities producing them to constitute an industry. ^{13/}

In this case, domestic producers often produce the different grades of ferrosilicon in the same plants utilizing the same furnaces, workers, and technology. ^{14/} In addition, the industry does not maintain separate profit centers for each grade of ferrosilicon, but considers the appropriate "profit

^{12/} For example, in the most recently completed section 201 investigation, which covered 22 different stainless and alloy tool steel tariff items, the Commission found four domestic industries--industries producing stainless steel sheet and strip, stainless steel plate, stainless steel bar and wire rod, and alloy tool steel. Stainless Steel and Alloy Tool Steel: Report to the President on Investigation No. TA-201-48 . . ., USITC Publication 1377, May 1983, at 12-16. Compare the recent section 406 case on mushrooms from China in which the Commission concluded that the appropriate domestic industry consisted of facilities producing canned mushrooms and did not include growers of fresh mushrooms. The Commission concluded that while fresh and canned mushrooms were probably directly competitive, they were treated as separate industries because they were sold in different markets and separate data on mushroom canning and growing operations were available. Under these circumstances, the Commission concluded that separate consideration of these industries was consistent with the practice in the marketplace. Canned Mushrooms from the People's Republic of China: Report to the President on Investigation No. TA-406-9 . . ., USITC Publication 1293, September 1982, at 3, 24.

^{13/} See, e.g., Stainless Steel and Alloy Tool Steel, note 12, *supra*, at 15-16, wherein the Commission deemed it "appropriate to delineate four domestic industries from the universe of domestic stainless steel and alloy tool steel producers."

^{14/} Report, at A-4-A-5.

center" for ferrosilicon to be all ferrosilicon. 15/ Accordingly, none of the domestic producers provided the Commission with separate financial, employment, or capacity utilization data on any of the three categories of domestically produced ferrosilicon.

Under these circumstances, it is appropriate to group together domestic production of the 8-30, 30-60, and 60-80 percent grades of ferrosilicon. We therefore have concluded that the domestic industry consists of all domestic production facilities devoted to the production of ferrosilicon falling within these three categories. 16/

Imports are increasing rapidly

The first of the three statutory criteria requires a finding that the imports are "increasing rapidly, either absolutely or relatively." The Senate Finance Committee Report states that this increase "must have occurred during a recent period of time, as determined by the Commission taking into account any historical trade level which may have existed." 17/

In section 406 cases, the Commission generally examines import trends over the most recent 3 years. 18/ In the present case, there were no imports

15/ Hearing transcript, at 152-53.

16/ If separate data had been available that would have allowed us to narrow the industry definition to include only the facilities producing 50 percent and 75 percent grade ferrosilicon, our determination in this case would have been the same. Domestic production of these two grades accounts for substantially all domestic ferrosilicon production, and thus the data underlying our analysis would have been very similar.

17/ S. Rep. No. 93-1298, note 2, supra, at 212.

18/ See, e.g., Canned Mushrooms, note 12, supra, at 10-11, 25; and Certain Ceramic Kitchenware and Tableware from the People's Republic of China: Report to the President on Investigation No. TA-406-8 . . ., USITC Publication 1279, August 1982, at 9-11.

of Soviet ferrosilicon until June 1983. 19/ Imports totaled 16,647 short tons during the period June-November 1983. 20/ The ratio of Soviet ferrosilicon imports to total U.S. ferrosilicon production accordingly increased from zero for the years 1980-1982 to 3.8 percent for the period January-September 1983, the latest period for which comparable domestic production and import data were available. 21/

In light of the above, we have concluded that imports of Soviet ferrosilicon are "increasing rapidly" for purposes of section 406.

The industry is materially injured

The second criterion requires a finding of material injury or threat thereof. The Senate Finance Committee Report states that material injury represents "a lesser degree of injury" than the serious injury standard used in section 201. 22/ In determining whether there is material injury in a section 406 case, the Commission has generally examined data concerning domestic production, shipments, inventories, idling of production facilities, industry profitability, and changes in employment. 23/

19/ Report, at A-14. These imports were the first imports of Soviet ferrosilicon since 1974. The 1974 imports from the Soviet Union consisted of 75 percent grade ferrosilicon.

20/ Report, at A-14.

21/ Report, at A-14. Although the Commission obtained data on Soviet imports for all of 1983, it obtained complete data on the domestic industry and imports from other sources only through September 30, 1983. Thus, our analysis of the impact of imports from the Soviet Union will necessarily focus on the period January 1980 through September 1983.

22/ S. Rep. No. 93-1298, note 2, *supra*, at 212.

23/ These are the same economic factors which the Commission is required to take into account in section 201 investigations. The factors are listed in section 201(b)(2) of the Trade Act (19 U.S.C. § 2251(b)(2)).

Although there has been some recent improvement in the condition of the domestic ferrosilicon industry, we have concluded that the domestic industry is materially injured. Domestic production declined from 713,000 short tons in 1980 to 414,000 short tons in 1982, and declined further to 311,000 short tons in January–September 1983 as compared with 344,000 short tons in January–September 1982. 24/ Domestic shipments declined from 607,000 short tons in 1980 to 365,000 short tons in 1982, but shipments rose slightly in January–September 1983 to 306,000 short tons as compared with 298,000 short tons in January–September 1982. 25/ U.S. producers' end-of-period inventories increased from 145,000 short tons in 1980 to 156,000 short tons in 1982, but inventories declined to 130,000 short tons by September 30, 1983, as compared with 164,000 short tons as of September 30, 1982. 26/ The decline in inventories reflected an increase in shipments coupled with a continuation of the decline in production. Capacity utilization declined from 72.1 percent in 1980 to 46.3 percent in 1982. Capacity utilization was only 46.9 percent in January–September 1983, despite a decline in industry capacity. 27/ U.S. ferrosilicon producers reported a net operating loss of \$29.1 million in 1982 and a net operating loss of \$28.7 million in the first 9 months of 1983. 28/ Employment in the industry declined from an average of 6494 persons in 1980 to an average of 3940 in 1982, or by 39 percent. Average employment declined an

24/ Report, at A-15.

25/ Report, at A-17.

26/ Report, at A-20.

27/ Report, at A-16.

28/ Report, at A-24.

additional 18.5 percent during January-September 1983 to 3439 persons as compared with 4221 persons during January-September 1982. 29/

Soviet imports are not a significant cause of material injury

The third criterion requires a finding that the rapidly increasing imports are a significant cause of the material injury or threat thereof. The term "significant cause" is not defined in the statute, and the legislative history provides us with only general guidance. As stated in the Senate Finance Committee Report:

The term "significant cause" is intended to be an easier standard to satisfy than that of "substantial cause" [as used in section 201]. On the other hand, "significant cause" is meant to require a more direct causal relationship between increased imports and injury than the standard used in [adjustment assistance cases], i.e., "contribute importantly." [Emphasis supplied.] 30/

Thus, Congress intended that there be a direct causal link between the subject imports and material injury. The subject imports need not be a "substantial cause," but must do more than "contribute importantly" to material injury. Since the term "substantial cause" means "a cause which is important and not less than any other cause," 31/ a significant cause must be at least an important cause but need not be equal to or greater than any other cause. In order to determine whether the imports under investigation are a sufficiently important cause of material injury, we must look to the facts of each case.

Although the domestic industry is experiencing problems, we do not find a sufficient causal relationship between the industry's difficulties and imports

29/ Report, at A-21.

30/ S. Rep. No. 93-1298, note 2, supra, at 212.

31/ 19 U.S.C. § 2251(b)(4).

of Soviet ferrosilicon. The severe problems being experienced by the domestic industry antedate the importation of Soviet ferrosilicon, which began only in June 1983. Two factors affecting the health of the domestic ferrosilicon industry which are more important than imports from the Soviet Union are (1) the substantial decline in demand for ferrosilicon as a result of the severe decline in domestic production of steel, 32/ and (2) the substantial increase in the volume of imports of ferrosilicon from countries other than the Soviet Union. Therefore, imports of Soviet ferrosilicon have been, at most, an identifiable and contributing cause of injury to the domestic industry, but they are not a significant cause of the industry's difficulties.

Soviet imports, while increasing rapidly since June 1983, remain small relative to total imports of ferrosilicon. Imports from the Soviet Union totaled 11,683 short tons during January-September 1983 as a result of shipments in June and September and were equal to 2.8 percent of U.S. consumption during this period. 33/ By comparison, imports from all sources,

32/ Industry officials conceded that the reduction in ferrosilicon production was proportionate to the decline in steel production. See hearing transcript, at 161-62.

Commissioner Stern notes that the large decline in demand for ferrosilicon has been beyond any fluctuations attributable to a normal business cycle. The steel and cast iron industries are two principal consumers of ferrosilicon. The trend in U.S. consumption of all ferrosilicon during this period was similar to the trends for U.S. raw steel production and U.S. producers' shipments of cast iron. With the economic recovery and the increase in U.S. production of iron and steel, the decline in domestic ferrosilicon shipments has stopped and shipments are starting to increase. See Appendix D of the report.

33/ Report, at A-14. A third shipment of Soviet ferrosilicon in November 1983 raised imports to 16,647 short tons for all of 1983, but full year 1983 U.S. consumption data and a 1983 ratio of imports to consumption are not available. See note 21, supra.

including the Soviet Union, totaled 110,018 short tons and were equal to 25.8 percent of U.S. consumption during January–September 1983. 34/ During the period January–September 1983, as compared with the corresponding period of 1982, imports from all sources increased by almost four times the level of imports from the Soviet Union.

In terms of volume, the Soviet Union ranked fifth behind four other foreign suppliers of ferrosilicon during January–September 1983. Brazil and Canada each supplied more than twice as much ferrosilicon, and Norway and Venezuela were also larger suppliers. 35/ Canadian ferrosilicon imports increased by a greater amount than Soviet ferrosilicon imports during January–September 1983 as compared with January–September 1982, and Norwegian and Venezuelan imports increased by almost as much. Significantly, imports of ferrosilicon by domestic producers in 1983 exceeded the amount of imports of 50 percent grade ferrosilicon from the Soviet Union during the same time period. 36/

To a large extent, 1983 import levels and the January–September 1983 ratio of imports to consumption exaggerate the real level of Soviet imports. Much of the Soviet ferrosilicon imported in 1983 was for the dual purpose of establishing an inventory base and providing sufficient inventory levels for the winter months when it is difficult or impractical to ship from Baltic ports. As of early January 1984, about 40 percent of 1983 Soviet imports were

34/ Report, at A-33, A-53. We note that imports from all sources totaled only 70,934 short tons and were equal to 10.5 percent of U.S. consumption in 1980.

35/ Report, at A-53.

36/ Report, at A-31.

still in inventory. Thus, a substantial portion of the Soviet imports entered in 1983 have not yet been sold in the market. 37/

Although it was alleged by the domestic industry that, based on the duty-declared value of the Soviet imports, the prices of ferrosilicon imported from the Soviet Union were substantially lower than the prices of domestic and other imported ferrosilicon, the data gathered by the Commission do not support this contention. 38/ Rather, the data indicate that the Soviet ferrosilicon was sold at prices prevailing in the market and these sales did not suppress or depress prices. While there were reports in the trade press during the summer of 1983 that Soviet ferrosilicon was being imported at unreasonably low prices, the prices paid by end-user purchasers appear to be in line with the prices paid for other imports.

Prices paid for both domestic and imported ferrosilicon generally rose during 1983, despite increasing imports from the Soviet Union, largely in response to the beginning of a recovery in domestic demand for ferrosilicon. More specifically, the weighted average domestic prices of 50 percent grade ferrosilicon reported by domestic producers on sales to their major customers increased from 33 cents per pound during the first quarter of 1983 to 36 cents per pound during the last two quarters of 1983. 39/ In addition, two of the three domestic producers who provided f.o.b. prices for the first quarter of 1984 reported prices higher than the prices they reported during the fourth quarter of 1983. 40/

37/ Report, at A-29.

38/ See, e.g., hearing transcript, at 81, 109.

39/ Report, at A-35.

40/ Report, at A-35.

The Commission also gathered data on delivered prices from domestic purchasers of ferrosilicon. The data indicate that the weighted average delivered price of Soviet imports was higher than or the same as the weighted average delivered price of imports from other sources during the second and fourth quarters of 1983. 41/ During the third quarter of 1983, the weighted average delivered price of the Soviet material was only slightly lower than the weighted average delivered price of imports from other sources. In the three quarters for which data are available, the weighted average delivered price of the Soviet material was only slightly lower than the weighted average delivered price of the domestic product. It is important to note that the lowest delivered price for the Soviet material was never lower than the lowest delivered price for the domestic product or the lowest price for imports from other sources. U.S. producers had both the lowest and highest actual delivered prices during these three quarters. 42/

Several purchasers of Soviet ferrosilicon advised the Commission that they purchased the Soviet material because it was priced lower than the domestic product. However, domestic producers testified at the hearing that the domestic product generally is priced at a premium over imported products and, consequently, import prices are generally lower than the price of domestically produced ferrosilicon. 43/ Thus, the fact that Soviet

41/ Report, at A-36.

42/ Report, at A-36.

43/ Hearing transcript, at 81, 172, 174.

ferrosilicon may have been sold at prices slightly lower than domestic ferrosilicon is not considered indicative of market disruption.

Based on the foregoing, we have concluded that the Soviet ferrosilicon was not sold at prices and in quantities which disrupted the domestic ferrosilicon market. 44/

Imports are not a significant cause of the threat of material injury

We have also determined that the rapidly increasing imports are not a significant cause of the threat of material injury to the domestic industry. A "threat" of injury is deemed to exist when "injury, although not yet existing, is clearly imminent if import trends continued unabated." 45/

While the Soviet Union is the world's largest producer of ferrosilicon and is adding to its productive capacity, 46/ the information before us, including information concerning future shipments of Soviet ferrosilicon, does not indicate that imports of Soviet ferrosilicon will increase in 1984. A representative of the purchaser of Soviet ferrosilicon, S.A. des Minerais

44/ The domestic industry argued that the Commission should be cognizant of the fact that the Senate Finance Committee was "particularly concerned that the U.S. could become dependent upon Communist countries for vital raw materials . . .". Prehearing brief of the Ferroalloys Association, at 43-44, quoting S. Rep. No. 93-1298 (note 2, supra) at 210-11. Overdependence on a communist country as a supplier of raw material is not one of the criteria expressly listed in the statute. It is a concern expressed in the legislative history. In light of the past and projected volume of Soviet imports as well as the role of imports from other traditional foreign suppliers, any concern that the United States will become overdependent on the Soviet Union as a supplier of ferrosilicon is not justified.

45/ S. Rep. No. 93-1298, note 2, supra, at 121. Neither section 406 nor its legislative history defines the term "threat". However, as the Finance Committee report on section 406 makes clear, the section 406 market disruption definition is formulated along lines similar to the criteria for import relief under section 201 (S. Rep. No. 93-1298, note 2, supra, at 212).

46/ Report, at A-29.

(Minerais), testified that the amount of ferrosilicon which the Soviet Union has agreed to supply to them in 1984 is less than the amount supplied in 1983. 47/ In support of this testimony, Minerais provided the Commission with confidential copies of its 1983 and 1984 contracts with the Soviet Union. Minerais' 1984 contract sets a maximum limit on the amount of ferrosilicon which it may purchase. As a result of its 1984 contract, Minerais will reduce, on a pro rata basis, the amount of ferrosilicon shipped to various markets, including the United States. 48/

As indicated previously, prices paid by end-users for Soviet ferrosilicon trended upward during 1983 along with prices for domestic and other imported ferrosilicon and, in light of the increase in demand for ferrosilicon, it is likely that this trend will continue in 1984. 49/ Prices paid by Minerais to the Soviet exporter for ferrosilicon also have trended upward during this period. 50/ According to information submitted by Minerais, the firm has paid a higher price for the Soviet material in the first quarter of 1984 than it paid in the fourth quarter of 1983. 51/

The Senate Finance Committee was concerned that exports from communist countries "could be directed so as to flood domestic markets within a shorter

47/ Hearing transcript, at 212.

48/ Hearing transcript, at 271. Minerais provided the Commission with data which show that a substantial portion of Minerais' purchases of ferrosilicon from the Soviet Union has traditionally been sold in markets other than the United States. Although these individual markets are small relative to the U.S. market, there is no reason to believe that Minerais will alter its past practices and abandon its other markets.

49/ Hearing transcript, at 212.

50/ Id., at 208.

51/ Confidential attachment to the posthearing brief of S.A. des Minerais and Bomar Resources, Inc. See also hearing transcript, at 225.

period of time than could occur under free market conditions. . . ." 52/
However, the Committee was also careful to note that "[a] reasonable quantity" of imports would not cause market disruption. 53/

In this case, the importers of Soviet ferrosilicon have not entered an unreasonable quantity of ferrosilicon. The information before us does not indicate that these imports have disrupted the U.S. market. The contractual relationship between Minerais and the Soviet Union provides no basis for predicting that imports are likely to increase in the foreseeable future or that the importers have obtained access to a long-term, low-cost source of ferrosilicon that will enable them to suppress or depress ferrosilicon prices in the U.S. market.

Conclusion

In view of the above, we have concluded that rapidly increasing imports of Soviet ferrosilicon are not a significant cause of material injury or threat thereof to the domestic ferrosilicon industry and that such imports are therefore not disrupting the U.S. ferrosilicon market.

52/ S. Rep. No. 93-1298, note 2, supra, at 210.

53/ Id., at 212.

VIEWS OF CHAIRMAN ALFRED ECKES

Based on persuasive evidence developed in this investigation, I conclude that this case represents a classic example of market disruption. These facts require an affirmative determination. Frankly, I am surprised and troubled that the Commission majority could reach a negative determination. This can only be one of those rare instances in which the majority misunderstood the domestic industry, misread the facts, and thus, misapplied the law. In these unusual circumstances, I feel a particular obligation to explain carefully my own determination and perspective.

Statutory Provisions and Legislative History

My own affirmative determination is based on no novel legal theories. Rather, it is rooted in a traditional analysis of the statute, the intent of Congress, and past Commission precedent. Congress enacted Section 406 (e)(2) of the Trade Act of 1974 to provide an effective remedy against market disruption caused by imports from Communist countries. According to the statute, market disruption exists with regard to a domestic industry if "imports of an article, like or directly competitive with an article produced by such domestic industry, are increasing rapidly, either absolutely or relatively, so as to be a significant cause of material injury, or threat thereof, to such domestic industry." 1/

1/ 19 U.S.C. 2436 (1980).

In its report on the legislation the Senate Finance Committee discussed more specifically congressional intent. The Committee stated that by virtue of its ability to control the distribution process and the price at which articles are sold, a Communist country could disrupt domestic markets, for instance, by directing exports "so as to flood domestic markets within a shorter period of time than could occur under free market conditions (s)." 1/ The Committee also expressed concern that "our traditional, dependable suppliers . . . should be given reasonable assurances that they will be able to compete in our market under fair trade conditions without facing the threat of periodic dumping or other disruptive sales practices." 2/

Procedurally, a Section 406 investigation may appear similar to an "escape clause" investigation under Section 201, but the substantive provisions of Section 406 and the rationale underlying these must not be confused with Section 201 provisions. The Senate Report provides a useful comparison of the differences between the market disruption concept and the serious injury concept in Section 201. The latter would require that increased imports of the article be a "substantial cause" of the requisite injury, or threat thereof, to a domestic industry. The former requires that the article is being, or is likely to be, imported in such increased quantities as to be a "significant cause" of material injury, or threat thereof. On the one hand, Congress intended the term "significant cause" to be an easier standard to satisfy than "substantial cause." On the other hand,

1/ S. Rep. No. 93-1298, 93d Cong., 2d Sess. 210 (1974). (Hereinafter cited "S. Rep.").

2/ Id., p. 211.

Congress intended "significant cause" to require a more direct causal relationship between increased imports and injury than the "contribute importantly" standard used in cases involving worker, firm and community adjustment assistance. 1/

In addition, congressional authors of Section 406 intended the term "material injury" to represent a lesser degree of injury than the term "serious injury" employed in Section 201. In essence, as the Senate Report observed, the market disruption concept "is formulated along lines similar to the criteria for import relief under Section 201 However, the market disruption test is intended to be more easily met than the serious injury tests in Section 201." 2/

When the Commission makes a determination in a market disruption case, it must address the following three questions:

- (1) Are imports from a Communist country increasing rapidly, either absolutely or relatively?
- (2) Is a domestic industry materially injured or threatened with material injury?
- (3) Are such rapidly increasing imports a significant cause of material injury or threat thereof?

In subsequent sections I shall address each of these criteria and discuss the compelling evidence for an affirmative determination.

Nature of the Ferrosilicon Industry

Before proceeding with the statutory analysis, I want to address the issues of "like" product and "domestic industry." In a Section 406

1/ S. Rep., p. 212.

2/ Id.

investigation, the Commission must determine whether there is a domestic industry producing an article "like or directly competitive" with imports subject to this investigation.

The article, ferrosilicon, is an alloy containing iron and silicon, used as a deoxidizing agent in the production of steel and iron. It is one product in the family of ferroalloys, a family which also includes high-carbon ferromanganese and high-carbon ferrochromium. There are also several varieties of ferrosilicon, depending on the proportions of silicon and iron contained in the alloy as well as the presence of other additives. Indeed, the Tariff Schedules of the United States contain five separate headings for ferrosilicon products.

An issue fundamental to Commission analysis involves whether imports from the Soviet Union, which to date are exclusively "50 percent" ferrosilicon, are like or directly competitive with one, some or all of the various ferrosilicon products produced domestically. In my view, the imported article meets this statutory test. For one thing, the manufacturing process employed is essentially the same for all categories of ferrosilicon, although energy requirements and the proportion of raw material vary among individual categories. For another, many ferrosilicon products are produced in the same submerged arc electric furnaces. Indeed, at different times in a typical year, domestic producers generally will use the same facilities to produce a variety of ferrosilicon products, depending on their assessment of marketplace conditions.

In my view a definition of the domestic industry also must include production of both 50 percent and 75 percent ferrosilicon. Steel manufacturers and, to some extent iron foundries can use either variety under

certain conditions. In short, there is a significant degree of interchangeability between the two large tonnage grades. Also, the same facilities and labor force are used to produce both 50 percent and 75 percent ferrosilicon. For these reasons I consider the domestic industry, which is the subject of this investigation, to consist of all facilities used to produce ferrosilicon in the United States. 1/

Up to this point, my analysis of the "like" product and the "domestic industry" may resemble the discussion of my colleagues. However, as one who has written an historical account of the international struggle for minerals, I am particularly concerned that they apparently misunderstand the significance of this product and the ferrosilicon processing industry. 2/ This investigation, unlike some previous Section 406 investigations, does not deal with a nonessential agricultural product, like mushrooms, or a discretionary consumer good, like clothespins and gloves. Rather it concerns the product of a vital industry, one that has far-reaching implications for national defense and this country's industrial mobilization base. Our national experience in World War I and World II demonstrated the critical importance of maintaining ferroalloys processing capacity. 3/

1/ However, the narrow category of ferrosilicon containing less than 8 percent silicon and the category which contains over 80 percent silicon, are not considered interchangeable by purchasers of 50 percent and 75 percent ferrosilicon and are not consumed in large quantities. Furthermore, ferrosilicon containing over 80 percent silicon, was not produced in the United States during the period covered by this investigation.

2/ Alfred E. Eckes, The United States and the Global Struggle for Minerals (Austin: University of Texas Press, 1979).

3/ U.S. Senate. Committee on Energy and Natural Resources. Geopolitics of Strategic and Critical Materials. (98th Cong., 1st sess.), p. 111. (Hereinafter cited "Geopolitics of Strategic and Critical Materials.")

Other industrial countries are also sensitive to the importance of a national ferroalloys industry. The chairman of the Japan Iron and Steel Foundation, reportedly has said:

"I would like to emphasize that in view of the importance of the ferroalloy industry to the national economy as a whole and the need to maintain and develop national security and technology, every nation must keep its ferroalloy industry viable at an appropriate scale." 1/

With this perspective in mind, I note that in writing Section 406, Congress expressed concern about the possibility of this country becoming dependent on Communist countries for "vital raw materials." Our national legislature also indicated that Communist countries might employ "disruptive sales practices," such as moving in and out of markets with relative speed. That Congress was concerned especially about the Soviets disrupting markets for materials used in the production of steel is emphasized in the list of materials specifically listed in the Senate Report. These are: "oil, gas, nickel, chromium, manganese and others." (emphasis added) 2/

It is reasonable to infer that Congress intended Section 406 to apply to both unprocessed raw materials, like chromium and manganese, and processed raw materials, like ferrosilicon. Anyone familiar with the minerals and metals processing industries knows the essential interrelationship. A nation can have deposits of ores, or even ore stockpiles, but without processing capacity these are only a pile of useless rocks. Indeed, in past national emergencies the inadequacy of processing facilities, not the absence of ores, has frequently been the greater bottleneck. 3/

1/ Id., p. 112.

2/ S. Rep., p. 210.

3/ Geopolitics of Strategic and Critical Materials, pp. 111-112.

Even though ferrosilicon does not presently appear on the official list of strategic and critical materials for stockpiling, it must be considered a "vital" raw material. 1/ As the Commission staff report emphasizes, "There are no practical substitutes for ferrosilicon, although aluminum and silicon carbide can technically be substituted for ferrosilicon in certain applications." (emphasis added). 2/ In an academic sense, there are possible substitutes for most materials, but these substitutes have different properties and costs, which are often unacceptable.

In his statement to the Commission, Sen. James McClure emphasized another unique aspect of this industry. Furnaces used to produce ferrosilicon can also produce, with certain adjustments, other ferroalloys, such as ferrochromium and ferromanganese. As Sen. McClure said: "With the capacity to produce ferrosilicon comes the capacity to produce all other ferroalloys. The reverse is not so." (emphasis added). 3/ Recently, there has been a tendency for American smelting capacity to shift off shore, and this pattern has been particularly true in ferrochrome and ferromanganese as well as steel, aluminum and nonferrous metals 4/, resulting in sharply reduced domestic ferrochromium and ferromanganese smelting capacity. Consequently, the health of the ferrosilicon industry assumes a new importance: It is the backbone of what remains of the U.S. ferroalloys industry. With a domestic ferrosilicon processing capacity the U.S. could still produce vital chrome and manganese products in a national emergency situation.

1/ When Section 406 was written, oil and gas technically were not stockpile items, either, although the authors of Section 406 clearly understood their "vital" significance and mentioned them as examples of such materials.

2/ Report, p. A-11.

3/ Hearing before the Commission, January 6, 1984, Transcript p. 17. (Hereinafter cited, "Transcript")

4/ Geopolitics of Strategic and Critical Materials, p. 106-107.

There are several other distinctive features of this industry that warrant discussion at this point, because they help to differentiate my analysis of the factual data from that of my colleagues. For one thing, unlike the market for many agricultural products, there are few sellers and buyers of ferrosilicon. Nine firms produce ferrosilicon in 14 plants. Indeed, three producers account for almost three-fourths of the U.S. producers' commercial shipments in 1982. Similarly, at the Commission hearing, the domestic industry testified that there are probably six to eight buyers who purchase 80 percent of total tonnage. Because the product is fungible, and different grades can be substituted for one another on occasion, price is the dominant factor in marketplace transactions.

Second, in this distinctive marketplace, decisions to buy and sell are often made on the basis of incomplete and fragmentary pricing information. Domestic producers advised the Commission that there is little market intelligence regarding day-to-day price conditions. Moreover, pricing practices vary considerably. Some prices are negotiated with buyers on a quarterly basis, and these price commitments may extend beyond the quarter under consideration. Some sales are made on a spot price quotation basis. Other price-related factors, such as credit terms and transportation costs, also have an important impact. Prices may be quoted on a f.o.b. basis or on a delivered basis, or even on a consignment basis. Finally, different grade-quality requirements may also lead to pricing differentiations.

With a myriad of factors affecting individual transaction prices, it is entirely possible that the market responds to incomplete or inaccurate information. Sometimes prices jump in extreme and sudden ways, the Commission

learned at the hearing. One witness testified that the industry "probably overreacts" to published pricing information because it is "so dependent on a few customers." 1/

This background helps to explain how even rumors of Soviet imports at extraordinarily low customs values could have disrupted the domestic market in the latter half of 1983. At the Commission hearing, the petitioners emphasized that press reports of Soviet imports having a customs value less than half that of other imports of 50 percent ferrosilicon spread through the "consuming industry like wild fire." 2/ This depressed prices, as those buyers who were offered low priced Soviet material turned to the domestic producers and said: "Reduce your prices to imported levels if you expect to get our business." 3/

I am concerned that in this investigation the Commission majority may have given inadequate attention to the fact that the price of ferrosilicon is shaped by a few buyers and sellers routinely operating with incomplete information. I reiterate: This situation is quite unlike the market for major agricultural products where there are many buyers and sellers operating with considerable knowledge of actual market transaction prices. With a product such as ferrosilicon, perceptions of the availability of a supply at prices having no relation to market value can be as important as actual transactions in shaping the marketplace response to new imports, such as those arriving from the Soviet Union.

1/ Transcript, p. 111.

2/ Transcript, p. 44.

3/ Id., p. 45.

Rapidly Increasing Imports 1/

In my judgment imports of ferrosilicon from the Soviet Union are rapidly increasing, and thus do satisfy the first key statutory criterion.

In reviewing Section 406, I note that imports of "a like or directly competitive article" must be "increasing rapidly, either absolutely or relatively." Furthermore, the legislative history indicates that the increased imports must have "occurred during a recent period of time" taking into account "any historical trade levels which may have existed." 2/ 3/ The legislative history also indicates that a "reasonable quantity of such materials could be imported from communist countries without causing market disruption." 4/

1/ Importers argued in this investigation that recourse to Section 406 in these circumstances is inappropriate since there is no Soviet government control over the distribution process or prices of the ferrosilicon.

I do not find this argument persuasive. It is evident that Minerals (purchaser from the Soviet government) and Bomar (purchaser from Minerals and importer of record) benefit from the non-market price advantages associated with Soviet ferrosilicon. Moreover, these imports are treated by U.S. Customs as being products of the Soviet Union.

2/ S. Rep., p. 212.

3/ The point has been raised with regard to the "increasing rapidly" criterion that this investigation was premature in view of the fact that these imports are new in the marketplace -- and that any rate of increase could not be measured meaningfully.

The Senate report on this section is clear regarding congressional anticipation of timely consideration of disruptive practices. In a comparison of the Senate version of Section 406 with the House bill, the Senate report states: "The criteria to be applied by the International Trade Commission in determining whether market disruption exists would be liberalized and broadened, beyond the criteria in the House bill, so as to assure that effective action against market disruption or its likelihood will be taken at the earliest possible time." (emphasis added), Sen. Rep., p. 211. Moreover, the Senate report in discussing the "increasing rapidly" requirement observed that the Commission is to take "into account any historical levels which may have existed." (emphasis added), Sen. Rep., p. 212. Certainly, this language cannot be read as requiring previous imports before a comparison could be made.

4/ Id., p. 211.

Data accumulated in the investigation show that, except for a small shipment of 75 percent material in 1974, the Soviet Union did not export ferrosilicon to this country until mid-1983. Consequently, there is no historical basis for Soviet participation in the domestic market, as there was, for example, in East Germany's role as the traditional supplier of montan wax to the U. S. market. ^{1/} From zero market share in 1982, Soviet ferrosilicon imports jumped to 2.8 percent of total U.S. ferrosilicon consumption in the period January-September 1983. In the 30-60 percent category Soviet shipments amounted to 4.9 percent of U. S. consumption. These Soviet imports amounted to 3.8 percent of total U. S. ferrosilicon production and to 6 percent of production in the 30-60 percent grade material.

When one looks at market share, data accumulated in this investigation show that the domestic industry is losing market share to imports generally and market share to the Soviets specifically. In the first 9 months of 1983 the total ferrosilicon industry lost 7.4 percentage points of the domestic market, compared with data for January-September, 1982. Thirty-eight percent of this loss was to Soviet imports, which were concentrated in the last half of 1983. In the 30-60 percent category the domestic industry lost 5.8 percentage points of the total domestic market, and 84 percent of this loss was to rising Soviet imports.

Another way of looking at the data is to compare Soviet imports with total U. S. imports. In the course of a single year, 1983, the Soviet Union emerged as the largest single foreign supplier of ferrosilicon with a 30-60 percent content, taking 39.5 percent of the import market. When all

^{1/} See Inv. No. TA-406-7, Unrefined Montan Wax from East Germany, USITC Pub. 1214 (January 1982).

categories of ferrosilicon imports are taken into consideration, the Soviet Union was still a large supplier, taking 10.6 percent of the import market in 1983. These penetration figures are based on overall figures for the first 9 months of 1983; Soviet imports did not arrive until June. Thus, on a quarterly basis, using only data for the period June-September 1983, these ratios would be considerably higher.

During the investigation the Commission also obtained information about the prospect for future Soviet imports. Importers have plans to sell substantial quantities of the same grade ferrosilicon in the U. S. market over the next several years. These imports will approximate the quantity of ferrosilicon obtained from the Soviet Union in 1983. Information on future sales in the U. S. market is incomplete since the Soviet government did not appear at the hearing or provide evidence about its marketing plans, capacity, capacity utilization, or marketing plans. Furthermore, imports of ferrosilicon have been rising in the 75 percent category, and the Commission knows that the present exclusive contracts for Soviet ferrosilicon sales, mentioned above, do not include shipments in the higher-purity category.

With strong data showing imports rising absolutely and relatively, I am not impressed with the argument that the Commission should ignore Soviet imports because they are the sales of a new supplier. Nor, do I think they are a "reasonable quantity" mentioned in the legislative history. 1/ In past

1/ S. Rep., p. 211. The Commission has interpreted the "rapidly increasing" standard as being directed towards "abnormal increases" in imports in contrast to the importation of a "reasonable quantity" which the Senate Finance Committee Report stated section 406 was not intended to prohibit. See Certain Ceramic Kitchenware and Tableware from the People's Republic of China, Inv. No. TA-406-8, USITC Pub. 1279, at 9, August 1982. With regard to these Soviet imports I am puzzled that the Commissioners who did not find market disruption, nevertheless found imports to be "rapidly increasing" i.e., at an abnormal level-while at the same time labeling the quantity of such imports to be a "reasonable quantity."

Section 406 decisions the Commission has interpreted the "rapidly increasing" standard as being directed to "abnormal increases" in imports. From my perspective, since the Soviet Union has never been a factor in the U.S. market for this product, its sales in 1983 of the magnitude discussed above are clearly "abnormal increases."

Also, I do not think the Commission can ignore the Soviet imports because a 2.8 percent market share of total ferrosilicon may seem insignificant to some in the context of a Section 406 proceeding. As I noted in a preceding paragraph, the domestic ferrosilicon industry has steadily lost market share to imports from a variety of countries, first in the 75 percent category and more recently in the 50 percent category. Rising imports coupled with a decline in domestic demand at home have made this vital industry even more vulnerable to the market disruption tactics of a new Communist bloc entrant.

Question of Material Injury

This industry exhibits the classic signs of material injury, and consequently satisfies the second statutory criteria quite easily.

The domestic producers have stated their industry is in an "alarming state." 1/ Indeed, at the hearing witnesses described it as a "terminal" industry, unless it obtained import relief. 2/ Traditional indicators of injury show low capacity utilization, declining production, declining shipments, and declining trends for employment in this industry. Although aggregate operating income increased slightly between 1980 and 1981, domestic producers reported a large aggregate operating loss (\$29.1 million) in 1982. Losses continued into 1983, for the industry had an operating loss of \$28.7

1/ Prehearing brief of the Ferroalloys Association, p. 20.

2/ Transcript, p. 115.

million during the nine-month period January to September. In 1982, five of nine firms reported an operating loss, but seven reported an operating loss in 1983. As the data suggest, the economic recovery in 1983 brought no relief for the ferrosilicon industry. Interim sales for 1983 were below interim figures for the comparable 1982 period.

As noted in the preceding section, the domestic industry lost market share to imports in 1983. For the total ferrosilicon industry, imports were 18.4 percent of consumption in the first nine-months of 1982 and 25.8 percent of consumption in the comparable period of 1983. For the 30-60 percent grade, in which Soviet goods competed, the figure was 6.7 percent for 1982 and 12.5 percent for the comparable period of 1983. At a time when the industry was losing market share, it was also experiencing a further decline in sales, employment, production, capacity utilization and profits. Meanwhile, as one might expect, domestic inventories of 30-60 percent grade were rising. Had the industry's basic indicators not trended downward in 1983, at a time when the Soviet imports first entered the market, one might claim there was no connection between Soviet imports and injury. But as these data suggest, no such correlation exists. Rather, the coincidence of greater injury and Soviet import competition in 1983 establishes a causal connection between the two.

Significant Cause of Material Injury

In order for market disruption to exist, a third criterion must be satisfied. The rapidly rising imports must be a "significant cause" of material injury. As noted earlier, this criterion is less restrictive than the "substantial cause" required in an escape clause investigation and more

rigorous than the "contribute importantly" clause used for adjustment assistance determinations. Thus, the rapidly increasing imports in a section 406 investigation must be at least an important cause of material injury, but they need not be a cause equal to or greater than any other cause.

There can be no doubt that this industry confronts a number of difficult circumstances. At home declining demand has cut into sales. And rising imports from a number of countries have reduced the domestic industry's market share. However, in my view there is abundant evidence to support the petitioner's claim that rapidly rising Soviet imports are a "significant cause" of the material injury.

First, as noted earlier, the domestic industry lost significant market share to the Soviet Union during 1983. 1/ This lost market share coincided with a further decline in industry capacity utilization, employment, sales and profits.

Second, pricing data, although it must be utilized cautiously for reasons previously mentioned, also draws a strong causal nexus between imports and injury. In each of the quarters that Soviet ferrosilicon was sold in the U.S. market during 1983, it undersold on a weighted average delivered price basis the comparable prices for domestic ferrosilicon. In short, based on a traditional Commission measure of average weighted sales, imported Soviet ferrosilicon undersold domestic ferrosilicon. I am not impressed with the

1/ See preceding discussion regarding "Rapidly Increasing Imports" which also includes analysis of the causal relationship between the volume of Soviet imports and injury to the domestic industry.

argument that the lowest Soviet price was sometimes higher than the lowest domestic price for ferrosilicon. 1/ To require that all imports undersell all domestic sales before relief is allowable is an unworkable standard. It conflicts with traditional Commission practice. It conflicts with the notion that relief should be provided to an industry composed of producers facilities, some more efficient than others, some operating in different geographic regions. In reviewing the pricing data, I note that where it is possible to compare what a single buyer paid in the same quarter for domestic, imported and Soviet ferrosilicon, the data show that Soviet imports to that purchaser have been priced lower than both domestic prices and other import prices.

Some of the pricing data suggest that from time to time Soviet importers sell at the market price for imported ferrosilicon. On other occasions the Soviet price seems close to the domestic price. These facts do not undercut my conclusion that Soviet pricing does have a price depressing impact on the market. The market for ferrosilicon is a unique market, one in which prices are often negotiated in tenth's and hundredth's of a cent per pound. 2/ In transactions involving hundreds of tons, such seemingly small differentials

1/ In the absence of more reliable information, an analysis of ranges and a comparison of prices of specific transactions might be inviting. However, it is apparent that an effective limitation on the value of any such comparisons is that there is little specific information available regarding the price structure of each transaction. Thus, one can have little confidence in making exact comparisons of individual transactions in this market, as is possible frequently in agriculture and other industries. Any price analysis that does not take into account these concerns is incomplete and superficial.

2/ See confidential submission filed by the Ferroalloys Association, on January 16, 1984, regarding a domestic producer's price negotiations for the first quarter, 1984. The domestic purchaser indicated that low Soviet prices reflected current market conditions and, "Therefore they would not accept a price increase."

are in fact quite significant in the purchasing decisions of steel end-users who themselves are operating at substantial losses. These slight price differentials have an enormous impact. To conclude that there is no connection between Soviet prices and domestic prices because Soviet prices are within the range of domestic prices is to engage in disturbingly simplistic economic analysis. In essence, such analysis ignores the extreme price sensitivity which characterizes trade in ferrosilicon.

Moreover, lost sales information provides strong confirmation for my interpretation of the pricing data. Two-thirds of the volume of Soviet imports included in Table 18 (the comparison of weighted average delivered prices) are also accounted for in the lost sales section. Repeatedly purchasers told the Commission staff that they bought Soviet ferrosilicon because it was the lowest-priced ferrosilicon available on the market. Purchasers confirmed allegations of lost sales accounting for more than 2,200 tons as being lost on the basis of price. This tonnage is impressive. It accounts for about 13 percent of Soviet imports in 1983 and 20 percent of the Soviet imports actually sold in the U.S. market.

In short, there are three strong connections between Soviet imports and injury--rising Soviet market share in the face of declining domestic profits, evidence of Soviet ferrosilicon underselling the domestic market on an average weighted basis, and testimony from purchasers that sales were lost to the Soviet Union because of price.

The impact of these imports is significant. In its weakened condition the domestic industry lost incremental sales volume. It was unable to pass along higher prices to end users during the last half of 1983 despite increased consumption. 1/ Finally, as the domestic industry testified, low

1/ Transcript, pp. 75-77.

Soviet offer prices disrupted the market in the last half of 1983. The mere presence of an offer to undersell can be disruptive in the ferrosilicon market. This is especially true when a new market entrant has both an incentive and need to drop prices in order to obtain a presence in the market, and when the new entrant is a non-market economy operating without regard to free market disciplines.

It is no comfort to the domestic industry to claim that future imports are fixed and suggest that these levels are reasonable and noninjurious. What emerges from the record of this investigation is not a one-time importation, or an isolated episode. Rather, the Soviet Union arrived and decided to establish a presence in the market at the cost of other producers. Nothing in the record persuades me that continuation of these levels would be noninjurious in the future.

With the limited availability of markets in Japan and the European Community and with the present overcapacity of ferrosilicon worldwide, the Soviet Union has every natural incentive to hold its newly-acquired stake in the U.S. market and expand it.

All the evidence points to a classic example of market disruption. This industry made a persuasive case for import restraints and justified this with compelling evidence. I am disturbed that my colleagues failed to consider the distinctive characteristics of this vital industry and overlooked the clear

evidence of increasing volumes and market penetration, underselling, and lost sales. Their negative determination in this case emasculates Section 406 as an effective import-relief statute. 1/ I am disturbed that the ferrosilicon industry, a key segment of the vital ferroalloys industry, remains exposed to disruptive market behavior by Soviet imports.

1/ Arguments were made during this investigation that any relief under this statute would be ineffective in addressing any material injury being experienced by the domestic industry.

The focus of any statutory relief is on the impact of imports from a communist country which have been found to be disrupting the domestic market.

The intent of Section 406 is not to address all import-related problems for the domestic industry. To deny relief because it will not address the impact of all imports is to ignore the statute as written by Congress.

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On November 2, 1983, the U.S. International Trade Commission received a request from the United States Trade Representative to conduct an investigation under section 406 of the Trade Act of 1974. 1/ Accordingly, the Commission instituted an investigation on November 16, 1983, under section 406(a) of the Trade Act of 1974 (19 U.S.C. 2436). The purpose of the investigation is to determine, with respect to imports of ferrosilicon from the Union of Soviet Socialist Republics (U.S.S.R.), provided for in items 606.35, 606.36, 606.37, 606.39, and 606.40 of the Tariff Schedules of the United States (TSUS), whether market disruption exists with respect to an article produced by a domestic industry. Section 406(e)(2) of the Trade Act of 1974 states that market disruption exists within a domestic industry if "imports of an article, like or directly competitive with an article produced by such domestic industry, are increasing rapidly, either absolutely or relatively, so as to be a significant cause of material injury, or threat thereof, to such domestic industry." The statute requires the Commission to submit its determination to the President within 3 months after the filing of the petition. In this case, final action must occur by February 2, 1984.

Notice of the Commission's institution of investigation No. TA-406-10, and of the public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, D.C., and by publishing the notice in the Federal Register of November 25, 1983 (48 F.R. 53187). 2/ The hearing was held on January 6, 1984. 3/ The vote was held on January 24, 1984.

Other Investigations Concerning Ferroalloys

In recent years, the Commission has conducted only one investigation involving any of the products which are the subject of this investigation. That investigation, No. 701-TA-10 (Final), was conducted under the countervailing duty law provisions of the Tariff Act of 1930 (19 U.S.C. 1671) and involved ferrosilicon containing over 60 percent but not over 80 percent, by weight, of silicon and certain other nonferrosilicon ferroalloy products from Brazil. 4/ The investigation was terminated by the Commission on March 14, 1980 (45 F.R. 17698), without a determination, at the request of the petitioner, the Ferroalloys Association.

The U.S. Department of Treasury (Treasury) and Department of Commerce (Commerce) have also conducted investigations involving ferrosilicon in recent years. Treasury, on January 2, 1980, announced that as a result of a countervailing duty investigation involving imports of such 60 to 80 percent

1/ A copy of the United States Trade Representative's request for an investigation is presented in app. A.

2/ A copy of the Commission's notice is presented in app. B.

3/ A copy of the list of witnesses at the public hearing is presented in app. C.

4/ 45 F.R. 3400.

ferrosilicon from Spain, it was imposing a countervailing duty of 3.36 percent ad valorem on such imports. 1/

Commerce instituted an investigation involving ferroalloys, including ferrosilicon, under section 232 of the Trade Expansion Act of 1962 (19 U.S.C. 1862), the national security provision, in August 1981. Commerce sent its report on this matter to the President in August 1982. Although the results of this investigation have not yet been announced, the President in December 1982 acted to increase U.S. stockpiles of ferromanganese and ferrochromium, two of the three basic ferroalloys covered by the investigation. He took no action with respect to the third ferroalloy, ferrosilicon.

The Commission has conducted several investigations in recent years with respect to ferrochromium under section 201 of the Trade Act of 1974 (19 U.S.C. 2251). Ferrochromium has been produced by some of the same firms in the same plants as ferrosilicon. In addition, sections 201 and 406 share the same definition of industry and are similar in other ways. In the first of the section 201 investigations, No. TA-201-20, Low-Carbon Ferrochromium, the Commission found in the negative by a 3-to-1 vote, having found that a change in the stainless steel refining process to a process utilizing cheaper high-carbon ferrochromium was a more important cause of serious injury than increased imports. 2/ In the second investigation, No. TA-201-28, High Carbon Ferrochromium, the Commission made an affirmative determination by a 3-to-1 vote and recommended an increase in duties, 3/ but the President found that such relief was not in the national economic interest and none was provided. In the third case, investigation No. TA-201-35, which also involved high-carbon ferrochromium, the Commission found in the affirmative by a 4-to-0 vote, and a majority again recommended higher duties. 4/ As a result of that case, the President proclaimed a temporary increase in duties for a 3-year period on certain high-carbon ferrochromium valued less than 38 cents per pound. 5/ The relief was extended for an additional 1 year and terminated on November 15, 1982. 6/

1/ 45 F.R. 25. On July 29, 1983 (48 F.R. 34493), Commerce announced the final results of an administrative review of this countervailing duty order and reduced the rate applicable to ferrosilicon to 2.14 percent ad valorem. On Apr. 23, 1982, the Commission received a letter from the Embassy of Spain requesting an injury determination under sec. 104(b) of the Trade Agreements Act of 1979 on this countervailing duty order. The Commission has 3 years to complete this investigation, or in this case until Apr. 23, 1985.

2/ Low-Carbon Ferrochromium: Report to the President on Investigation No. TA-201-20..., USITC Publication 825, July 1977.

3/ High-Carbon Ferrochromium: Report to the President on Investigation No. TA-201-28..., USITC Publication 845, December 1977.

4/ High-Carbon Ferrochromium: Report to the President on Investigation No. TA-201-35..., USITC Publication 911, September 1978.

5/ Proclamation No. 4608 of Nov. 15, 1978 (43 F.R. 53701).

6/ The Commission recommended that relief be extended in modified form for a 3-year period, as a result of an investigation under sec. 203(i)(2) and (i)(3) of the Trade Act of 1974. High-Carbon Ferrochromium: Report to the President on Investigation No. TA-203-8..., USITC Publication 1185 September 1981. The President proclaimed the 1-year extension in proclamation No. 4884 of Nov. 13, 1981 (46 F.R. 56407).

The Product

Description and uses

Ferrosilicon is an alloy of iron and silicon. For the purposes of this investigation, it is defined as a ferroalloy which contains, by weight, not over 30 percent of manganese and over 8 percent but not over 96 percent silicon. Ferrosilicon is typically used in the production of steel or cast iron as a deoxidizing agent or as an alloying agent to improve a product's strength, machineability, or ductility.

Ferrosilicon is produced from relatively abundant raw materials. The primary raw materials, silicon sand (silicon oxide) or quartz (crushed quartzite) and shredded iron or steel scrap are fed into a submerged-arc electric furnace. Molten ferrosilicon accumulates in the furnace and is periodically drawn off into ladles. The ferrosilicon is then poured into cast-iron molds, cooled, and then crushed into the sizes required by customers. Both lumps (standard sizes) and fines (small, nonstandard sizes) are produced in the crushing operation. Lumps are the preferred form of ferrosilicon, 1/ since lumps tend to sink quickly into molten materials and are incorporated rapidly into such mixtures. Fines are more difficult to incorporate into such mixtures, since they tend to float on the surface of such molten materials. Ferrosilicon is also sold in the form of briquets, which consist of fines and a binding agent shaped in a mold.

The various types of ferrosilicon are principally differentiated by their silicon content. For the purposes of this investigation, four different ferrosilicon categories, based on silicon content, will be discussed. 2/ The range of silicon content for these four categories, their typical silicon content, their common additives, their share of apparent U.S. consumption of ferrosilicon in 1982, and their principal uses, according to the relevant provisions in the Tariff Schedules of the United States Annotated (TSUSA), are shown in the following tabulation:

1/ Data submitted by four firms, which accounted for * * * percent of total U.S. producers' commercial shipments of ferrosilicon in 1982, show that the lump form made up * * * percent of U.S. producers' shipments in that year.

2/ For the purposes of this report, the quantities discussed will be gross weights, rather than weights of silicon content.

TSUSA item No.	Range of silicon content <u>1/</u>	Typical silicon content	Common additive	Share of apparent U.S. con- sumption in 1982	Principal use
		Percent		Percent	
606.3520	Over 8 percent, but not over 30 percent (8-30)	18	None	***	Production of cast iron.
606.3542	Over 30 percent, but not over 60 percent (30-60)	48	Over 2 percent: magne- sium	61.6	Production of steel and cast iron. <u>2/</u>
606.3600	Over 60 percent but not over 80 percent (60-80)	76	Over 3 percent: calci- um	***	Production of steel. <u>3/</u>
606.3900	Over 80 percent but not over 96 percent (80-96)	85	None	0.5	Production of steel.

1/ Hereinafter, ranges shown in parentheses will be used to refer to specific categories.

2/ Ferrosilicon with over 2 percent magnesium is used to produce ductile cast iron.

3/ Ferrosilicon with over 3 percent calcium is used as a desulfurizer in the production of steel.

The manufacturing process is essentially the same for these four categories, except for the proportion of the raw materials and the energy requirements--electrical costs increase as the silicon content increases. However, silicon content must be closely monitored within the 30-60 percent category. Around the 50 percent silicon level, contact with water can result in spontaneous fires and the release of poisonous gases. 1/ Six U.S. producers, which accounted for * * * percent of total U.S. producers' commercial shipments of ferrosilicon in 1982, advised that the two principal categories of ferrosilicon (the 30-60 and the 60-80 percent silicon content categories, which accounted for 65.0 and * * * percent of total U.S. production of ferrosilicon in 1982, respectively) can be produced interchangeably in certain of their

1/ Such problems are avoided by keeping the silicon content of ferrosilicon within this category below the 50-percent level. Ferrosilicon in the 30-60 percent category produced by U.S. firms typically has had a silicon content of 48 percent; imports of the same category from the U.S.S.R. in 1983 had a silicon content of * * * percent.

furnaces. One U.S. producer indicated that certain of their furnaces can be converted to the production of different grades of ferrosilicon in a matter of hours. 1/

The bulk of the 30-60 and 60-80 percent silicon categories consist of products termed "50 percent grade" and "75 percent grade" ferrosilicon, respectively. Ferrosilicon which has a nominal silicon content between 47 and 51 percent, is not a proprietary product, and contains not over 2 percent, by weight, of magnesium is referred to as "50 percent grade" in the trade. 2/ Ferrosilicon which has a nominal silicon content between 74 and 79 percent, is not a proprietary product, and contains not over 3 percent, by weight, of calcium is called "75 percent grade" in the industry. 3/

Although industry sources clearly indicate that certain formulations of ferrosilicon (e.g., ferrosilicon containing over 2 percent magnesium) probably could not be used interchangeably with other formulations by consumers, 4/ responses are mixed on the question of the interchangeability of the 50 percent and 75 percent grades by consumers. Certain U.S. purchasers (primarily steel producers) have indicated in their responses to the Commission's purchaser questionnaire that the 50 and 75 percent grades are interchangeable for all or most of their purposes. At the same time, some of these firms indicate that such interchangeability requires changes in operating procedures. Other purchasers have stated that the two grades are not interchangeable in their operations (e.g., the 75 percent grade is required for inoculation of cast irons); some of these firms purchase both grades, but they use them for different purposes.

The 50 and 75 percent grades present purchasers with different physical and financial considerations. The two grades obviously differ in silicon content, and they also differ slightly in the forms of silicon present. Both

1/ Personnel of a U.S. producer, * * * advised that they can convert production in their furnaces from one of the two most significant categories to the other (the 30-60 and 60-80 percent silicon content categories) in * * * hours. They also indicated that additives posing potential problems to existing furnace linings, such as magnesium, could be dealt with by incorporating them as ladle additions, rather than adding them to the furnace.

2/ Based on data supplied by four U.S. producers, which accounted for * * * percent of total U.S. producers' commercial shipments of the 30-60 percent silicon category in 1982, 50 percent grade ferrosilicon represented 72.2 percent of the quantity of U.S. producers' shipments in the 30-60 silicon content category in that year.

3/ Data supplied by two U.S. producers, which accounted for * * * percent of total U.S. producers' commercial shipments of the 60-80 percent silicon category in 1982, show that 75 percent grade ferrosilicon represented * * * percent of the quantity of U.S. producers' shipments in the 60-80 percent silicon category in that year.

4/ The Ferroalloys Association's prehearing brief, p. 8.

grades contain the same iron and silicon compound, but the 75 percent grade also contains uncombined silicon, which does not occur in nature and is extremely active chemically. The 50 percent grade provides a higher iron content, which makes it more expensive to ship (on the basis of contained silicon) and gives it a diluting and endothermic (or lowering-of-temperature) effect 1/ on the material to which it is added, and it has historically been the least expensive of the two grades.

One U.S. producer, * * *, which accounted for * * * percent of total U.S. producers' commercial shipments of ferrosilicon in 1982, offered this assessment of the interchangeability of the 50 and 75 percent grades in its response to the Commission's producer questionnaire:

* * * * *

The Ferroalloys Association advises that 50 and 75 percent grade ferrosilicon of "regular purity" are interchangeable for consumers. 2/ A sustained price differential of 1 or 2 cents per pound of contained silicon is believed sufficient for a consumer to switch from one of these products to the other. 3/

The imported product

Imports of ferrosilicon from the U.S.S.R. are in the lump form and consist solely of ferrosilicon of 30-60 percent silicon content, containing not over 2 percent, by weight, of magnesium, reported under TSUSA item 606.3546. The U.S.S.R. material is considered to be 50 percent grade of "regular purity."

The domestic product

Domestic producers manufacture ferrosilicon of 8-30, 30-60, and 60-80 percent silicon content, but they do not produce ferrosilicon in the 80-96 percent silicon category. The 30-60 percent silicon category is the most significant of the three types produced by U.S. firms and represented 65.0 percent of total U.S. production of ferrosilicon in 1982.

1/ The 75 percent grade is exothermic; it increases the temperature of the molten material to which it is added.

2/ Data submitted in the Ferroalloys Association's prehearing brief (p. 13), show that 50 percent grade ferrosilicon of "regular purity" accounted for 76.5 percent of the total quantity of 30-60 percent silicon material consumed in the United States in 1982, and 75 percent grade of "regular purity" accounted for 40.9 percent of the total quantity of 60-80 percent silicon material consumed in the United States in the same year.

3/ Transcript of the hearing, pp. 153-154.

U.S. tariff treatment

The ferrosilicon covered in this investigation is provided for in TSUS items 606.35, 606.36, 606.37, 606.39 and 606.40. The current column 1 (most-favored-nation) 1/ and column 2 2/ rates of duty are presented in table 1. The table also shows the staged tariff rates resulting from the Tokyo round of the Multilateral Trade Negotiations (MTN) and the pre-MTN column 1 rates. The current rates of duty applicable to imports from the least developed developing countries (LDDC's) 3/ are 1.5 percent ad valorem under TSUS item 606.37 and 5.8 percent ad valorem under TSUS item 606.40. Only imports under TSUS items 606.36 and 606.37 are eligible for duty-free treatment under the Generalized System of Preferences (GSP). 4/ 5/

During the period under investigation (Jan. 1, 1980, to Sept. 30, 1983), imports of ferrosilicon from the U.S.S.R. were entered only during 1983 and only under TSUS item 606.35. Such imports were subject to a duty of 2 cents per pound on silicon content, representing an ad valorem equivalent of 12.3 percent.

1/ The rates of duty in column 1 are most-favored-nation (MFN) rates, and are applicable to imported products from all countries except those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA. The People's Republic of China, Hungary, Romania, and Yugoslavia are the only Communist countries currently eligible for MFN treatment. However, MFN rates would not apply to products of developing countries if preferential tariff treatment is granted under the Generalized System of Preferences (GSP) or under the "LDDC" column.

2/ The rates of duty in rate of duty in column numbered 2 apply to imported products from those Communist countries and areas enumerated in general headnote 3(f) of the TSUSA.

3/ The preferential rates of duty in the "LDDC" column reflect the full U.S. MTN concession rates implemented without staging for particular items and apply to covered products of the least developed developing countries, enumerated in general headnote 3(d) of the TSUSA. Where no rate of duty is provided in the "LDDC" column for a particular item, the column 1 rate applies.

4/ The GSP is a program of nonreciprocal tariff preferences granted by the United States to developing countries to aid their economic development by encouraging greater diversification and expansion of their production and exports. The GSP, as enacted in title V of the Trade Act of 1974 and implemented by Executive Order No. 11888, of Nov. 24, 1975, applies to merchandise imported on or after Jan. 1, 1976, and is scheduled to remain in effect until Jan. 4, 1985. It provides for duty-free entry of eligible articles imported directly from designated beneficiary developing countries.

5/ As a result of a petition filed by the Ferroalloys Association with the United States Trade Representative (47 F.R. 9948), imports from Brazil under TSUS items 606.36 and 606.37 were declared ineligible for duty-free treatment under the GSP effective Mar. 31, 1983.

Table 1.--Ferrosilicon: U.S. rates of duty, by TSUS items

TSUS item No. 1/	Description	Pre-MTN col. 1 rate of duty 2/	(Cents per pound; percent ad valorem) Staged col. 1 rates of duty effective with respect to articles entered on or after Jan. 1--									Col. 2 rate of duty
			1980	1981	1982	1983	1984	1985	1986	1987		
606.35	Ferrosilicon: Containing over 8 percent but: not over 60 percent by weight of silicon. 3/ Containing over 60 percent but not over 80 percent by weight of silicon: Containing over 3 percent by weight of calcium. 7/	Free	4/	4/	4/	4/	4/	4/	4/	4/	2¢ on silicon content.	
606.36A* 5/6/	Other-----	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	11.5%.	
606.37A* 5/6/	Other-----	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	0.5¢ on silicon content	11.5%.	
606.39	Containing over 80 percent but not over 90 percent by weight of silicon. 8/	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	1¢ on silicon content	9%.	
606.40	Containing over 90 percent by weight of silicon. 9/	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	2¢ on silicon content	40%.	

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1/ The designation "A*" indicates that the item is currently designated as an eligible article for duty-free treatment under the U.S. Generalized System of Preferences and that certain developing countries, specified in general headnote 3(c) of the Tariff Schedules of the United States Annotated, are not eligible.

2/ Rate effective prior to Jan. 1, 1980.

3/ Classified under TSUSA item 607.5020 prior to Jan. 1, 1980.

4/ Rate not modified in the Tokyo round of the Multilateral Trade Negotiations.

5/ Brazil became ineligible for duty-free treatment under the GSP effective Mar. 31, 1983.

6/ Countervailing duties applied to imports from Spain effective Jan. 2, 1980.

7/ Classified under TSUS item 607.51 prior to Jan. 1, 1980.

8/ Classified under TSUS item 607.52 prior to Jan. 1, 1980.

9/ Classified under TSUS item 607.53 prior to Jan. 1, 1980.

U.S. Market

Apparent U.S. consumption

Apparent U.S. consumption of ferrosilicon increased from 678,035 short tons in 1980 to 749,985 short tons in 1981, or by 10.6 percent (table 2). U.S. consumption then decreased by 41.0 percent, to 442,584 short tons in 1982, before increasing by 13.9 percent in January–September 1983 relative to consumption during the corresponding period of 1982. The volume of U.S. production, producers' shipments, imports, and reported consumption of ferrosilicon from 1965 to 1983, and the share of U.S. consumption of ferrosilicon represented by each type of ferrosilicon from January 1, 1980, to September 30, 1983, are shown in appendix D (tables D-1 to D-2).

Table 2.—Ferrosilicon: U.S. producers' commercial shipments, 1/ exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, by types, 1980–82, January–September 1982, and January–September 1983

Type and period	Producers' commercial shipments	Exports	Imports	Apparent U.S. consumption	Ratio of U.S. imports to consumption
	Short tons				Percent
8–30 percent silicon:					
1980	***	***	1,184	***	***
1981	***	***	2,783	***	***
1982	***	***	641	***	***
January–September--					
1982	***	***	641	***	***
1983	***	***	28	***	***
30–60 percent silicon:					
1980	410,259	5,192	19,416	424,483	4.6
1981	403,046	9,375	19,992	413,663	4.8
1982	259,717	5,101	17,789	272,405	6.5
January–September--					
1982	213,769	4,161	15,148	224,756	6.7
1983	212,025	5,294	<u>2/</u> 29,576	<u>2/</u> 236,307	<u>2/</u> 12.5
60–80 percent silicon:					
1980	***	***	50,102	***	***
1981	***	***	132,994	***	***
1982	***	***	57,173	***	***
January–September--					
1982	***	***	50,691	***	***
1983	***	***	80,394	***	***

See footnote at end of table.

Table 2.--Ferrosilicon: U.S. producers' commercial shipments, 1/ exports of domestic merchandise, imports for consumption, and apparent U.S. consumption, by types, 1980-82, January-September 1982, and January-September 1983--Continued

Type and period	Producers' commercial shipments	Exports	Imports	Apparent U.S. consumption	Ratio of U.S. imports to consumption
	Short tons				Percent
80-96 percent silicon:					
1980-----	0	0	232	232	100.0
1981-----	0	0	1,484	1,484	100.0
1982-----	0	0	2,188	2,188	100.0
January-September--					
1982-----	0	0	894	894	100.0
1983-----	0	0	20	20	100.0
Total:					
1980-----	621,321	14,220	70,934	678,035	10.5
1981-----	608,807	16,075	157,253	749,985	21.0
1982-----	374,917	10,123	77,790	442,584	17.6
January-September--					
1982-----	306,166	8,066	67,374	365,474	18.4
1983-----	314,525	8,106	<u>2/</u> 110,018	<u>2/</u> 416,437	<u>2/</u> 26.4

1/ Data include responses of 9 firms and exclude intracompany and intercompany shipments.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: U.S. producers' commercial shipments and exports, compiled from data obtained in response to questionnaires of the U.S. International Trade Commission; U.S. imports, compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Because of rounding, figures may not add to the totals shown.

Apparent U.S. consumption of ferrosilicon of the 30-60 percent silicon content decreased from 424,483 short tons in 1980 to 413,663 short tons in 1981, or by 2.5 percent. U.S. consumption then decreased by 34.1 percent to 272,405 short tons in 1982, before increasing by 5.1 percent in January-September 1983 relative to consumption during the corresponding period of 1982.

The steel and cast-iron industries are the two principal consumers of ferrosilicon, and the trend in U.S. consumption of all ferrosilicon during this period was similar to the trends for U.S. raw steel production (American Iron and Steel Institute data) and U.S. producers' shipments of cast iron (Commerce data), 1/ as shown in the following tabulation:

	<u>Apparent U.S. consumption of ferrosilicon</u> (1,000 short tons)	<u>U.S. raw steel production</u> (1,000 short tons)	<u>U.S. producers' shipments of cast iron</u> (1,000 short tons)
1980-----	678	111,835	12,249
1981-----	750	120,828	12,223
1982-----	443	74,577	8,499
Jan.-Sept.--			
1982-----	365	58,367	6,783
1983-----	416	61,386	7,017

The volume of U.S. production of raw steel from 1965 to 1983 is shown in table D-3.

Channels of distribution

Ferrosilicon is largely sold directly to iron and steel producers, without long-term contracts, at prices prevailing at the time of the sale. Ferrosilicon is also sold to distributors.

The distribution of the importer's sales of ferrosilicon during January-November 1983 is shown in the following tabulation:

* * * * * * *

Competitive products

There are no practical substitutes for ferrosilicon, although aluminum and silicon carbide can technically be substituted for ferrosilicon in certain applications. Aluminum can be used in place of ferrosilicon as a deoxidizer in steel production, and it is more effective as a deoxidizer than ferrosilicon. However, aluminum is more expensive than ferrosilicon and does not provide silicon and iron to the steelmaking process. Silicon carbide can be substituted for ferrosilicon in cast-iron production, and it is usually less expensive than ferrosilicon; however, it can be used only in certain types of furnaces and does not provide uniform results in the final products.

1/ Production data for cast iron are not available.

The Domestic Industry

U.S. producers

During the period under investigation, ferrosilicon was produced by 9 firms in 14 plants in the United States. Each firm, its establishment location(s), and its share of total U.S. producers' commercial shipments of ferrosilicon in 1982 (in terms of quantity) are shown in table 3.

Table 3.--Ferrosilicon: U.S. producers, establishment locations, and share of U.S. producers' commercial shipments, 1982

Firm	Establishment location	Share of U.S. producers' commercial shipments
Aluminum Co. of America (Alcoa)-----	Addy, Wash.	***
Elkem Metals Co. (Elkem)-----	Alloy, W. Va.	***
	Ashtabula, Ohio	
Foote Mineral Co. (Hanna)-----	Graham, W. Va.	***
	Keokuk, Iowa	
Hanna Mining Co. (Foote)-----	Rock Island,	***
	Wash. 1/	
Interlake, Inc. (Interlake)-----	Beverly, Ohio	***
International Minerals & Chemical Corp. (IMC).	Bridgeport, Ala.	***
	Kimball, Tenn.	
Ohio Ferro-Alloys Corp. (OFA)-----	Philo, Ohio	***
	Mt. Meigs, Ala. 2/	
Roane Alloys Division (Roane) 3/-----	Rockwood, Tenn.	***
SKW Alloys, Inc. (SKW)-----	Calvert City, Ky.	***
	Niagara Falls, N.Y.:	

1/ Plant is located at Rock Island, but it is occasionally listed as Wenatchee.

2/ Plant is located at Mt. Meigs, but it is occasionally listed as Montgomery.

3/ ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Of the nine firms, three--Elkem (Norway), Roane (Republic of South Africa), and SKW (West Germany)--are foreign owned. Elkem's ferrosilicon production facilities were acquired from Union Carbide Corp. on July 1, 1981. * * *. As indicated in the preceding tabulation, domestic production of ferrosilicon is relatively concentrated, with the three largest producers--* * *--together accounting for * * * percent of total U.S. producers' commercial shipments in 1982.

Most of the firms have produced other ferroalloys in addition to ferrosilicon during the period under investigation. On the basis of U.S. Bureau of Mines data on shipments of all ferroalloys, ferrosilicon represented 38 percent of U.S. producers' shipments of such alloys in 1982. The fact that the United States has excellent natural resources of silicon contributes to the significance of ferrosilicon to U.S. producers. The United States lacks similar deposits of manganese and chromium, upon which most other ferroalloys are based.

Certain establishments experienced production shutdowns or strikes during the period under consideration. * * *

U.S. importer

There is only one known importer of ferrosilicon from the U.S.S.R., Bomar Resources, Inc. (Bomar) of New York, N.Y., which is described by a company official as a commodity importer/trader. Bomar obtains U.S.S.R. ferrosilicon from a Luxembourg trading firm, Societe Anonyme Des Minerais (Minerais).

Minerais has exclusive rights to market U.S.S.R. ferrosilicon of 45-50 percent silicon content outside of the U.S.S.R. and COMECON countries. 1/ * * *. Minerais also purchases and resells 75 percent grade ferrosilicon from the U.S.S.R. * * *. Minerais' agreement for 75 percent grade is not exclusive worldwide, and * * *.

Minerais * * *. 2/ Minerais sold ferrosilicon to only one U.S. distributor (Bomar) in 1983. * * *. 3/ * * *. However, Minerais indicated that when their allotment is reduced by the U.S.S.R., the amount available to each market that they serve will be reduced pro rata. 4/

* * * * *

Foreign Producers

Ferrosilicon is produced in many countries throughout the world. The major producing countries are the United States, the U.S.S.R., Norway, Japan, and the People's Republic of China. The combined production of ferrosilicon by these five countries totaled almost 1.8 million short tons in 1982, or 56.6 percent of world production. Ferrosilicon plants in these countries may vary from those with small, labor-intensive furnaces to those with large, computer-controlled facilities. The U.S.S.R. is the world's largest producer of ferro-

1/ COMECON countries consist of the U.S.S.R., Poland, Czechoslovakia, Hungary, Romania, Bulgaria, East Germany, Mongolia, Vietnam, and Cuba.

2/ Minerais * * *. Minerais also advises that their 1985 allotment from the U.S.S.R. will not exceed the 1984 level, transcript of hearing, p. 212.

3/ Telex in Minerais' posthearing brief.

4/ Transcript of hearing, pp. 271-272.

silicon, and its production of 750,000 short tons in 1982 represented 24 percent of world production.

Consideration of the Question of Rapidly Increasing Imports

Rate of increase of imports

During the period under investigation, imports of ferrosilicon from the U.S.S.R. entered the United States only in 1983. The product imported from the U.S.S.R. consisted solely of ferrosilicon of 30-60 percent silicon content, containing not over 2 percent, by weight, of magnesium, 1/ and totaled 11,683 short tons during January-September 1983. 2/ 3/ This amount entered the United States in two shipments (June and September) and represented the following shares of total imports from all countries:

	<u>Ratio of ferrosilicon imports from U.S.S.R. to total imports from all countries (percent)</u>
Ferrosilicon <u>1/</u> -----	10.6
Ferrosilicon, 30-60 percent silicon content <u>2/</u> -----	39.5
Ferrosilicon, 30-60 percent silicon content, containing not over 2 percent, by weight, of magnesium <u>3/</u> -----	53.5

1/ Provided for under TSUS items 606.35, 606.36, 606.37, 606.39, and 606.40.

2/ Provided for under TSUSA items 606.3542 and 606.3546.

3/ Provided for under TSUSA item 606.3546.

Rate of increase of imports relative to U.S. production and consumption

The ratio of imports of ferrosilicon from the U.S.S.R. to U.S. production and consumption during January-September 1983, on the basis of quantity, are shown as follows:

	<u>Ratio of ferrosilicon imports from U.S.S.R. to U.S. production (percent)</u>	<u>Ratio of ferrosilicon imports from U.S.S.R. to U.S. consumption (percent)</u>
Ferrosilicon-----	3.8	2.8
Ferrosilicon, 30-60 percent silicon content-----	6.0	4.9

1/ Provided for under TSUSA item 606.3546.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

3/ A third shipment of 4,964 short tons of the same type of ferrosilicon from the U.S.S.R. was imported into the United States during November 1983, bringing the total imported during 1983 to 16,647 short tons.

Consideration of the Question of Material Injury

U.S. production, capacity, and capacity utilization

U.S. production of ferrosilicon declined steadily during the period under investigation (table 4). It declined from 712,635 short tons in 1980 to 691,055 short tons in 1981, or by 3.0 percent. Production decreased by 40.1 percent to 414,241 short tons in 1982, and then declined by 9.5 percent in January–September 1983, relative to production for the corresponding period of 1982.

Table 4.--Ferrosilicon: U.S. production, 1/ by types, 1980–82, January–September 1982, and January–September 1983

Type	1980	1981	1982	January–September--	
				1982	1983
Production (short tons)					
8–30 percent silicon-----	***	***	***	***	***
30–60 percent silicon-----	453,405	452,020	269,271	219,698	194,449
60–80 percent silicon-----	***	***	***	***	***
Total-----	712,635	691,055	414,241	343,887	311,139
Percent of total					
8–30 percent silicon-----	***	***	***	***	***
30–60 percent silicon-----	63.6	65.4	65.0	63.9	62.5
60–80 percent silicon-----	***	***	***	***	***
Total-----	100.0	100.0	100.0	100.0	100.0

1/ Data include responses of 9 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Note.--Because of rounding, figures may not add to the totals shown.

U.S. production of ferrosilicon is concentrated in the 30–60 percent silicon content category, and all 9 U.S. producers manufactured ferrosilicon in the 30–60 percent silicon category at some point during January 1, 1980, and September 30, 1983. During this same period, 8 U.S. producers * * * manufactured ferrosilicon in the 60–80 percent silicon category at some point. There are no U.S. producers of ferrosilicon in the 80–96 percent silicon category and only one firm (* * *) producing ferrosilicon in the 8–30 percent silicon category. U.S. production of ferrosilicon in the 30–60 percent silicon category steadily declined during 1980–82, decreasing from

453,405 short tons in 1980 to 452,020 short tons in 1981, or by 0.3 percent, and declining by 40.4 percent to 269,271 short tons in 1982. Production then decreased by 11.5 percent in January-September 1983, compared with production in the corresponding period of 1982.

U.S. producers' capacity to produce ferrosilicon steadily declined during the period under investigation (table 5). U.S. production capacity decreased from 988,712 short tons in 1980 to 976,035 short tons in 1981, or by 1.3 percent, and then declined by 8.4 percent to 894,191 short tons in 1982. Capacity decreased 2.3 percent in January-September 1983, relative to capacity for the corresponding period of 1982.

Table 5.--Ferrosilicon: U.S. production, capacity, and capacity utilization, 1/ 1980-82, January-September 1982, and January-September 1983

Item	1980	1981	1982	January-September--	
				1982	1983
Production-----short tons---	712,635	691,055	414,241	343,887	311,139
Capacity-----do-----	988,712	976,035	894,191	678,717	663,104
Capacity utilization					
percent---	72.1	70.8	46.3	50.7	46.9

1/ Data include responses of 9 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The utilization of U.S. producers' capacity to produce ferrosilicon declined throughout the period under consideration, decreasing from 72.1 percent in 1980 to 70.8 percent in 1981, and further declining to 46.3 percent in 1982. The capacity utilization ratio of 46.9 percent for January-September 1983 also represented a decrease from that of 50.7 percent in the corresponding period of 1982.

U.S. producers' intercompany and intracompany shipments

U.S. producers' intercompany and intracompany shipments have represented a relatively small portion of the quantity of U.S. production during the period under consideration, as shown in the following tabulation:

*	*	*	*	*	*	*
*	*	*	*	*	*	*

U.S. producers' domestic commercial shipments

The quantity of U.S. producers' domestic commercial shipments ^{1/} of ferrosilicon steadily declined during 1980-82, though not as sharply as production; but unlike production, shipments posted an increase during January-September 1983 (table 6). Shipments declined from 607,101 short tons in 1980 to 592,732 short tons in 1981, or by 2.4 percent, and then decreased by 38.5 percent to 364,794 short tons in 1982. U.S. producers' commercial shipments increased by 2.8 percent in January-September 1983, compared with shipments in the corresponding period of 1982.

Table 6.--Ferrosilicon: U.S. producers' domestic commercial shipments, ^{1/} by types, 1980-82, January-September 1982, and January-September 1983

Type	1980	1981	1982	January-September--	
				1982	1983
Quantity (short tons)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	405,067	393,671	254,616	209,608	206,731
60-80 percent silicon-----	***	***	***	***	***
Total-----	607,101	592,732	364,794	298,100	306,419
Value (1,000 dollars)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	187,701	191,382	122,655	100,885	91,875
60-80 percent silicon-----	***	***	***	***	***
Total-----	295,270	304,879	186,123	151,955	141,481
Unit value (per short ton)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	463.39	486.15	481.73	481.31	444.42
60-80 percent silicon-----	***	***	***	***	***
Average-----	486.36	514.37	510.22	509.75	461.73

^{1/} Data include responses of 9 firms and exclude intracompany, intercompany, and export shipments.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

^{1/} Data exclude domestic intracompany and intercompany shipments and export shipments. * * *

U.S. producers' commercial shipments of ferrosilicon in the 30-60 percent silicon category followed a similar trend during 1980-82, but the quantity of such shipments decreased by 1.4 percent during January-September 1983, compared with that in the corresponding period of 1982.

In contrast, the value of U.S. producers' commercial shipments of ferrosilicon increased from 1980 to 1981 and declined thereafter. Shipments increased by 3.3 percent from \$295.3 million in 1980 to \$304.9 million in 1981, and then declined to \$186.1 million in 1982, or by 39.0 percent. The value of such shipments decreased by 6.9 percent in January-September 1983, relative to that of shipments during the corresponding period of 1982. The value of shipments of ferrosilicon in the 30-60 percent silicon category followed a similar pattern.

The average unit value of U.S. producers' commercial shipments of ferrosilicon cannot be used as an accurate reflection of prices because of variations in product mix. However, these data give some indication of the range of prices among product categories and the trend in the domestic industry's pricing activity. For comparison, the average unit values of U.S. imports are shown in tables D-4 to D-6.

U.S. producers' exports

U.S. producers' exports of ferrosilicon have represented a relatively small portion of the quantity of total commercial shipments during the period under consideration, as shown in the following tabulation:

	<u>Ratio of U.S. exports to</u> <u>commercial shipments</u> <u>(percent)</u>
1980-----	2.3
1981-----	2.6
1982-----	2.7
January-September--	
1982-----	2.6
1983-----	2.5

The quantity of U.S. producers' exports of ferrosilicon increased from 14,220 short tons in 1980 to 16,075 short tons in 1981, or by 13.0 percent, and then declined by 37.0 percent to 10,123 short tons in 1982 (table 7). The quantity of exports increased by 0.5 percent in January-September 1983, compared with exports in the corresponding period of 1982. Canada was the principal market during this period and accounted for over 40 percent of the quantity of exports in 1982. Relatively high-priced forms of ferrosilicon (e.g., containing over 2 percent magnesium) make up a significant share of exports, over 40 percent of the quantity of exports in 1982.

Exports of ferrosilicon in the 30-60 percent silicon category followed a similar trend. Canada was the principal market for such exports, and ferrosilicon in this category frequently contained over 2 percent magnesium.

Table 7.--Ferrosilicon: U.S. producers' exports of domestically produced merchandise, 1/ by types, 1980-82, January-September 1982, and January-September 1983

Type	1980	1981	1982	January-September--	
				1982	1983
Quantity (short tons)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	5,192	9,375	5,101	4,161	5,294
60-80 percent silicon-----	***	***	***	***	***
Total-----	14,220	16,075	10,123	8,066	8,106
Value (1,000 dollars)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	3,377	6,287	4,648	3,654	4,045
60-80 percent silicon-----	***	***	***	***	***
Total-----	8,839	10,404	7,439	6,013	5,696
Unit value (per short ton)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	650.42	670.61	911.19	878.15	764.07
60-80 percent silicon-----	***	***	***	***	***
Average-----	621.59	647.22	734.86	745.47	702.69

1/ Data include responses of 9 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Five U.S. producers (* * *) reported exports of ferrosilicon during the period under consideration. Each firm's share of the quantity of total exports in 1982 is shown in the following tabulation:

* * * * *

U.S. producers' inventories

The quantity of U.S. producers' yearend inventories of all ferrosilicon steadily increased from 118,584 short tons in 1979 to 170,979 short tons in 1981, or by 44.2 percent, and then declined by 8.7 percent to 156,056 short tons in 1982 (table 8). The quantity of inventories decreased by 21.2 percent in January-September 1983, compared with inventories in the corresponding

Table 8.--Ferrosilicon: U.S. producers' end-of-period inventories 1/ and commercial shipments, 2/ by types, 1979-82, January-September 1982, and January-September 1983

Type and period	Inventories	U.S. producers' commercial shipments	Ratio of inventories to commercial shipments
	Short tons		Percent
8-30 percent silicon:			
As of Dec. 31--			
1979-----	***	3/	3/
1980-----	***	***	***
1981-----	***	***	***
1982-----	***	***	***
As of Sept. 30--			
1982-----	***	***	***
1983-----	***	***	***
30-60 percent silicon:			
As of Dec. 31--			
1979-----	75,854	3/	3/
1980-----	82,248	410,259	20.0
1981-----	117,276	403,046	29.1
1982-----	100,150	259,717	38.6
As of Sept. 30--			
1982-----	104,824	213,769	49.0
1983-----	69,302	212,025	32.7
60-80 percent silicon:			
As of Dec. 31--			
1979-----	***	3/	3/
1980-----	***	***	***
1981-----	***	***	***
1982-----	***	***	***
As of Sept. 30--			
1982-----	***	***	***
1983-----	***	***	***
Total:			
As of Dec. 31--			
1979-----	118,584	3/	3/
1980-----	144,945	621,321	23.3
1981-----	170,979	608,807	28.1
1982-----	156,056	374,917	41.6
As of Sept. 30--			
1982-----	164,330	306,166	53.7
1983-----	129,563	314,525	41.2

1/ Data include responses of 9 firms, and may be overstated to the extent that * * *.

2/ Data include domestic and export shipments, but exclude intracompany and intercompany shipments.

3/ Not available.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

period of 1982. Inventories of ferrosilicon in the 30-60 percent silicon category followed a similar pattern.

As a ratio of U.S. producers' commercial shipments, 1/ U.S. producers' inventories of ferrosilicon increased from 23.3 percent in 1980 to 28.1 percent in 1981 and to 41.6 percent in 1982. The ratio of inventories to commercial shipments decreased to 41.2 percent in January-September 1983 compared with 53.7 percent in the corresponding period of 1982.

U.S. employment and productivity

Data on U.S. employment and productivity in the ferrosilicon industry show declining trends for employment and fluctuating trends for productivity (table 9). The average number of employees in U.S. establishments declined from 6,494 in 1980 to 3,940 in 1982, or by 39.3 percent. That number then

Table 9.--Average number of employees, total and production and related workers, in U.S. establishments producing ferrosilicon, hours worked by, productivity of, wages and total compensation paid to, and the average hourly wages of such production and related workers, 1/ 1980-82, January-September 1982, and January-September 1983

Item	1980	1981	1982	January-September--	
				1982	1983
Average employment:					
All persons:					
Number-----	6,494	5,864	3,940	4,221	3,439
Percentage change-----	<u>2/</u>	-9.7	-32.8	<u>2/</u>	-18.5
Production and related workers producing--					
All products:					
Number-----	5,141	4,583	2,852	3,082	2,608
Percentage change-----	<u>2/</u>	-10.9	-37.8	<u>2/</u>	-15.4
Ferrosilicon:					
Number-----	2,024	1,844	1,176	1,209	941
Percentage change-----	<u>2/</u>	-8.9	-36.2	<u>2/</u>	-22.2
Hours worked by production and related workers producing--					
All products:					
Number-----thousands--	10,589	9,535	5,783	4,738	3,986
Percentage change-----	<u>2/</u>	-10.0	-39.3	<u>2/</u>	-15.9

See footnotes at end of table.

1/ Data include domestic and export shipments, but exclude intracompany and intercompany shipments.

Table 9.--Average number of employees, total and production and related workers, in U.S. establishments producing ferrosilicon, hours worked by, productivity of, wages and total compensation paid to, and the average hourly wages of such production and related workers, 1/ 1980-82, January-September 1982, and January-September 1983--Continued

Item	1980	1981	1982	January-September--	
				1982	1983
Ferrosilicon:					
Number-----thousands--	4,098	3,686	2,357	1,945	1,478
Percentage change-----	<u>2/</u>	-10.0	-36.1	<u>2/</u>	-24.0
Productivity of production and related workers producing--					
Ferrosilicon:					
Quantity--short tons per hour--	0.1739	0.1875	0.1757	0.1768	0.2105
Percentage change-----	<u>2/</u>	7.8	-6.3	<u>2/</u>	19.1
Wages paid to all production and related workers producing--					
All products:					
Value-----1,000 dollars--	113,614	112,186	75,543	61,523	51,514
Percentage change-----	<u>2/</u>	-1.3	-32.7	<u>2/</u>	-16.3
Ferrosilicon:					
Value-----1,000 dollars--	43,999	43,217	30,587	25,083	18,912
Percentage change-----	<u>2/</u>	-1.8	-29.2	<u>2/</u>	-24.6
Total compensation paid to production and related workers producing--					
All products:					
Value-----1,000 dollars--	146,636	145,009	99,119	81,113	70,480
Percentage change-----	<u>2/</u>	-1.1	-31.6	<u>2/</u>	-13.1
Ferrosilicon:					
Value-----1,000 dollars--	58,601	57,794	41,927	34,123	26,784
Percentage change-----	<u>2/</u>	-1.4	-27.5	<u>2/</u>	-21.5
Hourly wage rate <u>3/</u> for production and related workers producing--					
All products:					
Average-----	\$10.73	\$11.77	\$13.06	\$12.99	\$12.92
Percentage change-----	<u>2/</u>	9.7	11.0	<u>2/</u>	-0.5
Ferrosilicon:					
Average-----	\$10.74	\$11.72	\$12.98	\$12.90	\$12.80
Percentage change-----	<u>2/</u>	9.2	10.8	<u>2/</u>	-0.8

1/ Data include responses of 9 firms.

2/ Not available.

3/ Based on wages paid excluding fringe benefits.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

dropped by 18.5 percent in January-September 1983, relative to average employment reported for the corresponding period of 1982.

The average number of production and related workers in U.S. establishments producing ferrosilicon accounted for 29.8 percent of total employment in such establishments in 1982. The average number of such production workers declined from 2,024 in 1980 to 1,176 in 1982, or by 41.9 percent. The average number then dropped by 22.2 percent in January-September 1983 relative to the number of workers for the corresponding period of 1982. In 1982, 93.6 percent of such production and related workers were represented by a union, primarily the United Steelworkers of America. * * *.

The number of hours worked by production and related workers producing ferrosilicon declined throughout the period, from 4.1 million in 1980 to 2.4 million in 1982, or by 42.5 percent. The number then fell by 24.0 percent in January-September 1983, relative to the number of hours worked in the corresponding period of 1982.

The productivity of production and related workers producing ferrosilicon fluctuated during the period under consideration, increasing from 0.1739 short ton per hour in 1980 to 0.1875 short ton per hour in 1981, or by 7.8 percent, but then decreasing by 6.3 percent in 1982 to 0.1757 short ton per hour. Productivity increased by 19.1 percent to 0.2105 short ton per hour in January-September 1983, relative to productivity in the corresponding period of 1982.

Wages paid to production and related workers producing ferrosilicon decreased throughout the period and represented 73.0 percent of total compensation in 1982. Wages declined from \$44.0 million in 1980 to \$30.6 million in 1982, or by 30.5 percent. Wages decreased by 24.6 percent in January-September 1983, compared with wages paid in the corresponding period of 1982.

Total compensation paid to production and related workers producing ferrosilicon decreased throughout the period under investigation. Total compensation declined from \$58.6 million in 1980 to \$41.9 million in 1982, or by 28.5 percent, and it decreased by an additional 21.5 percent in January-September 1983, relative to total compensation in the corresponding period of 1982.

The hourly wage rate of production and related workers producing ferrosilicon increased from 1980 to 1982, but declined in 1983. The hourly wage rate increased from \$10.74 per hour in 1980 to \$12.98 per hour in 1982, or by 20.9 percent. The hourly wage rate decreased by 0.8 percent in January-September 1983, compared with the hourly wage rate in the corresponding period of 1982.

Financial experience of U.S. producers

Income-and-loss data for ferrosilicon and overall operations.--Usable income-and-loss data, on an establishment basis and for ferrosilicon alone, were received from seven U.S. firms, which accounted for * * * percent of the quantity of total U.S. commercial shipments of ferrosilicon in 1982.

Aggregate net sales of ferrosilicon increased by 8.3 percent, from \$302.3 million in 1980 to \$327.4 million in 1981 and then declined by 37.5 percent to \$204.7 million in 1982. During the interim period ended September 30, 1983, total net sales fell by 4.6 percent to \$135.4 million, compared with \$141.9 million in the corresponding period of 1982. The data for U.S. producers' ferrosilicon operations are presented in table 10.

Table 10.--Income-and-loss experience of 7 U.S. producers on their ferrosilicon operations, 1980-82, 1/ interim period ended Sept. 30, 1982, and interim period ended Sept. 30, 1983

Item	1980	1981	1982	Interim period ended Sept. 30--	
				1982	1983
Net sales-----1,000 dollars--	302,337	327,443	204,680	141,863	135,395
Cost of goods sold-----do-----	282,706	306,170	218,324	154,399	154,978
Gross profit or (loss)-----do-----	19,631	21,273	(13,644)	(12,536)	(19,583)
General, selling, and adminis- trative expenses					
1,000 dollars--	14,619	15,627	15,466	11,285	9,122
Operating income or (loss)--do-----	5,012	5,646	(29,110)	(23,821)	(28,705)
Interest expense-----do-----	9,466	10,952	12,308	8,253	6,676
Other income or (expense), net					
1,000 dollars--	(610)	323	114	(121)	(873)
Net loss before incomes taxes					
1,000 dollars--	(5,064)	(4,983)	(41,304)	(32,195)	(34,508)
Depreciation and amortization expense-----1,000 dollars--	13,043	12,817	10,820	7,640	8,856
Cash flow or (deficit) from operations-----1,000 dollars--	7,979	7,834	(30,484)	(24,555)	(25,652)
Ratio of net sales to--					
Gross profit or (loss)--percent--	6.5	6.5	(6.7)	(8.8)	(14.5)
Operating income or (loss) do-----	1.7	1.7	(14.2)	(16.8)	(21.2)
Net loss before income taxes percent--	(1.7)	(1.5)	(20.2)	(22.7)	(25.5)
Cost of goods sold-----do-----	93.5	93.5	106.7	108.8	114.5
General, selling, and adminis- trative expenses-----percent--	4.8	4.8	7.6	8.0	6.7
Number of firms reporting operating losses-----	2	3	5	6	7
Number of firms reporting net losses-----	3	4	5	6	7

1/ Accounting year ended Dec. 31, for 6 producers and on June 30, for 1 producer.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Aggregate operating income increased from \$5.0 million in 1980 to \$5.6 million in 1981 because of increased sales. During the same period, however, the ratio of operating income to net sales remained steady at 1.7 percent because the cost of goods sold, and general, selling, and administrative expenses in relation to net sales also remained steady. In 1982, U.S. producers reported a large operating loss of \$29.1 million, equivalent to 14.2 percent of net sales. During the interim period ended September 30, 1983, the ferrosilicon industry sustained increased operating losses of \$28.7 million, or 21.2 percent of net sales, compared with an operating loss of \$23.8 million, or 16.8 percent of net sales, in the corresponding period of 1982. Gross profit or loss margins and pretax net loss margins followed a similar trend, as did the operating income or loss margins during the period under investigation.

U.S. producers attribute the losses in 1982 and interim 1983 primarily to the drop in the sales volume due to the depressed condition of the steel industry; this, in turn, contributed to increased unit costs from operating at reduced capacity, coupled with selling prices which did not keep pace with increasing unit costs and expenses. Further, those companies which signed power supply contracts with the Tennessee Valley Authority (TVA) were committed to pay a minimum power bill (* * *) irrespective of their use of power, thus increasing their costs while operating at a lower level of capacity. * * *.

Cash flow generated from U.S. producers' ferrosilicon operations declined from \$8.0 million in 1980 to \$7.8 million in 1981 and then turned into deficits of \$30.5 million in 1982 and \$25.7 million in the interim period ended September 30, 1983. Five firms sustained pretax net losses in 1982, compared with four firms in 1981 and three firms in 1980. All seven firms reported losses in the interim period of 1983.

* * * * *

The income-and-loss data for U.S. producers' establishments in which ferrosilicon is produced are shown in table 11. Ferrosilicon sales as a share of total establishment sales increased from 39.5 percent in 1980 to 45.2 percent in 1982 and then declined to 37.7 percent in interim 1983, compared with 41.6 percent in the corresponding period of 1982. Total establishment sales declined slightly by 2 percent in 1981 but fell by 41 percent in 1982, compared with the level of 1980. During interim 1983, such sales increased by 5 percent, compared with sales in interim 1982. The overall establishment operating profit ratios show a declining trend, while profits on ferrosilicon operations were stable in 1981. U.S. producers reported losses for their establishment operations similar to those for ferrosilicon operations during 1982 and both interim periods of 1982 and 1983. During interim 1983, however, the operating loss on overall establishment operations declined slightly, whereas the operating loss on ferrosilicon operations increased.

Table 11.--Income and loss experience of 7 U.S. producers on the overall operations of their establishments within which ferrosilicon is produced, 1980-82, 1/ interim period ended Sept. 30, 1982, and interim period ended Sept. 30, 1983

Item	1980	1981	1982	Interim period ended Sept. 30--	
				1982	1983
Net sales-----1,000 dollars--	765,446	752,100	452,916	340,954	359,116
Cost of goods sold-----do-----	701,317	691,835	470,337	353,748	373,792
Gross profit or (loss)-----do-----	64,129	60,265	(17,421)	(12,794)	(14,676)
General, selling, and adminis- trative expenses					
1,000 dollars--	37,299	38,403	34,668	25,629	21,106
Operating income or (loss)---do-----	26,830	21,862	(52,089)	(38,423)	(35,782)
Interest expense-----do-----	9,461	21,512	27,538	20,238	13,306
Other income or (expense), net					
1,000 dollars--	195	2,176	2,138	1,162	5,543
Net income before income taxes					
1,000 dollars--	17,564	2,526	(77,489)	(57,499)	(43,545)
Depreciation and amortization expense-----1,000 dollars--	26,655	26,269	20,508	15,756	16,695
Cash flow or (deficit) from operations-----1,000 dollars--	44,219	28,795	(56,981)	(41,743)	(26,850)
Ratio of net sales to--					
Gross profit or (loss)-percent--	8.4	8.0	(3.8)	(3.8)	(4.1)
Operating income or (loss)					
do-----	3.5	2.9	(11.5)	(11.3)	(10.0)
Net income or (loss) before income taxes-----percent--	2.3	0.3	(17.1)	(16.9)	(12.1)
Cost of goods sold-----do-----	91.6	92.0	103.8	103.8	104.1
General, selling, and adminis- trative expenses-----percent--	4.9	5.1	7.7	7.5	5.9
Number of firms reporting operating losses-----	-	3	6	7	7
Number of firms reporting net losses-----	2	3	6	7	7
Ratio of ferrosilicon sales to total establishment sales					
percent--	39.5	43.5	45.2	41.6	37.7

1/ Accounting year ended Dec. 31, for 6 producers and on June 30, for 1 producer.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Investment in productive facilities.--To provide an additional measure of profitability, the ratios of operating profit or loss to original cost and book value of fixed assets employed in overall establishment operations and ferrosilicon operations are presented in table 12. These ratios showed a similar negative trend in 1982 and interim 1983, as did the ratios of operating profit or loss to net sales for both establishment and ferrosilicon operations.

Table 12.--Ferrosilicon: Investment in productive facilities by U.S. producers producing ferrosilicon as of the end of accounting years 1980-82, interim period ended Sept. 30, 1982, and interim period Sept. 30, 1983

Item	1980	1981	1982	Interim period ended Sept. 30--	
				1982	1983
Overall establishment operations: <u>1/</u>					
Original cost					
1,000 dollars--	361,463	374,464	385,895	383,119	387,287
Book value-----do-----	256,304	246,703	243,256	242,273	228,790
Ratio of operating income or (loss) to--					
Net sales-----percent--	3.5	2.9	(11.5)	(11.3)	(10.0)
Original cost-----do-----	7.4	5.8	(13.5)	<u>2/</u> (10.0)	<u>2/</u> (9.5)
Book value-----do-----	10.5	8.9	(21.4)	<u>2/</u> (15.9)	<u>2/</u> (16.1)
Ferrosilicon operations: <u>3/</u>					
Original cost					
1,000 dollars--	200,727	209,240	214,447	213,688	215,214
Book value-----do-----	130,000	126,801	122,517	122,697	115,197
Ratio of operating income or (loss) to--					
Net sales-----percent--	***	***	***	***	***
Original cost-----do-----	***	***	***	<u>2/</u> ***	<u>2/</u> ***
Book value-----do-----	***	***	***	<u>2/</u> ***	<u>2/</u> ***

1/ Data include responses of 7 firms.

2/ Interim data are not comparable to annual data.

3/ Data include responses of 6 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Capital expenditures.--Nine firms furnished data relative to their capital expenditures for land and land improvements, building and leasehold improvements, and machinery and equipment used in the manufacture of all products of the reporting establishments; eight firms supplied such data for ferrosilicon. Overall establishment total capital expenditures rose from \$25.5 million in 1980 to \$26.7 million in 1981 and then declined 37.8 percent

to \$16.6 million in 1982, as shown in table 13. Capital expenditures further declined to \$7.3 million in January–September 1983, compared with \$11.5 million in the corresponding period of 1982, representing a decline of 36 percent.

Table 13.—Ferrosilicon: U.S. producers' capital expenditures for land and land improvements, building and leasehold improvements, and machinery and equipment, 1980–82, January–September 1982, and January–September 1983

(In thousands of dollars)					
Period	: Land and : land im- : provements	: Building and : leasehold : improvements	: Machinery : and : equipment	: Total	
All products of establish- ments: <u>1/</u>	:	:	:	:	:
1980-----	935	467	24,119	25,521	
1981-----	619	891	25,169	26,679	
1982-----	1,096	610	14,900	16,606	
January–September--	:	:	:	:	:
1982-----	502	378	10,586	11,466	
1983-----	37	220	7,050	7,307	
Ferrosilicon: <u>2/</u>	:	:	:	:	:
1980-----	149	220	9,684	10,053	
1981-----	41	231	11,384	11,656	
1982-----	-	244	7,158	7,402	
January–September--	:	:	:	:	:
1982-----	-	199	5,793	5,992	
1983-----	-	-	1,958	1,958	

1/ Data include responses of 9 firms.

2/ Data include responses of 8 firms.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Capital expenditures relative to ferrosilicon dropped from \$10.1 million in 1980 to \$7.4 million in 1982. During January–September 1983, capital expenditures fell by 67 percent to \$2.0 million from \$6.0 million in the same period of 1982.

Research and development expenditures.—There were seven firms that furnished data relative to their research and development expenditures in connection with their ferrosilicon operations. Data were compiled from questionnaire responses and are presented in the following tabulation:

	<u>Value</u> <u>(1,000 dollars)</u>
1980-----	2,995
1981-----	3,653
1982-----	2,074
January-September--	
1982-----	1,560
1983-----	1,662

Impact of imports on U.S. producers' growth, investment, and ability to raise capital.--The Commission requested U.S. producers to describe and explain the actual and potential negative effects, if any, of imports of ferrosilicon from the U.S.S.R. on their firm's growth, investment, and ability to raise capital. Their responses are presented below:

* * * * *

Consideration of the Question of Threat of Material Injury

U.S. importer's inventories

Bomar, which did not import ferrosilicon from the U.S.S.R. prior to 1983, reported an inventory of * * * short tons of ferrosilicon from the U.S.S.R. as of November 30, 1983. Bomar indicated at the hearing on January 6, 1984, that they had sold 10,000 short tons of the 16,647 short tons that they had imported in 1983, leaving an inventory of 6,647 short tons, as of that date. 1/
* * *

Capacity of the foreign producers to increase exports

Total capacity data are not available for the U.S.S.R. ferrosilicon industry, but the U.S.S.R. industry reportedly 2/ has been undergoing rapid expansion. Two furnaces, each with an annual capacity of roughly 100,000 short tons, were put in operation in 1981 and 1982. A third furnace of equal capacity is expected to be put in service prior to 1985. Minerais offers contradictory information regarding the U.S.S.R.'s ferrosilicon capacity. According to Minerais, "* * *." 3/

1/ Transcript of hearing, p. 197.

2/ U.S. Bureau of Mines data.

3/ Telex in Minerais' posthearing brief.

Estimated U.S.S.R. production of ferrosilicon 1/ steadily increased during 1980-82, as shown in the following tabulation:

	<u>U.S.S.R. production</u> <u>(1,000 short tons)</u>
1980-----	694
1981-----	717
1982-----	750

In 1976, the last year that the quantity of U.S.S.R. exports was reported, the U.S.S.R. exported 176,639 short tons of ferrosilicon, or 27 percent of its estimated production. The U.S.S.R. reportedly 2/ produces ferrosilicon in the 8-30 percent, 30-60 percent, 60-80 percent, and 80-96 percent silicon categories.

Official U.S.S.R. trade statistics report only the value of ferrosilicon exports and imports. 3/ These data are shown in the following tabulation:

	<u>U.S.S.R. exports</u> <u>(1,000 dollars)</u>	<u>U.S.S.R imports</u> <u>(1,000 dollars)</u>
1980-----	28,395	876
1981-----	44,299	831
1982-----	48,600	<u>1/</u>

1/ Not reported.

The data show that the U.S.S.R. enjoys a favorable trade balance in ferrosilicon.

Consideration of the Question of the Causal Relationship Between Imports and the Alleged Injury

U.S. imports

The quantity of total U.S. imports of ferrosilicon from all countries fluctuated upward during the period under investigation, as shown in table 14. Such imports increased from 70,934 short tons in 1980 to 157,253 short tons in 1981, or by 121.7 percent, and then decreased by 50.5 percent to 77,790 short tons in 1982. Imports increased by 63.3 percent in January-September 1983, relative to imports in the corresponding period of 1982. The share of U.S. imports represented by each type of ferrosilicon from January 1, 1980 to September 30, 1983, is shown in table D-7. Brazil, Canada, Norway, and Venezuela have consistently been the largest sources of U.S. imports of ferrosilicon during the period under consideration. The share of total U.S. imports accounted for by these four countries increased from 70.0 percent in

1/ U.S. Bureau of Mines data.

2/ Transcript of the hearing, p. 260.

3/ Minerais reports * * *, telex in Minerais' posthearing brief.

Table 14.--Ferrosilicon: U.S. imports for consumption, by types and sources, 1980-82, January-September 1982, and January-September 1983

(In short tons)						
Type and source	1980	1981	1982	January-September--		
				1982	1983	
8-30 percent silicon:						
U.S.S.R.-----	0	0	0	0		0
All other:						
Imported by U.S. pro-						
ducers 1/-----	0	0	0	0		0
Other-----	1,184	2,783	641	641		28
Total-----	1,184	2,783	641	641		28
30-60 percent silicon:						
U.S.S.R.-----	0	0	0	0	2/	11,683
All other:						
Imported by U.S. pro-						
ducers 1/-----	***	***	***	***		***
Other-----	***	***	***	***		***
Total-----	19,416	19,992	17,789	15,148	2/	29,576
60-80 percent silicon:						
U.S.S.R.-----	0	0	0	0		0
All other:						
Imported by U.S. pro-						
ducers 1/-----	***	***	***	***		***
Other-----	***	***	***	***		***
Total-----	50,102	132,994	57,173	50,691		80,394
80-96 percent silicon:						
U.S.S.R.-----	0	0	0	0		0
All other:						
Imported by U.S. pro-						
ducers 1/-----	0	0	0	0		0
Other-----	232	1,484	2,188	894		20
Total-----	232	1,484	2,188	894		20
Total:						
U.S.S.R.-----	0	0	0	0	2/	11,683
All other:						
Imported by U.S.						
producers 1/-----	***	***	***	***		***
Other-----	***	***	***	***		***
Grand total-----	70,934	157,253	77,790	67,374	2/	110,018

1/ Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission. Data include responses of 9 firms.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

1980 to 76.7 percent in January-September 1983 (table D-4). During the period under consideration, imports of ferrosilicon from the U.S.S.R. entered the United States only in 1983. Such imports totaled 11,683 short tons and accounted for 10.6 percent of total U.S. imports in January-September 1983.

The quantity of U.S. producers' imports also fluctuated upward during this period. * * *.

Four U.S. producers (* * *) reported imports, although none reported imports from the U.S.S.R. Each firm's share, in terms of quantity, of U.S. producers' imports in 1982 1/ is shown in the following tabulation:

* * * * *

U.S. imports of ferrosilicon of 30-60 percent silicon content 2/ represented 26.9 percent of total U.S. imports of ferrosilicon from all countries in January-September 1983, compared with the ratio of 27.4 percent in 1980. Total U.S. imports of ferrosilicon of 30-60 percent silicon content increased by 3.0 percent, from 19,416 short tons in 1980 to 19,992 short tons in 1981, decreased by 11.0 percent to 17,789 short tons in 1982, and then increased by 95.2 percent in January-September 1983, relative to the corresponding period of 1982. Brazil, Canada, and France have consistently been the largest sources of U.S. imports during the period; together they accounted for 44.3 percent of the quantity of these imports in January-September 1983 (table D-5). All U.S. imports of ferrosilicon from the U.S.S.R. in January-September 1983 were ferrosilicon of 30-60 percent silicon content. Such imports from the U.S.S.R. represented 39.5 percent of total U.S. imports of this category of ferrosilicon during that period.

In addition to containing 30-60 percent silicon, the ferrosilicon imported from the U.S.S.R. in January-September 1983 contained no more than 2 percent by weight of magnesium. 3/ Imports from the U.S.S.R. accounted for 53.5 percent of total U.S. imports of such material during that period (table D-6).

The share of apparent U.S. consumption of ferrosilicon represented by the quantity of total U.S. imports from all countries fluctuated upward during the period under consideration (table 15). Imports from the U.S.S.R. represented 2.8 percent of apparent U.S. consumption in January-September 1983, compared with 25.8 percent for total U.S. imports from all countries and * * * percent for U.S. producers' imports.

The share of apparent U.S. consumption of ferrosilicon of 30-60 percent silicon content represented by the quantity of total U.S. imports from all countries steadily increased during the period under consideration. Imports from the U.S.S.R. of such material represented * * * percent of apparent U.S. consumption in January-September 1983, compared with 12.5 percent for total U.S. imports from all countries.

1/ * * *.

2/ Provided for under TSUSA items 606.3542 and 606.3546.

3/ Provided for under TSUSA item 606.3546.

Table 15.--Ferrosilicon: Ratios of U.S. producers' domestic commercial shipments, all imports, imports from U.S.S.R., and U.S. producers' imports to apparent U.S. consumption, by types, 1980-82, January-September 1982, and January-September 1983

Type and period	(In percent)			
	Ratio to consumption of--			
	U.S. producers' domestic commercial shipments 1/	All imports	Imports from U.S.S.R.	Imports of U.S. producers 1/
8-30 percent silicon:				
1980-----	***	***	-	-
1981-----	***	***	-	-
1982-----	***	***	-	-
January-September--				
1982-----	***	***	-	-
1983-----	***	***	-	-
30-60 percent silicon:				
1980-----	95.4	4.6	-	***
1981-----	95.2	4.8	-	<u>2/</u> ***
1982-----	93.5	6.5	-	***
January-September--				
1982-----	93.3	6.7	-	***
1983-----	87.5	<u>3/</u> 12.5	<u>3/</u> 4.9	***
60-80 percent silicon:				
1980-----	***	***	-	***
1981-----	***	***	-	***
1982-----	***	***	-	***
January-September--				
1982-----	***	***	-	***
1983-----	***	***	-	***
80-96 percent silicon:				
1980-----	-	100.0	-	-
1981-----	-	100.0	-	-
1982-----	-	100.0	-	-
January-September--				
1982-----	-	100.0	-	-
1983-----	-	100.0	-	-
Total:				
1980-----	89.5	10.5	-	***
1981-----	79.0	21.0	-	***
1982-----	82.4	17.6	-	***
January-September--				
1982-----	81.6	18.4	-	***
1983-----	74.2	<u>3/</u> 25.8	<u>3/</u> 2.8	***

1/ Data include responses from 9 firms exclusive of intracompany, intercompany, and export shipments.

2/ * * *.

3/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: Based on data in tables 2 and 14 of this report.

Prices

Transaction prices 1/ for ferrosilicon are generally determined by informal negotiations between buyers and sellers. The end users and distributors that purchase ferrosilicon commonly buy from more than one domestic or import source. Transportation costs are borne by either the buyer or the seller depending upon the terms negotiated in a given transaction. Although these costs vary, depending upon such factors as the distance shipped and the method of transportation, they typically amount to less than 5 percent of the f.o.b. price.

Quarterly price data for 50 and 75 percent grade ferrosilicon were requested from producers, purchasers, and Bomar, which is the only importer of ferrosilicon from the U.S.S.R. All of the producers and the importer furnished prices on sales to major customers, and 23 of the 28 purchasers that returned questionnaires provided prices on purchases from domestic and import suppliers. 2/

Opinions differ as to whether 50 and 75 percent grade ferrosilicon are substitute products. Since more energy is needed to produce the 75 percent ferrosilicon than the 50 percent grade, unit production costs and prices of the 75 percent grade tend to be higher, on the average, than for the lower silicon product. However, in individual transactions 75 percent ferrosilicon is often sold at a lower price than the 50 percent grade. Twelve of the purchasers that returned questionnaires stated that 50 and 75 percent grade ferrosilicon are interchangeable products in at least some applications. Seven other purchasers stated that they could never be substituted for each other, and one purchaser was undecided.

Weighted-average domestic prices of 50 and 75 percent grade ferrosilicon have both declined irregularly between January-March 1981 and October-December 1983, as shown in table 16. The overall decline has resulted from the weak demand for iron and steel that has prevailed during most of this period, and the increasing competition from imported ferrosilicon. The price of 50 percent ferrosilicon increased from 39 cents per pound in January-March 1981 to 43 cents in the corresponding period of 1982 and then declined by 23 percent during the next year to 33 cents in January-March 1983. As the demand for iron and steel began to recover, the price increased to 36 cents in July-September and stayed at that level for the remainder of 1983. The price of 75 percent ferrosilicon has generally moved in the same direction as the 50 percent grade throughout 1981-83. It increased slightly from 44 cents per pound in January-March of 1981 to 46 cents per pound in April-June, where it remained for the rest of the year. The price declined during six of the next seven quarters, falling to a low of 35 cents in July-September of 1983 before recovering to 39 cents in October-December.

1/ The prices discussed throughout this section of the report are cents per pound of contained silicon.

2/ Regression estimates by the staff of the relationship between prices and imports of ferrosilicon are presented in app. E.

Table 16.--Ferrosilicon: Weighted-average prices reported by domestic producers on sales to major customers of 50 and 75 percent grade ferrosilicon, 1/ by quarters, January 1981-December 1983

(In cents per pound of contained silicon)				
Period	:	50 percent	:	75 percent
<hr/>				
1981:	:		:	
January-March-----	:	39	:	44
April-June-----	:	41	:	46
July-September-----	:	42	:	46
October-December-----	:	42	:	46
1982:	:		:	
January-March-----	:	43	:	44
April-June-----	:	42	:	42
July-September-----	:	40	:	40
October-December-----	:	40	:	38
1983:	:		:	
January-March-----	:	33	:	36
April-June-----	:	34	:	37
July-September-----	:	36	:	35
October-December-----	:	36	:	39
	:		:	

1/ Prices reported on an f.o.b. basis.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

In the posthearing submissions, three U.S. producers reported f.o.b. prices received on sales to their largest customers early in January 1984.
* * *

Data presented in tables 17 and 18 show that * * *.

The range of delivered prices that is shown in table 18 indicates * * *.

Table 17.--Ferrosilicon: Weighted-average prices reported by U.S. producers and by the importer of ferrosilicon from the U.S.S.R. on sales to major customers for 50 percent grade ferrosilicon, 1/ by quarters, April-December 1983

(In cents per pound of contained silicon)				
Period	:	United States	:	U.S.S.R.
1983:	:		:	
April-June-----	:	34	:	***
July-September-----	:	36	:	***
October-December-----	:	36	:	***
	:		:	

1/ Prices reported on an f.o.b. basis.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 18.--Ferrosilicon: Weighted-average domestic prices and ranges of prices reported by end-user customers on purchases from domestic sources, imports from the U.S.S.R., and imports from other sources for 50 percent grade ferrosilicon, 1/ by quarters, April-December 1983

(In cents per pound of contained silicon)									
Period	:	United States		:	U.S.S.R.		:	Other import sources 2/	
	:			:			:		
	:	Range	Average	:	Range	Average	:	Range	Average
1983:	:	:	:	:	:	:	:	:	:
April-June-----	:	31-45	37	:	***	***	:	***	***
July-September-----	:	31-43	36	:	***	***	:	***	***
October-December-----	:	31-44	38	:	***	***	:	***	***
	:	:	:	:	:	:	:	:	:

1/ Prices reported on a delivered basis.

2/ Norway, Brazil, Canada, and Venezuela.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Weighted-average prices paid by end-user purchasers of domestically produced 75 percent ferrosilicon are compared with weighted-average prices paid for imports from Norway, Brazil, Canada, Venezuela, and Iceland for 1982-83, as shown in table 19. The data show that prices of these imports generally declined along with U.S. prices throughout 1982 and January-June 1983 before turning upward in the more recent period. During most of 1982 and 1983, prices of imports were 3 to 6 cents per pound lower than the U.S. price. However, during October-December 1983, the average import price was only 1 cent below the domestic price.

Table 19.--Ferrosilicon: Weighted-average domestic prices reported by end-user customers on purchases from domestic and import sources for 75 percent grade ferrosilicon, 1/ by quarters, January 1982-December 1983

(In cents per pound of contained silicon)				
Period	:	United States	:	Imports <u>2/</u>
	:		:	
1982:	:		:	
January-March-----	:	43	:	40
April-June-----	:	44	:	38
July-September-----	:	42	:	38
October-December-----	:	41	:	36
1983:	:		:	
January-March-----	:	37	:	33
April-June-----	:	38	:	34
July-September-----	:	39	:	35
October-December-----	:	39	:	38
	:		:	

1/ Prices reported on a delivered basis.

2/ Includes imports from Norway, Brazil, Canada, Venezuela, and Iceland.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

On the purchasers' questionnaires, firms were asked to indicate the factor that was most important in influencing their decision to buy the imported ferrosilicon from the U.S.S.R. in 1983. All five of the end-user purchasers stated that the low price of the U.S.S.R. product was the most important factor. Three of these five firms stated that * * *. The other two firms stated that * * *.

Lost sales

Two domestic producers, * * *, provided * * * allegations of lost sales resulting from import competition from the U.S.S.R. during 1983. These allegations involved * * * short tons of * * *. None of the other six current producers was able to provide any specific allegations.

* * * * *

APPENDIX A

UNITED STATES TRADE REPRESENTATIVE'S
REQUEST FOR AN INVESTIGATION

THE UNITED STATES TRADE REPRESENTATIVE
WASHINGTON
20506

November 1, 1983

The Honorable Alfred Eckes
Chairman
United States International Trade Commission
701 E Street, N.W.
Washington, D.C. 20436

Dear Chairman Eckes:

From representations made to this office by the Ferroalloy Association, it appears that there has been a significant increase in the importation of low priced ferrosilicon from the Soviet Union. After consultation with the President and a review of evidence which indicates a possible case of market disruption caused by the importation of an article from a Communist country, I hereby request that the International Trade Commission promptly make an investigation to determine whether market disruption exists with respect to the importation of ferrosilicon (TSUS items 606.35, 606.36, 606.37, 606.39 and 606.40) from the Soviet Union under the authority of Section 406(a) of the Trade Act of 1974.

Thank you very much for your attention to this matter.

Very truly yours,



WILLIAM E. BROCK

WEB:all

APPENDIX B

COMMISSION'S NOTICE OF INSTITUTION

Commission, following receipt on November 2, 1983, of a letter request from the United States Trade Representative, has instituted investigation No. TA-406-10 under section 406(a) of the Trade Act of 1974 to determine, with respect to imports of ferrosilicon provided for in items 606.35, 606.36, 606.37, 606.39, and 606.40 of the Tariff Schedules of the United States, which is the product of the Soviet Union, whether market disruption exists with respect to an article produced by a domestic industry. Ferrosilicon is used as a deoxidizing agent or as a strengthening alloy in the production of various iron and steel products. Section 406(e)(2) of the Trade Act defines such market disruption to exist whenever "imports of an article, like or directly competitive with an article produced by such domestic industry, are increasing rapidly, either absolutely or relatively so as to be a significant cause of material injury, or threat thereof, to such domestic industry."

EFFECTIVE DATE: November 16, 1983.

FOR FURTHER INFORMATION CONTACT:

James Lukes (202-523-0279) or Larry Brookhart (202-523-0275), Office of Industries, U.S. International Trade Commission.

SUPPLEMENTARY INFORMATION:

Public Hearing

The Commission will hold a public hearing in connection with this investigation beginning at 10 a.m. on Friday, January 6, 1984, in the Hearing Room, U.S. International Trade Commission Building, 701 E Street, NW., Washington, D.C. All parties will be given an opportunity to be present, to produce evidence, and to be heard at the hearing. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission not later than the close of business (5:15 p.m.) on Wednesday, December 21, 1983.

Prehearing Procedure

To facilitate the hearing process, it is requested that persons wishing to appear at the hearing submit prehearing briefs enumerating and discussing the issues which they wish to raise at the hearing. Fourteen copies of such prehearing briefs should be submitted to the Secretary to the Commission no later than the close of business on Friday, December 30, 1983. All parties submitting prehearing briefs and other documents shall serve copies or other parties of record in accordance with the requirements of section 201.16 of the rules (19 CFR 201.16, as published in 47 FR 6190 (Feb. 10, 1982)). Any business

[Investigation No. TA-406-10]

Ferrosilicon From the Soviet Union

AGENCY: International Trade Commission.

ACTION: Institution of an investigation under section 406(a) of the Trade Act of 1974 (19 U.S.C. 2436(a)) and scheduling of a hearing to be held in connection therewith.

SUMMARY: Notice is hereby given that the U.S. International Trade

information which a submitter desires the Commission to treat as confidential shall be submitted separately and each sheet must be clearly marked at the top "Confidential Business Data" and submitted in accordance with the procedures set forth in §§ 201.6 and 201.8(d) of the Commission's rules (19 CFR 201.6, 201.8(d), as published in 47 FR 6188 (Feb. 10, 1982)).

Copies of prehearing briefs and other written submissions will be made available for public inspection in the Office of the Secretary. Oral presentations should, to the extent possible, be limited to issues raised in the prehearing briefs. All persons desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 10 a.m. on December 20, 1983, in Room 117 of the U.S. International Trade Commission Building.

For further information concerning the conduct of the investigation, hearing procedures and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR Part 201).

By order of the Commission

Issued: November 17, 1983.

Kenneth R. Mason,
Secretary.

[FR Doc. 83-31534 Filed 11-23-83; 8:45 am]

BILLING CODE 7020-02-M

APPENDIX C

LIST OF WITNESSES AT THE PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject : Ferrosilicon from The Soviet Union

Inv. No. : TA-406-10

Date and time: January 6, 1984 - 10:00 a.m.

Sessions were held in connection with the investigation in the Hearing Room of the United States International Trade Commission, 701 E Street, N.W., in Washington.

Congressional appearances:

Honorable Doug Walgren, United States Congressman, State of Pennsylvania

Robert L. Terrell, Professional Staff Member, Committee on Energy and Natural Resources, on behalf of the Committee Chairman, Honorable James A. McClure, United States Senator, State of Idaho

In support of a finding of market disruption:

Swidler, Berlin & Strelow--Counsel
Washington, D.C.
on behalf of

The Ferroalloys Association

George Watson, President

R. L. Cunningham, President, Ohio Ferro-Alloys Corporation,
Vice Chairman of the Board, The Ferroalloys Association

John L. Collins, President, SKW Metals & Alloys and
most recent ex-Chairman of the Board, The
Ferroalloys Association

John Trunzo, President, Elkem Metals and Treasurer,
The Ferroalloys Association

E. Philip Comer, President, Foote Mineral Company and
Chairman of the Board, The Ferroalloys Association

Thomas M. Lemberg--OF COUNSEL

In opposition to a finding of market disruption:

Donohue and Donohue--Counsel
New York, N.Y.
on behalf of

Bomar Resources, Inc., New York, N.Y.

Larry Pryor, Vice President, Bomar Resources, Inc.

Roger S. Ehrmann, Chief Executive Officer of
Societe Anonyme des Minerais

Gerard Marx, Manager, Ferroalloys Division,
Bomar Resources, Inc.

Jean-Pierre Friedrich, Director of Societe
Anonyme des Minerais

Joseph F. Donohue, Sr.)
James A. Geraghty)--OF COUNSEL
John M. Peterson)

APPENDIX D
STATISTICAL TABLES

Table D-1.--Ferrosilicon: U.S. production, producers' shipments, imports for consumption, and reported consumption of ferrosilicon of 25 to 95 percent silicon content, 1965-83

(In short tons)				
Year	Production	Shipments	Imports <u>1/</u>	Consumption
1965-----	515,747	507,493	16,493	432,857
1966-----	495,109	508,418	30,405	432,443
1967-----	511,619	477,639	30,334	389,313
1968-----	498,736	522,573	26,401	455,005
1969-----	535,257	531,582	33,614	497,559
1970-----	573,093	480,560	22,403	430,296
1971-----	561,972	488,153	24,467	468,514
1972-----	670,689	603,410	39,600	545,481
1973-----	700,299	713,718	99,933	625,768
1974-----	692,088	571,703	142,205	559,315
1975-----	591,317	477,487	70,438	450,703
1976-----	653,038	606,255	98,775	509,870
1977-----	650,076	614,549	115,525	524,107
1978-----	657,707	607,057	135,619	547,175
1979-----	741,834	630,539	113,553	549,314
1980-----	572,567	494,860	70,934	444,052
1981-----	560,211	450,342	157,253	451,126
1982-----	308,324	289,395	77,790	292,317
1983 <u>2/</u> -----	284,169	282,361	153,597	300,650

1/ Import data cover ferrosilicon of all silicon contents.

2/ Partially estimated.

Source: U.S. production, producers' shipment, and reported consumption data compiled from official statistics of the U.S. Department of the Interior; import data, compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table D-2.--Apparent U.S consumption, by types, 1980-82, January-September 1982, and January-September 1983

Types	1980	1981	1982	January-September--	
				1982	1983
Consumption (short tons)					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	424,483	413,663	272,405	224,756	236,307
60-80 percent silicon-----	***	***	***	***	***
80-96 percent silicon-----	232	1,484	2,188	894	20
Total-----	678,035	749,985	442,584	365,474	416,437
Percent of total					
8-30 percent silicon-----	***	***	***	***	***
30-60 percent silicon-----	62.6	55.2	61.5	61.5	56.7
60-80 percent silicon-----	***	***	***	***	***
80-96 percent silicon-----	1/	0.2	0.5	0.2	1/
Total-----	100.0	100.0	100.0	100.0	100.0

1/ Less than 0.05 percent.

Source: Compiled from table 2 of this report, pp. A-12-13.

Note.--Because of rounding, figures may not add to the totals shown.

Table D-3.--Raw Steel: U.S. production, 1965-83

(In short tons)			
Year	Production	Year	Production
1965-----	131,462	1975-----	116,642
1966-----	134,101	1976-----	128,000
1967-----	127,213	1977-----	125,333
1968-----	131,462	1978-----	137,031
1969-----	141,262	1979-----	136,341
1970-----	131,514	1980-----	111,835
1971-----	120,443	1981-----	120,828
1972-----	133,241	1982-----	74,577
1973-----	150,799	1983-----	83,379
1974-----	145,720		

Source: Compiled from data of the American Iron & Steel Institute.

Table D-4.--Ferrosilicon: U.S. imports of ferrosilicon, 1/ by principal sources, 1980-82, January-September 1982, and January-September 1983

Source	1980	1981	1982	January-September--	
				1982	1983
Quantity (short tons)					
U.S.S.R.-----	0	0	0	0	<u>2/</u> 11,683
Brazil-----	14,694	45,061	30,779	27,165	24,457
Canada-----	16,350	20,619	10,421	8,722	23,982
Norway-----	12,428	30,492	10,936	9,603	18,591
Venezuela-----	6,176	23,783	9,547	7,120	17,320
Iceland-----	4,163	9,196	0	0	4,512
France-----	7,729	12,096	6,753	6,343	2,552
Mexico-----	0	33	169	0	2,085
All other-----	9,394	15,973	9,185	8,421	4,836
Total-----	70,934	157,253	77,790	67,374	2/ 110,018
Value (1,000 dollars)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> 1,777
Brazil-----	8,609	23,741	15,908	13,897	12,407
Canada-----	7,760	8,993	4,818	4,047	11,469
Norway-----	5,724	12,512	4,197	3,792	8,908
Venezuela-----	3,726	8,719	2,503	2,016	3,732
Iceland-----	2,228	4,853	-	-	1,406
France-----	7,841	11,441	6,390	5,944	2,493
Mexico-----	-	17	80	-	806
All other-----	6,639	10,842	6,446	5,842	3,718
Total-----	42,527	81,118	40,342	35,538	2/ 46,716
Unit value (per short ton)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> \$152.10
Brazil-----	\$585.85	\$526.87	\$516.58	\$511.58	507.31
Canada-----	474.59	436.14	462.40	463.96	478.23
Norway-----	460.59	410.33	383.82	394.92	479.13
Venezuela-----	603.28	366.59	262.23	283.07	215.47
Iceland-----	535.21	527.74	-	-	311.62
France-----	1,014.40	945.86	946.29	937.01	976.62
Mexico-----	-	503.58	474.46	-	386.76
All other-----	706.73	678.77	701.80	693.74	768.82
Average-----	599.52	515.85	518.60	527.48	<u>2/</u> 424.62

1/ Imports entered under TSUS items 606.35, 606.36, 606.37, 606.39, and 606.40.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Table D-5.--Ferrosilicon: U.S. imports of ferrosilicon, 30-60 percent silicon content, 1/ by principal sources, 1980-82, January-September 1982, and January-September 1983

Source	1980	1981	1982	January-September--	
				1982	1983
Quantity (short tons)					
U.S.S.R.-----	0	0	0	0	<u>2/</u> 11,683
Canada-----	6,541	8,415	3,807	3,017	8,395
Norway-----	2,011	2,479	180	141	3,462
Brazil-----	2,759	2,555	10,109	8,664	3,260
France-----	3,885	4,098	2,783	2,513	1,446
Mexico-----	0	33	55	0	1,170
West Germany-----	979	828	831	788	149
Japan-----	0	1	6	6	12
All other-----	3,241	1,583	19	19	0
Total-----	19,416	19,992	17,789	15,148	<u>2/</u> 29,576
Value (1,000 dollars)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> 1,777
Canada-----	2,633	3,300	1,430	1,163	2,531
Norway-----	808	779	152	117	2,570
Brazil-----	2,089	2,133	5,386	4,477	2,678
France-----	4,474	5,612	3,527	3,233	1,372
Mexico-----	-	17	18	-	309
West Germany-----	1,288	1,183	872	814	198
Japan-----	-	1	11	11	20
All other-----	1,509	782	23	23	-
Total-----	12,801	13,807	11,419	9,839	<u>2/</u> 11,455
Unit value (per short ton)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> \$152.10
Canada-----	\$402.56	\$392.18	\$375.74	\$385.62	301.49
Norway-----	401.98	314.31	844.31	831.50	742.31
Brazil-----	756.99	834.89	532.85	516.78	821.53
France-----	1,151.60	1,369.39	1,267.23	1,286.35	949.01
Mexico-----	-	503.58	329.93	-	264.10
West Germany-----	1,315.44	1,429.10	1,048.80	1,033.20	1,330.22
Japan-----	-	1,678.00	1,730.98	1,730.98	1,673.68
All other-----	465.60	494.00	1,277.78	1,263.16	-
Average-----	659.28	690.65	641.90	649.51	<u>2/</u> 387.31

1/ Imports entered under TSUSA items 606.3542 and 606.3546.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Because of rounding, figures may not add to the totals shown.

Table D-6.--Ferrosilicon: U.S. imports of ferrosilicon, 30-60 percent silicon content containing not over 2 percent by weight of magnesium, 1/ by principal sources, 1980-82, January-September 1982, and January-September 1983

Source	1980	1981	1982	January-September--	
				1982	1983
Quantity (short tons)					
U.S.S.R.-----	0	0	0	0	<u>2/</u> 11,683
Canada-----	6,014	7,128	3,425	2,901	7,068
Mexico-----	0	0	55	0	1,170
France-----	2,569	3,772	2,234	2,055	1,131
Brazil-----	154	311	5,404	5,017	636
West Germany-----	586	826	815	784	132
Spain-----	0	0	19	19	0
Japan-----	0	0	2	2	0
All other-----	4,699	3,595	0	0	0
Total-----	14,022	15,632	11,953	10,778	<u>2/</u> 21,819
Value (1,000 dollars)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> 1,777
Canada-----	1,580	2,221	1,116	926	1,988
Mexico-----	-	-	18	-	309
France-----	3,187	5,279	3,025	2,796	1,157
Brazil-----	180	285	1,738	1,590	435
West Germany-----	758	1,181	842	800	174
Spain-----	-	-	23	23	-
Japan-----	-	-	3	3	-
All other-----	1,886	1,170	-	-	-
Total-----	7,591	10,136	6,765	6,138	<u>2/</u> 5,840
Unit value (per short ton)					
U.S.S.R.-----	-	-	-	-	<u>2/</u> \$152.10
Canada-----	\$262.65	\$311.64	\$325.75	\$319.05	281.25
Mexico-----	-	-	329.93	-	264.10
France-----	1,240.34	1,399.31	1,353.92	1,360.39	1,023.35
Brazil-----	1,168.01	916.41	321.56	317.00	685.05
West Germany-----	1,292.93	1,429.87	1,033.00	1,020.33	1,319.95
Spain-----	-	-	1,212.18	1,212.18	-
Japan-----	-	-	1,960.69	1,960.69	-
All other-----	401.36	325.45	-	-	-
Average-----	541.38	648.45	565.92	569.49	<u>2/</u> 267.66

1/ Imports entered under TSUSA item 606.3546.

2/ Includes 6,331 short tons from the U.S.S.R. that arrived in the United States in September, but were not recorded in official import statistics until October.

Source: Compiled from official statistics of the U.S. Department of Commerce, except as noted.

Note.--Because of rounding, figures may not add to the totals shown.

Table D-7.--Ferrosilicon: U.S. imports for consumption, by types, 1980-82, January-September 1982, and January-September 1983

Types	1980	1981	1982	January-September--	
				1982	1983
Imports (short tons)					
8-30 percent silicon-----	1,184	2,783	641	641	28
30-60 percent silicon-----	19,416	19,992	17,789	15,148	29,576
60-80 percent silicon-----	50,102	132,994	57,173	50,691	80,394
80-96 percent silicon-----	232	1,484	2,188	894	20
Total-----	70,934	157,253	77,790	67,374	110,018
Percent of total					
8-30 percent silicon-----	1.7	1.8	0.8	1.0	<u>1/</u>
30-60 percent silicon-----	27.4	12.7	22.9	22.5	26.9
60-80 percent silicon-----	70.6	84.6	73.5	75.2	73.1
80-96 percent silicon-----	0.3	0.9	2.8	1.3	<u>1/</u>
Total-----	100.0	100.0	100.0	100.0	100.0

1/ Less than 0.05 percent.

Source: Compiled from table 14 of this report, p. A-43.

APPENDIX E

**REGRESSION ESTIMATES OF THE DEMAND FOR
IMPORTS OF FERROSILICON**

A regression was performed to examine the effects of the domestic price, the import price, and aggregate U.S. industrial output on the demand for total imports of all categories of ferrosilicon during recent periods. It was believed that the demand for imports declines with increases in the import price and that it increases with declines in the domestic price or with increases in industrial output as measured by the Federal Reserve Board index of industrial production. The results, which were developed from 10 observations of quarterly data for the period from January 1981 through June 1983, were generally consistent with these expectations. The industrial output variable and the import price variable were both statistically significant. The estimates show that a 1 percent increase in the price of imports would result in a 1.8 percent decline in the quantity demanded. The domestic price variable was not statistically significant, although the coefficient for this variable suggests that imports are positively related to the domestic price.

The detailed results of the regression are presented in the expression below. In this equation, P_d is the domestic price of 50 percent ferrosilicon, P_m is the average unit value of imports with transportation charges included and I is the index of industrial production. The R^2 value of .746 was respectable, but the Durbin-Watson statistic of 1.31 indicates that positive autocorrelation may be present. All three of the coefficients had the expected signs, and the t values below the coefficients show that P_m was significant at the 90 percent confidence level and that I was significant at the 95 percent level.

$$\ln Q_m = -37.170 - 1.775 \ln P_m + .087 \ln P_d + 9.452 \ln I$$

$$(-2.971) \quad (2.213) \quad (.061) \quad (3.692)$$

$$R^2 = .746$$

$$D.W. = 1.310$$

