Silicon Metal From Russia

Investigation No. 731-TA-991 (Preliminary)

Publication 3502

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U.S. International Trade Commission

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CONTENTS

	Page
Determination and views of the Commission	I-1
Determination	I-1
Views of the Commission	I-3
Part I: Introduction	I-1
Background	I-1
Previous investigations	I-2
Antidumping investigations	I-2
Five-year review investigations	I-2
Organization of the report	I-3
Summary of data presented in the report	I-3
The nature and extent of alleged sales at LTFV	I-3
The subject product	I-3
Scope	I-3
U.S. tariff treatment	I-4
Physical characteristics and uses	I-4
Manufacturing process	I-6
Domestic like product issues	I-8
U.S. market participants	I-9
U.S. producers	I-9
U.S. importers	I-9
U.S. purchasers	I-9
Part II: Conditions of competition in the U.S. market	II-1
Channels of distribution and market characteristics	П-1
Supply and demand considerations	П-1
U.S. supply	II-1
Import supply	II-2
U.S. demand	II-3
Substitutability issues	П-3
Factors affecting sales	П-4
Part III: U.S. producers' production, shipments, and employment	III-1
U.S. producers	III-1
U.S. capacity, production, and capacity utilization	III-2
U.S. producers' shipments	III-5
U.S. producers' purchases	III-5
U.S. producers' inventories	III-5
U.S. employment, wages, and productivity	III-5

CONTENTS—Continued

	Pag
Part IV: U.S. imports, apparent consumption, and market shares	IV-
U.S. importers	IV-
U.S. imports	IV-
U.S. importers' current orders	IV-
Apparent U.S. consumption	IV-
U.S. market shares	IV-
Part V: Pricing and related information	V-
Factors affecting prices	
U.S. inland transportation costs and geographic markets	
Exchange rates	
Pricing practices	
Pricing methods	
Sales terms and discounts	
Price data	
Price trends	
Price comparisons	
Lost sales and lost revenues	
Part VI: Financial experience of the U.S. industry	VI-
Background	
Operations on silicon metal	
Investment in productive facilities, capital expenditures, and research and development	
expenses	VI-
Capital and investment	
Part VII: Threat considerations	VII-
The industry in Russia	VII-
U.S. importers' inventories	VII-
Antidumping duty orders in third country markets	VII-
Appendixes	
Whennives	
A. Federal Register notices	
B. Calendar of public conference	
C. Summary table	
D. Effects of imports on U.S. producers' existing development and production efforts, growt	
investment, and ability to raise capital	D-

CONTENTS—Continued

		Page
Figure	es	
I-1.	Silicon metal: Schematic diagram of the production process	I-7
III-1.	Silicon metal: U.S. producers' capacity and production, 1999-2001	III-4
IV-1.	Silicon metal: U.S. imports, by sources, 1999-2001	IV-3
IV-2.	Silicon metal: Apparent U.S. consumption, by sources, 1999-2001	IV-7
V-1.	Exchange rates: Indexes of the nominal and real values of the Russian ruble relative to	V-2
37.0	the U.S. dollar, by quarters, January 1999-December 2001	V-2
V-2.	Silicon metal: Weighted-average f.o.b. sales prices for product 1, by quarters,	37.6
77.0	January 1999-December 2001	V-6
V-3.	Silicon metal: Weighted-average f.o.b. sales prices for product 2, by quarters, January 1999-December 2001	V-6
V-4.	Silicon metal: Weighted-average f.o.b. sales prices for product 3, by quarters,	
	January 1999-December 2001	V-6
V-5.	Silicon metal: Weighted-average delivered purchase prices (as reported by U.S.	
	chemical producers) for product 3, by quarters, January 1999-December 2001	V-6
VII-1.	Silicon metal: Russian producers' capacity, production, and capacity utilization, 1999-2001, and projections for 2002-03	VII-2
Table		т 1
I-1.	Silicon metal: Chronology of investigation No. 731-TA-991 (Preliminary)	I-1
I-2.	Silicon metal: Tariff rates, 2002	I-4
II-1.	Silicon metal: Existence of differences in factors other than price between silicon metal produced in the United States, Russia, and in other countries that are a significant	TT 4
т о	factor in sales of silicon metal in the U.S. market	II-4
II-2.	Silicon metal: Interchangeability between silicon metal produced in the United States, Russia, and in other countries	II-5
III-1.	Silicon metal: U.S. producers, location of production facilities, position with respect to	TTT 1
TTT 0	the petition, U.S. production, and U.S. shipments, 2001	III-1
III-2.	Silicon metal: U.S. producers' capacity, production, and capacity utilization, by firms,	TIT 2
TTT 2	1999-2001	III-3
III-3.	Silicon metal: U.S. producers' shipments, by types and by firms, 1999-2001	III-6
III-4.	Silicon metal: U.S. producers' U.S. shipments, by market segments and by end	TIT O
TTT 6	users, 1999-2001	III-9
III-5.	Silicon metal: U.S. producers' purchases (other than direct imports), by sources,	TTT 10
ш	1999-2001	III-10
Ш-6.	Silicon metal: U.S. producers' end-of-period-inventories, by firms, 1999-2001	III-10
III-7.	Average number of production and related workers producing silicon metal, hours	
	worked, wages paid to such employees, and hourly wages, productivity, and unit	TTT 11
	labor costs, by firms, 1999-2001	III-11

CONTENTS-Continued

		Pag
Table	s–Continued	
IV-1.	Silicon metal: U.S. importers of the subject merchandise from Russia, company locations, sources of imports, and subject U.S. imports, 1999-2001	IV-
IV-2.	Silicon metal: U.S. imports, by sources, 1999-2001	IV-
IV-3.	Silicon metal: U.S. importers' U.S. shipments of subject imports from Russia, by market segments and by end users, 1999-2001	IV-
IV-4.	Silicon metal: U.S. shipments of domestic product, U.S. imports, by sources, and apparent U.S. consumption, 1999-2001	IV-
IV-5.	Silicon metal: Apparent U.S. consumption and market shares, by sources, 1999-2001	IV-
V-1.	Silicon metal: Weighted-average f.o.b. selling prices and quantities for product 1, and margins of underselling/(overselling), by quarters, January 1999-December 2001	1V- V-
V-2.	Silicon metal: Weighted-average f.o.b. selling prices and quantities for product 2, and margins of underselling/(overselling), by quarters, January 1999-December 2001	V-
V-3.	Silicon metal: Weighted-average f.o.b. selling prices and quantities for product 3,	V-
V-4.	by quarters, January 1999-December 2001 Silicon metal: Weighted-average delivered purchase prices and quantities for product 3 as reported by ***, and margins of underselling/(overselling), by quarters, January 1999-December 2001	V- V-
V-5.	Silicon metal: U.S. producers' lost sales allegations	V-
V-6.	Silicon metal: U.S. producers' lost revenue allegations	V-
V-0. VI-1.	Results of operations of U.S. producers in the production of silicon metal, fiscal years 1999-2001	V-
VI-2.	Results of operations of U.S. producers of silicon metal, by firms, fiscal years 1999-2001	VI-
VI-3.	Capital expenditures, research and development expenses, and value of assets of U.S. producers of silicon metal, fiscal years 1999-2001	VI-
VI-4.	Capital expenditures of U.S. producers of silicon metal, by firms, fiscal years 1999-2001	VI-
VII-1.	Silicon metal: Russian producers' capacity, production, and capacity utilization, by firms, 1999-2001, and projections for 2002-03	VII-
VII-2.	Silicon metal: Data on the industry in Russia, 1999-2001, and projections for 2002-03.	VII-
VII-3.	Silicon metal: U.S. importers' end-of-period inventories of imports, by sources, 1999-2001	VII-
C-1.	Silicon metal: Summary data concerning the U.S. market. 1999-2001	C-

NOTE

Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-991 (Preliminary)

SILICON METAL FROM RUSSIA

DETERMINATION

On the basis of the record¹ developed in the subject investigation, the United States International Trade Commission (Commission) determines,² pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)) (the Act), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports from Russia of silicon metal, provided for in subheadings 2804.69.10 and 2804.69.50 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (LTFV).

COMMENCEMENT OF FINAL PHASE INVESTIGATION

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigation. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the Department of Commerce (Commerce) of an affirmative preliminary determination in the investigation under section 733(b) of the Act, or, if the preliminary determination is negative, upon notice of an affirmative final determination in that investigation under section 735(a) of the Act.

Parties that filed entries of appearance in the preliminary phase of the investigation need not enter a separate appearance for the final phase of the investigation. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigation.

BACKGROUND

On March 7, 2002, a petition was filed with the Commission and Commerce by Globe Metallurgical Inc. (Globe), Cleveland, OH; SIMCALA, Inc., Mt. Meigs, AL; the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers (I.U.E.-C.W.A, AFL-CIO, C.L.C., Local 693), Selma, AL; the Paper, Allied-Industrial Chemical and Energy Workers International Union (Local 5-89), Boomer, WV; and the United Steel Workers of America (AFL-CIO, Local 9436), Niagara Falls, NY, alleging that an industry in the United States is materially injured and threatened with material injury by reason of imports of silicon metal from Russia that are alleged to be sold in the United States at less than fair value (LTFV). Accordingly, effective March 7, 2002, the Commission instituted antidumping duty investigation No. 731-TA-991 (Preliminary).

¹ The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(f)).

² Vice Chairman Deanna Tanner Okun not participating.

Notice of the institution of the Commission's investigation and of a public conference 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, DC, and by publishing the notice in the *Federal Register* of March 15, 2002 (67 FR 11709). The conference was held in Washington, DC, on March 26, 2002, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

Investigation No. 731-TA-991 (Preliminary)

SILICON METAL FROM RUSSIA

Based on the record in this investigation, we find a reasonable indication that an industry in the United States is materially injured by reason of imports of silicon metal from Russia that are allegedly sold in the United States at less than fair value (LTFV).¹

I. THE LEGAL STANDARD FOR PRELIMINARY DETERMINATIONS

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determination, whether there is a reasonable indication that a domestic industry is materially injured, threatened with material injury, or whether the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.² In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."

II. DOMESTIC LIKE PRODUCT AND INDUSTRY

A. In General

To determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry." Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Act"), defines the relevant domestic industry as the "producers as a [w]hole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product." In turn, the Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation"6

The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in

3 ⁶ 19 U.S.C. § 1677(10).

¹ Vice Chairman Okun did not participate in this preliminary determination.

² 19 U.S.C. §§ 1671b(a), 1673b(a); see also American Lamb Co. v. United States, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); Aristech Chemical Corp. v. United States, 20 CIT 353, 354-55 (1996). We note that no party argued that the establishment of an industry is materially retarded by reason of the allegedly unfairly traded imports.

³ American Lamb, 785 F.2d at 1001 (Fed. Cir. 1986); see also Texas Crushed Stone Co. v. United States, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

⁴ 19 U.S.C. § 1677(4)(A).

⁵ Id.

characteristics and uses" on a case-by-case basis.⁷ No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.⁸ The Commission looks for clear dividing lines among possible like products, and disregards minor variations.⁹ Although the Commission must accept the determination of the Department of Commerce ("Commerce") as to the scope of the imported merchandise allegedly subsidized or sold at less than fair value, the Commission determines what domestic product is like the imported articles Commerce has identified.¹⁰

B. Product Description

The scope of this investigation as defined by Commerce in its notice of initiation covers the following imported merchandise:

silicon metal, which generally contains at least 96.00 percent but less than 99.99 percent silicon by weight. The merchandise covered by this investigation also includes silicon metal from Russia containing between 89.00 and 96.00 percent silicon by weight, but containing more aluminum than the silicon metal which contains at least 96.00 percent but less than 99.99 percent silicon by weight. Silicon metal currently is classifiable under subheadings 2804.69.10 and 2804.69.50 of the Harmonzied Tariff Schedule of the United States ("HTSUS"). This investigation covers all silicon metal meeting the above specification, regardless of tariff classification. 11

A small percentage of silicon metal is used in the production of solar and electronic silicon and generally contains over 99.99 percent silicon. This type of silicon metal, which is also known as semiconductor-grade silicon metal, is not within the scope of this investigation.¹²

⁷ See, e.g., NEC Corp. v. Department of Commerce, 36 F. Supp.2d 380, 383 (Ct. Int'l Trade 1998); Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Torrington Co. v. United States, 747 F. Supp. 744, 749, n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case"). The Commission generally considers a number of factors including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. See Nippon, 19 CIT at 455, n.4; Timken Co. v. United States, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

⁸ See, e.g., S. Rep. No. 96-249, at 90-91 (1979).

⁹ Nippon Steel, 19 CIT at 455; Torrington, 747 F. Supp. at 748-49; see also S. Rep. No. 96-249, at 90-91 (1979) (Congress has indicated that the domestic like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

¹⁰ <u>Hosiden Corp. v. Advanced Display Mfrs.</u>, 85 F.3d 1561, 1568 (Fed. Cir. 1996) (Commission may find single domestic like product corresponding to several different classes or kinds defined by Commerce); <u>Torrington</u>, 747 F. Supp. at 748-52 (affirming Commission's determination of six domestic like products in investigations where Commerce found five classes or kinds).

¹¹ 67 FR 15791, 15791 (April 3, 2002).

¹² See, e.g., 67 FR 15791 (April 3, 2002); Petition at 10-11.

C. <u>Domestic Like Product</u>

Petitioners¹³ and Respondents¹⁴ agree, for purposes of this preliminary phase of the investigation, that the Commission should define one domestic like product, coextensive with the scope.¹⁵

All silicon metal is usually sold in lump form typically ranging from 6 inches by ½ inch to 4 inches by ¼ inch. Silicon metal of all grades is sold through the same channels of distribution in the U.S. market and the vast majority is sold directly to end users. Chemical grade silicon metal is used by the chemical industry to produce silanes, and metallurgical grades of silicon metal are used in the primary and secondary aluminum industries as an alloying agent. Silicon metal of the same grade is considered interchangeable. Furthermore, higher grade silicon metal is sometimes shipped to a purchaser with lower specification requirements, due to excess product availability and low shipping costs. The process for producing all grades of silicon metal is virtually identical. According to Petitioners, silicon metal prices for each particular market segment tend to be adjusted based on the price fluctuations in the other two market segments.

Therefore, based on shared physical characteristics, some overlapping uses, similar channels of distribution, some interchangeability, the same production processes and employees, and relatively minor differences in pricing between the grades of silicon metal, we define the domestic like product as all silicon metal consistent with Commerce's scope, regardless of grade.

D. Domestic Industry

The domestic industry is defined as "the producers as a [w]hole of a domestic like product ..."²³ In defining the domestic industry, the Commission's general practice has been to include in the industry

¹³ Petitioners are Globe Metallurgical Inc. ("Globe"); SIMCALA, Inc. ("SIMCALA"); the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers, I.U.E.-C.W.A., AFL-CIO, C.L.C., Local 693 ("I.U.E.-C.W.A."); the Paper, Allied-Industrial, Chemical and Energy Workers International Union, Local 5-89 ("PACEWIU"); and the United Steel Workers of America, AFL-CIO, Local 9436 ("USWA") (hereinafter collectively called "Petitioners").

¹⁴ Respondents are Greenwich Metals, Inc. ("Greenwich"), SUAL Holding ("SUAL"), ZAO Kremny ("ZAO Kremny"), General Electric Silicones LLC ("GE Silicones"), and Bratsk Aluminum Smelter ("Bratsk") (hereinafter collectively called "Respondents").

¹⁵ Petition at 18; Conference Transcript ("Conference Tr.") at 86-87 (Mr. Stein); SUAL/ZAO Kremny Postconference Brief at 6.

¹⁶ See, e.g., Confidential Report, as revised by Memorandum INV-Z-048, April 17, 2002 ("CR") at I-5; Public Report ("PR") at I-4.

¹⁷ See, e.g., Petitioners' Postconference Brief at 7; CR at II-1; PR at II-1.

¹⁸ See, e.g., CR at I-6 to I-7; PR at I-5 to I-6.

¹⁹ See, e.g., CR at I-7; PR at I-6.

²⁰ See, e.g., CR at I-6; PR at I-5; Petitioners' Answers to Questions From Staff Conference, April 5, 2002, at 3.

²¹ See, e.g., Petitioners' Postconference Brief at 7.

²² See, e.g., Conference Tr. at 29, 42 (Dr. Button).

²³ 19 U.S.C. § 1677(4)(A).

all domestic production of the domestic like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.²⁴

None of the parties disputes that the domestic industry should consist of all domestic producers of silicon metal, coextensive with the scope of the investigation.²⁵ Based on our finding that the domestic like product consists of all grades of silicon metal, consistent with the scope of the investigation, we find that the domestic industry consists of all domestic producers of silicon metal.

III. REASONABLE INDICATION OF MATERIAL INJURY BY REASON OF ALLEGEDLY LTFV IMPORTS

In the preliminary phase of antidumping duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured by reason of the imports under investigation.²⁶ In making this determination, the Commission must consider the volume of imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.²⁷ The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."²⁸ In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.²⁹ No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."³⁰

For the reasons discussed below, we determine that there is a reasonable indication that the domestic industry producing silicon metal is materially injured by reason of subject silicon metal imports from Russia that are allegedly sold in the United States at less than fair value.

A. Conditions of Competition

The following conditions of competition are pertinent to our analysis in this investigation.

The demand for silicon metal is derived from the demand for the products in which it is used, namely aluminum products and certain chemical products.³¹ The largest customer market for silicon metal produced by the domestic industry is the chemical market, which represented 60.7 percent of U.S.

²⁴ See <u>United States Steel Group v. United States</u>, 873 F. Supp. 673, 681-84 (Ct. Int'l Trade 1994), <u>aff'd</u>, 96 F. 3d 1352 (Fed. Cir. 1996).

²⁵ See, e.g., Petition at 18; Conference Tr. at 87 (Mr. Waite); SUAL/ZAO Kremny Postconference Brief at 7. None of the parties raised any issue regarding related parties, and there is no related parties issue for us to consider.

²⁶ 19 U.S.C. §§ 1671b(a), 1673b(a).

²⁷ 19 U.S.C. § 1677(7)(B)(i). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each [such] factor . . . [a]nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B); see also Angus Chemical Co. v. United States, 140 F.3d 1478 (Fed. Cir. 1998).

²⁸ 19 U.S.C. § 1677(7)(A).

²⁹ 19 U.S.C. § 1677(7)(C)(iii).

³⁰ 19 U.S.C. § 1677(7)(C)(iii).

³¹ See, e.g., CR at II-4; PR at II-3.

producers' U.S. shipments in 2001, followed by a fairly even division between the primary and secondary aluminum markets.³² U.S. importers of Russian silicon metal sell product to these three customer groups, but in different proportions than the domestic producers. Over the period of investigation, the biggest market for Russian silicon metal was the secondary aluminum market, although shipments of Russian silicon metal to chemical customers increased significantly during this period from 7.9 percent in 1999 to 30.9 percent in 2001.³³

By quantity, apparent U.S. consumption rose slightly from 328,060 short tons of contained silicon ("short tons") in 1999 to 330,900 short tons in 2000, but then declined over 15 percent to 279,031 short tons in 2001.³⁴ U.S. producers also reported that demand in both the aluminum and chemical sectors generally decreased during the period of investigation, although they differ as to the time-frame for the decline. Four importers also reported in their questionnaire responses that demand for silicon metal in the U.S. market had decreased. In general, both U.S. producers and importers agreed that the declines in silicon metal demand were due to the general decline in U.S. industrial output during the period of investigation.³⁵

There are currently three producers of silicon metal in the United States: Elkem Metals, Inc. ("Elkem"), Globe and SIMCALA. A fourth producer, American Silicon Technologies ("AST"), ceased production of silicon metal in the fourth quarter of 1999.³⁶ Aggregate capacity of the domestic industry decreased from 250,973 short tons in 1999 to 224,262 short tons in 2000, and then to 195,545 short tons in 2001.³⁷ Given the level of apparent domestic consumption during the period of investigation,³⁸ the domestic industry was only able to meet a portion of U.S. total consumption of silicon metal.

Two U.S. silicon metal producers also produce ferrosilicon, which is used in the production of steel, especially stainless and heat-resisting steel and cast iron.³⁹ U.S. producers note that, although it is "fairly easy, rather quick, and relatively inexpensive to convert a furnace from silicon metal production to ferrosilicon production," it is harder, takes longer, and costs more to convert a furnace from the production of ferrosilicon to silicon metal production.⁴⁰ Globe converted two silicon metal furnaces at its Beverly, OH, facility to ferrosilicon production in 2000 and converted one silicon metal furnace at its facility in Niagara Falls, NY, to ferrosilicon production in August 2001. The Niagara Falls ferrosilicon facility was subsequently shut down. According to industry sources, no ferrosilicon furnace in the U.S.

³² See, e.g., CR/PR at II-1 and Table III-4.

³³ See, e.g., CR/PR at II-1 and Table IV-3.

³⁴ See, e.g., CR/PR at Table IV-4.

³⁵ See, e.g., CR at II-4; PR at II-3; Petitioners' Answers to Questions From Staff Conference, April 5, 2002, at 22-23. Respondents also reported that consolidation in the domestic aluminum industry during the period of investigation resulted in aluminum production being moved offshore, thus reducing domestic demand for silicon metal. Consolidations in the chemical industry and offshore expansions also appear to have reduced domestic demand for chemical grade silicon metal. SUAL/ZAO Kremny Postconference Brief at 29-30.

³⁶ See, e.g., CR at I-12 n.37; PR at I-9 n.37.

³⁷ See, e.g., CR/PR at Table III-2.

³⁸ See, e.g., CR/PR at Table IV-5.

³⁹ See, e.g., CR at I-10; PR at I-8.

⁴⁰ See, e.g., CR at II-2 to II-3; PR at II-1 to II-2.

was converted to silicon metal production during the period of investigation.⁴¹ Silicon metal producers have high fixed costs and thus need to maintain a high level of capacity utilization in order to remain profitable.⁴² Capacity utilization by the domestic industry declined over the latter portion of the period of investigation.⁴³

Petitioners and Respondents do not dispute that some level of imports is necessary to satisfy domestic demand.⁴⁴ Data compiled from questionnaire responses indicate that silicon metal was imported not only from Russia but also nonsubject countries including Brazil, South Africa, Saudi Arabia, Canada, France, and China during the period of investigation.⁴⁵

Generally, within the same grade most silicon metal available in the U.S. market has the same chemical specifications and can be used for similar applications.⁴⁶ The parties generally agree on the commodity nature of the product, the interchangeability between U.S.-produced and subject silicon metal, and the importance of price in purchasing decisions.⁴⁷

Petitioners acknowledge that there is a qualification process for silicon metal, although they claim that all of the domestic silicon metal and most imports of silicon metal already are qualified for sale to most purchasers. Once suppliers are qualified, the purchaser chooses a supplier based principally

⁴¹ See, e.g., CR at I-10 n.30; PR at I-8 n.30; See also, Petitioners' Answers to Questions From Staff Conference, April 5, 2002, at 27-31 and Exhibit 8.

⁴² See, e.g., CR at VI-5 to VI-6; PR at VI-1; ***; ***; ***.

⁴³ Average capacity utilization of the domestic industry was 83.4 percent in 1999, 87.2 percent in 2000, and 74.3 percent in 2001. See, e.g., CR/PR at Table III-2. U.S. production by the domestic industry declined 6.6 percent between 1999 and 2000, while average production capacity declined 10.6 percent, thus resulting in the increase in capacity utilization evidenced during this period. Between 2000 and 2001, U.S. production by the domestic industry declined 25.7 percent while average production capacity declined 12.8 percent, thus resulting in the decline in capacity utilization evidenced over the latter portion of the period of investigation. CR/PR at Table C-1.

⁴⁴ Petitioners argued that the required volume of silicon metal imports depends on fluctuations in total U.S. demand and the U.S. price level of silicon metal. Petitioners' Answers to Staff Questions at 24. Respondents argued that at least fifty percent of domestic demand of silicon metal must be satisfied by imports. Conference Tr. at 92 (Mr. Appleby).

⁴⁵ See, e.g., CR/PR at Table IV-1.

⁴⁶ See, e.g., CR at II-5; PR at II-4.

⁴⁷ <u>See, e.g.,</u> CR at II-5 to II-6; PR at II-4; CR/PR at Tables II-1, II-2. Respondents testified at the conference that Russian producers are excluded from a significant segment of the U.S. primary aluminum market because no Russian producer is qualified to manufacture low iron silicon metal (less than 0.35 percent iron) due to the composition of quartzite deposits in Russia. However, the record indicates that, except for those applications that require low-iron grades of silicon, the various grades of silicon metal produced in Russia are of sufficient variety and purity that the Russian material is competitive in virtually all U.S. markets and applications. <u>See, e.g.</u>, Conference Tr. at 68 (Dr. Magrath), 76-77 (Mr. Appleby); CR at I-7 to I-8; PR at I-6; Staff conversation with Frederick Waite, Esq., counsel for SUAL Holding and ZAO Kremny, April 11, 2002.

on price.⁴⁸ The data gathered in this investigation indicate that there are no substantial differences among silicon metal produced in the United States, Russia, and nonsubject countries, other than price.⁴⁹

B. Volume of the Subject Imports

Section 771(C)(i) of the Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant." ⁵⁰

After a slight decrease from 1999 to 2000, the quantity of subject imports rose between 2000 and 2001 by over one-third.⁵¹ The record further shows that the proportion of subject imports destined for the chemical industry sector, where the majority of U.S. product competes, also increased sharply from 7.9 percent in 1999 to 30.9 percent in 2001.⁵² It appears that this increase is attributable, at least in part, to quality improvements in Russian silicon metal, which have resulted in more widespread competition between subject imports and domestically produced silicon metal in all three major markets for silicon metal.⁵³ Moreover, we note that the increase in subject imports took place even though Russian producers are not able to manufacture low iron silicon metal due to the composition of quartzite deposits in Russia.⁵⁴

Subject imports' U.S. market share, by quantity, followed a trend that was similar to import levels: after experiencing a slight decrease from 1999 to 2000, it increased sharply by 4.8 percentage points in 2001.⁵⁵

In quantity terms, the market share of the domestic industry declined 7.9 percentage points over the period of investigation.⁵⁶ Nonsubject import market share initially rose from 29.7 percent to 35.3 percent during 1999 to 2000, but then decreased to 33.1 percent in 2001.⁵⁷ During the last year of the period of investigation, subject and nonsubject import market share moved divergently, with subject import market share increasing by 4.8 percentage points and nonsubject market share decreasing by 2.3

⁴⁸ See, e.g., Conference Tr. at 40 (Mr. Perkins, Mr. Boardwine and Dr. Button); Petitioners' Answers to Questions From Staff Conference, April 5, 2002, at 20-22.

⁴⁹ <u>See, e.g.</u>, CR/PR at Table II-1. A minority of U.S. importers indicated that Russian and U.S.-produced silicon metal are not interchangeable due to differences in iron content and product quality. <u>See, e.g.</u>, CR at II-7; PR at II-5.

⁵⁰ 19 U.S.C. § 1677(7)(C)(i).

⁵¹ By quantity, subject imports initially decreased from 25,158 short tons in 1999, to 24,643 short tons in 2000, but then increased to 34,153 short tons in 2001. The total value of subject imports initially decreased from \$26.2 million in 1999 to \$25.5 million in 2001, but then increased to \$35.3 million in 2001. See, e.g., CR/PR at Table IV-2.

⁵² See, e.g., CR/PR at II-1 and Table IV-3.

⁵³ See, e.g., CR at I-7; PR at I-6; Petition at 17-18; Conference Tr. at 11 (Mr. Perkins).

⁵⁴ See, e.g., CR at I-7; PR at I-6; Conference Tr. at 68 (Dr. Magrath), 76-77 (Mr. Appleby).

⁵⁵ See, e.g., CR/PR at Table C-1. Subject imports' market share, by quantity, declined from 7.7 percent in 1999 to 7.4 percent in 2000, but then increased to 12.2 percent in 2001. See, e.g., CR/PR at IV-5.

⁵⁶ See, e.g., CR/PR at Table C-1. The domestic industry's market share by quantity declined from 62.6 percent in 1999 to 57.2 percent in 2000, and then to 54.7 percent in 2001. See, e.g., CR/PR at Table IV-5.

⁵⁷ See, e.g., CR/PR at Table IV-5.

percentage points.⁵⁸ Thus, from 2000 to 2001, subject imports gained market share at the expense of both U.S. producers and nonsubject imports.

For purposes of this preliminary determination, we find the volume of subject imports and the increase in volume, particularly over the latter portion of the period of investigation, to be significant in both absolute terms and relative to U.S. consumption.⁵⁹

C. Price Effects of the Subject Imports

Section 771(C)(ii) of the Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether—

- (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
- (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree. 60

As noted above, the record in the preliminary phase of this investigation shows that silicon metal is a commodity product, sold mainly on the basis of price and that there is a high degree of substitutability between the subject merchandise and the domestic like product.⁶¹

The record indicates that sales of chemical and primary aluminum grade silicon metal in the U.S. market are generally by contract and sales of secondary aluminum grade are on a spot basis.⁶² U.S. producers reported that there are a variety of pricing mechanisms in contracts that adjust prices quarterly, semi-annually, or annually based on a published price such as that found in Metals Week or Ryan's Notes.⁶³ One U.S. producer, ***, reported that its contracts usually contain meet-or-release clauses.⁶⁴

⁵⁸ See, e.g., CR/PR at Tables IV-5 and C-1; The quantity of nonsubject imports increased from 97,499 short tons in 1999 to 116,908 short tons in 2000, but then decreased to 92,279 short tons in 2001. See, e.g., CR/PR at Table IV-2.

⁵⁹ We find the volume of subject imports from Russia to be significant notwithstanding Respondents' argument that the level of Russian subject imports during the 2000-2001 period still remained below historically high levels. For the three-year period examined, the subject imports increased significantly and, as noted, the proportion destined for the chemical industry sector, where the majority of U.S. product competes, grew substantially. See Conference Tr. at 62 (Dr. Magrath); SUAL/ZAO Kremny Postconference Brief at 18-19.

^{60 19} U.S.C. § 1677(7)(C)(ii).

⁶¹ See, e.g., CR at II-5 to II-6, Tables II-1 and II-2; PR at II-3, Tables II-1 and II-2.

⁶² See, e.g., CR at V-2; PR at V-1; Conference Tr. at 42-43 (Dr. Button and Mr. Perkins).

⁶³ See, e.g., CR at V-2 to V-3; PR at V-1 to V-2. Metals Week and Ryan's Notes publish weekly pricing data for silicon metal. These prices are obtained from surveys with traders and purchasers who are asked to provide the current prevailing price and market trends. See, e.g., CR at V-3 n.1; PR at V-2 n.1; Petitioners' Postconference Brief at 12.

⁶⁴ See, e.g., CR at V-3; PR at V-2. Meet-or-release clauses provide that, if the purchaser is offered a price by another supplier that is lower than the price provided under the contract, the incumbent supplier must lower its price (continued...)

Petitioners testified that the existence of contracts in the silicon metal industry does not necessarily provide protection to the domestic industry and reported several instances when prices within a given contract had been modified as a result of index pricing, meet-or-release clauses, and other price adjustment mechanisms.⁶⁵

One Respondent, GE Silicones, conducted three reverse internet auctions in the fall of 2001 to purchase *** short tons of silicon metal, or approximately 75 percent of its 2002 requirements.⁶⁶ Other purchasers of silicon metal, including ***, have held internet auctions as well.⁶⁷ In any final phase of this investigation, we intend to examine the effect of these auctions on price-based competition in the market.⁶⁸

The record shows underselling by the subject imports in the vast majority of pricing comparisons. The Commission gathered quarterly pricing data for three silicon metal products. Using the sales price data from primary aluminum and secondary aluminum producers (questionnaire products 1 and 2), there were 24 instances where comparisons between U.S. and Russian prices were possible. ⁶⁹ In 20 of the 24 instances, the Russian product was priced below the domestic product, with margins ranging from 0.3 percent to 18.4 percent. ⁷⁰ Using the purchase price data from chemical manufacturers (questionnaire product 3), there were 10 instances where price comparisons were possible. The Russian product was priced below the domestic product in 9 of 10 quarters, with margins ranging from 7.9 to 19.4 percent. ⁷¹ We find the evidence of underselling by the subject imports to be significant.

The evidence gathered in this preliminary phase of the investigation shows that both U.S. and subject import prices of silicon metal sold to all three groups of customers (i.e., chemical, primary and secondary aluminum customers) generally have declined during the period of investigation. Importer pricing data indicate that subject import prices for questionnaire product 1 declined by 30.3 percent and that subject import prices for questionnaire product 2 declined by 20.9 percent during the period of

⁶⁴ (...continued) to meet the competing offer or the purchaser is free to cancel the contract. <u>See, e.g.</u>, Petitioners' Postconference Brief at 13.

⁶⁵ See, e.g., CR at V-3; PR at V-2; Conference Tr. at 27 (Dr. Button).

⁶⁶ For the reverse auctions, GE Silicones sets a maximum and a reserve price. Once the reverse auction is opened, bidders who have been pre-qualified can continue to make bids as long as their bid is below the last one made. The reverse auction is closed if no new qualifying bid is received for two minutes. See, e.g., CR at V-4; PR at V-3; GE Silicones' Postconference Brief at 10-11. See also, Conference Tr. at 72 and 86 (Ms. Haynes).

⁶⁷ <u>See, e.g.</u>, CR at V-4; PR at V-3. One U.S. producer, Globe, reported that GE Silicones' contract requirements for the internet auction, ***, were very rigid and that ***. Globe chose not to participate in the internet auction because ***. <u>See, e.g.</u>, CR at V-4 to V-5; PR at V-3; <u>See also</u>, Petitioners' Answers to Questions from Staff Conference, April 5, 2002, at 13-14, and Conference Tr. at 72 (Ms. Haynes).

⁶⁸ Respondent, GE Silicones, argued that imports were available for sale at "virtually the same price" as Russian imports during GE Silicones' reverse internet auctions and that even without the presence of Russian imports in the internet reverse auctions, nonsubject imports would have been sold at the same volumes and the same price as, or within fractions of, subject imports. Conference Tr. at 72-73 (Ms. Haynes); GE Silicones Postconference Brief at 12. We intend to explore this issue further in any final phase investigation.

⁶⁹ See, e,g., CR at V-13; PR at V-7; CR/PR at Tables V-1 and V-2.

⁷⁰ See, e.g., CR at V-13; PR at V-7.

⁷¹ See, e.g., CR at V-13; PR at V-7; CR/PR at Table V-4.

investigation.^{72 73} Comparatively, U.S. producers reported that, over the period of investigation, prices for questionnaire product 1 declined by 8.4 percent, prices for questionnaire product 2 declined by 14.2 percent, and prices for questionnaire product 3 declined by 3.4 percent.⁷⁴

We note that evidence regarding lost sales and lost revenue is mixed. However, there are a number of instances of confirmed lost sales, including one involving a sale to *** of *** pounds of silicon metal lost to subject imports in *** and a sale to *** of *** pounds of silicon metal lost to subject imports in ***. Two lost revenue allegations were also confirmed, including one involving a sale of *** pounds of silicon metal to *** in ***.

Given the level and magnitude of underselling by the subject imports as well as their significant volumes and high substitutability with the domestic like product, we find that subject imports have depressed U.S. prices to a significant degree.⁷⁶ 77

(continued...)

⁷² Although importer pricing data were not available for questionnaire product 3, purchaser pricing data show that, after falling by *** percent between the second and fourth quarters of 1999, subject import prices for questionnaire product 3 declined irregularly by *** percent during the remainder of the period of investigation. See, e.g., CR at V-6; PR at V-4; CR/PR at Table V-4. Respondents argued that imports from seven major supplying countries had average unit values lower than Russia in the year 2001. However, data collected from *** show that ***. See, e.g., Conference Tr. at 62 (Dr. Magrath); CR at V-6 to V-7; PR at V-4.

⁷³ We note that subject import prices declined more sharply than apparent domestic consumption, which fell by 14.9 percent during the period of investigation. <u>See, e.g.</u>, CR/PR at Table C-1.

⁷⁴ See, e.g., CR at V-6; PR at V-4.

⁷⁵ See, e.g., CR at V-13 to V-18; PR at V-7 to V-9; CR/PR at Tables V-5 and V-6.

⁷⁶ See, e.g., CR/PR at Table V-1, V-2, V-4, and C-1; CR at II-1 and II-5; PR at II-1 and II-3.

⁷⁷ Commissioner Bragg finds that, in particular, pricing data over the latter portion of the period of investigation indicate significant price depression by reason of subject imports. The Commission collected pricing data for three silicon metal products accounting for roughly 94 percent of domestically produced U.S. shipments and 61 percent of subject imports over the period of investigation; coverage for 2001 was even higher, with roughly 96 percent of domestically produced U.S. shipments and 85 percent of subject imports accounted for. CR at V-5 and V-6, PR at V-4. With regard to product 2, the annual weighted average price of subject imports declined by over *** percent between 2000 and 2001, while the annual weighted average price for domestic producers declined by almost *** percent. See CR/PR at Table V-2. Although annual weighted average prices for subject and domestic product 2 were nearly identical in 2000, during 2001 the annual weighted average price of subject product 2 was *** percent lower than that of the comparable domestic product. See id. With regard to products 1 and 3, Commissioner Bragg notes that although the annual weighted average selling price of subject imports of product 1 and the annual weighted average purchase price (selling price was not available) of subject imports of product 3 changed by less than *** percent between 2000 and 2001, U.S. producers' annual weighted average selling price for product 1 and the annual weighted average purchase price for subject imports of product 3 each declined by over *** percent. See CR/PR at Tables V-1 and V-4. Importantly, the annual weighted average price of subject import product 1 was *** percent lower than the comparable domestic product in 2000 and *** percent lower in 2001; similarly, the annual weighted average price of subject import product 3 was *** percent lower than the comparable domestic product in 2000 and *** percent lower in 2001. See id. The price declines sustained by the domestic industry between 2000 and 2001 occurred in the context of a 15.7 percent decline in apparent U.S. consumption, a 19.4 percent decline in U.S. shipments for the domestic industry, a 38.6 percent increase in subject import volume, a 21.1 percent decline in nonsubject import volume, and a 6.8 percent increase in the domestic industry's per unit cost of goods sold. CR/PR at Table C-1. Moreover, as noted previously, silicon metal is a commodity product and subject imports are highly substitutable for the domestic like product. CR at I-7 and II-5, PR at I-6 and II-3. Based upon all the foregoing,

D. Impact of the Subject Imports

In examining the impact of the subject imports on the domestic industry, we consider all relevant economic factors that bear on the state of the industry in the United States.⁷⁸ These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."⁷⁹ 80 81

We find that, as subject import volume increased sharply from 2000 to 2001, at prices that undersold and depressed U.S. prices, subject imports had a significant adverse impact on the domestic industry. Most major financial and performance indicators of the domestic industry declined steadily over the period of investigation. Specifically, the domestic industry's operating income and operating margin declined from 1999 to 2001 and the industry registered a loss in 2001, when subject imports reached their highest level. Domestic producers' operating income in 1999 was \$24.4 million, \$11.1 million in 2000 and negative \$11.2 million in 2001. Although the industry's operating margin declined from 8.2 percent in 1999 to a negative 5.1 percent in 2001. Although the industry's cost of goods sold declined, prices and sales values declined more steeply as subject imports increased and the domestic industry's cost of goods ratio to net sales increased by 12.3 percent during the period of investigation, placing the industry in a cost-price squeeze.

⁷⁷ (...continued)

Commissioner Bragg finds that significant volumes of lower-priced subject imports, which significantly undersold the domestic like product, caused significant price depression in the U.S. market for silicon metal.

⁷⁸ 19 U.S.C. § 1677(7)(C)(iii); see also SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." <u>Id.</u> at 885).

⁷⁹ 19 U.S.C. § 1677(7)(C)(iii); see also SAA at 851, 885; <u>Live Cattle from Canada and Mexico</u>, Invs. Nos. 701-TA-386 and 731-TA-812 to 813 (Prelim.), USITC Pub. 3155 at 25, n.148 (Feb. 1999).

⁸⁰ The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping duty proceeding as part of its consideration of the impact of imports. <u>See</u> 19 U.S.C. § 1677(7)(C)(iii)(V). In its notice of initiation, Commerce estimated an antidumping margin of 97.17 percent for Russian silicon metal. 67 FR 15791, 15793 (April 3, 2002).

⁸¹ Commissioner Bragg notes that she does not ordinarily consider the magnitude of the margin of dumping to be of particular significance in evaluating the effects of subject imports on domestic producers. <u>See</u> Separate and Dissenting Views of Commissioner Lynn M. Bragg in <u>Bicycles from China</u>, Inv. No. 731-TA-731 (Final), USITC Pub. 2968 (June 1996).

⁸² See, e.g., CR/PR at Tables VI-1 and IV-2.

⁸³ See, e.g., CR/PR at Table VI-1.

⁸⁴ See, e.g., CR/PR at Table VI-1.

The domestic industry's cost of goods sold rose in proportion to net sales during the period of investigation. U.S. producers' ratio of cost of goods sold to net sales increased from 86.1 percent in 1999, to 90.0 percent in 2000, and to 98.4 percent in 2001. See, e.g., CR/PR at Tables VI-1, C-1.

As prices dropped and the volume of subject imports increased by 35.8 percent, ⁸⁶ the decline in the industry's condition was evidenced by declines in a number of other performance indicators as well. Domestic producers lost U.S. market share and their U.S. commercial shipments and domestic production fell by *** percent and 30.6 percent, respectively, from 1999 to 2001.⁸⁷ These declines in domestic production and U.S. commercial shipments outpaced a 14.9 percent decline in U.S. apparent consumption.⁸⁸ In part, as a result of its losses related to silicon metal production, Globe converted two silicon metal furnaces at its Beverly, OH, facility to ferrosilicon production in 2000 and converted one silicon metal furnace at its facility in Niagara Falls, NY, to ferrosilicon production in August 2001.⁸⁹ Even as domestic production capacity declined by 22.1 percent from 1999 to 2001,⁹⁰ domestic producers' average capacity utilization levels, which had increased slightly from 83.4 percent in 1999 to 87.2 percent 2000, declined to 74.3 percent in 2001.⁹¹ The decline in capacity utilization is significant and adverse for this industry, which has high fixed costs.⁹² The average number of production and related workers also declined by 27.3 percent throughout the period of investigation.⁹³

Capital expenditures for the domestic industry decreased from \$*** in 1999 to \$7.8 million in 2001.94 Domestic producers also indicated that they have had to cancel or delay capital improvement projects as a result of allegedly dumped subject imports.95

Given the significant volume of subject imports and the adverse effect on domestic prices, we find, for purposes of this preliminary investigation, that low-priced subject imports have had a significant adverse impact on the domestic industry, as reflected in a number of declining financial and performance indicators during the period of investigation.

CONCLUSION

For the reasons stated above, we determine that there is a reasonable indication that the domestic industry producing silicon metal is materially injured by reason of subject silicon metal imports from Russia that are allegedly sold in the United States at less than fair value.

⁸⁶ See, e.g., CR/PR at Table C-1.

⁸⁷ See, e.g., Tables IV-5 and C-1. Domestic producers' commercial shipments fell from 202,953 short tons in 1999 to *** short tons in 2000 and *** short tons in 2001. Domestic production declined from 209,376 short tons in 1999 to 195,630 short tons in 2000 to 145,333 short tons in 2001. See, e.g., CR/PR at Tables III-3 and III-2.

⁸⁸ See, e.g., CR/PR at Table C-1.

⁸⁹ See, e.g., CR at I-10 n.30; PR at I-8 n.30. See also, Petitioners' Answers to Questions From Staff Conference, April 4, 2002, at 30-31 and Exhibit 8.

⁹⁰ Domestic production capacity declined from 250,973 short tons in 1999 to 224,262 short tons in 2000, and to 195,545 short tons in 2001. See, e.g., CR/PR at Tables C-1 and III-2. AST closed its silicon metal operations in September 1999. See, e.g., CR at I-12 n.37; PR at I-9 n.37.

⁹¹ See, e.g., CR/PR at Table III-2.

⁹² See, e.g., CR at VI-5 to VI-6; PR at VI-1.

⁹³ See, e.g., CR/PR at Table C-1. Due in part to AST's closure in 1999, the number of production and related workers fell from 719 in 1999 to 637 in 2000, and then to 523 in 2001. See, e.g., CR/PR at Table III-7.

⁹⁴ See, e.g., CR/PR at Table VI-3.

⁹⁵ See, e.g., CR at D-3 to D-4; PR at D-3.

PART I: INTRODUCTION

BACKGROUND

This investigation results from a petition filed on March 7, 2002, with the U.S. International Trade Commission (Commission) and the U.S. Department of Commerce (Commerce), by Globe Metallurgical Inc. (Globe), Cleveland, OH; SIMCALA, Inc., Mt. Meigs, AL; the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers (I.U.E.-C.W.A, AFL-CIO, C.L.C., Local 693), Selma, AL; the Paper, Allied-Industrial Chemical and Energy Workers International Union (Local 5-89), Boomer, WV; and the United Steel Workers of America (AFL-CIO, Local 9436), Niagara Falls, NY, alleging that an industry in the United States is materially injured and threatened with material injury by reason of imports of silicon metal from Russia that are alleged to be sold in the United States at less than fair value (LTFV). Information relating to the background of this investigation is presented in table I-1.

Table I-1 Silicon metal: Chronology of investigation No. 731-TA-991 (Preliminary)

Date	Action		
March 7, 2002	Antidumping duty petition filed with Commerce and the Commission; Commission institutes investigation No. 731-TA-991 (Preliminary)		
March 15, 2002	Commission's notice of institution is published in the Federal Register ¹		
March 26, 2002	Commission's public conference ²		
April 3, 2002	Commerce's notice of initiation is published in the Federal Register ³		
April 18, 2002	Commission's vote		
April 22, 2002	Commission's transmittal of determinations to Commerce		
April 29, 2002	Commission's transmittal of views to Commerce		

¹ 67 FR 11709, March 15, 2002. A copy of this notice is presented in app. A.

Source: Notices of the Commission and Commerce.

² A list of witnesses appearing at the conference is presented in app. B.

³ 67 FR 15791, April 3, 2002. A copy of this notice is presented in app. A.

¹ The imported product subject to this investigation is silicon metal which generally contains at least 96.00 percent but less than 99.99 percent of silicon by weight. Also covered by this investigation is silicon metal containing between 89.00 and 96.00 percent silicon by weight, but containing more aluminum than the silicon metal which contains at least 96.00 percent but less than 99.99 percent silicon by weight. For a more complete description of the subject product, see the section of the report titled "Scope."

PREVIOUS INVESTIGATIONS

Antidumping Investigations

On August 24, 1990, a petition was filed with Commerce and the Commission alleging that an industry in the United States was materially injured or threatened with material injury by reason of dumped imports of silicon metal from Argentina, Brazil, and China.²

On April 23, 1991, Commerce made a final affirmative dumping determination with respect to imports from China. The Commission transmitted its final affirmative injury determination to Commerce on June 3, 1991, and Commerce issued an antidumping duty order on June 10, 1991.³

On June 12, 1991, Commerce made a final affirmative dumping determination with respect to imports from Brazil. The Commission transmitted its affirmative injury determination to Commerce on July 24, 1991, and Commerce issued an antidumping duty order on July 31, 1991.⁴

On August 9, 1991, Commerce made a final affirmative dumping determination with respect to imports from Argentina. The Commission transmitted its final affirmative injury determination to Commerce on September 19, 1991, and Commerce issued an antidumping duty order on September 26, 1991.⁵

Five-Year Review Investigations

As a result of full five-year (sunset) review investigations concerning the antidumping duty orders on imports of silicon metal from Argentina, Brazil, and China, the Commission determined on January 31, 2001, that revocation of the antidumping duty order on silicon metal from Argentina would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.⁶ The Commission further determined that revocation of the antidumping duty orders on silicon metal from Brazil and China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.⁷ On February 16, 2001, Commerce published its notices of continuation of antidumping duty orders on silicon metal from Brazil and China, and revocation of the antidumping duty order on silicon metal from Argentina.⁸

⁸ 66 FR 10669, February 16, 2001.

I-2

² The petition was filed by American Alloys, Elkem, Globe, Silicon Metaltech, SiMETCO, and SKW.

³ 56 FR 26649, June 10, 1991. See, Silicon Metal from China, Investigation No. 731-TA-472 (Final), USITC Pub. 2385, June 1991.

⁴ 56 FR 36135, August 31, 1991. See, Silicon Metal from Brazil, Investigation No. 731-TA-471 (Final), USITC Pub. 2404, July 1991.

⁵ 56 FR 48779, September 26, 1991. See, Silicon Metal from Argentina, Investigation No. 731-TA-470 (Final), USITC Pub. 2429, September 1991.

⁶ 66 FR 8981, February 5, 2001. See, Silicon Metal from Argentina, Brazil, and China, Investigations Nos. 731-TA-470-472 (Review), USITC Pub. 3385, January 2001.

⁷ Ibid.

ORGANIZATION OF THE REPORT

Information on the subject merchandise, alleged antidumping margins, and the domestic like product are presented in Part I. Information on conditions of competition and other economic factors are presented in Part II. Information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment, are presented in Part III. Information on the volume of imports of the subject merchandise is presented in Part IV. Part V presents data on prices in the U.S. market. Part VI presents information on the financial experience of U.S. producers. Information on the subject country foreign producers and U.S. importers' inventories is presented in Part VII.

SUMMARY OF DATA PRESENTED IN THE REPORT

A summary of data collected in the investigation is presented in appendix C. U.S. industry data on silicon metal are based on the questionnaire responses of firms accounting for all known U.S. production during 1999-2001. U.S. import data are based on official statistics and U.S. importer inventory data are based on the questionnaire responses of firms accounting for approximately *** percent of U.S. imports from Russia during this period. Data on the foreign producers in Russia are based on the questionnaire responses of firms believed to account for all known production of the subject merchandise in Russia.

THE NATURE AND EXTENT OF ALLEGED SALES AT LTFV

On April 3, 2002, Commerce published its notice of initiation in the Federal Register. Based on a comparison of export price to normal value, the estimated dumping margin at initiation for silicon metal from Russia is 97.17 percent ad valorem.¹⁰ The period of review for Commerce's dumping investigations is July to December 2001.

THE SUBJECT PRODUCT

Scope

The imported product subject to this investigation is defined by Commerce as-

...silicon metal which generally contains at least 96.00 percent but less than 99.99 percent silicon by weight. The merchandise covered by this investigation also includes silicon metal from Russia containing between 89.00 and 96.00 percent silicon by weight, but containing more aluminum than the silicon metal which contains least 96.00 percent but less than 99.99 percent silicon by weight. Silicon metal currently is classifiable under subheadings 2804.69.10 and 2804.69.50 of the Harmonized Tariff Schedule of the

⁹ Based on a comparison of official statistics of Commerce and responses of importers to questionnaires of the Commission.

¹⁰ Petitioners allege, and Commerce concurs, that Russia should be treated as a non-market economy (NME) for purposes of this investigation, and that Egypt is an appropriate surrogate country for the purpose of initiating this investigation. *See*, 67 FR 15791, April 3, 2002.

United States (HTSUS). This investigation covers all silicon metal meeting the above specification, regardless of tariff classification.¹¹

U.S. Tariff Treatment

Table I-2 presents current tariff rates for silicon metal.

Table I-2 Silicon metal: Tariff rates, 2002

HTS subheading	Article description ¹	General ²	Special ³	Column 24
		Rates	(percent ad v	alorem)
2804.61.00 ⁵	Silicon containing by weight not less than 99.99 percent of silicon	Free	(⁶)	25.0
2804.69.10	Silicon containing by weight less than 99.99 percent but not less than 99.00 percent of silicon	5.3	Free ⁷	21.0
2804.69.50	Other silicon	5.5	Free ⁸	45.0

¹ An abridged description is provided for convenience; however, an unabridged description may be obtained from the respective headings, subheadings, and legal notes of the HTS.

² Normal trade relations, formerly known as the most-favored-nation duty rate, applicable to imports from Russia.

⁵ This product, semiconductor-grade silicon, is not subject to this investigation.

⁶ Not applicable.

Source: Harmonized Tariff Schedule of the United States (2002).

Physical Characteristics and Uses

Silicon is a chemical element, metallic in appearance, solid in mass, and steel gray in color that is commonly found in nature in combination with oxygen either as a silica (SiO_2) or in combination with both oxygen and a metal in silicate minerals. Although commonly referred to as a metal, silicon exhibits characteristics of both metals and nonmetals. Silicon metal, whether imported or domestic, is usually sold in lump form typically ranging from 6 inches x $\frac{1}{2}$ inch to 4 inches x $\frac{1}{4}$ inch. Silicon metal is a polycrystalline material, whose crystals have a diamond cubic structure at atmospheric pressure.

The type and level of impurities rather than the precise silicon content (assuming it is near 99 percent) is the principal factor determining whether the silicon metal product can be used in a given application. As such, it is not possible to assume that silicon metal imported under HTS subheading 2804.69.10 (silicon containing by weight less than 99.99 percent but not less than 99.00 percent silicon)

³ For eligible goods under the Generalized System of Preferences, African Growth and Opportunity Act, Caribbean Basin Economic Recovery Act and Trade Partnership Act, Israel Free Trade Agreement (FTA), and NAFTA-originating goods of Canada and Mexico.

⁴ Applies to imports from a small number of countries that do not enjoy normal or preferential trade relations duty status.

⁷ The applicable rate for Jordan is 2.6 percent.

⁸ The applicable rate for Jordan is 2.7 percent.

¹¹ See, Commerce's notice of initiation, 67 FR 15791, April 3, 2002.

Petition, p. 10. The dimensions refer to the maximum and minimum dimensions of the silicon metal lumps. If the specification is 6 inches x $\frac{1}{2}$ inch, no dimension of a lump can be larger than 6 inches or smaller than $\frac{1}{2}$ inch.

is necessarily "purer" than silicon metal imported under HTS subheading 2804.69.50 (silicon containing by weight less than 99.00 percent silicon) even though the silicon content of the former is higher.

There are four broadly defined categories, or grades, for silicon metal, which are ranked in generally descending order of purity as: (1) semiconductor grade;¹³ (2) chemical grade; (3) a metallurgical grade used to produce primary aluminum (aluminum produced from ore); and (4) a metallurgical grade used to produce secondary aluminum (aluminum produced from scrap).¹⁴ However, higher grade silicon metal is sometimes shipped to a purchaser with a lower specification requirement because of market factors such as excess product availability and low shipping costs.¹⁵

According to *** there are no known substitutes for silicon metal.¹⁶ Silicon metal is used in the chemical industry to produce silanes which are, in turn, used to produce a family of organic chemicals known as silicones. Silicones are used in a wide variety of applications including resins, lubricants, plastomers, and water-repellent compounds which are employed in the chemical, pharmaceutical, automotive, and aerospace industries.¹⁷ Silicon metal employed in the production of primary and secondary aluminum is used as an alloying agent (it is a required component in aluminum casting alloys) because the silicon increases fluidity and reduces shrinkage while it enhances strength, castability, and weldability.¹⁸ Primary aluminum applications include the manufacture of components that require higher purity aluminum, such as automobile wheels. Secondary-aluminum applications apply primarily to the automotive castings industry. Other applications for silicon metal include the production of brass and bronzes, steel, copper alloys, ceramic powders, and refractory coatings.

¹³ As previously mentioned, semiconductor grade silicon used in the electronics industry is not covered in this investigation. It is a high-purity product generally containing over 99.99 percent silicon. Petition, pp. 10-11. *See also*, Commerce's scope definition, 67 FR 15791, April 3, 2002.

¹⁴ Although silicon metal has been described in terms of different grades, there is, in fact, no uniformly accepted grade classification system. Silicon metal "grades" actually refer to ranges of specifications that are typically sold to particular groups of customers. These specifications, which exist within very narrow ranges and are often proprietary, establish the minimum amounts of silicon and the maximum amounts of impurities, such as iron, calcium, aluminum, or titanium, that the silicon metal may contain. Specifications for chemical-use silicon metal typically require silicon that contains less than 0.4 percent iron, less than 0.025 percent calcium, and less than 0.25 percent aluminum. Specifications for the metallurgical primary-aluminum use silicon metal typically require silicon that contains less than 0.5 percent iron (although some low-iron specifications call for less than 0.35 percent iron) and less than 0.07 percent calcium (although some specifications call for less than 0.015 percent). Specifications for silicon used in metallurgical secondary-aluminum use typically require no more than 1 percent iron and no more than 0.35 percent calcium. Petition, p. 11; see also, conference transcript, p. 68. Chemical customers each have their own detailed specifications. Requirements also vary widely among primary-aluminum customers. Even some secondary-aluminum customers, whose product comes closest to representing a commodity, have differences in tolerances with regard to impurities.

¹⁵ According to petitioners, in general producers "make the best quality silicon metal they can possibly make and sell it down into the various chemical and aluminum applications" and "to the knowledge of domestic producers, no producer purposely sets out to produce a secondary aluminum product." Petitioners' answers to questions from staff conference, April 5, 2002, p. 3.

¹⁶ See, responses of *** to the Commission's U.S. producers' questionnaire, question IV-B.8.

¹⁷ Petition, p. 10.

¹⁸ Because iron interferes with these functions, the iron content of silicon metal used in the production of aluminum is usually limited to a maximum of 1 percent or less.

Silicon metal is generally considered to be a commodity product in that materials of the same grade are considered interchangeable. As stated by a representative from Globe, "Competing suppliers produce essentially the same product using the same raw materials and the same production process. They sell it on the same basis and to the same customers." According to the petitioners, historically the silicon metal produced in Russia was of lower purity than the domestic material, which was principally used in metallurgical applications. However, because of quality improvements imported silicon metal from Russia and domestically produced silicon metal currently compete directly in all three major markets for silicon metal (including chemicals) and are interchangeable. Conversely, according to the respondents, Russian producers are excluded from a significant segment of the U.S. primary aluminum market because no Russian producer is qualified to manufacture low iron silicon metal (less than 0.35 percent iron) due to the composition of quartzite deposits in Russia. However, counsel for SUAL Holding and ZAO Kremny stated that except for those applications that require low-iron grades of silicon, the various grades of silicon metal produced in Russia are of sufficient variety and purity that the Russian material is competitive in virtually all U.S. markets and applications.

Manufacturing Process

Silicon metal is produced from mined quartzite (a rock consisting principally of quartz, a natural crystallized silica) which is washed, crushed, and screened. Only material containing a high percentage of silica (over 99 percent) and a low iron content (less than one percent) can be used to produce silicon metal. The quartzite is combined with a carbon-containing reducing agent (low-ash coal, petroleum coke, charcoal, or coal char) and a bulking agent (such as wood chips) in a submerged-arc electric furnace²⁴ to produce molten silica, which is reduced to silicon metal. The overall chemical reaction is summarized below:

The hot metal is poured into iron molds or onto beds of silicon metal fines for cooling, and is then shaped into ingots or crushed to the desired size for shipping.²⁵ A schematic diagram of the silicon metal production process is shown in figure I-1.²⁶

I-6

¹⁹ Conference transcript, p. 11.

²⁰ Petition, pp. 17-18; and conference transcript, p. 11.

²¹ Primarily domestic producers of alloy wheel rims used in the automotive industry.

²² Conference transcript, pp. 68 and 76-77. Counsel for the three Russian producers of silicon metal indicated that these companies did not plan to produce low-iron silicon metal in the foreseeable future. Staff conversation with Quentin Baird, counsel for Bratsk Aluminum Smelter, April 10, 2002; and staff conversation with Frederick Waite, counsel for SUAL Holding and ZAO Kremny, April 11, 2002.

²³ Staff conversation with Frederick Waite, counsel for SUAL Holding and ZAO Kremny, April 11, 2002. *See also*, conference transcript, pp. 88-89.

²⁴ The process relies on electricity from a transformer system and is extremely energy intensive.

²⁵ Silicon Metal from China, Investigation No. 731-TA-472 (Final), USITC Pub. 2385, June 1991, pp. A-1-9.

²⁶ Petition, exh. 8.

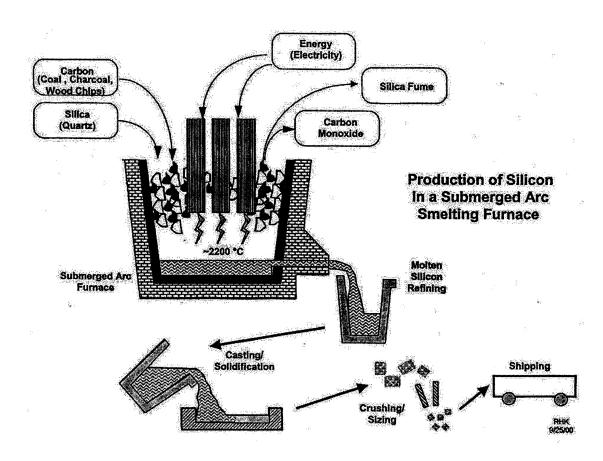


Figure I-1 Silicon metal: Schematic diagram of the production process

Source: Petition, exh. 8.

Lumps of the chemical-grade silicon are manufactured to be of smaller size (about 1 inch maximum) compared with the metallurgical grades. Also, the more refined grades of silicon metal require an oxidative refining step that is not required to produce secondary aluminum. However, as previously noted, in practice U.S. producers usually subject all the silicon metal that they produce to oxidative refining and "sell down" the higher-grade silicon metal to secondary aluminum customers even though these have less stringent purity specifications. The estimated difference in cost between the more refined grades and the secondary aluminum grade, assuming the oxidative refining step was eliminated in producing the latter, is ***. Differences in costs also arise because some forms of silicon (e.g., the lowiron grades), require higher raw material expenditures; the difference in raw materials costs between the low-iron grade and other forms of silicon amounts to about *** per pound.²⁷

²⁷ Petitioners' Answers to Questions from Staff Conference, April 5, 2002, pp. 3-4.

Two U.S. silicon metal producers also produce ferrosilicon,²⁸ which is used in the production of steel, especially stainless and heat-resisting steel and cast iron.²⁹ Producers can switch production between ferrosilicon and silicon metal with varying degrees of cost, downtime, and efficiency loss.³⁰ It is generally easier for firms to switch from silicon metal production to ferrosilicon production than the reverse. Ferrosilicon contains more impurities than silicon metal and tends to contaminate the furnace lining with impurities intolerable in silicon metal production. Typically, when production is switched from ferrosilicon to silicon metal the furnace must, at a minimum, be relined. In addition, certain furnace designs are more efficient at producing one product than another, leading to a consideration of an efficiency loss when switching production.³¹

DOMESTIC LIKE PRODUCT ISSUES³²

In its original 1991 antidumping determinations, the Commission found the domestic like product to be "all silicon metal, regardless of grade, having a silicon content of at least 96.00 percent but less than 99.99 percent of silicon by weight, and excluding semiconductor grade silicon." In its recent sunset review determinations, the Commission found the domestic like product to be "all silicon metal, regardless of grade, corresponding to the current scope of the orders."

I-8

²⁸ According to table 3 of the *Mineral Industry Surveys, Silicon: 2000 Annual Review* published by the U.S. Geological Survey (August 2001), Elkem and Globe produce both silicon metal and ferrosilicon.

²⁹ Ferrosilicon is a product used by the steel industry as an alloying agent. Ferrosilicon differs from silicon metal in that it has a much lower silicon content, ranging from 50 to 96 percent, and greater levels of impurities, including iron.

³⁰ Globe converted two silicon metal furnaces at its facility in Beverly, OH, to ferrosilicon production in 2000 and converted one silicon metal furnace at its facility in Niagara Falls, NY, to ferrosilicon production in August 2001; the latter was subsequently shut down.

According to industry sources, no ferrosilicon furnace in the United States was converted to silicon metal production during the period examined; however, a ferrosilicon furnace was reported to have been converted to silicon production outside the United States. The conversion of ferrosilicon to silicon metal is technically possible for smaller ferrosilicon furnaces but may be technically impossible if the ferrosilicon furnace is large. *See*, petitioners' *Answers to Questions from Staff*, April 5, 2002, pp. 27-31 and exh. 8.

³¹ Silicon Metal from China, Investigation No. 731-TA-472 (Final), USITC Pub. 2385, June 1991, p. A-9.

³² The Commission's decision regarding the appropriate domestic products that are "like" the subject imported products is based on a number of factors including (1) physical characteristics and uses; (2) common manufacturing facilities and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and, where appropriate, (6) price.

³³ Silicon Metal from China, Investigation No. 731-TA-472 (Final), USITC Pub. 2385, June 1991, p. 10. See also, Silicon Metal from Brazil, Investigation No. 731-TA-471 (Final), USITC Pub. 2404, July 1991, pp. 6-9, and Silicon Metal from Argentina, Investigation No. 731-TA-470 (Final), USITC Pub. 2429, September 1991, pp. 5-8.

³⁴ Silicon Metal from Argentina, Brazil, and China, Investigations Nos. 731-TA-470-472 (Review), USITC Pub. _{I-8} 3385, January 2001, pp. 4-5.

In the current investigation, Petitioners argue that there is a single like product corresponding to the scope definition.³⁵ For purposes of the preliminary phase of the investigation, respondents do not dispute petitioners' definition of the domestic like product.³⁶

U.S. MARKET PARTICIPANTS

U.S. Producers

There are currently three producers of silicon metal in the United States.³⁷ The largest U.S. producer is ***.³⁸ A more detailed discussion of U.S. production, shipments, and employment data is presented in *Part III: U.S. Producers' Production, Shipments, and Employment*.

U.S. Importers

Twelve importers accounted for almost all of the silicon metal imported from Russia during 1999-2001. The largest importers were ***. A more detailed discussion of U.S. imports and apparent consumption is presented in *Part IV: U.S. Imports, Apparent Consumption, and Market Shares*.

U.S. Purchasers

The largest purchasers of chemical-grade silicon metal from Russia during the period examined were ***. Significant purchasers of metallurgical grades were primary and secondary aluminum producers.

I-9

³⁵ Petition, pp. 16-18. *See also*, petitioners' postconference brief, p. 7, wherein petitioners state "...the domestic like product is all silicon metal, regardless of grade, having a silicon content of less than 99.99 percent silicon by weight."

³⁶ See, postconference brief of SUAL Holding and ZAO Kremny, p. 6. See also, conference transcript, testimony of Mr. Stein (counsel to General Electric Silicones) and Mr. Waite (counsel to SUAL Holding and ZAO Kremny), p. 87.

³⁷ A fourth producer, American Silicon Technologies (AST), ceased production in the fourth quarter of 1999.

38 ***

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

CHANNELS OF DISTRIBUTION AND MARKET CHARACTERISTICS

Silicon metal is sold both to distributors and directly to end users. During the period examined, virtually all shipments of U.S.-produced silicon metal were made directly to end users. Similarly, the overwhelming majority of U.S. importers' shipments of subject merchandise also was made directly to end users.

There are three main customer groups for silicon metal in the U.S. market: primary aluminum producers, secondary aluminum producers, and chemical producers. During the period examined, the largest market for U.S. producers of silicon metal was the chemical market; shipments of domestic silicon metal to the chemical market accounted for between 57.2 and 60.7 percent of U.S. producers' total U.S. shipments.³ U.S. producers' shipments were somewhat more evenly divided between the primary and secondary aluminum markets; shipments to these two markets accounted for 15.1 to 17.4 percent for primary aluminum and 20.4 to 22.8 percent for secondary aluminum over the period. U.S. importers of silicon metal from Russia also sell to these three market segments, although the concentration in each market differed somewhat from that of the U.S. producers over the period examined. During 1999-2001, the amount of Russian silicon metal sold to the chemical market increased significantly. In 1999, shipments of Russian silicon metal sold to the chemical market accounted for 7.9 percent of total shipments; however, by 2001, this amount rose to 30.9 percent. Slightly different from the U.S. producers' data, the majority of imports of silicon metal from Russia was sold to the secondary aluminum market in each year of the period examined.

SUPPLY AND DEMAND CONSIDERATIONS

U.S. Supply

Based on available information, U.S. producers of silicon metal have the ability to respond to changes in price with moderate to large changes in the quantity of shipments of U.S.-produced silicon metal to the U.S. market. The main factors contributing to this degree of responsiveness are unused capacity and production flexibilities.

Industry Capacity

Data reported by U.S. producers indicate that there is excess capacity with which to expand production in the event of price changes. Domestic capacity utilization declined irregularly over the period, rising from 83.4 percent in 1999 to 87.2 percent in 2000 and then falling to 74.3 percent in 2001.

II-1

¹ U.S. producers' shipments to end users accounted for *** percent of shipments in 1999, *** percent in 2000, and *** percent in 2001.

² U.S. importers' shipments of the subject merchandise to end users accounted for *** percent of importers' shipments in 1999, *** percent in 2000, and *** percent in 2001.

³ See, table III-4 in this report.

Inventory Levels

Inventories of domestically-produced silicon metal, as a ratio to total shipments, were relatively low and declined irregularly over the period. Domestic producers' inventories (relative to total shipments) increased from *** percent in 1999 to *** percent in 2000 and then fell sharply to *** percent in 2001. These data indicate that U.S. producers are likely to be constrained in their ability to use inventories as a means to increase supply to the U.S. market.

Export Markets

Exports of domestic silicon metal accounted for a small and declining share of total shipments over the period examined. Exports (relative to total shipments) declined from *** percent in 1999 to *** percent in 2000 and to *** percent in 2001. These data indicate that U.S. producers have limited flexibility to use exports to alter supply in response to price changes in the U.S. market.

Production Alternatives

U.S. producers have the ability to shift production from the production of silicon metal to the production of other products, such as ferrosilicon. In their responses to Commission staff questions, petitioners reported that "it is fairly easy, rather quick and relatively inexpensive to convert a furnace from silicon metal production to ferrosilicon production." However, it is harder, takes longer, and costs more to convert a furnace from the production of ferrosilicon to the production of silicon metal. Thus, while there is some time and expense involved switching, the flexibility to do so enhances domestic silicon metal producers' ability to alter production levels of silicon metal.

Import Supply

Based on available information, Russian producers of silicon metal have the ability to respond to changes in price with moderate to large changes in the quantity of shipments of Russian silicon metal to the U.S. market. The main factors contributing to this degree of responsiveness are unused capacity and the existence of alternate markets.

Industry Capacity

Data reported by Russian producers indicate that there is excess capacity with which to expand production in the event of price changes in the U.S. market. Capacity utilization for Russian producers was at its highest level in 2001 but was still below 77.0 percent.

Export Markets

Russian producers sell silicon metal in the Russian home market, the U.S. market, and other non-U.S. export markets.⁴ During 1999-2001, commercial shipments to the Russian home market accounted for between *** and *** percent of total shipments. Exports to the U.S. market accounted for between *** and *** percent of total shipments while exports to alternate markets accounted for *** to *** percent of total shipments. These data indicate that Russian producers have the flexibility to use

⁴ Other export markets include: ***.

alternate export markets to increase or decrease shipments to the U.S. market in response to price changes in the U.S. market.

U.S. Demand

Based on available information, the overall demand for silicon metal is unlikely to change significantly in response to changes in price. The factors contributing to the low degree of price sensitivity are the relatively low cost share of silicon metal and the limited availability of substitute products.

Demand Characteristics

The demand for silicon metal follows the demand of the products in which it is used, specifically aluminum products and certain chemical products. U.S. producers were mixed with regard to trends in demand for silicon metal in the U.S. market. Three U.S. producers reported that demand generally decreased during 1999-2001. According to these producers, the decline in demand has been evident in both the aluminum and chemical sectors of the market, although not necessarily at the same time. *** reported that demand was very strong throughout the decade which ended in 1997 and that beginning in 1998, the trend reversed. According to ***, the increases in silicon metal demand during the 1980s were fueled by increases in the chemical sector; however, demand in this sector started to decrease around 1998. *** stated that while demand for silicon metal in the chemical sector improved slightly in 1999 and 2000, it fell by over 15 percent in 2001. Four out of five importers that responded to the question on demand changes reported that the demand for silicon metal in the U.S. market had decreased. In general, both U.S. producers and importers agreed that the declines in demand were due to poor economic conditions in the United States.

Substitute Products

All three U.S. producers reported that there are no products that could be substituted for silicon metal. Similarly, six out of seven responding importers reported that there were no substitutes for silicon metal; the remaining firm noted that some firms try to buy high silicon bearing scrap aluminum.

Cost Share

Most firms did not provide information on the cost share of silicon metal relative to the total cost of the end products in which it is used. *** estimated that the cost of silicon metal in aluminum applications generally ranges from 1 to 16 percent while the cost share for chemical applications ranges from 30 to 50 percent.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported silicon metal depends upon such factors as relative prices, quality, and conditions of sale. Based on available data in this preliminary phase investigation, staff believes that there is a relatively high degree of substitution between domestic silicon metal and subject imports from Russia.

Factors Affecting Sales

Both U.S. producers and respondents at the staff conference repeatedly referred to silicon metal as a commodity product.⁵ Generally, firms agreed that most silicon metal that is available in the U.S. market has the same chemical specifications and can be used for similar applications. In fact, at the staff conference, both petitioners and respondents stated that price is a very important factor because silicon metal from different sources is so similar. When asked to discuss any differences between U.S., Russian, and other imported silicon metal (other than price), all U.S. producers and most importers reported that they were unaware of any factors (table II-1).⁶ One importer, ***, did provide some comments on differences in product characteristics. *** noted that U.S. producers and non-Russian foreign suppliers can offer services and technical support which are not generally provided by Russian producers.

Table II-1
Silicon metal: Existence of differences in factors other than price between silicon metal produced in the United States, Russia, and in other countries that are a significant factor in sales of silicon metal in the U.S. market

Country pair	Number of U.S. producers reporting		Number of U.S. importers reporting	
	Yes	No	Yes	No
U.S. vs. Russia	0	3	3	5
U.S. vs. other	0	3	1	7
Russia vs. other	0	3	2	6

Comparison of Domestic and Imported Silicon Metal

Questionnaire responses reveal general agreement on the issue of interchangeability between U.S.-produced and subject silicon metal (table II-2). All responding U.S. producers reported that silicon metal from different countries is used interchangeably.⁷ One U.S. producer, ***, further noted that for many years, Russian producers could not meet all the chemical specification requirements of the chemical and primary aluminum customers. In the past several years, Russian producers have improved their capability and can now meet the requirements of these customers.

II-4

⁵ Conference transcript, pp. 25 (Button), 70 (Haynes), and 76 (Appleby).

⁶ Unlike U.S. producers, Russian producers are unable to produce low-iron silicon metal (i.e., 0.35 percent or less iron content) for use in certain applications in the primary aluminum market (mainly in the production of automotive alloy wheels) because of the relatively high levels of iron and calcium impurities in the quartzite deposits in Russia. *See*, postconference brief of Bratsk Aluminum, p. 1; postconference brief of GE Silicones, p. 19, and testimony of Mr. Appleby, conference transcript, p. 77.

⁷ Nonsubject imports include silicon metal from Brazil, Canada, China, and South Africa.

Table II-2
Silicon metal: Interchangeability between silicon metal produced in the United States, Russia, and in other countries

	Number of U.S. pr	oducers reporting	Number of U.S. importers reporting		
Country pair	Yes	No	Yes	No	
U.S. vs. Russia	3	0	5	3	
U.S. vs. other	3	0	8	1	
Russia vs. other	3	0	7	1	

Importers were in agreement when comparing U.S.-produced silicon metal and silicon metal from nonsubject import sources and when comparing Russian and nonsubject product. However, three of the eight responding importers reported that the Russian and U.S.-produced silicon metal are not interchangeable. Two of these firms cited differences in iron content and the third firm stated that the U.S. quality is better than that required by the secondary aluminum industry. In its postconference brief, Russian respondents noted one exception to the general interchangeability between Russian silicon metal and silicon metal from the United States and nonsubject countries. These respondents noted that Russian producers cannot supply silicon metal containing 0.35 percent or less iron. Respondents report that "although exact numbers as to the portion of domestic and import sales that low iron silicon metal represents are unavailable, it is estimated by a respondent industry witness to be a significant portion of the primary aluminum market."

⁸ Russian respondents report that 90 percent of the more than 60 million pounds of silicon metal required by Alcoa (a large primary aluminum manufacturer) had to be low iron silicon metal (postconference brief of SUAL Holding and Zao Kremny, p. 10).

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

Information on capacity, production, shipments, inventories, and employment is presented in this section of the report, and is based on the questionnaire responses of four U.S. producers of silicon metal representing all known U.S. production during 1999-2001. A summary of U.S. producer data is presented in appendix C.

U.S. PRODUCERS

Table III-1 presents U.S. producers responding to the Commission's questionnaires, including information on the location of production facilities and the share of reported U.S. production in 2001.

Table III-1 Silicon metal: U.S. producers, location of headquarters, position with respect to the petition, U.S. production, and U.S. shipments, 2001

Firm	Location of production facilities	Position with respect to the petition	Production	Share of production	U.S. shipments	Share of U.S. shipments
			Short tons ¹	Percent	Short tons ¹	Percent
AST ²	Rock Island, WA	*** 3	0	0	0	0
Elkem⁴	Alloy, WV	*** 5	***	***	***	***
Globe ⁶	Beverly, OH Niagara Falls, NY Selma, AL Springfield, OR	Petitioner	***	***	***	***
SIMCALA ⁷	Mt. Meigs, AL	Petitioner ⁸	***	***	***	***
Total			145,333	100.0	152,600	100.0

¹ Quantity in short tons of contained silicon.

8 ***

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

Source: Compiled from data submitted in response to Commission questionnaires.

² AST ceased production in September 1999 ***.

^{***}

⁴ Elkem is a *** subsidiary of Elkem ASA, Oslo, Norway.

⁵ Elkem ***.

⁶ Lee Capital Holdings, Boston, MA, owns *** percent of Globe.

⁷ SIMCALA is a *** subsidiary of SIMCALA Holdings, Inc., Mt. Meigs, AL, which in turn is owned *** percent by Cravey, Green & Wahlen, Atlanta, GA.

Three firms, Elkem, Globe, and SIMCALA, currently produce silicon metal in the United States. A fourth producer, American Silicon Technologies (AST), ceased production operations in September 1999.

During the original silicon metal investigations in 1990-91, eight firms produced silicon metal: American Alloys, Dow Corning, Elkem, Globe, Reynolds, Silicon Metaltech, SiMETCO, and SKW.

U.S. CAPACITY, PRODUCTION, AND CAPACITY UTILIZATION

U.S. producers' capacity, production, and capacity utilization data are presented in table III-2 and figure III-1. U.S. production capacity decreased by 22.1 percent from 1999 to 2001. U.S. production decreased by 30.6 percent from 1999 to 2001. Industry capacity utilization was 83.4 percent in 1999, 87.2 percent in 2000, and 74.3 percent in 2001.

Elkem increased its production capacity *** percent from 1991 to 2001.¹⁰ Globe reduced capacity.¹¹ SIMCALA reported ***.¹² AST ceased production in September 1999.¹³

¹ During the review investigations, Globe ***.

² AST ceased production in September 1999 ***.

^{3 ***}

⁴ American Alloys closed its production facility in 1998, and in January 2000 American Alloys filed for bankruptcy protection. In December 2001, the production assets of American Alloys were purchased out of bankruptcy by Highlander Core Industries, which plans to use the assets to produce silicomanganese. *See*, petitioners' *Answers to Questions from Staff*, April 5, 2002, p. 7.

⁵ Dow Corning sold its silicon metal production facility to Globe in 1993.

⁶ Reynolds closed its plant in 1990. The Reynolds plant has never reopened.

⁷ Silicon Metaltech declared bankruptcy and its assets were acquired by AST in 1993. By September of 1999 AST had shut its facilities.

⁸ SiMETCO declared bankruptcy in 1995 and its assets were acquired by SIMCALA.

⁹ Globe acquired SKW's production facility in 1994.

¹⁰ Elkem currently operates *** silicon metal furnaces. ***. Despite an overall increase in its production capacity, on August 26, 2001, Elkem shut down a furnace at its Alloy, WV, facility "***." See, Elkem's response to Commission's producers' questionnaire response, question II-2. See also, petitioners Answers to Questions from Staff, April 5, 2002, exh. 8.

¹¹ Globe indicated that it "***." See, Globe's response to Commission's producers' questionnaire response, question II-2. ***.

¹² SIMCALA indicated that "***." *See*, SIMCALA's response to Commission's producers' questionnaire response, question II-2.

¹³ Subsequent to AST's suspension of operations, the company relinquished its environmental permits, many of which had "grandfather" clauses allowing it to operate under substantially relaxed environmental guidelines. Any future start up of operations again at the Rock Island facility would require a substantial investment to upgrade its furnaces to meet current air quality standards. *See*, petitioners' postconference brief, p. 16.

Table III-2
Silicon metal: U.S. producers' capacity, production, and capacity utilization, by firms, 1999-2001

		Calendar year					
ltem	1999	2000	2001				
	Quantity	(short tons of containe	ed silicon)				
Capacity:							
AST ¹	***	***	***				
Elkem ²	***	***	***				
Globe ³	***	***	***				
SIMCALA⁴	***	***	***				
Subtotal	250,973	224,262	195,545				
Production:							
AST	***	***	***				
Elkem	***	***	***				
Globe	***	***	***				
SIMCALA	***	***	***				
Subtotal	209,376	195,630	145,333				
	Ca	pacity utilization (perc	ent)				
AST	***	***	***				
Elkem	***	***	***				
Globe	***	***	***				
SIMCALA	***	***	***				
Average	83.4	87.2	74.3				

¹ In September 1999, AST shut down its three-furnace facility in Rock Island, WA.

Source: Compiled from data submitted in response to Commission questionnaires; petitioners *Answers to Questions from Staff*, April 5, 2002, exh. 8; and conference transcript, pp. 16, 23, 45-46.

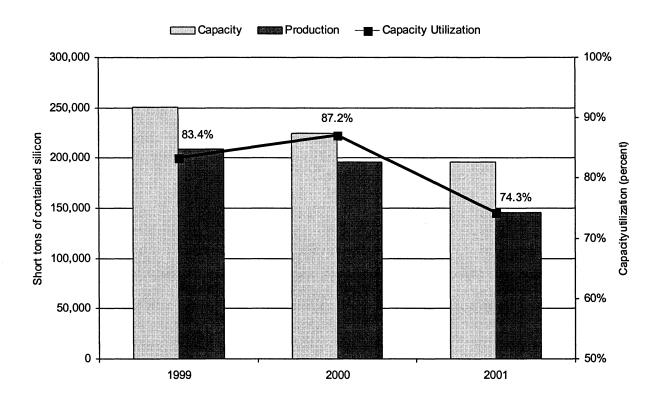
² In August 2001, Elkem shut down one of its five silicon metal furnace at its Alloy, WV, facility.

³ During 2000, Globe converted both silicon metal furnaces at its Beverly, OH, plant to ferrosilicon production. Globe's single-furnace facility in Springfield, OR, has been idled since December 2000. In August 2001, Globe converted one of the two silicon metal furnaces at its Niagara Falls, NY, plant to ferrosilicon production. In December 2001, Globe shut down a silicon metal furnace at its Niagara Falls plant and closed the converted ferrosilicon furnace at the same plant. As a condition of a power agreement, Globe idled its Selma, AL, plant during July and August 2001.

⁴ SIMCALA idled one of its three furnaces in August 2001 for routine maintenance work. The furnace has not been restarted. See, conference transcript, pp. 23, 45-46.

⁵ Not applicable.

Figure III-1 Silicon metal: U.S. producers' capacity and production, 1999-2001



Source: Table III-2.

U.S. PRODUCERS' SHIPMENTS

Data on U.S. producers' shipments are presented in table III-3. U.S. shipments decreased by 25.7 percent from 1999 to 2001. Export shipments decreased by *** percent from 1999 to 2001, and accounted for *** percent of total shipments in 1999, *** percent in 2000, and *** percent in 2001. Data on U.S. producers' shipments by market segments and by end uses are presented in table III-4.

U.S. PRODUCERS' PURCHASES

*** purchased silicon metal from other sources during 1999-2001. Data on U.S. producers' purchases (other than direct imports), by sources, are presented in table III-5. *** reported purchasing silicon metal from other domestic producers. *** reported purchasing silicon metal from Russia during this period, while *** reported purchasing nonsubject silicon metal.

U.S. PRODUCERS' INVENTORIES

Data on U.S. producers' inventories of silicon metal are presented in table III-6.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

U.S. producers' employment data are presented in table III-7.

15 *** III-5

¹⁴ From 1999 to 2001, Elkem's U.S. shipments ***, Globe's U.S. shipments ***, and SIMCALA's U.S. shipments ***.

Table III-3 Silicon metal: U.S. producers' shipments, by types and by firms, 1999-2001

	Calendar year					
Item	1999	2000	2001			
	Quantity (short tons of contained silicon)					
Commercial U.S. shipments:						
AST	***	***	**			
Elkem	***	***	**			
Globe	***	***	**			
SIMCALA	***	***	**			
Subtotal	202,953	***	Service .			
Internal consumption:						
AST	***	***	**			
Elkem	***	***	**			
Globe	***	***	**			
SIMCALA	***	***	**			
Subtotal	2,450	***	**			
U.S. shipments:						
AST	***	***	**			
Elkem	***	***	**			
Globe	***	***	**			
SIMCALA	***	***	**			
Subtotal	205,403	189,349	152,600			
Export shipments:						
AST	***	***	**			
Elkem ¹	***	***	**			
Globe ¹	***	***	**			
SIMCALA	***	***	**			
Subtotal	***	***	**			
Total:						
AST	***	***	**			
Elkem	***	***	**			
Globe	***	***	**			
SIMCALA	***	***	**			
Subtotal	***	***	**			

Table III-3--*Continued*Silicon metal: U.S. producers' shipments, by types and by firms, 1999-2001

	Calendar year					
Item	1999	2000	2001			
	Value (\$1,000)					
Commercial U.S. shipments:						
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	277,726	***	***			
Internal consumption:						
AST ²	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	2,292	***	***			
U.S. shipments:						
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	280,018	249,280	198,389			
Export shipments:						
AST	***	***	***			
Elkem ¹	***	***	***			
Globe ¹	***	***	***			
SIMCALA	***	***	***			
Subtotal	***	***	***			
Total:			1			
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	***	***	***			
Table continued. See footnotes at end of table.		1	L			

Table III-3--Continued Silicon metal: U.S. producers' shipments, by types and by firms, 1999-2001

	Calendar year					
Item	1999	2000	2001			
	Unit value (per short ton of contained silicon)					
Commercial U.S. shipments:						
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Average	\$1,368	***	***			
Internal consumption:						
AST ²	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Average	\$935	***	***			
U.S. shipments:						
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Average	\$1,363	\$1,317	\$1,300			
Export shipments:						
AST	***	***	***			
Elkem ¹	***	***	***			
Globe ¹	***	***	***			
SIMCALA	***	***	**			
Average	***	***	***			
Total:						
AST	***	***	**:			
Elkem	***	***	**:			
Globe	***	***	***			
SIMCALA	***	***	**			
Average	***	***	***			

¹ Export shipments went to ***.
² Estimated by the staff.
³ Not applicable.

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

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-4
Silicon metal: U.S. producers' U.S. shipments, by market segments and by end users, 1999-2001¹

		Calendar year		
Item	1999	2000	2001	
	Quantity (sho	ort tons of contained	silicon)	
U.S. shipments to distributors:				
Chemical producers	***	***	***	
Primary aluminum producers	***	***	***	
Secondary aluminum producers	***	***	***	
Other producers	***	***	***	
Subtotal	***	***	***	
U.S. shipments to end users:				
Chemical producers	***	***	***	
Primary aluminum producers	***	***	***	
Secondary aluminum producers	***	***	***	
Other producers	***	***	***	
Total	***	***	***	
Total U.S. shipments:				
Chemical producers	118,660	107,090	92,215	
Primary aluminum producers	29,839	32,494	23,448	
Secondary aluminum producers	42,779	42,750	30,943	
Other producers	6,905	4,891	5,307	
Subtotal	198,183	187,225	151,913	
	Shares of total U.S. shipments (percent)			
U.S. shipments to distributors	***	***	***	
U.S. shipments to end users	***	***	***	
Total	100.0	100.0	100.0	
U.S. shipments to:				
Chemical producers	59.9	57.2	60.7	
Primary aluminum producers	15.1	17.4	15.4	
Secondary aluminum producers	21.6	22.8	20.4	
Other producers	3.5	2.6	3.5	
	3.3	2.0	0.0	

¹ Includes the data of three firms: Elkem, Globe, and SIMCALA. ***.

Note.—Because of rounding, figures may not add to the totals shown. Shipment data in this table may not equal shipment data in table III-3 because of reporting differences by firms.

Source: Compiled from data submitted in response to Commission questionnaires.

Table III-5
Silicon metal: U.S. producers' purchases (other than direct imports), by sources, 1999-2001

* * * * * * *

Table III-6
Silicon metal: U.S. producers' end-of-period-inventories, by firms, 1999-2001

	Calendar year				
Item	1999	2000	2001		
	Quantity (short tons of contain	ed silicon)		
End-of-period inventories:					
AST ¹	***	***	***		
Elkem	***	***	***		
Globe	***	***	***		
SIMCALA	***	***	***		
Subtotal	9,135	11,110	2,306		
		Ratios (percent)			
End-of-period inventories to production:					
AST	***	***	***		
Elkem	***	***	***		
Globe	***	***	***		
SIMCALA	***	***	***		
Average	4.4	5.7	1.6		
End-of-period inventories to U.S. shipments:					
AST	***	***	***		
Elkem	***	***	***		
Globe	***	***	***		
SIMCALA	***	***	***		
Average	4.4	5.9	1.5		
End-of-period inventories to total shipments:					
AST	***	***	***		
Elkem	***	***	***		
Globe	***	***	***		
SIMCALA	***	***	***		
Average	***	***	***		

^{1 ***}

Note.-Due to certain inconsistencies in reporting, production, shipments, and inventories do not reconcile.

Source: Compiled from data submitted in response to Commission questionnaires, except where noted.

III-10

² Not applicable.

Table III-7

Average number of production and related workers producing silicon metal, hours worked, wages paid to such employees, and hourly wages, productivity, and unit labor costs, by firms, 1999-2001

	Calendar year					
Item	1999	2000	2001			
	Proc	duction and related workers	3			
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	719 637					
	Но	ours worked (1,000 hours)				
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	1,632	1,471	1,203			
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Subtotal	32,436	29,055	23,788			
		Hourly wages (per hour)				
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Average	\$19.88	\$19.75	\$19.77			
	Productivity (short	tons of contained silicon p	per 1,000 hours)			
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
Average	128.3	133.0	120.8			
	Unit labor costs (per short ton of contained silicon)					
AST	***	***	***			
Elkem	***	***	***			
Globe	***	***	***			
SIMCALA	***	***	***			
		\$148.52	\$163.68			

PART IV: U.S. IMPORTS, APPARENT CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission sent questionnaires to approximately 20 firms believed to import silicon metal from Russia during 1999-2001 and received responses from 13 firms.¹ Twelve of these firms imported silicon metal from Russia during this period,² and accounted for 98.2 percent of subject imports in 1999, 95.3 percent of subject imports in 1999, and 102.5 percent of subject imports in 2001.³ Table IV-1 presents a list of these 12 U.S. importers of the subject merchandise including their location, sources of imports, and the quantity of subject imports during 1999-2001.

Table IV-1
Silicon metal: U.S. importers of the subject merchandise from Russia, company locations, sources of imports, and subject U.S. imports, 1999-2001

U.S. IMPORTS

Table IV-2 and figure IV-1 present data on U.S. imports of silicon metal based on official statistics of Commerce. The quantity of U.S. imports of silicon metal from Russia decreased by 2.0 percent from 1999 to 2000 but increased by 38.6 percent in 2001.⁴ The quantity of U.S. imports of silicon metal from nonsubject sources increased by 19.9 percent from 1999 to 2000 but decreased by 21.1

⁴ Respondents argue that subject imports from Russia in 1999 and 2000 were substantially below the level of Russian imports in 1998, and although imports increased in 2001, imports from Russia remained below historical levels. *See*, postconference brief of SUAL Holding and ZAO Kremny, p. 18 and exh. 4. Historical Russian imports of silicon metal (based on official statistics of Commerce) are presented in the following tabulation:

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001
Quantity (short tons contained silicon)	33,502	62,990	40,005	28,794	33,878	36,794	25,158	24,643	34,153
Share of total imports (percent)	43.5	53.4	40.0	33.8	25.8	34.0	20.5	17.4	27.0

IV-1

¹ Although the Commission did not receive a completed response from ***. However, data for *** is presented in this report based on the firm's earlier response to the Commission's questionnaire in the five-year review investigations and data compiled from the Customs net import file.

² Another firm, ***, imported only from nonsubject sources (***).

³ Based on a comparison of data compiled from questionnaires of the Commission and official statistics of Commerce. Questionnaire data include information from ***, which responded but provided no usable data other than imports. The firm is currently in bankruptcy. Without ***'s data, questionnaire coverage is *** percent in 1999, *** percent in 1999, and *** percent in 2001. For this reason, official statistics, rather than questionnaire data are presented for imports and also used for apparent consumption; with the exception of table IV-1, data of *** are not included in this report.

Table IV-2 Silicon metal: U.S. imports, by sources, 1999-2001

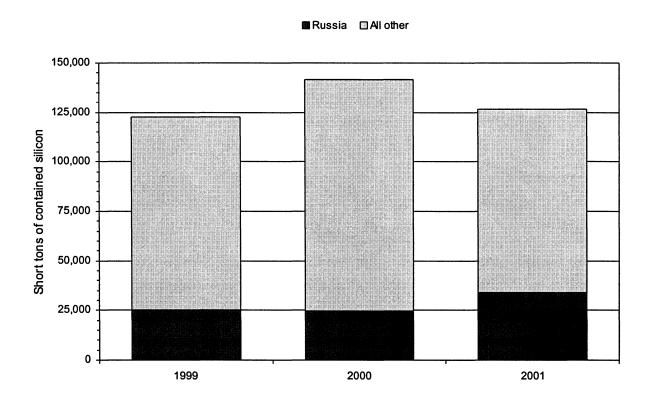
	Calendar year					
Source	1999	2000	2001			
	Quantity (short tons of contained silicon)					
Russia	25,158	24,643	34,153			
All other sources	97,499	116,908	92,279			
Total	122,657	141,551	126,431			
		Value (\$1,000)				
Russia	26,201	25,529	35,325			
All other sources	122,231	134,819	104,420			
Total	148,432	160,349	139,745			
	Unit value (per short ton of contained silicon)					
Russia	\$1,041	\$1,036	\$1,034			
All other sources	1,254	1,153	1,132			
Average	1,210	1,133	1,105			
	Share of quantity (percent)					
Russia ¹	20.5	17.4	27.0			
All other sources	79.5	82.6	73.0			
Average	100.0	100.0	100.0			
	Share of value (percent)					
Russia	17.7	15.9	25.3			
All other sources	82.3	84.1	74.7			
Average	100.0	100.0	100.0			

¹ In the 12-month period preceding the filing of the petition (i.e., March 2001-February 2002), imports of silicon metal from Russia accounted for 31.1 percent of total imports. Imports from Russia during this period were 40,632 short tons of contained silicon while total imports were 130,554 short tons of contained silicon.

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

Source: Compiled from official statistics of Commerce.

Figure IV-1 Silicon metal: U.S. imports, by sources, 1999-2001



Source: Table IV-2.

percent in 2001.⁵ Overall, U.S. imports of all silicon metal increased by 15.4 percent from 1999 to 2000 but decreased by 10.7 percent in 2001.

Table IV-3 presents U.S. importers' shipments of subject imports from Russia by market segments and by end users. With respect to channels of distribution, the overwhelming majority of subject imports were sold directly to end users, with shipments to end users accounting for *** percent of importers' shipments in 1999, *** percent in 2000, and *** percent in 2001. With respect to market segments, the vast majority of U.S. importers' U.S. shipments of silicon metal from Russia have gone to the secondary aluminum market.⁶ However, since 1999 sales to chemical producers have increased substantially.⁷

U.S. IMPORTERS' CURRENT ORDERS

Six U.S. importers, ***, ***, ***, ***, *10 ***, *11 ***, *12 and ***, *13 have arranged for the importation of 40,982 short tons of silicon metal from Russia for delivery in 2002.

⁵ Other significant nonsubject import sources of silicon metal are Brazil, Canada, and South Africa. In particular, respondents argue that imports from South Africa represented a greater source of imports of silicon metal over the period examined than did imports from Russia. *See*, postconference brief of SUAL Holding and ZAO Kremny, p. 20 and exh. 4. Historical imports of silicon metal from Brazil, Canada, and South Africa (based on official statistics of Commerce) are presented in the following tabulation:

Item	1993	1994	1995	1996	1997	1998	1999	2000	2001
			Qu	antity (shor	t tons conta	ained silico	n)		
Brazil	370	516	15,888	11,345	10,663	6,273	12,429	22,385	17,309
Canada	15,380	18,734	16,169	14,842	24,065	18,874	25,044	27,347	17,281
South Africa	4,427	3,738	3,016	5,194	15,315	25,273	28,184	40,329	35,305
				Share of to	tal imports	(percent)			
Brazil	0.5	0.4	15.9	13.3	8.1	5.8	10.1	15.8	13.7
Canada	19.9	15.9	16.2	17.4	18.3	17.5	20.4	19.3	13.7
South Africa	5.7	3.2	3.0	6.1	11.7	23.4	23.0	28.5	27.9

⁶ U.S. importers' shipments of the subject merchandise to the secondary aluminum market accounted for 84.4 percent of shipments in 1999, 75.5 percent in 2000, and 64.5 percent in 2001.

8 ***.

9 ***.

10 ***.

11 ***.

12 ***.

IV-4

⁷ U.S. importers' shipments of the subject merchandise to the chemical market accounted for 7.9 percent of shipments in 1999, 19.6 percent in 2000, and 30.9 percent in 2001.

Table IV-3 Silicon metal: U.S. importers' U.S. shipments of subject imports from Russia, by market segments and by end users, 1999-2001

	Calendar year			
Item	1999	2000	2001	
	Quantity (sh	nort tons of contained	silicon)	
U.S. shipments to distributors:				
Chemical producers	***	***	**	
Primary aluminum producers	***	***	**	
Secondary aluminum producers	***	***	**	
Other producers	***	***	**	
Subtotal	***	***	**	
U.S. shipments to end users:				
Chemical producers	***	***	**	
Primary aluminum producers	***	***	**	
Secondary aluminum producers	***	***	**	
Other producers	***	***	**	
Subtotal	***	***	**	
Total U.S. shipments:				
Chemical producers	1,879	4,686	9,878	
Primary aluminum producers	1,180	930	817	
Secondary aluminum producers	19,993	18,064	20,616	
Other producers	640	243	648	
Total	23,692	23,923	31,959	
	Shares of total U.S. shipments (percent)			
U.S. shipments to distributors	***	***	**	
U.S. shipments to end users	***	***	**	
Total	100.0	100.0	100.0	
U.S. shipments to:				
Chemical producers	7.9	19.6	30.9	
Primary aluminum producers	5.0	3.9	2.6	
Secondary aluminum producers	84.4	75.5	64.5	
Other producers	2.7	1.0	2.0	
Total	100.0	100.0	100.0	

IV-5

Source: Compiled from data submitted in response to Commission questionnaires.

APPARENT U.S. CONSUMPTION

Table IV-4 and figure IV-2 present data on apparent U.S. consumption of silicon metal. Based on quantity, apparent U.S. consumption increased by 0.9 percent from 1999 to 2000 but decreased by 15.7 percent in 2001. Based on value, apparent U.S. consumption decreased by 4.4 percent from 1999 to 2000 and decreased by another 17.5 percent in 2001.

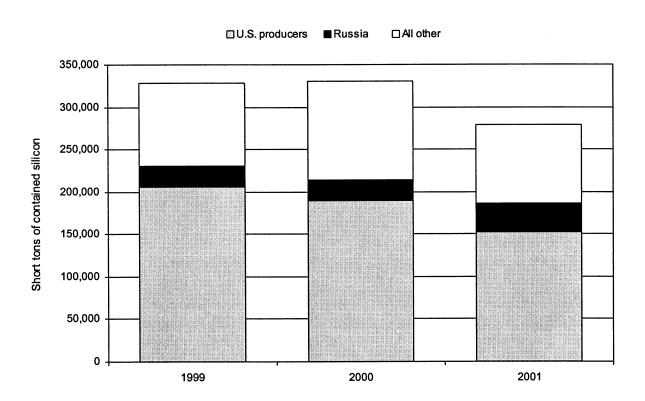
Table IV-4
Silicon metal: U.S. shipments of domestic product, U.S. imports, by sources, and apparent U.S. consumption, 1999-2001

	Calendar year			
Source	1999	2000	2001	
	Quantity (short tons of contained silicon)			
U.S. producers' U.S. shipments:	205,403	189,349	152,600	
U.S. imports from-				
Russia	25,158	24,643	34,153	
All other sources	97,499	116,908	92,279	
Total U.S. imports	122,657	141,551	126,431	
Apparent U.S. consumption	328,060	330,900	279,031	
	Value (\$1,000)			
U.S. producers' U.S. shipments:	280,018	249,280	198,389	
U.S. imports from-				
Russia	26,201	25,529	35,325	
All other sources	122,231	134,819	104,420	
Total U.S. imports	148,432	160,349	139,745	
Apparent U.S. consumption	428,449	409,629	338,134	

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

Source: Compiled from data submitted in response to questionnaires of the Commission and official statistics of Commerce.

Figure IV-2 Silicon metal: Apparent U.S. consumption, by sources, 1999-2001



Source: Table IV-4.

U.S. MARKET SHARES

Table IV-5 presents data on U.S. market shares based on apparent U.S. consumption of silicon metal.

Table IV-5
Silicon metal: Apparent U.S. consumption and market shares, by sources, 1999-2001

	Calendar year			
Source	1999	2000	2001	
	Quantity (sho	Quantity (short tons of contained silicon)		
Apparent U.S. consumption	328,060	330,900	279,031	
		Value (\$1,000)		
Apparent U.S. consumption	428,449	409,629	338,134	
	Share of quantity (percent)			
U.S. producers' shipments:	62.6	57.2	54.7	
U.S. imports from–				
Russia	7.7	7.4	12.2	
All other sources	29.7	35.3	33.1	
Total imports	37.4	42.8	45.3	
	Share of value (percent)			
U.S. producers' shipments:	65.4	60.9	58.7	
U.S. imports from-				
Russia	6.1	6.2	10.4	
All other sources	28.5	32.9	30.9	
Total imports	34.6	39.1	41.3	

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

Source: Compiled from data submitted in response to questionnaires of the Commission.

PART V: PRICING AND RELATED INFORMATION

FACTORS AFFECTING PRICES

U.S. Inland Transportation Costs and Geographic Markets

Three U.S. producers reported that U.S.-inland transportation costs accounted for between 2 and 3.5 percent of the total cost of the silicon metal. These firms also reported that they generally arrange the transportation from their facility to their customers' location. Importers that provided estimates indicated that U.S.-inland transportation costs ranged for between 2.75 and 15 percent of the total delivered cost of the silicon metal. Five of the six responding firms stated that they arrange transportation, while the remaining firm reported that its customers usually do.

Producers reported very similar shipping distances, with all three responding producers stating that the vast majority (i.e., over 90 percent) of the silicon metal that they sell is shipped to customers within 101 and 1,000 miles. There was more variation in the responses from the importers. On average, importers reported shipping approximately 28 percent of their silicon metal within 100 miles, 55 percent within 101-1,000 miles, and 18 percent over 1,000 miles.

With regard to geographic market areas served by U.S. producers of silicon metal, all three responding producers reported that they serve the entire U.S. market. While two responding importers reported that they sell to all parts of the United States, the remaining three responding importers reported selling to specific markets, such as the East Coast, Mid-West, and West Coast.

Exchange Rates

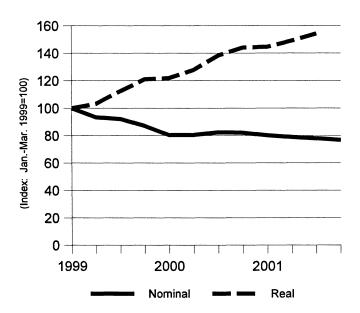
Quarterly data reported by the International Monetary Fund indicate that the nominal value of the Russian ruble depreciated 23.2 percent relative to the U.S. dollar from January 1999 through December 2001. Adjusted for inflation, the real value of the Russian ruble appreciated 54.3 percent relative to the U.S. dollar during the period January 1999 through September 2001; producer price data for Russia are not available for the last quarter of 2001 (figure V-1).

PRICING PRACTICES

Pricing Methods

Available information from questionnaires and the staff conference indicates that sales of silicon metal in the U.S. market are made on both a contract and spot basis. All three responding U.S. producers reported that the vast majority of their sales (i.e., over 90 percent) are made on a contract basis. Importers were somewhat mixed, with some firms reporting that all sales are done on a spot basis and others reporting that a majority of sales are on a contract basis. Available information indicates that contracts are more likely to be used in the chemical market segment. While contracts in the chemical segment are likely to be at least one year in duration, contracts in the primary and secondary aluminum markets are likely to be shorter (e.g., 3 to 12 months) in duration.

Figure V-1 Exchange rates: Indexes of the nominal and real values of the Russian ruble relative to the U.S. dollar, by quarters, January 1999-December 2001



Source: International Monetary Fund, International Financial Statistics, March 2002.

Annual contracts are usually negotiated during the fourth quarter of the prior year and often contain approximate volumes but not necessarily firm numbers. Producers reported variations in price terms within a contract. *** reported that its contracts fix both price and quantity but its contracts contain a pricing mechanism to adjust prices quarterly, semi-annually, or annually based on a published price (e.g., Metals Week or Ryan's Notes).\(^1\) *** reported that its contracts usually contain meet-or-release clauses. *** stated that its contracts can generally be fixed or indexed to prices published in Metals Week or Ryan's Notes depending on the customer and the duration of the contract. *** also noted that its contracts are negotiated in the fourth quarter and that they generally contain estimated volumes and fixed prices. *** reported having no contracts containing meet-or-release clauses. On the import side, those importers that reported using contracts frequently reported that the average duration varies from 3 to 12 months, with quarterly renegotiations. Generally, these importers reported that both price and quantity are fixed.

Petitioners stated at the conference that the existence of contracts in the silicon metal industry does not necessarily provide protection to the U.S. industry.² As noted earlier, petitioners have stated that long-term contracts frequently base contract prices on formulas tied to reference prices or they contain meet-or-release clauses. Petitioners state that contracts with such pricing formulas make the

V-2

¹ Metals Week and Ryan's Notes publish weekly pricing data for silicon metal. These prices are obtained from surveys with traders and purchasers who are asked to provide the current prevailing price and market trends (petitioners' postconference brief, p. 12).

² Conference transcript, p. 27.

supplier highly vulnerable to the effects of an overall declining market price level.³ Petitioners were asked to provide specific data on how often prices within a given contract were actually changed. In petitioners' responses to staff questions, they reported several instances where prices within a given contract had been modified but did not provide an overall estimate of what percent of their contract sales these modifications accounted for.

A relatively recent method of buying silicon metal was discussed at the staff conference, in briefs, and in reports. GE Silicones reported that it had begun to use reverse internet auctions to purchase silicon metal. GE Silicones conducted three reverse auctions in the fall of 2001 for the purchase of *** tons of silicon metal, or approximately 75 percent of its 2002 requirements. GE Silicones reported that the silicon metal grade specification and commercial terms were established prior to the auctions and firms that are qualified to supply GE Silicones are invited to bid. The auctions are "reverse" auctions where GE Silicones sets a maximum and a reserve price and once the auction is opened qualified bidders can continue to make bids as long as their bid is below the last one made. The auction is closed if no new qualifying bid is received for two minutes. GE silicones provided copies of the results of these auctions with its questionnaire response. These data show that for one bid, the winner was a ***; for another bid ***, the winners were *** suppliers; and for a third bid *** the winners were domestic (***) and Russian suppliers. GE Silicones noted that *** did not participate.

Petitioners provided some information on internet auctions in their responses to staff questions. Petitioners note that there have been other purchasers that have held auctions, including ***. *** reported that it did participate in the *** auction and "entered several bids at prices it felt were fair" but *** did not win this auction. *** also reported participating in the *** auction but dropped out of the bidding when the bid price approached ***'s "cash costs."

With regard to the GE Silicones auction, petitioners noted that this was *** due to ***. *** reported that GE Silicones' contract requirements were very rigid and difficult and that GE also wanted a ***. ***.8

Sales Terms and Discounts

In general, U.S. producers and importers reported that they have no specific discount policies for their sales of silicon metal. Some firms stated that discounts (in the form of lower prices) may arise in the course of negotiations but they are not formal policies. Firms also reported that sales terms are generally net 30.

V-3

³ Petitioner's postconference brief, p. 12.

⁴ GE Silicones' postconference brief, p. 10. See also, conference transcript, pp. 72 and 86.

⁵ GE Silicones' postconference brief, p. 11.

⁶ *Ibid*, pp. 11-16.

⁷ *Ibid*, pp. 14-16 and conference transcript, p. 73. In the bids involving ***. GE Silicones' postconference brief, p. 11.

⁸ Petitioners Answers to Questions from Staff, April 5, 2002, pp. 13-14.

PRICE DATA

The Commission requested quarterly data for the total quantity and value of three silicon metal products. Data were requested for the period January 1999 through December 2001. The products for which pricing data were requested are as follows:

<u>Product 1</u>. – For sales to primary aluminum producers–silicon metal less than 99.99% pure that contains a minimum of 98.5% silicon, a maximum of 1.00% iron, a maximum of 0.07% calcium, and no restriction of the aluminum content.

<u>Product 2</u>. – For sales to secondary aluminum producers–silicon metal less than 99.99% pure that contains a minimum of 98.0% silicon, a maximum of 1.00% iron, a maximum of 0.4% calcium, and no restriction of the aluminum content.

<u>Product 3.</u> – For sales to chemical manufacturers—silicon metal less than 99.99% pure that contains a minimum of 98.5% silicon, a maximum of 0.65% iron, a maximum of 0.02% calcium, and a maximum of 0.035% aluminum.

Three U.S. producers and six importers provided usable pricing data for sales of the requested products in the U.S. market, although not all firms reported pricing data for all products for all quarters. In addition to sales price data, the Commission requested *** to provide purchase price data for their purchases of chemical grade silicon metal from both U.S. and Russian sources. The reported price data accounted for approximately 95.9 percent of the quantity of domestically-produced commercial shipments of silicon metal in 2001 and 85.3 percent of the quantity of imports of silicon metal from Russia in 2001. Coverage for the entire period examined was 93.7 percent for the domestic product and 61.0 percent for imports from Russia.

PRICE TRENDS

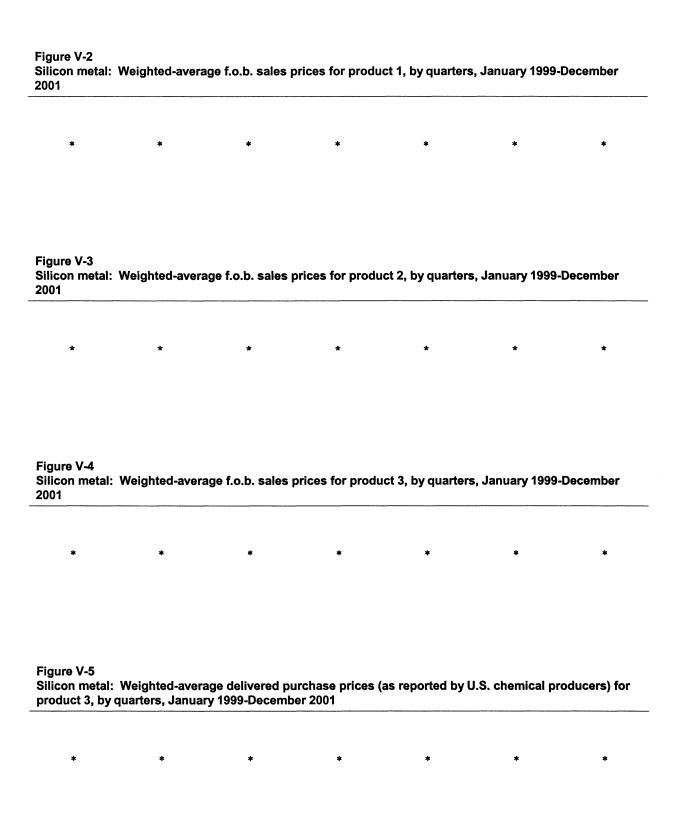
Data on reported weighted-average prices and quantities for products 1 through 3 are presented in tables V-1 through V-4 and figures V-2 through V-5. As is evident from the tables and figures, silicon metal prices have generally declined during the period examined. Weighted-average f.o.b. prices reported by U.S. producers for sales of silicon metal to primary aluminum manufacturers (i.e., product 1) declined by 8.4 percent over the period examined. Prices for U.S.-produced silicon metal sold to secondary aluminum producers (product 2) also declined, falling by 14.2 percent. Prices for U.S.-produced silicon metal sold to chemical manufacturers showed the smallest decline over the period, decreasing by 3.4 percent. Purchase price data for U.S.-produced silicon metal show a decline of *** percent during the period examined.

Weighted-average prices for Russian silicon metal sold to primary aluminum manufacturers declined 30.3 percent during the period examined; however, it should be noted that this percentage decline is calculated from a particularly high first quarter price. Weighted-average prices for sales of Russian silicon metal to the secondary aluminum market decreased by 20.9 percent during the period examined. There were no sales price data reported by importers for sales of chemical grade silicon

V-4

⁹ Public price data available from *Ryan's Notes* also exhibited a declining trend over the period 1999 through December 2001.

Table V-1 Silicon metal: Weighted-average f.o.b. selling prices and quantities for product 1, and margins of underselling/(overselling), by quarters, January 1999-December 2001						
*	*	*	*	*	*	*
Table V-2 Silicon metal: \underselling/(o				antities for produ ber 2001	ct 2, and margi	ns of
*	*	*	*	*	*	*
Table V-3 Silicon metal: \ 1999-December		age f.o.b. selling	prices and qu	antities for produ	ıct 3, by quarteı	s, January
*	*	*	*	*	*	*
				and quantities fo anuary 1999-Dece		eported by
*	*	*	*	*	*	*



metal. Data provided by purchasers *** indicate that prices were more stable in the chemical market; these purchase prices show a decline of *** percent from the second quarter of 1999 to the fourth quarter of the same year for Russian silicon metal. After that decline, prices of the imported product declined irregularly by *** percent by the end of the period.¹⁰

PRICE COMPARISONS

Using the sales price data, there were 24 instances where comparisons between U.S. and Russian prices were possible. In 20 of the 24 instances, the Russian product was priced below the domestic product, with margins ranging from 0.3 to 18.4 percent. In the remaining 4 instances, prices for the U.S. product were lower than those for the Russian product; margins ranged from 1.2 to 18.6 percent.

Using the purchase price data, there were 10 instances where price comparisons were possible. The Russian product was priced below the domestic product in 9 of 10 quarters, with margins ranging from 7.9 to 19.4 percent. In the remaining quarter, the U.S. product was priced 4.4 percent below the Russian product.

LOST SALES AND LOST REVENUES

Petitioners submitted 17 allegations of lost sales and 11 allegations of lost revenues due to competition from imports of silicon metal from Russia. The lost sales allegations totaled \$*** and involved *** short tons of silicon metal, while the lost revenue allegations totaled \$*** and involved *** short tons of silicon metal. Staff contacted firms named in these allegations; tables V-5 and V-6 provide a summary of the information obtained. In addition, comments obtained from purchasers named in the allegations are also provided.

*	*	*	*	*	*	*
able V-6						
	U.S. producers	' lost revenue al	legations			

- *** corrected the data provided in the allegation. For the *** allegation, it stated the correct quantity was ***, the rejected U.S. price was ***, and the accepted import price was ***. For the *** allegation, it stated the correct quantity was ***; it did not know the rejected U.S. price and stated the accepted import price was ***. It stated it purchased material from Russia, South Africa, and France during this time period. It further stated, "accepted quote firm price, one year as per quote request. Rejected U.S. quote firm for *** with quarterly increases possible, making the request for a one year firm price not established." *** provided a letter it received from *** which included the following statements, "***. ***."
- *** agreed with *** allegation but disagreed with ***, stating that the source was South Africa not Russia and that the accepted import values were higher than those stated in the allegations.
- *** stated "(1) *** did not receive quotation from a U.S. producer for deliveries in ***. *** accepted import pricing in the range of *** (delivered). The volume of import product purchased by *** was *** metric tons in *** not *** lbs. as indicated. (2) *** received a quotation from a U.S. producer during *** at *** (delivered basis). A purchase order was issued for *** metric tons of product. ***. *** accepted import pricing at *** Si contained, delivered." (3) With regard to ***, *** reported that it denied the allegation and stated that "it only purchased material from a U.S. producer; the price was \$***/lb. Si contained, delivered, during ***."
 - *** confirmed the lost sales prices given but not the volumes.
- *** stated "We consumed silicon during this time. We bought no Russian silicon to the best of our knowledge and we have no information as to other prices. In ***, we had no silicon delivered. In ***, our entire delivery was from ***. In ***, we purchased *** loads from ***, the balance from non-Russian sources."
- *** stated that, with regard to the *** allegation, the "purchase was made at a lower price from a domestic producer." Regarding the ***, *** agreed with the allegation but stated, "however other imported material priced at similar levels." It disagreed with *** stating, "material was purchased at higher prices than indicated." It further stated that the Russians have been very competitive in their pricing as have a lot of other countries, but they also offer continuity of supply which the domestic producers often will not do. *** also stated that one of the petitioners told *** that it could not depend on continuity because when prices went up, "they would go where the higher prices were."
 - *** corrected the volume *** and the accepted total import value ***.
 - *** corrected the quantity, ***, and stated "agree on current price from ***."
- *** stated "the true cost of Russian silicon was even less. I still bought U.S. silicon because I believe in buying USA products. I did use Russian quote to get price reduction."
- *** stated "By my calculations, the contained price from Russian material is \$***. We bought material at this price totaling *** pounds at this price. We also bought *** pounds of Russian imports at \$*** silicon contained. These were our only purchases in ***."
- *** stated the following: "I cannot agree or disagree with information on the form you have faxed to me without knowing how you have arrived at the figures you are showing on the form."

"*** does purchase material from suppliers in Russia for ***. The price we pay for the silicon coming out of Russia is eight to eleven percent lower than the silicon we purchase from the United States producers. The quality of the silicon coming from Russia is not as good as the silicon that is produced in the United States and therefore the value is less. The recovery on the Russian silicon is lower than the United States silicon with irons being higher and thus lessening its value."

* * * * * * *

PART VI: FINANCIAL EXPERIENCE OF THE U.S. INDUSTRY

BACKGROUND

Four U.S. producers, AST, Elkem, Globe, and SIMCALA, representing all known U.S. production during 1999-2001, provided usable financial data on their silicon metal operations. Three of these firms, Elkem, Globe, and SIMCALA, currently produce silicon metal while one firm, AST, ceased production in September 1999. Detailed data regarding furnaces in operation, shut down, and conversion to ferrosilicon by each responding firm during the period of examined are presented in the section entitled *U.S. Capacity, Production, and Capacity Utilization* in Part III of this report. The financial data reflect the impact of such shut down and conversion of furnaces to ferrosilicon.

OPERATIONS ON SILICON METAL

Income-and-loss data for the U.S. producers on their silicon metal operations are presented in table VI-1 and selected financial data, by firm, are presented in table VI-2. The operating income margin declined from 8.2 percent of total net sales in 1999 to 4.1 percent in 2000, and then dropped to a negative margin of 5.1 percent in 2001. From 1999 to 2000, the quantity of net sales fell by 3.4 percent and the per-pound average selling price declined by four times more than the average cost of goods sold and unit SG&A expenses, resulting in a decreased operating income. From 2000 to 2001, the quantity of net sales dropped by 16.4 percent and the per-pound average selling price declined whereas the average cost of goods sold and SG&A expenses increased, resulting in a negative operating income.

With respect to its increase in raw materials costs, direct labor, and SG&A expenses, *** stated that:

4 ***

VI-1

¹ AST, Elkem, and SIMCALA's fiscal year ended on December 31. Globe's fiscal year ended on the Saturday nearest to June 30.

² AST's data are derived from its producers' questionnaire response submitted in September 2000 for the review case and include data only through June 2000. AST reported its volume in gross tons, which are converted into short tons of contained silicon.

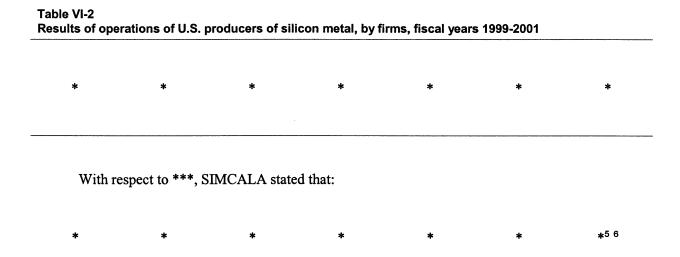
^{3 ***}

Table VI-1 Results of operations of U.S. producers in the production of silicon metal, fiscal years 1999-2001

	Fiscal years				
ltem	1999	2000	2001		
	Quantity (sh	Quantity (short tons of contained silicon)			
Net sales¹	211,031	203,862	170,345		
	Value (\$1,000)				
Net sales¹	296,805	271,079	221,208		
Cost of goods sold	255,620	244,034	217,687		
Gross profit	41,185	27,045	3,521		
SG&A expenses	16,743	15,964	14,703		
Operating income or (loss)	24,442	11,081	(11,182)		
Interest expense	14,150	13,759	13,693		
Other expense ²	7,359	8,055	72,269		
Other income items	2,377	3,160	3,224		
Net income or (loss)	5,310	(7,573)	(93,920)		
Depreciation/amortization	17,175	17,225	17,153		
Cash flow ²	22,485	9,652	(14,975)		
	Ratio to net sales (percent)				
Cost of goods sold	86.1	90.0	98.4		
Gross profit	13.9	10.0	1.6		
SG&A expenses	5.6	5.9	6.6		
Operating income or (loss)	8.2	4.1	(5.1)		
Net income or (loss)	1.8	(2.8)	(42.5)		
	Unit value (per short ton of contained silicon)				
Net sales	\$1,406	\$1,330	\$1,299		
Cost of goods sold	1,211	1,197	1,278		
Gross profit	195	133	21		
SG&A expenses	79	78	86		
Operating income or (loss)	116	54	(66)		
	Number of firms reporting				
Operating losses	***	***	***		
Data	4	4	3		

¹ Net sales quantity and value include internal consumption, which accounted for less than *** percent of total net sales.
² SIMCALA recorded a non-cash accounting charge of \$61,792,045, which includes the write-off of goodwill of \$30,064,104 and write-down of the property, plant, and equipment of \$31,728,941 as per SFAS 121 in September 2001 (SIMCALA, form 10-Q for the quarterly period ended September 30, 2001, p. 5). The cash flow is adjusted for this non-cash charge for 2001.

Source: Compiled from data submitted in response to Commission questionnaires.



INVESTMENT IN PRODUCTIVE FACILITIES, CAPITAL EXPENDITURES, AND RESEARCH AND DEVELOPMENT EXPENSES

The responding firms' data on capital expenditures, research and development (R&D) expenses, and the value of their property, plant, and equipment for their silicon metal operations are shown in table VI-3. Capital expenditures, by firm, are presented in table VI-4. ***.

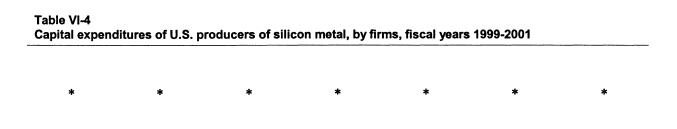
^{5 ***}

⁶ On March 31, 1998, SIMCALA Holdings, Inc. through its wholly owned subsidiary, SAC Acquisition Corp., purchased all of the outstanding common stock of SIMCALA, Inc. On such date, SAC was merged into SIMCALA Holdings. The acquisition of the company for approximately \$65.3 million in cash, including \$6.1 million in expenses directly related to the acquisition and assumption of approximately \$22 million in liabilities, has been accounted for as a purchase. The acquisition was financed through the issuance of senior notes in the amount of \$75 million and equity contributed of \$22 million. The excess of the purchase price over the fair value of the identifiable net assets in the amount of \$34.5 million has been classified as goodwill. In September 2001, SIMCALA recorded a non-cash accounting charge related to an impairment of certain long-lived assets as required by SFAS 121 "Accounting for the Impairment of Certain Long-Lived Assets and For Long-Lived Assets to be Disposed of."

SIMCALA states that ***. ***. ***. ***. ***.

Table VI-3
Capital expenditures, research and development expenses, and value of assets of U.S. producers of silicon metal, fiscal years 1999-2001

	Fiscal years			
Item	1999	2000	2001	
	Value (\$1,000)			
Capital expenditures	***	9,457	7,773	
R&D expenses	2,746	1,888	1,434	
Fixed assets:				
Original cost	261,265	269,734	244,675	
Book value	173,649	169,687	111,424	
Source: Compiled from data submitted in res	ponse to Commission questionna	aires.		



CAPITAL AND INVESTMENT

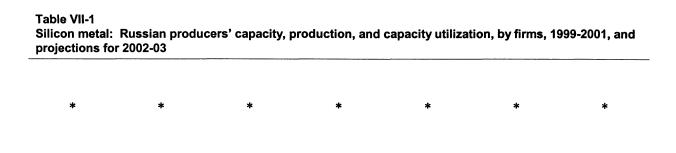
The Commission requested U.S. producers to describe any actual or potential negative effects of imports of silicon metal from Russia on their firms' growth, investment, and ability to raise capital or development and production efforts (including efforts to develop a derivative or more advanced version of the product). Their responses are shown in appendix D.

PART VII: THREAT CONSIDERATIONS

The Commission analyzes a number of factors in making threat determinations.¹ Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V, and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows.

THE INDUSTRY IN RUSSIA

The Commission received questionnaire responses from three producers of silicon metal that are believed to account for all known production of silicon metal in Russia during 1999-2001.² Table VII-1 and figure VII-1 present data on Russian producers' capacity, production, and capacity utilization. Table VII-2 presents aggregated Russian industry data.



The three Russian producers are Bratsk Aluminum Smelter (Bratsk Aluminum), Irkutsk, Russia;³ SUAL-Kremniy-Ural (SKU), Sverdlovsk, Russia;⁴ and ZAO Kremny, Irkutsk, Russia.⁵ SKU and ZAO Kremny share common ownership through SUAL Holding.

¹ See, 19 U.S.C. § 1677(7)(F)(i)).

² ZAO Kremny estimated that it accounted for *** percent of silicon metal production in Russia in 2000; Bratsk Aluminum estimated that it accounted for *** percent; and SKU estimated that it accounted for *** percent. See, responses to the Commission's foreign producers' questionnaire, p. 5.

³ Bratsk Aluminum is a primary aluminum producer ***. Silicon metal accounted for approximately *** percent of Bratsk Aluminum's sales in its most recent fiscal year. The firm was *** Russian producer during 1999-2001. Bratsk produces only secondary aluminum-grade silicon metal. See, postconference brief of Bratsk Aluminum, p. 1.

⁴ SKU was *** Russian producer during the period examined. Silicon metal accounted for *** percent of SKU's sales in its most recent fiscal year. SKU produces only metallurgical-grade silicon metal.

⁵ ZAO Kremny was *** Russian producer during the period examined. Silicon metal accounted for *** percent of ZAO Kremny's sales in its most recent fiscal year. ZAO Kremny produces metallurgical- and chemical-grade silicon metal.

grade silicon metal.^{7 8}



Table VII-2
Silicon metal: Data on the industry in Russia, 1999-2001, and projections for 2002-03

All of the Russian manufacturers produce metallurgical-grade silicon metal for the secondary and primary aluminum markets.⁶ However, only one manufacturer, ZAO Kremny, produced chemical-

Petitioners have asserted that the quality and purity of imported silicon metal from Russia has improved over time and that imports from Russia are accepted for use by customers in all segments of the U.S. market. Respondents agree that subject imports are generally interchangeable with domestically-

Russian capacity increased by *** percent from 1999 to 2001 but is projected to decrease by *** percent by 2003. Russian production increased by *** percent from 1999 to 2001 but is projected to decrease by *** percent by 2003. Industry capacity utilization was *** percent in 1999, *** percent in 2000, and *** percent in 2001, and is projected to be *** percent in 2002 and *** percent in 2003.

produced silicon metal and silicon metal imported from nonsubject sources. 10

⁶ Russian producers are unable to produce low-iron silicon metal (i.e., 0.35 percent or less iron content) for use in certain applications in the primary aluminum market (mainly in the production of automotive alloy wheels) because of the relatively high levels of iron and calcium impurities in the quartzite deposits in Russia. *See*, postconference brief of Bratsk Aluminum, p. 1; postconference brief of GE Silicones, p. 19, and testimony of Mr. Appleby, conference transcript, p. 77.

⁷ Only ZAO Kremny has the refining equipment to produce chemical-grade silicon metal. *See*, testimony of Mr. Appleby and Mr. Wilner, conference transcript, pp. 88-89.

⁸ Sales to end users in the chemical market accounted for *** percent of ZAO Kremny's shipments to the United States in 1999, *** percent in 2000, *** percent in 2001, and are projected to be *** percent in 2002 and *** percent in 2003. ZAO Kremny's largest customers in 2001 were ***.

⁹ See, petitioners' Answers to Questions from Staff, April 5, 2002, pp. 18-19.

¹⁰ See, postconference brief of SUAL Holding and ZAO Kremny, pp. 10-11. See also, testimony of Mr. Appleby, conference transcript, p. 76.

U.S. IMPORTERS' INVENTORIES

Table VII-3 presents data on U.S. importers' end-of-period inventories of imported silicon metal.

Table VII-3 Silicon metal: U.S. importers' end-of-period inventories of imports, by sources, 1999-2001

	Calendar year				
Item	1999	2000	2001		
Imports from Russia:1					
Inventories (short tons of contained silicon)	8,871	5,516	10,212		
Ratio to imports (percent)	39.0	26.8	27.8		
Ratio to U.S. shipments of imports (percent)	37.4	23.1	31.8		
Imports from all other sources: ²					
Inventories (short tons of contained silicon)	***	***	***		
Ratio to imports (percent)	***	***	***		
Ratio to U.S. shipments of imports (percent)	***	***	***		
Imports from all sources:					
Inventories (short tons of contained silicon)	***	***	***		
Ratio to imports (percent)	***	***	***		
Ratio to U.S. shipments of imports (percent)	***	***	***		

¹ Based on responses of 11 firms: ***.

Note.—Import data presented in this table are based on responses to questionnaires of the Commission, not official statistics of Commerce. Due to certain inconsistencies in reporting, inventories, shipments, and imports may not reconcile.

Source: Compiled from data submitted in response to Commission questionnaires.

ANTIDUMPING DUTY ORDERS IN THIRD COUNTRY MARKETS

There are no known antidumping orders or other trade restraints in third countries concerning silicon metal from Russia.¹¹

² Based on the responses of five firms: ***.

¹¹ See, postconference brief of SUAL Holding and ZAO Kremny, p. 38.

APPENDIX A

FEDERAL REGISTER NOTICES

INTERNATIONAL TRADE COMMISSION

[Investigation No. 731–TA–991 (Preliminary)]

Silicon Metal From Russia

AGENCY: International Trade Commission.

ACTION: Institution of antidumping investigation and scheduling of a preliminary phase investigation.

SUMMARY: The Commission hereby gives notice of the institution of an investigation and commencement of preliminary phase antidumping investigation No. 731-TA-991 (Preliminary) under section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)) (the Act) to determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Russia of silicon metal, provided for in subheadings 2804.69.10 and 2804.69.50 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value. Unless the Department of Commerce extends the time for initiation pursuant to section 732(c)(1)(B) of the Act (19 U.S.C. 1673a(c)(1)(B)), the Commission must reach a preliminary determination in antidumping investigations in 45 days, or in this case by April 22, 2002. The Commission's views are due at Commerce within five business days thereafter, or by April 29, 2002.

For further information concerning the conduct of this investigation and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and B (19 CFR part 207). EFFECTIVE DATE: March 7, 2002.

FOR FURTHER INFORMATION CONTACT: Fred Fischer (202-205-3179/ ffischer@usitc.gov), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearingimpaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000. General information concerning the Commission may also be obtained by accessing its internet server (http:// www.usitc.gov). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS-ON-LINE) at http://dockets.usitc.gov/ eol/public.

SUPPLEMENTARY INFORMATION:

Background.—This investigation is being instituted in response to a petition filed on March 7, 2002, by Globe

Metallurgical Inc., Cleveland, OH: SIMCALA, Inc., Mt. Meigs, AL; the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers (I.U.E.-C.W.A, AFL-CIO, C.L.C., Local 693), Selma, AL; the Paper, Allied-Industrial Chemical and **Energy Workers International Union** (Local 5-89), Boomer, WV; and the United Steel Workers of America (AFL-CIO, Local 9436), Niagara Falls, NY.

Participation in the investigation and public service list.—Persons (other than petitioners) wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in sections 201.11 and 207.10 of the Commission's rules, not later than seven days after publication of this notice in the Federal Register. Industrial users and (if the merchandise under investigation is sold at the retail level) representative consumer organizations have the right to appear as parties in Commission antidumping investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.—Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this investigation available to authorized applicants representing interested parties (as defined in 19 U.S.C. 1677(9)) who are parties to the investigation under the APO issued in the investigation, provided that the application is made not later than seven days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for those parties authorized to

receive BPI under the APO Conference.—The Commission's

Director of Operations has scheduled a conference in connection with this investigation for 9:30 a.m. on March 26, 2002, at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Parties wishing to participate in the conference should contact Fred Fischer (202–205–3179 / ffischer@usitc.gov) not later than March 22, 2002, to arrange for their appearance. Parties in support of the imposition of antidumping duties in this investigation and parties in opposition to the imposition of such duties will each be collectively allocated one hour within which to make an oral presentation at the

conference. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the conference.

Written submissions.—As provided in sections 201.8 and 207.15 of the Commission's rules, any person may submit to the Commission on or before April 2, 2002, a written brief containing information and arguments pertinent to the subject matter of the investigation. Parties may file written testimony in connection with their presentation at the conference no later than three days before the conference. If briefs or written testimony contain BPI, they must conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's rules do not authorize filing of submissions with the Secretary by facsimile or electronic means.

In accordance with sections 201.16(c) and 207.3 of the rules, each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: This investigation is being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.12 of the Commission's rules.

Issued: March 11, 2002. By order of the Commission.

Marilyn R. Abbott,

Acting Secretary.

[FR Doc. 02-6193 Filed 3-14-02; 8:45 am] BILLING CODE 7020-02-P

DEPARTMENT OF COMMERCE

International Trade Administration [A–821–817]

Initiation of Antidumping Duty Investigation: Silicon Metal From the Russian Federation

AGENCY: Import Administration,
International Trade Administration,
Department of Commerce.

EFFECTIVE DATE: April 3, 2002.

FOR FURTHER INFORMATION CONTACT: Alex
Villanueva or Aishe Allen, Import
Administration, International Trade
Administration, U.S. Department of
Commerce, 14th Street and Constitution
Avenue, NW, Washington, DC 20230;
telephone: (202) 482–6412, (202) 482–
0172, respectively.

INITIATION OF INVESTIGATION The Applicable Statute and Regulations

Unless otherwise indicated, all citations to the statute are references to the provisions effective January 1, 1995, the effective date of the amendments made to the Tariff Act of 1930 ("Act") by the Uruguay Round Agreements Act ("URAA"). In addition, unless otherwise indicated, all citations to the Department of Commerce's ("Department") regulations are to 19 CFR Part 351 (2002).

The Petition

On March 7, 2002, the Department received a petition on imports of silicon metal from the Russian Federation ("Russia") filed in proper form by Globe Metallurgical Inc., Simcala Inc., the International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers, I.U.E.-C.W.A., AFL-CIO, C.L.C., Local 693, The Paper, Allied-Industrial, Chemical and Energy Workers International Union, Local 5-89, and the United Steel Workers of America, AFL-CIO, Local 9436. hereinafter referred to as "the petitioners." On March 13, 2002, the Department requested clarification of certain areas of the petition and received a response on March 18, 2002.

In accordance with section 732(b) of the Act, the petitioners allege that imports of silicon metal from Russian are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Act, and that such imports are materially injuring and threaten to injure an industry in the United States.

The petitioners are domestic producers of silicon metal and account for over 25 percent of domestic production of silicon metal, as defined in the petition. Therefore, the Department finds that the petitioners have standing to file the petition because they are interested parties as defined under section 771(9)(C) of the Act, with respect to the subject merchandise. The petitioners have demonstrated sufficient industry support with respect to the antidumping duty investigation they are requesting the Department to initiate (see "Determination of Industry Support for the Petition" below).

Scope of Investigation

For purposes of this investigation, the product covered is silicon metal, which generally contains at least 96.00 percent but less than 99.99 percent silicon by weight. The merchandise covered by this investigation also includes silicon metal from Russia containing between 89.00 and 96.00 percent silicon by weight, but containing more aluminum than the silicon metal which contains at least 96.00 percent but less than 99.99 percent silicon by weight. Silicon metal currently is classifiable under subheadings 2804.69.10 and 2804.69.50 of the Harmonized Tariff Schedule of the United States ("HTSUS"). This investigation covers all silicon metal meeting the above specification, regardless of tariff classification.

During our review of the petition, we discussed the scope with the petitioners to ensure that it accurately reflects the product for which the domestic industry is seeking relief. Moreover, as discussed in the preamble to the Department's regulations, we are setting aside a period for interested parties to raise issues regarding product coverage. See Antidumping Duties; Countervailing Duties; Final Rule, 62 FR 27295, 27323 (1997). The Department encourages all interested parties to submit such comments within 20 calender days of publication of this notice. Comments should be addressed to Import Administration's Central Records Unit at Room 1870, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW, Washington, DC 20230. The period of scope consultations is intended to provide the Department with ample opportunity to consider all comments and consult with interested parties prior to the issuance of the preliminary determination.

Determination of Industry Support for the Petition

Section 732(b)(1) of the Act requires that a petition be filed on behalf of the domestic industry. Section 732(c)(4)(A) of the Act provides that a petition meets this requirement if the domestic producers or workers who support the

petition account for: (1) at least 25 percent of the total production of the domestic like product, and (2) more than 50 percent of the production of the domestic like product produced by that portion of the industry expressing support for, or opposition to, the petition.

Section 771(4)(A) of the Act defines the "industry" as the producers as a whole of a domestic like product. Thus, to determine whether the petition has the requisite industry support, the statute directs the Department to look to producers and workers who produce the domestic like product. The International Trade Commission ("ITC"), which is responsible for determining whether "the domestic industry" has been injured, must also determine what constitutes a domestic like product in order to define the industry. While the Department and the ITC must apply the same statutory definition regarding the domestic like product (see section 771(10) of the Act), they do so for different purposes and pursuant to separate and distinct authority. In addition, the Department's determination is subject to limitations of time and information. Although this may result in different definitions of the domestic like product, such differences do not render the decision of either agency contrary to law.1

Section 771(10) of the Act defines the domestic like product as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation under this title." Thus, the reference point from which the domestic like product analysis begins is "the article subject to an investigation," i.e., the class or kind of merchandise to be investigated, which normally will be the scope as defined in the petition.

In this case, the domestic like product referred to in the petition is the single domestic like product defined in the "Scope of Investigation" section, above. At this time, the Department has no basis on the record to find the petition's definition of the domestic like product to be inaccurate. The Department, therefore, has adopted the domestic like product definition set forth in the petition.

Moreover, the Department has determined that the petition contains adequate evidence of industry support; therefore, polling was unnecessary (see Initiation Checklist Re: Industry Support, March 27, 2002) ("Initiation Checklist"). To the best of the Department's knowledge, producers supporting the petition represent over 50 percent of total production of the domestic like product. Additionally, no person who would qualify as an interested party pursuant to section 771(9) (A), (C), (D), (E), or (F) of the Act has expressed opposition to the petition.

Accordingly, the Department determines that this petition is filed on behalf of the domestic industry within the meaning of section 732(b)(1) of the Act.

Export Price

The following is a description of the allegation of sales at less than fair value upon which the Department based its decision to initiate this investigation. The sources of data for the deductions and adjustments relating to U.S. price and factors of production are also discussed in the *Initiation Checklist*. Should the need arise to use any of this information as facts available under section 776 of the Act in our preliminary or final determination, we may reexamine the information and revise the margin calculations, if appropriate.

The petitioners identified the

The petitioners identified the following Russian companies as major producers of silicon metal in Russia: Bratsk Aluminum Plant ("Bratsk"), JSC Russian Aluminum, Uralsky Aluminum Plant ("Uralsky"), and Irkutsk Aluminum Plant ("Irkutsk").

The petitioners based export price 'EP'') on import values declared to the U.S. Customs Service ("Customs"). In calculating import values declared to Customs, the petitioners used the HTSUS category under which subject merchandise is currently classified (i.e., 2804.69.10 and 2804.69.50). The petitioners calculated EP based on the average unit values ("AUVs") for entries of subject merchandise during July through December 2001. For purposes of initiation, we re-calculated the average U.S. price based on HTSUS by using a quantity based weighted-average of each HSTUS subheading. See Initiation Checklist. In order to obtain ex-factory prices, the petitioners deducted foreign inland freight from the Customs value. For purposes of calculating foreign inland freight, the petitioners used the surrogate value for rail because of the large distances involved and the lower expense of shipping by rail, as compared to shipments by truck.

To determine export price, we relied on the data in the petition except that we adjusted the petitioners' estimate for foreign inland freight. See Initiation Checklist. To value foreign inland

freight, the petitioners first calculated an average distance of three known producers of silicon metal in Russia to each producer's nearest port. See Initiation Checklist. The petitioners reported that the average distance for the three known producers of silicon metal in Russia to the nearest port was 4,149 kilometers. The petitioners multiplied this distance by an Egyptian surrogate value for rail freight that was based on an average of rates for distances ranging from 98 to 884 kilometers. For purposes of initiation, we revalued freight by multiplying the average distance to the port by the Egyptian surrogate value for rail freight for 884 kilometers only, as this is the closest distance to 4,149 kilometers.

Non-Market Economy Status

The petitioners asserted that Russia is a non-market economy country ("NME") and no determination to the contrary has yet been made by the Department. In previous investigations, the Department has determined that Russia is an NME. See Notice of Final Determination of Sales at Less Than Fair Value: Pure Magnesium from Russian Federation ("Magnesium from Russia"), 66 FR 49347 (September 27, 2001). In accordance with section 771(18)(C)(i) of the Act, the presumption of NME status remains in effect until revoked by the Department. The presumption of NME status for the Russian Federation has not been revoked by the Department and, therefore, remains in effect for purposes of the initiation of this investigation. Accordingly, the normal value of the product appropriately is based on factors of production valued in a surrogate market economy country in accordance with section 773(c) of the Act. In the course of this investigation, all parties will have the opportunity to provide relevant information related to the issues of Russia's NME status and the granting of separate rates to individual exporters.

Normal Value

The petitioners provided a dumping margin calculation using the Department's NME methodology as required by 19 C.F.R. § 351.202(b)(7)(i)(C). For the normal value ("NV") calculation, petitioners based the factors of production, as defined by section 773(c)(3) of the Act (raw materials, labor and energy), for silicon metal on information from Russian producers. See Initiation Checklist.

The petitioners selected Egypt as their surrogate country. The petitioners argued that pursuant to 773(c)(4) of the Act, Egypt is an appropriate surrogate

¹ See Algoma Steel Corp. Ltd., v. United States, 688 F. Supp. 639, 642–44 (CIT 1988); High Information Content Flat Panel Displays and Display Glass from Japan: Final Determination; Rescission of Investigation and Partial Dismissal of Petition, 56 FR 32376, 32380–81 (July 16, 1991).

because it is a market—economy country that is at a comparable level of economic development to the NME and is a significant producer of comparable merchandise. Based on the information provided by the petitioners, we believe that the petitioners' use of Egypt as a surrogate country is appropriate for purposes of initiation of this investigation. See Initiation Checklist.

In accordance with section 773(c)(4) of the Act, the petitioners valued factors of production, where possible, on reasonably available, public surrogate country data. To value certain raw materials, the petitioners used import statistics from Egypt, as reported in the United Nations Statistical Division Commodity Trade Database System ("UNCTS") for 1999, excluding those values from countries previously determined by the Department to be NME countries. For inputs valued in Egyptian pounds and not contemporaneous with the period of investigation ("POI") (i.e., July -December 2001), we used information from the wholesale price indices ("WPI") in Egypt as published in the International Financial Statistics ("IFS"), December 2001, to determine the inflation adjustment. The surrogate values calculated by the petitioners for raw materials were recently used in the antidumping duty investigation of silicomanganese from Kazakhstan, with the exception of electrode paste, charcoal and wood chips. See Notice of Preliminary Determination of Sales at Less Than Fair Value: Siliconmanganese from Kazakhstan, ("Silicomanganese from Kazakhstan") 66 FR 56639 (November 9, 2001) and

Initiation Checklist.

Labor was valued using the regression—based wage rate for Russia provided by the Department, which is available on the Import Administration's website, in accordance with 19 CFR 351.408(c)(3). Petitioners

valued electricity using the same
Egyptian surrogate value used in
Silicomanganese from Kazakhstan.

Factory overhead, selling, general and administrative expenses (SG&A), interest, and profit were derived from the 1999–2000 financial statements of Sinai Manganese Company ("Sinai"), an Egyptian ferro–manganese alloys producer.

We made adjustments to NV for electrode paste, charcoal, wood chips, and the surrogate ratios. For further information, see the *Initiation Checklist*.

Based on comparisons of EP to NV, calculated in accordance with section 773(c) of the Act, the estimated recalculated dumping margin for silicon metal from Russia is 97.17 percent.

Fair Value Comparisons

Based on the data provided by the petitioners, there is reason to believe that imports of silicon metal from Russia are being, or are likely to be, sold in the United States at less than fair value.

Allegations and Evidence of Material Injury and Causation

The petition alleges that the U.S. industry producing the domestic like product is being materially injured and is threatened with material injury, by reason of the imports of the subject merchandise sold at less than NV. The petitioners contend that the industry's injured condition is evident in (1) declines in production, (2) declines in shipments, and (3) declines in prices (4) capacity utilization, and (5) employment.

The Department assessed the allegations and supporting evidence regarding material injury and causation and determined that these allegations are supported by accurate and adequate evidence and meet the statutory requirements for initiation (see Attachments to Initiation Checklist, Re: Material Injury).

Initiation of Antidumping Investigation

Based upon our examination of the petition on silicon metal imports from Russia, we find that the petition meets the requirements of section 732 of the Act. Therefore, we are initiating an antidumping duty investigation to determine whether imports of silicon metal from Russia are being, or are likely to be, sold in the United States at less than fair value. Unless postponed, we will make our preliminary determination no later than 140 days after the date of this initiation.

Distribution of Copies of the Petition

In accordance with section 732(b)(3)(A) of the Act, a copy of the public version of the petition has been provided to the government representatives of Russia. We will attempt to provide a copy of the public version of the petition to each exporter named in the petition, as appropriate.

International Trade Commission Notification

We have notified the ITC of our initiation, as required by section 732(d) of the Act.

Preliminary Determination by the ITC

The ITC will preliminarily determine, no later than April 22, 2002, whether there is a reasonable indication that imports of silicon metal from Russia are causing material injury, or threatening

to cause material injury, to a U.S. industry. A negative ITC determination will result in this investigation being terminated; otherwise, this investigation will proceed according to statutory and regulatory time limits.

This notice is published pursuant to section 777(i) of the Act.

Dated: March 27, 2002

Faryar Shirzad,

Assistant Secretary for Import Administration.

[FR Doc. 02-8069 Filed 4-2-02; 8:45 am] BILLING CODE 3510-DS-S

APPENDIX B

CALENDAR OF PUBLIC CONFERENCE



UNITED STATES INTERNATIONAL TRADE COMMISSION

WASHINGTON, DC

CALENDAR OF PUBLIC CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission's conference held in connection with the following investigation:

SILICON METAL FROM RUSSIA Investigation No. 731-TA-991 (Preliminary)

March 26, 2002 - 9:30 a.m.

The conference was held in Courtroom A of the United States International Trade Commission Building, 500 E Street, SW, Washington, DC.

In Support of the Imposition of Antidumping Duties-

Verner, Liipfert, Bernard, McPherson, and Hand Washington, DC on behalf of

- Globe Metallurgical Inc.
- SIMCALA, Inc.
- International Union of Electronic, Electrical, Salaried, Machine and Furniture Workers (I.U.E.-C.W.A, AFL-CIO, C.L.C., Local 693)
- Paper, Allied-Industrial Chemical and Energy Workers International Union (Local 5-89)
- United Steelworkers of America (AFL-CIO, Local 9436)
 - J. Marlin Perkins, Vice President Sales North America, Globe Metallurgical Inc.
 - C. Edward Boardwine, President and CEO, SIMCALA, Inc.
 - Kenneth R. Button, Economic Consulting Services Inc.
 - Peter J. Kimball, Economic Consulting Services Inc.

William D. Kramer)
Jessie M. Brooks)-OF COUNSEL

B-3

CALENDAR OF PUBLIC CONFERENCE—Continued

In Opposition to the Imposition of Antidumping Duties-

Holland & Knight LLP Washington, DC on behalf of

- SUAL Holding
- ZAO Kremny
- Pultwen Ltd.
- Greenwich Metals, Inc.
 - Peter J. Appleby, President, Greenwich Metals, Inc.
 - Dr. Patrick J. Magrath, Managing Director, Georgetown Economic Services
 - Brad Hudgens, Economic Consultant, Georgetown Economic Services

Frederick P. Waite)
Kimberly R. Young)-OF COUNSEL

Shearman & Sterling Washington, DC on behalf of

• Bratsk Aluminum Smelter

Thomas B. Wilner)
Quentin M. Baird)—OF COUNSEL

Dewey Ballantine LLP Washington, DC on behalf of

- General Electric Silicones LLC
 - Marcia Haynes, General Manager, Global Sourcing, GE Silicones
 - Brent L. Bartlett, Economist, Dewey Ballantine

Michael H. Stein)-OF COUNSEL

APPENDIX C

SUMMARY TABLE

Table C-1
Silicon metal: Summary data concerning the U.S. market, 1999-2001

	short tons of contained sill e per short ton of containe				enses	
		Reported data		Period changes		
Item	1999	2000	2001	1999-2001	1999-2000	2000-2001
U.S. consumption quantity:						
Amount	328,060	330,900	279,031	-14.9	0.9	-15.7
Producers' share ¹	62.6	57.2	54.7	-7.9	-5.4	-2.5
Importers' share:1						
Russia	7.7	7.4	12.2	4.6	-0.2	4.8
All other sources	29.7	35.3	33.1	3.4	5.6	-2.3
Total imports	37.4	42.8	45.3	7.9	5.4	2.5
U.S. consumption value:						
Amount	428,449	409,629	338,134	-21.1	-4.4	-17.5
Producers' share ¹	65.4	60.9	58.7	-6.7	-4.5	-2.2
Importers' share:1						
Russia	6.1	6.2	10.4	4.3	0.1	4.2
All other sources	28.5	32.9	30.9	2.4	4.4	-2.0
Total imports	34.6	39.1	41.3	6.7	4.5	2.2
U.S. imports from-		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		·—————————————————————————————————————	L	
Russia:						
Quantity	25,158	24,643	34,153	35.8	-2.0	38.6
Value	26,201	25,529	35,325	34.8	-2.6	38.4
Unit value	\$1,041	\$1,036	\$1,034	-0.7	-0.5	-0.2
Ending inventory quantity	8,871	5,516	10,212	15.1	-37.8	85.1
All other sources:	3,0.1	5,5.6	.0,2.12		00	
Quantity	97,499	116,908	92,279	-5.4	19.9	-21.1
Value	122,231	134,819	104,420	-14.6	10.3	-22.5
Unit value	\$1,254	\$1,153	\$1,132	-9.7	-8.0	-1.9
Ending inventory quantity	294	62	21	-92.9	-78.9	-66.1
All sources:	207			-52.5	-70.5	-00.1
Quantity	122,657	141,551	126,431	3.1	15.4	-10.7
Value	148,432	160,349	139,745	-5.9	8.0	-10.7
Unit value	\$1,210		\$1,105	-8.7	-6.4	
Ending inventory quantity	9,165	\$1,133				-2.4
U.S. producers':	9,105	5,578	10,233	11.7	-39.1	83.5
Average capacity quantity	250,973	224,262	195,545	-22.1	-10.6	42.0
Production quantity				-30.6		-12.8
Capacity utilization ¹	209,376	195,630	145,333 74.3		-6.6	-25.7
	83.4	87.2	74.3	-9.1	3.8	-12.9
U.S. shipments:	005.400	400.040.	450.000	T		
Quantity	205,403	189,349	152,600	-25.7	-7.8	-19.4
Value	280,018	249,280	198,389	-29.2	-11.0	-20.4
Unit value	\$1,363	\$1,317	\$1,300	-4.6	-3.4	-1.2
Export shipments:						
Quantity	***	***	***	_***	_***	_***
Value	***	***	***	_***	_***	_***
Unit value	***	***	***	_***	_***	_***
Ending inventory quantity	9,135	11,110	2,306	-74.8	21.6	-7 9.2
Inventories/total shipments ¹	***	***	***	-***	***	_***

Table C-1--Continued
Silicon metal: Summa mary data concerning the U.S. market, 1999-2001

	nort tons of contained si per short ton of contain				enses		
		Reported data			Period changes		
Item	1999	2000	2001	1999-2001	1999-2000	2000-2001	
Production workers	719	637	523	-27.3	-11.4	-17.9	
Hours worked (1,000s)	1,632	1,471	1,203	-26.3	-9.9	-18.	
Wages paid (\$1,000s)	32,436	29,055	23,788	-26.7	-10.4	-18.	
Hourly wages	\$19.88	\$19.75	\$19.77	-0.5	-0.6	0.	
Productivity ²	128.3	133.0	120.8	-5.8	3.7	-9.	
Unit labor costs	\$154.92	\$148.52	\$163.68	5.7	-4.1	10.	
Net sales:							
Quantity	211,031	203,862	170,345	-19.3	-3.4	-16	
Value	296,805	271,079	221,208	-25.5	-8.7	-18	
Unit value	\$1,406	\$1,330	\$1,299	-7.7	-5.5	-2	
Cost of goods sold (COGS)	255,620	244,034	217,687	-14.8	-4.5	-10	
Gross profit or (loss)	41,185	27,045	3,521	-91.5	-34.3	-87	
SG&A expenses	16,743	15,964	14,703	-12.2	-4.7	-7	
Operating income or (loss)	24,442	11,081	(11,182)	(³)	-54.7		
Capital expenditures	***	9,457	7,773	_***	_***	-17	
Unit COGS	\$1,211	\$1,197	\$1,278	5.5	-1.2	6	
Unit SG&A expenses	\$79	\$78	\$86	8.8	-1.3	10	
Unit operating income or (loss)	\$116	\$54	\$(66)	(³)	-53.1		
COGS/sales ¹	86.1	90.0	98.4	12.3	3.9	8	
Operating income or (loss)/sales ¹	8.2	4.1	-5.1	-13.3	-4.1	-9	

 ^{1 &}quot;Reported data" are in percent and "period changes" are in percentage points.
 2 Productivity=short tons of contained silicon per 1,000 hours.
 3 Not applicable.

Note.-Financial data are reported on a fiscal-year basis and may not necessarily be comparable to data reported on a calendar-year basis. Because of rounding, figures may not add to the totals shown. Unit values, shares, and period changes are calculated from the unrounded figures.

Source: Compiled from data submitted in response to Commission questionnaires and from official Commerce statistics.

APPENDIX D

EFFECTS OF IMPORTS ON U.S. PRODUCERS' EXISTING DEVELOPMENT AND PRODUCTION EFFORTS, GROWTH, INVESTMENT, AND ABILITY TO RAISE CAPITAL

The Commission requested U.S. producers to describe any actual or potential negative effects of imports of silicon metal from Russia on their firms' growth, investment, and ability to raise capital or development and production efforts (including efforts to develop a derivative or more advanced version of the product).

Actual Negative Effects

Producer responses regarding actual negative effects experienced as a result of silicon metal from Russia are provided below.

* * * * * * * *

Anticipated Negative Effects

Producer responses regarding anticipated negative effects due to imports of silicon metal from Russia are provided below.

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