BEFORE THE
UNITED STATES DEPARTMENT OF COMMERCE
INTERNATIONAL TRADE ADMINISTRATION
AND THE
UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:  )
)  )  )  )
SILICON METAL FROM AUSTRALIA,  )  )  )  )
BRAZIL, KAZAKHSTAN, AND  )  )  )  )
NORWAY  )  )  )

ANTIDUMPING AND
COUNTEVRAILING DUTY
PETITION

PETITIONER:

GLOBE SPECIALTY METALS, INC.

VOLUME I – GENERAL ISSUES AND MATERIAL INJURY

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March 8, 2017

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I. GENERAL INFORMATION

A. Identity of the Petitioner

This petition is filed on behalf of Globe Specialty Metals, Inc. ("GSM"). GSM is the largest producer of silicon metal in the United States.\(^1\) The company has silicon metal production facilities in Beverly, Ohio; Alloy, West Virginia; Selma, Alabama; and Niagara Falls, New York. During 2016, the domestic industry produced approximately [160,433] short tons ("ST") of silicon metal.\(^2\) Of that total, GSM produced [ ] ST.\(^3\)

The name, address, telephone number, and e-mail address of the petitioner are:

Globe Specialty Metals, Inc.
County Road 32
P.O. Box 157
Beverly, OH 45715

J. Marlin Perkins, Vice President - Sales
Globe Metallurgical Inc.
Tel: (216) 272-1419
E-mail: perkins@globemetallurgical.com

B. Other U.S. Silicon Metal Producers

In addition to GSM, there are two other producers of silicon metal in the United States: Dow Corning Alabama ("DC Alabama") and Mississippi Silicon LLC ("Mississippi Silicon").

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\(^1\) See affidavit of J. Marlin Perkins, attached as Exhibit I-1.

\(^2\) See Exhibit I-2. In general, quantities of silicon metal in this petition are stated in terms of contained weight, not gross weight. For example, 50,000 ST of silicon metal with a 98 percent silicon content would be described as 49,000 ST of silicon metal. Exceptions to the use of contained weight include data on total U.S. industry production and shipments, which include data for other U.S. silicon metal producers; apparent domestic consumption, which is derived in part from the U.S. shipments of other U.S. silicon metal producers; and data on the capacities and production of producers in the subject countries. In these cases, the available data are reported on a gross-weight basis.

\(^3\) Id.
DC Alabama is a wholly owned subsidiary of Dow Corning Corporation ("DCC"), the largest U.S. consumer of silicon metal. Through DCC, DC Alabama is affiliated with Brazilian silicon metal producer Dow Corning Silício do Brasil Industria e Comercio Ltda. ("DC Brazil"). DC Alabama has an annual production capacity of [ ] ST of silicon metal at its plant in Mount Meigs, Alabama.  

Mississippi Silicon is majority owned by Rima Holding USA, Inc. ("Rima Holding"). Rima Holding in turn is owned by Brazilian silicon metal producer Rima Industrial S.A. or its owners, the Vicentin family. Mississippi Silicon has an annual production capacity of 39,700 ST of silicon metal at its plant in Burnsville, Mississippi.

The addresses, telephone numbers, and e-mail addresses of the other U.S. silicon metal producers are:

**DC Alabama**

Address: 1940 Ohio Ferro Road  
Mount Meigs, AL 36057

Telephone: (334) 215-7560  
E-Mail: Unknown

**Mississippi Silicon**

Address: 80 County Road 210  
Burnsville, MS 38833

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4 See Exhibit I-3.

5 The capacity is reported as [ ] metric tons ("MT"). Exhibit I-2.

6 Exhibit I-4.

7 Id.

8 Id. The capacity is reported as 36,000 MT.
C. Industry Support for the Petition

The statute provides that the Department of Commerce (the "Department") shall determine that a petition has been filed on behalf of a domestic industry 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.\(^9\) The Department’s regulations provide that the Department ‘‘normally will measure production over a twelve-month period specified by the {Department}, and may measure production based on either value or volume.’’\(^10\) In most instances, the Department bases its determination on volume.\(^11\)

In this case, GSM, DC Alabama, and Mississippi Silicon are the only domestic producers of silicon metal.\(^12\) In 2016, GSM accounted for approximately [ ] percent of the total volume

\(^9\) Section 732(c)(4)(A) of the Tariff Act of 1930, as amended (the "Act"), 19 U.S.C. § 1673a(c)(4)(A). In determining industry support, the Department is required to disregard domestic producers opposing the petition if such producers are related to foreign producers, unless such domestic producers demonstrate that their interests as domestic producers would be adversely affected by the imposition of an antidumping duty order. Section 732(c)(4)(B)(i) of the Act, 19 U.S.C. § 1673a(c)(4)(B)(i). In addition, the Department has discretion to disregard the position of domestic producers who are importers of the subject merchandise. Section 732(c)(4)(B)(ii) of the Act, 19 U.S.C. § 1673a(c)(4)(B)(ii). In this case, DC Alabama and Mississippi Silicon are related to foreign producers of subject merchandise—DC Brazil and Rima, respectively. In addition, DC Alabama’s parent company, DCC, is an importer of silicon metal from Brazil. GSM is not an importer of silicon metal from any subject country. To GSM’s knowledge, DC Alabama and Mississippi Silicon also do not import silicon metal from any subject country.

\(^10\) 19 C.F.R. § 351.203(e)(1).


\(^12\) Affidavit of J. Marlin Perkins, attached as Exhibit I-1.
of U.S. silicon metal production, while DC Alabama and Mississippi Silicon accounted for approximately [  ] percent and [  ] percent, respectively, of the total volume of production.\(^\text{13}\) Accordingly, GSM’s production meets the requirements that domestic producers or workers supporting the petition account for at least 25 percent of the total production of the domestic like product and 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.

In addition, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (“USW”) and the IUE-CWA, the Industrial Division of the Communications Workers of America, also support this petition.\(^\text{14}\) The USW represents the workers at GSM’s Alloy, West Virginia and Niagara Falls, New York silicon metal plants. The IUE-CWA represents the workers at GSM’s Selma, Alabama plant.

Therefore, this petition is filed on behalf of the domestic silicon metal industry.

**D. Other Applications for Import Relief**


\(^{13}\) GSM produced [  ] ST of silicon metal in 2016. \(\text{i.e.}\) DC Alabama and Mississippi Silicon produced [  ] ST and [  ] ST of silicon metal, respectively. Exhibit I-2. Thus, the total volume of silicon metal produced in the United States in 2016 = [160,433] ST: [  ] ST ÷ [  ] ST = [  ] percent. [  ] ST ÷ [  ] ST = [  ] percent. [  ] ST ÷ [  ] ST = [  ] percent. The production volume for GSM is stated in terms of the weight of the contained silicon, while the production estimates for DC Alabama and Mississippi Silicon are stated in terms of the gross weight of the silicon metal produced. Because the gross weight exceeds the weight of the contained silicon, these calculations conservatively understate GSM’s share of domestic silicon metal production in 2016.

\(^{14}\) See Exhibits I-5 and I-6.
E. Department of Commerce Periods of Investigation

In antidumping investigations involving merchandise from market economy countries such as Australia, Brazil, Kazakhstan, and Norway, the Department normally examines the merchandise sold during the four most recently completed fiscal quarters as of the month preceding the month in which the petition was filed.\(^{15}\) In accordance with this practice, the Department’s period of investigation ("POI") in the antidumping investigations covering imports from Australia, Brazil, and Norway will be the period from January 1 through December 31, 2016.

In countervailing duty investigations, the Department normally relies on information pertaining to the most recently completed calendar year. In accordance with this practice, the Department’s POI in the countervailing duty investigations covering imports from Australia, Brazil, and Kazakhstan will be calendar year 2016.

II. THE MERCHANDISE AND DOMESTIC INDUSTRY

A. The Requested Scope of the Investigations

The requested scope of these investigations is as follows:

The scope of these investigations covers all forms and sizes of silicon metal, including silicon metal powder. Silicon metal contains at least 85.00 percent but less than 99.99 percent silicon, and less than 4.00 percent iron, by actual weight. Semiconductor grade silicon (merchandise containing at least 99.99 percent silicon by actual weight and classifiable under HTSUS subheading 2804.61.0000) is excluded from the scope of these investigations.

Silicon metal is currently classifiable under subheadings 2804.69.1000 and 2804.69.5000 of the Harmonized Tariff Schedule of the United States ("HTSUS"). While the HTSUS numbers

\(^{15}\) 19 C.F.R. § 351.204(b)(1).
are provided for convenience and customs purposes, the written description of the scope remains dispositive.

B. The Imported Merchandise

1. Description

Silicon metal is a product normally composed almost entirely of elemental silicon, along with small amounts of other elements, such as iron, aluminum, and calcium. It is manufactured and sold in various degrees of purity.

Silicon metal is steel gray color. It is metallic in appearance, but fractures comparatively readily. Although called silicon metal, it is actually a metalloid, because it has both metallic and non-metallic characteristics. It is usually sold in sized-lump form. The lumps typically range from 6 inches x ½ inch to 4 inches x ¼ inch, although other forms and sizes are also sold.

Chemical manufacturers consume silicon metal in powder form in producing silicones and polysilicon. Such companies purchase silicon metal in lump form if they have their own grinding facilities. They purchase silicon metal in powder form if they do not have their own

\[16\] The silicon content threshold for subject merchandise in this petition is lower than the threshold in the existing silicon metal orders. The purpose of this change is to address potential circumvention concerns. The lower silicon content threshold does not affect the import data because silicon metal containing less than 99.00 percent silicon will still be imported under the same HTSUS subheading (HTSUS 2804.69.50). In addition, the lower silicon content threshold does not affect product mix, because (1) the silicon metal currently entering the United States almost always contains at least 97 percent silicon, (2) the added requirement that subject merchandise contain less than 4.00 percent iron ensures that the scope does not cover high-silicon-content ferrosilicon (or any other ferroalloy), and (3) Petitioner is not aware of any other product that would be encompassed by the lower threshold.

\[17\] These dimensions refer to the maximum and minimum sizes of the silicon metal lumps. If the specifications of silicon metal are 6 inches x ½ inch, for example, then no dimension of a silicon metal lump can be larger than 6 inches or smaller than ½ inch. The 6 inches is referred to in the industry as the “top” size, and the ½ inch is referred to as the “bottom” size.
grinding facilities.\textsuperscript{18} A lower grade of powder (fines – a by-product of the crushing and sizing process) is sold for ceramic and refractory applications.

2. Uses

Silicon metal is principally used as an alloying agent in aluminum production and by the chemical industry as an input in the production of silicones and polysilicon. As an alloying agent, it is used in the production of both primary aluminum (aluminum produced from ore) and secondary aluminum (aluminum produced from scrap). Silicon is a necessary ingredient in aluminum casting alloys. Silicon imparts high fluidity and low shrinkage to aluminum and improves castability, strength, and weldability.

In the chemical industry, silicon metal is used as the basis for the production of silanes, fluids from which more than 1,000 silicone resins, lubricants, plastomers, antifoaming agents, and water-repellent compounds are formulated. The silicones production process involves reacting silicon metal with methyl chloride in the presence of a copper catalyst to produce a mixture of methylchlorosilanes. Certain of these silanes are then hydrolyzed to produce the basic methylsilicone building block for the various silicone products.

In addition, an increasing proportion of silicon metal now serves as the base material for making polysilicon, a very high purity form of silicon manufactured by chemical producers. This product, which is not within the scope of this petition, generally contains over 99.999 percent silicon. It is generally made by reacting metallurgical silicon with hydrogen chloride gas.

\textsuperscript{18} Size consistency is important to chemical producers that purchase silicon metal in powder form. Suppliers to such customers must qualify their product before bidding to supply the chemical manufacturer. For that reason, there is no difference in terms of size consistency between qualified import and domestic suppliers.
in the presence of catalysts, producing silicon tetrachloride, which is then purified by fractional distillation. The purified distillate is pyrolytically decomposed to produce hyperpure metal and hydrochloric acid.

Silicon metal also is used in die casting and copper, magnesium, and steel manufacture.

3. Specifications

Although silicon metal often is 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 types of customers. These specifications establish the minimum amounts of silicon and the maximum amounts of other elements, such as iron, calcium, and aluminum, that the silicon metal may contain. The ranges of specifications vary depending on the type of end use of the silicon metal, e.g., secondary aluminum production, primary aluminum production, or chemical applications. The differences between these ranges of specifications are very small.\(^{19}\)

The specifications of U.S. chemical producers vary significantly, but typically call for silicon metal containing at least 98.0 percent silicon, no more than 0.5 percent iron, no more than

\(^{19}\) For example, one domestic producer (GSM) lists its silicon metal product specifications as:

<table>
<thead>
<tr>
<th>Chemical Grade</th>
<th>Primary Aluminum Grade</th>
<th>Secondary Aluminum Grade</th>
<th>High Purity Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silicon</td>
<td>98.50% min.</td>
<td>98.50% min.</td>
<td>98.50% min.</td>
</tr>
<tr>
<td>Iron</td>
<td>0.50% max.</td>
<td>0.35% max.</td>
<td>1.00% max.</td>
</tr>
<tr>
<td>Calcium</td>
<td>0.07% max.</td>
<td>0.07% max.</td>
<td>0.40% max.</td>
</tr>
<tr>
<td>Aluminum</td>
<td>0.20% max.</td>
<td>0.20% max.</td>
<td>0.20% max.</td>
</tr>
</tbody>
</table>

Some suppliers, customers, and publications refer to numerical grade designations such as "Grade 553." "Grade 553" is silicon metal with a maximum iron content of 0.5 percent, a maximum aluminum content of 0.5 percent, and a maximum calcium content of 0.3 percent. Such silicon metal normally has a minimum silicon content of 98.5 percent.
0.10 percent calcium, and no more than 0.35 percent aluminum. The specifications of U.S. primary aluminum producers typically call for silicon metal containing at least 98.5 percent silicon, less than 0.5 percent iron, and less than 0.07 percent calcium (in many cases below 0.015 percent). The specifications of U.S. secondary aluminum producers typically call for silicon metal containing at least 98.5 percent silicon, no more than 1.0 percent iron, and no more than 0.35 percent calcium.

4. Manufacturing Process

With one exception, all silicon metal, regardless of specification, is produced using essentially the same process and inputs. Silica in the form of high purity quartz is combined in a “charge” with a carbonaceous reductant such as low-ash coal, charcoal, or petroleum coke, and a bulking agent, usually wood chips. The charge is placed in a submerged arc electric furnace. Electrical energy is delivered from a transformer system to the furnace. High-current, low-voltage electricity is delivered to the reaction by conductors made from pre-baked or self-baking amorphous carbon.

20 "Chemical grade" silicon metal is a general term that refers to product that could be sold to chemical producers and would meet such producers' specifications. "Chemical grade" silicon metal is normally thought of as purer than "metallurgical grade" silicon metal (silicon metal sold to customers in the primary and secondary aluminum market segments), but that is not necessarily the case.

21 See Exhibit I-7. Unlike other silicon metal, Silgrain is produced by refining 90-94 percent ferrosilicon using a proprietary chemical leaching process. See Exhibit I-8.

22 Silicon is one of the most common elements on the earth’s surface. Silicon appears abundantly in combination with oxygen as “silica” – a compound composed almost entirely of silicon dioxide (SiO₂) – and as a component of many silicate minerals, such as quartzite (a rock composed principally of quartz), sand, and sandstone. These forms of silica are ubiquitous in the United States and throughout the world. However, only silica with a silicon dioxide content in excess of 99 percent and a low iron content (less than one percent) can be used effectively in the production of silicon metal.
The charge is heated to approximately 3,000 degrees Fahrenheit. At this temperature, the oxygen in the SiO₂ separates from the silicon and combines with the carbon in the reductant to form carbon monoxide gas. The simplified chemical reaction is as follows: \( \text{SiO}_2 + 2\text{C} \rightarrow \text{Si} + 2\text{CO} \). The gas escapes, leaving molten silicon.

The silicon is removed or "tapped" from the furnace on either a continuous or an intermittent basis. In the molten state, the silicon metal is often refined by oxygen injection to remove impurities such as aluminum and calcium. Some impurities cannot be removed from the liquid silicon and, therefore, must be controlled by raw material selection. After tapping (or refining), the silicon metal is poured into large flat iron molds or onto beds of silicon metal fines. The resulting ingot or billet is subsequently crushed to the desired size specification.

A schematic of the production process is attached as Exhibit I-10.

Silica fume (microsilica) – small particles of unreduced silicon dioxide recovered from the off-gases of silicon metal furnaces – is a by-product of silicon metal production. Silica fume is used in making concrete, oil well grouts, cementitious repair products, refractory and ceramics, and other products.

One form of silicon metal – Silgrain – is manufactured using a different process. Silgrain is the trademarked name for high purity silicon powder produced by one company – Norwegian producer Elkem AS ("Elkem"). Silgrain is produced by refining 90-94 percent ferrosilicon using a proprietary chemical leaching process.

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23. [Footnote]. Affidavit of Duane Huck, attached as Exhibit I-9.


25. See id. Like silicon metal produced using the standard process, Silgrain is used in the production of polysilicon, silicones, and other specialized materials. Exhibit I-7.
C. The Domestic Like Product and the Domestic Industry

1. Legal Standards

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 identifies the "domestic like product" and the "industry." Section 771(4)(A) of the Act defines the relevant domestic industry as the "producers as a whole 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." 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."

The determination of the appropriate domestic like product(s) in an investigation is a factual one, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis. In identifying the domestic like product, 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; (5) the use of common manufacturing facilities and production employees; and where

26 Section 771(4)(A) of the Act, 19 U.S.C. § 1677(4)(A); see also Certain Hot-Rolled Steel Flat Products from Australia, Brazil, Japan, Korea, the Netherlands, Turkey and the United Kingdom, Inv. Nos. 701-TA-545-547 and 731-TA-1291-1297 (Final), USITC Pub. No. 4638, at 5 (September 2016) ("Hot-Rolled Steel").


appropriate, (6) price. No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation. The Commission looks for clear dividing lines among possible like products and disregards minor variations.

2. The Domestic Like Product

In this case, the merchandise subject to investigation is silicon metal. The domestic like product is also silicon metal.

In all prior silicon metal investigations, the Commission has found a single like product consisting of all silicon metal, regardless of grade (other than semiconductor grade silicon metal). In the first three investigations, the Commission based its finding on “the similarity in physical characteristics, production processes, common manufacturing facilities and employees, and channels of distribution, as well as the complete substitutability of the higher grade product for the lower grades and the minor differences in price for the production of all grades of silicon metal as well as in the overall pricing of the end product.” In the fourth investigation, the

30 Hot-Rolled Steel, USITC Pub. No. 4638, at 5, n.15.


34 China Investigation, USITC Pub. No. 2385 at 10, attached as Exhibit I-11; Brazil Investigation, USITC Pub. No. 2404 at 9, attached as Exhibit I-12; Argentina Investigation, USITC Pub. No. 2429 at 7-8, attached as Exhibit I-13.
Commission found a single domestic like product "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." \(^{35}\)

In recent sunset reviews, the Commission again found a single domestic like product. \(^{36}\)

Applying the Commission’s criteria to the facts existing today shows that silicon metal continues to be a single like product.

Only minor physical differences exist among grades of silicon metal. All grades are composed almost entirely of elemental silicon, along with very small amounts of impurities. Silicon metal of all grades has the same physical appearance, \(i.e.,\) it is metallic in appearance, solid in mass, and steel gray in color. \(^{37}\) Both imported and domestic silicon metal are usually sold in lump form, but may also be sold in powder form.

Domestic silicon metal and the subject imports compete directly in the same market segments. Customers purchase silicon metal using specifications that prescribe the required percentage of silicon and minor elements by weight.

Customers do not distinguish between imported and domestic silicon metal. Within any given grade, imported and domestic silicon metal are entirely interchangeable. In addition, higher grade silicon metal is completely substitutable for lower grade product.

\(^{35}\) *Russia Investigation*, USTIC Pub. No. 3584 at 5, attached as Exhibit I-14.


With one exception (Silgrain), the process of producing silicon metal is essentially the same for all grades of imported and domestic silicon metal. Producers typically manufacture different grades of silicon metal using the same facilities and employees. Furthermore, producers normally can and do use the same furnaces to produce different grades of silicon metal.

Domestic and imported silicon metal are sold through substantially the same channels of distribution. Domestic producers make sales of silicon metal directly to end users. The subject imports mainly are sold to end users directly or through related U.S. distributors.

Generally, there are relatively minor differences in price among grades of silicon metal.

For all of these reasons, the domestic like product is all silicon metal, regardless of grade, with a silicon content of less than 99.99 percent silicon by weight.

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38 See section II.B.4., supra at 9-10 (describing the silicon metal manufacturing process). While Silgrain is produced in a different process (using different facilities and employees) than other silicon metal, Silgrain is like other silicon metal with respect to all other like product factors. Specifically, with respect to physical characteristics, like other silicon metal, Silgrain is composed almost entirely of silicon, with very small amounts of impurities. Silgrain is sold in powder form, as is other silicon metal consumed by chemical producers and certain other customers. Silgrain is indistinguishable from and interchangeable with other high purity silicon metal powder, whether produced by the domestic industry, or supplied by subject or nonsubject import sources. Silgrain is sold in the U.S. market through the same or similar channels of distributions as other silicon metal. Specifically, Silgrain is sold directly to end users. The uses for which Silgrain is marketed and sold include chemical (polysilicon and silicons) and aluminum applications. Silgrain is perceived by producers and consumers to be silicon metal. Finally, Silgrain competes head-to-head on the basis of price with other high purity silicon metal in powder form for sales to end users.

39 The imports from Kazakhstan are sold to end users through trading companies.
3. The Domestic Industry

Applying the Commission’s criteria, a single like product exists: silicon metal. Accordingly, the United States industry to be examined consists of silicon metal operations of the three domestic producers – GSM, DC Alabama, and Mississippi Silicon.⁴⁰

III. THE PRODUCERS AND EXPORTERS OF AUSTRALIAN, BRAZILIAN, KAZAKH, AND NORWEGIAN SILICON METAL

A. Australia

Simcoa Operations Pty Ltd (“Simcoa”) (http://www.simcoa.com.au/) is the only silicon metal producer in Australia.⁴¹ Simcoa is a wholly owned subsidiary of Shin Etsu Chemical Company,⁴² a publicly traded producer of silicones and chemicals based in Japan. Simcoa has one plant. All of the Australian silicon metal exported to the United States is exported by Simcoa.⁴³

Petitioner believes that Simcoa sells silicon metal to the United States at less than fair value and benefits from countervailable subsidies.

The address and contact information for Simcoa are:

⁴⁰ In prior silicon metal determinations, the Commission has found that the domestic industry consists of all U.S. producers of silicon metal. See, e.g., Brazil Investigation, USITC Pub. No. 2404 at 9 (“The domestic industry is consequently defined as all producers of such silicon metal in the United States.”), attached as Exhibit I-12; Russia Investigation, USTIC Pub. No. 3584 at 6 (“we find that the domestic industry consists of all domestic producers of silicon metal”), attached as Exhibit I-14; Russia Second Review, USTIC Pub. No. 4471 at 7-8 (“we define the domestic industry, as we did in the original investigation and first five-year review, to include all domestic producers of silicon metal”), attached as Exhibit I-15.

⁴¹ Exhibit I-17.

⁴² Exhibit I-18.

⁴³ Exhibit I-19.
B. Brazil

There are five Brazilian silicon metal producers: (1) DC Brazil, (2) Ligas de Aluminio S.A. ("LIASA") (http://liasa.com.br), (3) Rima Industrial S.A. ("Rima") (http://www.rima.com.br), (4) Companhia Ferroligas Minas Gerais -- MINASLIGAS ("MINASLIGAS") (http://www.minasligas.com.br), and (5) Italmagnesio Nordeste S/A ("Italmagnesio").\(^{44}\) DC Brazil, LIASA, and Rima exported silicon metal from Brazil to the United States during the POI.\(^{45}\) To the best of Petitioner's knowledge, Italmagnesio did not produce silicon metal during the POI and MINASLIGAS did not ship silicon metal the United States during the POI.

DC Brazil is wholly owned subsidiary of DCC, a producer of silicones and polysilicon based in the United States. DC Brazil has two plants.\(^{46}\)

LIASA is a privately owned company based in Brazil. LIASA has a single plant.\(^{47}\)

\(^{44}\) [ \text{confidential industry source} ] , attached as Exhibit I-20.

\(^{45}\) Exhibit I-21.

\(^{46}\) Exhibit I-22.

\(^{47}\) Exhibit I-23.
Rima is a privately owned producer of silicon metal, silicon alloys, and magnesium based in Brazil. Rima produces silicon metal in two plants.48

The information available to Petitioner indicates that DC Brazil, LIASA, and Rima accounted for 79.5, 9.2, and 11.3 percent of the silicon metal exported from Brazil to the United States during the POI, respectively.49

Petitioner believes that DC Brazil, LIASA, and Rima sell silicon metal to the United States at less than fair value and benefit from countervailable subsidies.

The addresses and contact information for DC Brazil are:

Rodovia PA 263 – Km 3,5 s/n
Breu Branco, Pará
CEP 68488-000

Tel: +55 94 3786-1000
E-mail: brasil.para@dowcorning.com
(Plant)

Rua José Galvond, 6
Santos Dumont, Minas Gerais
CEP 36440-000

Tel: +55 32 3251-9100
E-mail: Unknown
(Plant)

The address and contact information for LIASA are:

Avenida do Contorno, 1977
Belo Horizonte, Minas Gerais
CEP 30 110 009

Tel: +55 31 3249-2000
E-mail: liasa@liasa.com.br
(Headquarters)

48 Exhibit I-24.

49 See Exhibit I-21.
Av. Dr. José Patrus de Sousa, 1000
Pirapora, Minas Gerais
CEP 39 270 000

Tel: +55 31 3249-2000
E-mail: Unknown
(Plant)

The address and contact information for Rima are:

Distrito Industrial de Bocaiúva
Bocaiúva, Minas Gerais
CEP 31391-000

Tel: (+55 38) 3251.4000
E-mail: through company website at http://www.rima.com.br/eng/htmls/contact-rima.php
(Headquarters)

Anel Rodoviário Km 4,5, Bairro Novo dos Indústrias
Belo Horizonte, Minas Gerais
CEP 30622-910
Tel: (+55 31) 3329.4000/2121.4000
E-mail: Unknown
(Administrative office)

The address and contact information for MINASLIGAS are:

Rua Paraíba, 1122 – 4º Andar – Funcionarios
Belo Horizonte, Minas Gerais
CEP 30130-918

Tel: +55 31 3261-8666
E-mail: through company website at www.minasligas.com.br
(Headquarters)

Av. Kenzo Miyawaki (antiga Av. Oeste) 1120
Distrito Industrial Ministro Jorge Vargas
Pirapora, Minas Gerais
CEP 39270-000

Tel: Unknown
E-mail: Unknown
(Plant)

The address and contact information for Italmagnesio are:
R. Salvador Roberto 1853 1 Galpao, Bairro Progresso
Varzea da Palma, Minas Gerais
CEP 39260-000

Tel: +55 38 3731-1451
E-mail: Unknown

C. Kazakhstan

There are two silicon metal producers in Kazakhstan: (1) LLP Tau-Ken Temir ("Tau-Ken Temir") (http://www.tks-temir.kz) and (2) LLP Metallurgical Combine Kaz Silicon ("Kaz Silicon") (http://www.kazsilicon.kz).50

Tau-Ken Temir is a wholly owned subsidiary of Tau-Ken Samruk, a mining company owned by the government of Kazakhstan.51 Tau-Ken Temir has one plant.52 To the best of Petitioner's knowledge, Tau-Ken Temir is the only exporter of Kazakh silicon metal to the United States.

Petitioner believes that Tau-Ken Temir benefits from countervailable subsidies.

The address and contact information for Tau-Ken Temir are:

Oktyabrskiy district, industrial zone, north industrial zone
Building near HPP-3
Karaganda oblast, Karaganda city,
Kazakhstan

Tel: +7(7212) 908 533
E-mail: info@tks-temir.kz

The address and contact information for Kaz Silicon are:

50 [ Confidential industry source ] , attached as Exhibit I-20.

51 Exhibit I-25.

52 Id.
Almaty oblast
Karatal district
c. Bastobe, Komarova St. 1

Tel: +7(72834) 4-03-73
E-mail: kazsilicon@kazsilicon.com

D. Norway

There are two silicon metal producers in Norway: (1) Elkem (https://www.elkem.com) and (2) Wacker Chemicals Norway AS (https://www.wacker.com).\textsuperscript{53}

Elkem is a wholly owned subsidiary of China National Bluestar (Group) Co. Ltd., a global chemical industry group based in Beijing, China.\textsuperscript{54} Elkem has three plants.\textsuperscript{55} To the best of Petitioner’s knowledge, Elkem is the only exporter of Norwegian silicon metal to the United States.\textsuperscript{56}

Petitioner believes that Elkem sells silicon metal to the United States at less than fair value.

The address and contact information for Elkem are:

Drammensveien 169
Postboks 334 Skøyen,
NO-0213 Oslo, Norway

Tel: +47 22 45 01 00
E-mail: unknown
(Headquarters)

P.O. Box 133
NO-6723 Svelgen
Norway

\textsuperscript{53} [ Confidential industry source ], attached as Exhibit I-20.

\textsuperscript{54} Exhibit I-26.

\textsuperscript{55} Exhibit I-27.

\textsuperscript{56} Exhibit I-28.
Tel: +47 57 79 61 00  
E-mail: unknown  
(Bremanger plant)

NO-8226 Straumen  
Norway

Tel: +47 75 69 81 00  
E-mail: unknown  
(Salten plant)

P.O. Box 10  
NO-7301 Orkanger  
Norway

Tel: +47 72 48 82 00  
E-mail: unknown  
(Thorshavn plant)

The address and contact information for Wacker Chemicals Norway AS are:

Holla Metall  
Hollaveien 482  
7200 Kyrksaeterora  
Norway

Tel: +47 72 4506-00  
E-mail: Unknown

IV. THE IMPORTERS OF SILICON METAL FROM AUSTRALIA, BRAZIL, KAZAKHSTAN, AND NORWAY

A. Australia

To the best of Petitioner’s knowledge, all of the Australian silicon metal exported to the United States by Simcoa is imported by and consigned to a related company, Shintech Inc.\textsuperscript{37}

The address and contact information for Shintech Inc. are:

\textsuperscript{37} Exhibit I-19. Shintech is owned by the same parent company as Simcoa, Shin Etsu Chemical Co., Ltd. Exhibit I-18.
3 Greenway Plaza, Suite 1150
Houston, Texas 77046

Tel: (713) 965-0713
E-mail: http://www.shintechinc.com/contactus.html

B. Brazil

To the best of Petitioner's knowledge, all of the silicon metal exported from Brazil to the United States by DC Brazil is imported by and consigned to its parent company, DCC, for use in the production of silicones and polysilicon by DCC and its affiliates.

The address and contact information for DCC is:

Corporate Center
2200 W. Salzburg Road
P.O. Box 994
Auburn, MI 48611

Tel: (989) 496-4400
E-mail: http://www.dowcorning.com/content/support/contact_us.aspx

Petitioner has identified the following importers of silicon metal shipped from Brazil by LIASA based on publicly available port arrival data:

Greenwich Metals
165 West Putnam Avenue
Greenwich, CT 06830

Tel: (203) 622-4848
E-mail: Unknown

Medima LLC
5727 Strickler Road
Clarence, NY 14031

Tel: (716) 741-0400
E-mail: Unknown

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58 Exhibit I-21.

59 Id.
To the best of Petitioner's knowledge, all of the silicon metal exported from Brazil to the United States by Rima is imported by and consigned to a related company, Polymet Alloys, Inc.\textsuperscript{60}

The address and contact information for Polymet Alloys are:

1701 Providence Park, Suite 150  
Birmingham, AL  35242-4688

Tel:  (205) 981-2200  
E-mail:  Unknown

C. Kazakhstan

Based on the information available to Petitioner, including publicly available port arrival data, Petitioner believes that the following two unaffiliated trading companies are importers of Kazakh silicon metal exported to the United States by Tau-Ken Temir: CCMA LLC\textsuperscript{61} and N.T. Ruddock Company.

The address and contact information for CCMA LLC are:

450 Corporate Parkway #100  
Amherst, NY  14226-1268

Tel:  (800) 828-6621  
E-mail:  sales@ccmallc.com

The address and contact information for N.T. Ruddock Company are:

26123 Broadway Ave.  
Cleveland, OH  44146

Tel:  (440) 439-4976  
E-mail:  sales@ntruddock.com

\textsuperscript{60} Id.

\textsuperscript{61} Exhibit I-29.
D. Norway

The information available to Petitioner indicates that silicon metal exported to the United States from Norway is imported by Elkem Materials Inc. ("Elkem Materials"), an affiliated party that sells the silicon metal to unaffiliated customers in the United States. The address and contact information for Elkem Materials are:

P.O. Box 266
Pittsburgh, PA 15230-0266
(Mailing Address)

Airport Office Park, Building 2
400 Rouser Road
Moon Township, PA 15108-2749
(Street Address)

Tel: (412) 299-7200
E-mail: Unknown

Petitioner has identified the following additional importers of silicon metal from Norway based on publicly available port arrival data:

Mitsubishi Polycrystalline Silicon
No. 7800 Mitsubishi Lane
Theodore, AL 36582-7024

Tel: (251) 443-6440
E-mail: Unknown

REC Solar Grade Silicon LLC
3322 Road N N.E.
Moses Lake, WA 98837-9505

Tel: (509) 765-2106
E-mail: Unknown

63 Exhibit I-26.
64 Exhibit I-28.
Saint Gobain Ceramic Materials  
1 New Bond Street  
P.O. Box 15136  
Worcester, MA 01615  

Tel: (508) 795-5000  
E-mail: Unknown  

These additional importers are end users who import silicon metal for use in their manufacturing operations.

V. SALES AT LESS THAN FAIR VALUE

Petitioner alleges that silicon metal from Australia, Brazil, and Norway is being sold at less than fair value. The dumping margins for Australia range from 28.58 to 52.81 percent ad valorem. The dumping margins for Brazil range from 15.41 to 134.92 percent ad valorem. The dumping margins for Norway range from 32.25 to 45.66 percent ad valorem. Information regarding the calculation of the dumping margins for Australia, Brazil, and Norway is set forth in Volumes II, IV, and VII of this petition, respectively.

VI. COUNTERVAILABLE SUBSIDIES

Petitioner alleges that silicon metal producers in Australia, Brazil, and Kazakhstan are receiving countervailable subsidies. Information regarding the subsidies received by the producers in Australia, Brazil, and Kazakhstan is set forth in Volumes III, V, and VI of this petition, respectively.

VII. THE DOMESTIC SILICON METAL INDUSTRY IS SUFFERING MATERIAL INJURY

In assessing the condition of the domestic industry, the Commission considers a variety of factors, including, among others, financial performance, prices, production, shipments, capacity, capacity utilization, inventories, employment, wages, capital investments, and research.