

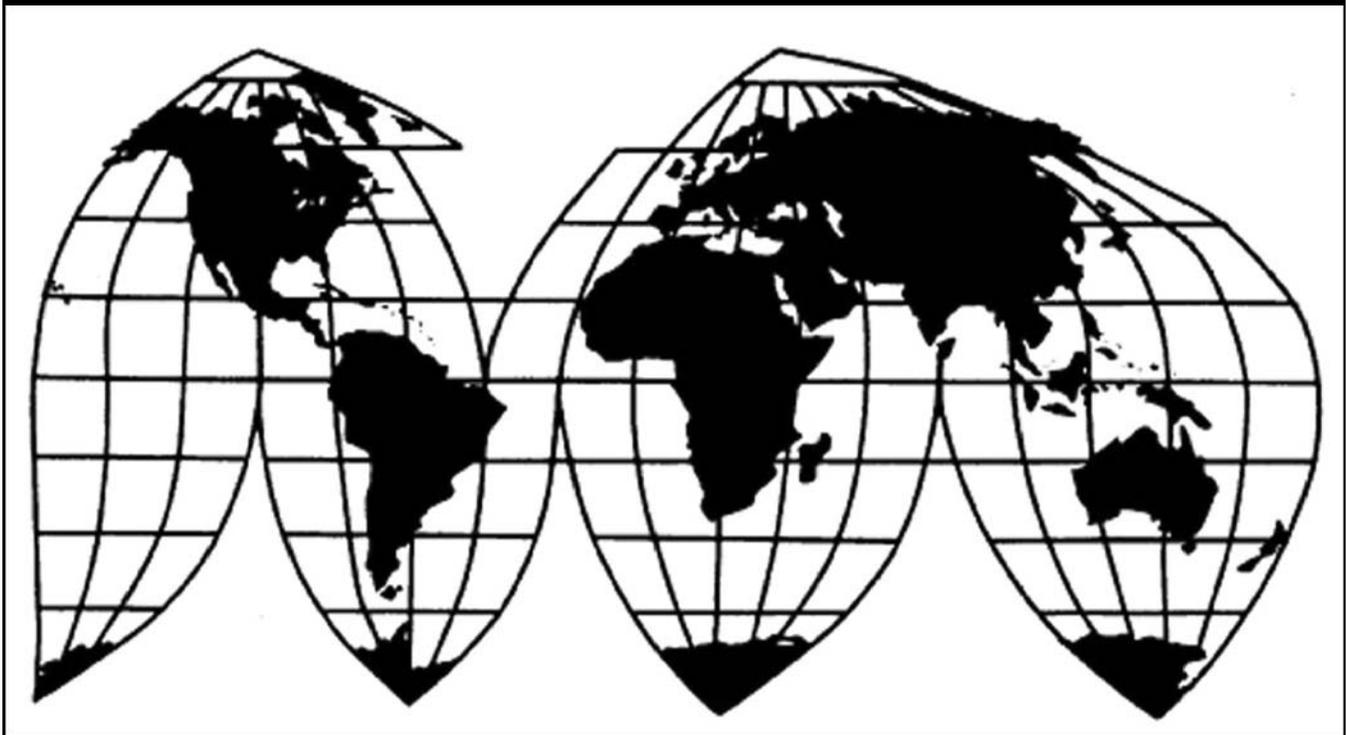
# **Ferrosilicon From Venezuela**

Investigation No. 731-TA-1225 (Final)

**Publication 4490**

**September 2014**

**U.S. International Trade Commission**



Washington, DC 20436

# U.S. International Trade Commission

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# U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted.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

# UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1225 (Final)

FERROSILICON FROM VENEZUELA

## DETERMINATION

On the basis of the record<sup>1</sup> developed in the subject investigation, the United States International Trade Commission (Commission) determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from Venezuela of ferrosilicon, provided for in subheadings 7202.21.10, 7202.21.50, 7202.21.75, 7202.21.90, and 7202.29.00 of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce (Commerce) to be sold in the United States at less than fair value (LTFV).

## BACKGROUND

The Commission instituted this investigation effective July 19, 2013, following receipt of a petition filed with the Commission and Commerce by Globe Specialty Metals, Inc., New York, New York; CC Metals and Alloys, LLC, Calvert City, Kentucky; the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union; and the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America. The final phase of the investigation was scheduled by the Commission following notification of a preliminary determination by Commerce that imports of ferrosilicon from Venezuela were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of March 31, 2014 (79 FR 18065). The hearing was held in Washington, DC, on July 29, 2014, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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



## Views of the Commission

Based on the record in the final phase of this investigation, we find that an industry in the United States is not materially injured or threatened with material injury by reason of imports of ferrosilicon from Venezuela found by the U.S. Department of Commerce (“Commerce”) to be sold in the United States at less than fair value.

### I. Background

The petition in this investigation was filed on July 19, 2013, by domestic producers Globe Specialty Metals, Inc. (“Globe”) and CC Metals and Alloys, LLC (“CC Metals”), and trade unions United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union and the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America.<sup>1</sup> Globe and CC Metals appeared at the hearing and submitted prehearing and posthearing briefs.

FerroAtlantica de Venezuela (“FerroVen”) and FerroAtlantica S.A. (collectively “FerroAtlantica”), respectively, a producer and exporter of the subject merchandise in Venezuela, and its parent and U.S. importer, appeared at the hearing and filed prehearing and posthearing briefs.

U.S. industry data are based on the questionnaire responses of Globe and CC Metals, which accounted for all U.S. production of ferrosilicon during calendar years 2011 through 2013 and (January to March) (“interim”) 2014, the period of investigation (“POI”).<sup>2</sup> Data for U.S. imports of ferrosilicon during the POI are based on official import statistics.<sup>3</sup> The Commission received a response to its questionnaire from FerroAtlantica, which accounted for all production of ferrosilicon in Venezuela and all exports of ferrosilicon from Venezuela to the United States during the POI.<sup>4</sup>

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<sup>1</sup> The petition concerned ferrosilicon from Russia and Venezuela. Confidential Report (“CR”) and Public Report (“PR”) at I-1. Commerce made preliminary and final negative dumping determinations on ferrosilicon from Russia. 79 Fed. Reg. 13620 (Mar. 11, 2014) (preliminary determination); 79 Fed. Reg. 44393 (Jul. 31, 2014) (final determination). Following Commerce’s negative final determination, the Commission terminated its investigation on ferrosilicon from Russia. 79 Fed. Reg. 46450 (Aug. 8, 2014). Consequently, ferrosilicon from Russia is nonsubject merchandise.

<sup>2</sup> CR at I-5, PR at I-4.

<sup>3</sup> CR at I-5, PR at I-4. The record also includes data on U.S. shipments of subject imports from Venezuela reported in FerroAtlantica’s questionnaire response, as well as U.S. shipments of nonsubject imports from Russia. CR/PR at Table D-1.

<sup>4</sup> CR at I-5, VII-3; PR at I-4, VIII-2-3.

## II. Domestic Like Product

### A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the “domestic like product” and the “industry.”<sup>5</sup> Section 771(4)(A) of the Tariff Act of 1930, as amended (“the Tariff 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.”<sup>6</sup> In turn, the Tariff 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.”<sup>7</sup>

The decision regarding the appropriate domestic like product in an investigation is a factual determination, and the Commission has applied the statutory standard of “like” or “most similar in characteristics and uses” on a case-by-case basis.<sup>8</sup> No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.<sup>9</sup> The Commission looks for clear dividing lines among possible like products and disregards minor variations.<sup>10</sup> Although the Commission must accept Commerce’s determination as to the scope of the imported merchandise that is subsidized or sold at less than fair value,<sup>11</sup> the Commission determines what domestic product is like the imported articles Commerce has identified.<sup>12</sup>

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<sup>5</sup> 19 U.S.C. § 1677(4)(A).

<sup>6</sup> 19 U.S.C. § 1677(4)(A).

<sup>7</sup> 19 U.S.C. § 1677(10).

<sup>8</sup> See, e.g., *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *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 the following: (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).

<sup>9</sup> See, e.g., S. Rep. No. 96-249 at 90-91 (1979).

<sup>10</sup> *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; see also S. Rep. No. 96-249 at 90-91 (Congress has indicated that the 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.”).

<sup>11</sup> See, e.g., *USEC, Inc. v. United States*, 34 Fed. Appx. 725, 730 (Fed. Cir. 2002) (“The ITC may not modify the class or kind of imported merchandise examined by Commerce.”); *Algoma Steel Corp. v.* (Continued...)

## B. Product Description

Commerce defined the scope of the imported merchandise under investigation as follows:

all forms and sizes of ferrosilicon, regardless of grade, including ferrosilicon briquettes. Ferrosilicon is a ferroalloy containing by weight four percent or more iron, more than eight percent but not more than 96 percent silicon, three percent or less phosphorus, 30 percent or less manganese, less than three percent magnesium, and 10 percent or less any other element. The merchandise covered also includes product described as slag, if the product meets these specifications.<sup>13</sup>

Ferrosilicon is used mainly in the production of steel and cast iron. In steel production, the silicon in ferrosilicon serves as a deoxidizer, preventing bubbles in solidified steel by combining with dissolved oxygen in molten steel. Ferrosilicon also is used as the source of silicon for alloying purposes in the production of certain cast iron and steel alloys, such as electrical steel.<sup>14</sup> Ferrosilicon also is used as a reducing agent, particularly in the production of stainless steel.<sup>15</sup>

Commercially, ferrosilicon is differentiated by grade and size. Ferrosilicon grades are defined by the percentages by weight of silicon and minor elements contained in the product. Almost all ferrosilicon consumed in the United States contains, by weight, approximately 75 percent or 50 percent of silicon. Ferrosilicon grades are further defined by the percentages of minor elements present in the product. Regular grades of 75 percent ferrosilicon and 50 percent ferrosilicon contain the indicated percentages of silicon and recognized maximum percentages of minor elements, such as aluminum, titanium, or calcium. Specialty grades of

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(...Continued)

*United States*, 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

<sup>12</sup> *Hosiden Corp. v. Advanced Display Mfrs.*, 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 (“Commerce’s {scope} finding does not control the Commission’s {like product} determination.”); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission’s determination defining six like products in investigations in which Commerce found five classes or kinds).

<sup>13</sup> 79 Fed. Reg. 44393, 44393-94 (Jul. 31, 2014). Commerce states that ferrosilicon is currently classifiable under the Harmonized Tariff Schedule of the United States (“HTSUS”) under subheading 7202.21.1000, 7202.21.5000, 7202.29.0010, and 7202.29.005. *Id.*

<sup>14</sup> CR at I-10, PR at I-7.

<sup>15</sup> CR at I-10, PR at I-7. As a reducing agent, the silicon in ferrosilicon reacts with chromium oxides to form silicon oxides, returning chromium to the molten steel, and increasing the overall chromium recovery of the process. *Id.* Ferrosilicon products sometimes referred to as inoculants contain controlled amounts of minor elements for the purpose of adding them to steel or foundry iron by using ferrosilicon as the carrier. CR at I-10, PR at I-7.

ferrosilicon differ from regular grades by having more restrictive limits on the content of minor elements.<sup>16</sup>

### C. Domestic Like Product Analysis

In its preliminary determinations, the Commission defined a single domestic like product that was coextensive with Commerce's scope. Petitioners requested and no party objected to that definition. The Commission found that all ferrosilicon shares the same basic physical characteristics and end uses, with the principal use being to introduce silicon into the production of steel and cast iron. The Commission observed that the same production facilities, production processes, and employees could be employed to produce all grades of ferrosilicon, and that the \*\*\* of the domestic industry's U.S. shipments of ferrosilicon were made directly to end users, including steel producers and iron foundries. The Commission noted that the record suggested that there was at least some degree of interchangeability between different grades of ferrosilicon and that producers and consumers perceived ferrosilicon to be a product distinct from other products.<sup>17</sup>

The record in the final phase of this investigation concerning the domestic like product factors is not materially different from that in the preliminary phase,<sup>18</sup> and there is no argument that the Commission should adopt a definition of the domestic like product different from that in the preliminary determinations.<sup>19</sup> Therefore, for the reasons set forth in the preliminary determinations and these Views, we find one domestic like product that is coextensive with the scope definition.

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<sup>16</sup> CR at I-9-10, PR at I-7-8. FerroAtlantica would have the market viewed as consisting of two segments: one consisting of regular grade and low aluminum grade 75 percent ferrosilicon, categories in which most of the subject imports compete, and a segment for all other ferrosilicon, consisting of specialty grades other than low aluminum 75 percent ferrosilicon and including all 50 percent ferrosilicon grades. *E.g.*, FerroAtlantica's Prehearing Brief at 16-17.

<sup>17</sup> *Ferrosilicon from Russia and Venezuela*, Inv. Nos. 731-TA-1224-1225 (Preliminary), USITC Pub. 4426 at 5-7 (Sept. 2012) ("Preliminary Determinations"). The Commission also observed that prices can differ among grades, and that petitioners contended that prices of all grades were interrelated to some extent and follow similar trends. *Id.* In this final phase investigation, shipment data for all main grades show often significant variations in movements of unit sales values between the different grades. See FerroAtlantica Prehearing Brief at 36, Exhibits 3 & 8.

<sup>18</sup> See generally CR at I-9-14, PR at I-7-9.

<sup>19</sup> Petitioners argue that the Commission should define the domestic like product to be ferrosilicon, a category that is coextensive with the definition of the scope of the subject merchandise, as it did in its preliminary determinations. Petitioners' Prehearing Brief at 5-6. FerroAtlantica stated in the preliminary phase that it did not object to defining the domestic like product in terms that are coextensive with Commerce's scope (Ferroatlantica's Postconference Brief at 9) and did not address domestic like product in its final phase submissions.

### III. Domestic Industry

The domestic industry is defined as the domestic “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.”<sup>20</sup> In defining the domestic industry, the Commission’s general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

In its preliminary determinations, the Commission defined the domestic industry as consisting of Globe and CC Metals, the two producers of ferrosilicon in the United States.<sup>21</sup> In the final phase of these investigations, Globe and CC Metals remain the sole domestic producers of ferrosilicon.<sup>22</sup> Accordingly, we again define the domestic industry as consisting of Globe and CC Metals.

### IV. No Material Injury by Reason of Subject Imports<sup>23</sup>

#### A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.<sup>24</sup> In making this determination, the Commission must consider the volume of subject 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.<sup>25</sup> The statute defines “material injury” as “harm which is not inconsequential, immaterial, or unimportant.”<sup>26</sup> In assessing whether 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.<sup>27</sup> No single factor is dispositive, and all relevant factors are considered “within the

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<sup>20</sup> 19 U.S.C. § 1677(4)(A).

<sup>21</sup> Preliminary Determination, USITC Pub. 4426 at 8.

<sup>22</sup> CR/PR at Table III-1. Parties make no argument for a domestic industry definition different from that in the preliminary determinations. There are no related party issues in this investigation.

<sup>23</sup> Negligibility under 19 U.S.C. § 1677(24) is not an issue in this investigation. Official import data indicate that imports from Venezuela exceeded the requisite 3 percent statutory negligibility threshold. From July 2012 to June 2013, the most recent 12-month period preceding the filing of the petition, U.S. imports from Venezuela accounted for 15.3 percent of total U.S. imports of ferrosilicon by quantity. CR at IV-9-10, PR at IV-7-8.

<sup>24</sup> 19 U.S.C. §§ 1671d(b), 1673d(b).

<sup>25</sup> 19 U.S.C. § 1677(7)(B). The Commission “may consider such other economic factors as are relevant to the determination” but shall “identify each {such} factor ... and explain in full its relevance to the determination.” 19 U.S.C. § 1677(7)(B).

<sup>26</sup> 19 U.S.C. § 1677(7)(A).

<sup>27</sup> 19 U.S.C. § 1677(7)(C)(iii).

context of the business cycle and conditions of competition that are distinctive to the affected industry.”<sup>28</sup>

Although the statute requires the Commission to determine whether the domestic industry is “materially injured or threatened with material injury by reason of” unfairly traded imports,<sup>29</sup> it does not define the phrase “by reason of,” indicating that this aspect of the injury analysis is left to the Commission’s reasonable exercise of its discretion.<sup>30</sup> In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the “by reason of” standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.<sup>31</sup>

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.<sup>32</sup> In performing its examination, however, the Commission need not isolate

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<sup>28</sup> 19 U.S.C. § 1677(7)(C)(iii).

<sup>29</sup> 19 U.S.C. §§ 1671d(a), 1673d(a).

<sup>30</sup> *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) (“{T}he statute does not ‘compel the commissioners’ to employ {a particular methodology}.”), *aff’g*, 944 F. Supp. 943, 951 (Ct. Int’l Trade 1996).

<sup>31</sup> The Federal Circuit, in addressing the causation standard of the statute, observed that “[a]s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement.” *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that “this court requires evidence in the record ‘to show that the harm occurred ‘by reason of’ the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.’” *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass’n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

<sup>32</sup> SAA at 851-52 (“{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports.”); S. Rep. 96-249 at 75 (1979) (the Commission “will consider information which indicates that harm is caused by factors other than less-than-fair-value imports.”); H.R. Rep. 96-317 at 47 (1979) (“in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;” those factors include “the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, (Continued...)

the injury caused by other factors from injury caused by unfairly traded imports.<sup>33</sup> Nor does the “by reason of” standard require that unfairly traded imports be the “principal” cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.<sup>34</sup> It is clear that the existence of injury caused by other factors does not compel a negative determination.<sup>35</sup>

Assessment of whether material injury to the domestic industry is “by reason of” subject imports “does not require the Commission to address the causation issue in any particular way” as long as “the injury to the domestic industry can reasonably be attributed to the subject imports” and the Commission “ensure{s} that it is not attributing injury from other sources to the subject imports.”<sup>36 37</sup> Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed “rigid adherence to a specific formula.”<sup>38</sup>

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(...Continued)

developments in technology and the export performance and productivity of the domestic industry”); accord *Mittal Steel*, 542 F.3d at 877.

<sup>33</sup> SAA at 851-52 (“{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports.”); *Taiwan Semiconductor Industry Ass’n*, 266 F.3d at 1345 (“{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports.” (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int’l Trade 2002) (“{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury” or make “bright-line distinctions” between the effects of subject imports and other causes.); see also *Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that “{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e.*, it is not an ‘other causal factor,’ then there is nothing to further examine regarding attribution to injury”), citing *Gerald Metals*, 132 F.3d at 722 (the statute “does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.”).

<sup>34</sup> S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

<sup>35</sup> See *Nippon Steel Corp.*, 345 F.3d at 1381 (“an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the ‘dumping’ need not be the sole or principal cause of injury.”).

<sup>36</sup> *Mittal Steel*, 542 F.3d at 877-78; see also *id.* at 873 (“While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured ‘by reason of’ subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.”) citing *United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75.

<sup>37</sup> Vice Chairman Pinkert does not join this paragraph or the following three paragraphs. He points out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when considering present material injury, to undertake a particular kind of analysis of non-subject imports, albeit without reliance upon presumptions or rigid formulas. *Mittal Steel* explains as follows:

(Continued...)

The Federal Circuit's decisions in *Gerald Metals*, *Bratsk*, and *Mittal Steel* all involved cases where the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.<sup>39</sup> The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

*Mittal Steel* clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test or any one specific methodology; instead, the court requires the Commission to have "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.<sup>40</sup> Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals*, *Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.<sup>41</sup>

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(...Continued)

What *Bratsk* held is that "where commodity products are at issue and fairly traded, price competitive, non-subject imports are in the market," the Commission would not fulfill its obligation to consider an important aspect of the problem if it failed to consider whether non-subject or non-LTFV imports would have replaced LTFV subject imports during the period of investigation without a continuing benefit to the domestic industry. 444 F.3d at 1369. Under those circumstances, *Bratsk* requires the Commission to consider whether replacement of the LTFV subject imports might have occurred during the period of investigation, and it requires the Commission to provide an explanation of its conclusion with respect to that factor.

542 F.3d at 878.

<sup>38</sup> *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); see also *Mittal Steel*, 542 F.3d at 879 ("Bratsk did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

<sup>39</sup> *Mittal Steel*, 542 F.3d at 875-79.

<sup>40</sup> *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

<sup>41</sup> To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in final phase investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on capacity, production, and shipments of the product under investigation in the major source countries (Continued...)

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard. Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.<sup>42</sup>

## **B. Conditions of Competition and the Business Cycle**

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

### **1. Demand Considerations**

Ferrosilicon is used primarily by the iron and steel industries as an alloying agent in the production of iron and steel. Consequently, demand for ferrosilicon is driven by demand for steel and iron products, which in turn reflects overall economic conditions.<sup>43</sup> Overall demand for ferrosilicon would likely experience only small changes in response to changes in price because there are few economically viable substitutes for ferrosilicon and it accounts for a small share of the total cost in most of its end-use applications.<sup>44</sup>

Demand, as measured by apparent U.S. consumption, increased overall by \*\*\* percent from 2011 to 2013.<sup>45</sup> Apparent U.S. consumption of ferrosilicon increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2012, then declined to \*\*\* short tons in 2013.<sup>46</sup> Market participants' questionnaire responses varied greatly regarding whether demand in the United States and elsewhere had increased, declined, or fluctuated during the POI.<sup>47</sup>

### **2. Supply Considerations**

Sources of supply to the U.S. market during the POI included domestic shipments, subject imports, and imports from nonsubject sources.

The domestic industry's market share decreased from \*\*\* percent in 2011 to \*\*\* percent in 2012 then increased to \*\*\* percent in 2013.<sup>48</sup> Globe and CC Metals accounted for all

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(...Continued)

that export to the United States. The Commission plans to continue utilizing published or requested information in final phase investigations in which there are substantial levels of nonsubject imports.

<sup>42</sup> *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp.*, 458 F.3d at 1350, citing *U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

<sup>43</sup> CR at II-11-12, PR at II-6-7.

<sup>44</sup> CR at II-10, PR at II-6-7.

<sup>45</sup> CR/PR at Table C-1.

<sup>46</sup> CR/PR at Table IV-5. Apparent U.S. consumption was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

<sup>47</sup> CR/PR at Table II-3.

<sup>48</sup> CR/PR at Table IV-6. The industry's market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

domestic production of ferrosilicon during the POI.<sup>49</sup> Both domestic producers reported producing products other than ferrosilicon on the same manufacturing equipment used to produce ferrosilicon.<sup>50</sup> The domestic industry's capacity dedicated to the production of ferrosilicon fluctuated but increased overall during the POI, increasing from \*\*\* short tons in 2011 to \*\*\* short tons in 2012, before declining to \*\*\* short tons in 2013.<sup>51</sup> During this period, \*\*\*.<sup>52</sup> The domestic industry's capacity was not sufficient to satisfy apparent U.S. consumption, whether capacity is measured by capacity dedicated to production of the domestic like product or overall production capacity.<sup>53</sup>

The market share of subject imports from Venezuela was below those of the domestic like product and nonsubject imports. It increased from \*\*\* percent in 2011 to \*\*\* percent in 2012 and to \*\*\* percent in 2013.<sup>54</sup>

Nonsubject imports supplied the largest share of the U.S. market throughout the POI. Nonsubject imports' market share declined from \*\*\* percent in 2011 to \*\*\* percent in 2012 and to \*\*\* percent in 2013.<sup>55</sup> The largest source of nonsubject imports was Russia, followed by China and Canada.<sup>56</sup>

### 3. Substitutability and Other Conditions

We find that there is a high degree of substitutability among the domestic like product, subject imports, and nonsubject imports of the same grade.<sup>57</sup> We further find that price is an

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<sup>49</sup> CR/PR at III-1.

<sup>50</sup> CR at III-6, PR at III-3. Domestic producers reported, for instance, that their furnaces dedicated to the production of magnesium ferrosilicon and other non-scope production could easily be shifted to the production of the domestic like product without performing furnace conversions, simply by the addition of the required raw materials. They consequently reported capacity dedicated to production of those products as part of their overall capacity to produce ferrosilicon. CR at III-6-7, PR at III-3; CR/PR at Table III-2.

<sup>51</sup> CR/PR at Table III-2. The industry's capacity was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

<sup>52</sup> CR at III-7 n.9, PR at III-3 n.9. Respondents assert that \*\*\*. FerroAtlantica Prehearing Brief at 3. *See also* CR/PR at Table III-2 (\*\*\*).

<sup>53</sup> *E.g.*, CR/PR at Table III-2 (showing the domestic industry's capacity dedicated to production of the domestic like product as well as its overall capacity, including the potential for shifting capacity to ferrosilicon production).

<sup>54</sup> CR/PR at Table IV-6. Subject imports' market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

<sup>55</sup> CR/PR at Table IV-6. Nonsubject imports' market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

<sup>56</sup> CR/PR at Table IV-2.

<sup>57</sup> CR at II-18; PR at II-13. \*\*\* domestic producers, as well as \*\*\* purchasers, reported that the domestic like product, subject imports, and nonsubject imports were always interchangeable. Most responding importers reported that the domestic like product was always or frequently interchangeable with the subject imports and nonsubject imports, that subject imports were always or frequently  
(Continued...)

important factor in purchasing decisions for ferrosilicon. A majority of purchasers found the domestic like product to be comparable with the subject imports as well as with nonsubject imports from Russia and other sources in each of 15 product characteristics.<sup>58</sup> Purchasers most often identified price, along with quality, as the most important of 14 factors in their purchasing decisions.<sup>59</sup> Regarding the importance of differences other than price among domestic product, subject imports, and nonsubject imports, \*\*\* reported that such differences were never significant and most purchasers reported they were never or sometimes significant. Importers were more inclined than domestic producers and purchasers to report that differences other than price were significant.<sup>60</sup>

Although there is high substitutability between ferrosilicon of the same grade from different sources, there is no evidence of any meaningful substitution between regular and specialty grades of ferrosilicon.<sup>61</sup> Regular grade ferrosilicon cannot be substituted in applications requiring the lower impurity levels of specialty grades of ferrosilicon and, although specialty grades of ferrosilicon can be substituted for regular grade ferrosilicon, the higher prices for specialty grades appear to render such substitution uneconomical on any regular basis.<sup>62</sup>

The record also indicates that the domestic industry sells a wider variety of ferrosilicon products than importers of the subject merchandise.<sup>63</sup> Domestic producers' U.S. shipments in 2013 of specialty grades, such as \*\*\*, exceeded their U.S. shipments of regular grade ferrosilicon.<sup>64</sup> Although most domestic producer shipments were of 75 percent ferrosilicon, a small portion was of 50 percent ferrosilicon.<sup>65</sup> The overwhelming majority of U.S. shipments of subject imports in 2013, by contrast, were of regular grade 75 percent ferrosilicon, with \*\*\* shares of subject import shipments being of specialty grades, and \*\*\* being of 50 percent ferrosilicon.<sup>66</sup>

Pricing of ferrosilicon in the U.S. market generally follows benchmark prices that are reported by *Ryan's Notes*, a publication that reports prices for ferrous and non-ferrous metals based on traders' and sellers' "closed spot market prices" for delivery within 30-45 days, above

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(...Continued)

interchangeable with nonsubject imports in most comparisons, and that nonsubject imports were always or frequently interchangeable with other nonsubject imports. CR/PR at Table II-10.

<sup>58</sup> CR/PR at Table II-8.

<sup>59</sup> CR/PR at Table II-5.

<sup>60</sup> CR/PR at Table II-12.

<sup>61</sup> The record shows very mixed responses on substitutability of regular 50 percent and regular 75 percent ferrosilicon. CR at II-19-20, PR at II-10-11.

<sup>62</sup> *E.g.*, CR at II-18-19, PR at II-10-11; *see also* Hearing Transcript at 123 (Hopkins).

<sup>63</sup> CR/PR at Table IV-4.

<sup>64</sup> CR/PR at Table IV-4; Petitioners' Posthearing Brief, Attachment B at Exhibits 1 & 2.

<sup>65</sup> CR/PR at Table IV-4.

<sup>66</sup> CR/PR at Table IV-4. Subject imports of one specialty grade -- low aluminum grade ferrosilicon -- accounted for a significantly larger share of total subject imports in 2011 and 2012 than in 2013. FerroAtlantica's Posthearing Brief at Exhibit 2.

minimum sizes, and conforming to particular specifications.<sup>67</sup> *Ryan's Notes* excludes prices set under long-term or formula contracts.<sup>68</sup> It reports prices twice a week and, at the end of the month, reports low, mid-point, high, and average prices.<sup>69</sup>

The record indicates differences in how the subject imports and the domestic like product were sold, including whether they were sold on a spot basis or under contract, the duration of contracts, and the extent to which sales under contracts included either fixed prices or price adjustment mechanisms based on formulas or indexing to benchmark prices, such as those published by *Ryan's Notes*. Most sales by importers of subject ferrosilicon were under annual contracts (multiple deliveries for 12 months); in these contracts, as with long term contracts (multiple deliveries for more than 12 months), prices were indexed to benchmark prices.<sup>70</sup> The remaining sales of the subject imports were fixed-priced under short-term contracts (multiple deliveries for under twelve months (an average of 150 days)), with a \*\*\* small share being spot sales.<sup>71</sup> Sales by the domestic producers, by contrast, were mostly on the basis of short-term (an average of 40 to 90 days) and annual contracts, in which prices were either indexed to benchmark prices or fixed.<sup>72</sup> The remaining sales by domestic producers were either under long-term contracts, in which prices were always indexed, or spot sales (where prices are always fixed).<sup>73</sup>

Quartzite, iron or steel scrap, low-ash coal or petroleum coke, and wood chips are the principal raw materials used to produce ferrosilicon. U.S. producers' raw materials costs as a share of cost of goods sold increased from \*\*\* percent in 2011 to \*\*\* percent in 2013.<sup>74</sup>

### C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff 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."<sup>75</sup>

The volume of subject imports from Venezuela increased from 17,802 short tons in 2011 to 23,245 short tons in 2012, and then to 25,922 short tons in 2013, a 45.6 percent increase

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<sup>67</sup> CR at V-3-4, PR at V-3-4. *Platts Metals Week* is another source of published metals prices; it is used less frequently for benchmark prices in the sale of ferrosilicon. CR at V-3, PR at V-3. \*\*\* also publishes prices that are sometimes used as benchmarks in sales. Petitioners' Posthearing Brief, Attachment A at 14.

<sup>68</sup> CR at V-4, PR at V-3-4. Parties debated the extent to which contract prices for subject imports affected spot prices and were thereby reflected in *Ryan's Notes* even if they are not included in the sample *Ryan's Notes* uses. See, e.g., Petitioners' Prehearing Brief at 11-12, FerroAtlantica's Posthearing Brief at 7-8.

<sup>69</sup> CR at V-4, PR at V-4.

<sup>70</sup> CR/PR at Table V-3.

<sup>71</sup> CR/PR at Table V-3.

<sup>72</sup> CR/PR at Table V-2.

<sup>73</sup> CR/PR at Table V-2.

<sup>74</sup> CR/PR at V-1, Table VI-3.

<sup>75</sup> 19 U.S.C. § 1677(7)(C)(i).

from 2011 to 2013.<sup>76</sup> Subject imports as a share of apparent U.S. consumption increased from \*\*\* percent in 2011 to \*\*\* percent in 2012 and then to \*\*\* percent in 2013.<sup>77</sup>

The \*\*\* percentage point gain in subject import market penetration from 2011 to 2013 came entirely at the expense of nonsubject imports, which lost \*\*\* percentage points of market share during that period. By contrast, the domestic industry gained market share from 2011 to 2013.<sup>78</sup>

We find the absolute volume of subject imports and the volume of subject imports relative to apparent U.S. consumption, particularly at the end of the POI, to be significant. As explained below, however, the significant volume of subject imports did not cause significant price effects or negatively impact the domestic industry.<sup>79</sup>

#### **D. Price Effects of the Subject Imports**

Section 771(7)(C)(ii) of the Tariff Act provides that 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.<sup>80</sup>

As discussed above, the record in this investigation indicates that subject imports and domestically produced ferrosilicon of the same grade are highly substitutable and price is an important factor in purchasing decisions. The Commission collected pricing data for two

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<sup>76</sup> Subject import volume increased by 30.6 percent from 2011 to 2012, and by 11.5 percent from 2012 to 2013. CR/PR at Table C-1. There were 7,801 short tons of subject imports in interim 2013 and 8,595 short tons in interim 2014. CR/PR at Table IV-2, C-1.

<sup>77</sup> CR/PR at Table IV-6. Subject imports' market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

<sup>78</sup> Nonsubject imports' market share increased from \*\*\* percent in 2011 to \*\*\* percent in 2012 and then declined to \*\*\* percent in 2013. CR/PR at Table IV-6. Nonsubject imports' market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

<sup>79</sup> FerroAtlantica maintains that U.S. importers' shipments of subject imports are more reflective than are official import data of subject imports' presence in the U.S. market. FerroAtlantica's Posthearing Brief at 13. The record includes import shipment data for subject imports from Venezuela, as well as for nonsubject imports from Russia. We have considered import volumes, apparent U.S. consumption, and market shares that result when the official import statistics for imports from Venezuela and Russia are replaced by their shipment data. CR/PR at Table D-1. These data do not affect our findings that subject import volume was significant, or that the imports did not cause significant price effects or negatively impact the domestic industry.

<sup>80</sup> 19 U.S.C. § 1677(7)(C)(ii).

products, seeking separate data for product sold in bulk and in super sacks.<sup>81</sup> Two U.S. producers and one importer of the subject merchandise from Venezuela provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.<sup>82</sup> For 2013, pricing data reported by these firms accounted for \*\*\* percent, by quantity, of U.S. producers' commercial shipments, and \*\*\* percent of U.S. commercial shipments of subject imports from Venezuela.<sup>83</sup>

The record indicates a mixed pattern of underselling and overselling by the subject imports. The pricing data show underselling by subject imports in \*\*\* quarterly price comparisons and overselling in \*\*\* comparisons.<sup>84</sup> The margins of underselling ranged from \*\*\* percent and the margins of overselling ranged from \*\*\* percent.<sup>85</sup> The average underselling margin was \*\*\* percent and the average overselling margin was \*\*\* percent.<sup>86</sup> Most of the instances of underselling occurred early in the period; underselling became less frequent later in the period when the volume of subject imports had increased. As a result, the volume of subject imports that oversold the domestic like product, \*\*\* short tons, was greater than the volume that undersold the domestic like product, \*\*\* short tons.<sup>87</sup> Moreover, \*\*\* of the \*\*\* instances of underselling by the subject imports were for sales of product 1 or product 2 in super sacks, a form in which the volumes of the domestic product were \*\*\* in each comparison showing underselling.<sup>88</sup>

The record also indicates that the underselling that did occur did not have the effect of displacing domestic production. The direct competition between the subject imports and the domestic like product indicated on the record occurs primarily with respect to regular grade 75 percent ferrosilicon and low aluminum grade 75 percent ferrosilicon.<sup>89</sup> U.S. producers' production of regular grade 75 percent ferrosilicon increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2013 and their production of low aluminum grade 75 percent ferrosilicon increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2013.<sup>90</sup> This is consistent with the

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<sup>81</sup> CR at V-18-19, PR at V-8. Pricing product 1 is regular grade 75 percent ferrosilicon. Product 2 is low aluminum grade 75 percent ferrosilicon. *Id*

<sup>82</sup> CR at V-6, PR at V-4.

<sup>83</sup> CR at V-19, PR at V-8.

<sup>84</sup> CR/PR at Table V-12.

<sup>85</sup> CR/PR at Table V-12.

<sup>86</sup> CR/PR at Table V-12.

<sup>87</sup> CR/PR at Tables V-7-V-10; *see also* FerroAtlantica's Posthearing Brief at Exhibit 13.

<sup>88</sup> CR/PR at Tables V-9, V-10.

<sup>89</sup> CR/PR at Table IV-3.

<sup>90</sup> CR/PR at Table III-2. Domestic producers' production of regular grade 75 percent ferrosilicon was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014; their production of low aluminum 75 percent ferrosilicon was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

Domestic producers are correct that subject imports included, in addition to regular and low aluminum grades, some high purity and other grades of specialty ferrosilicon. CR/PR at Table IV-3; Petitioners' Posthearing Brief, Answers to Questions at 2. Nonetheless, as is the case with the regular and low aluminum grades in which subject imports were more substantially present in the U.S. market, (Continued...)

data in the record that indicates that the domestic industry increased its market share from 2011 to 2013 notwithstanding the increasing volume of subject imports.<sup>91</sup> In light of these considerations, we find that underselling by the subject imports was not significant.<sup>92</sup>

We find that subject imports did not have the effect of depressing domestic producers' prices to a significant degree. Prices for each domestic product for which pricing data were reported for each quarter of the POI were lower in the first quarter of 2014 than in the first quarter of 2011.<sup>93</sup> The record does not indicate that these price declines were caused by the subject imports. Instead, domestic producers' prices declined as they increased their sales of regular and low aluminum grade products. This is confirmed by the predominant overselling by subject imports during the latter part of the POI, including well before the petition was filed. Both subject import and domestic prices declined sharply from 2011 to 2012. However, for the product in which domestic producers and importers reported the highest combined quantities (Product 1 – regular grade in bulk), domestic producers dropped prices in the first quarter of 2012, whereas subject import prices did not fall until the second quarter of 2012.<sup>94</sup>

Moreover, average unit values (“AUVs”) of domestic net sales of ferrosilicon grades in which there was not competition with subject imports declined from 2011 to 2013 whereas the AUVs for grades in which there was competition increased slightly overall in that period.<sup>95</sup> These greater declines in U.S. producer sale AUVs for grades in which subject imports were not

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(...Continued)

the high purity and other specialty grades were not among the grades for which domestic producers' production declined over the period. CR/PR at Table III-2. By contrast, grades in which domestic production declined from 2011 to 2013, low titanium and foundry grades, were ones in which there was no subject import competition. CR/PR at Tables III-2, IV-4.

<sup>91</sup> CR/PR at Table IV-6.

<sup>92</sup> Vice Chairman Pinkert finds that, although the issue is close, the underselling by the subject imports in \*\*\* price comparisons is significant. For the reasons stated in the text and in his footnote below on nonsubject imports, however, he concludes that the underselling did not cause adverse price effects in the U.S. market.

<sup>93</sup> CR/PR, Tables V-7-9. For product 1 sold in bulk, the product with by far the highest quantity of shipments of subject imports, the highest quarterly domestic shipment quantities occurred during the last four quarters of the POI. The subject imports oversold the domestic like product during each of these quarters. CR/PR at Table V-7.

<sup>94</sup> CR/PR at Table V-7.

<sup>95</sup> Petitioners' Posthearing Brief, Attachment B at Exhibits 1 & 2. The AUV for domestic producers' sales of specialty/50 percent grades, where there was limited or no subject import competition, declined from \$\*\*\* per short ton in 2011 to \$\*\*\* per short ton in 2012, and then decreased to \$\*\*\* in 2013, for an overall 2011 to 2013 decline of \*\*\* percent. *Id.* For sales in the regular/low aluminum grade category, in which both domestic product and subject imports were present, the domestic industry's AUV declined from \$\*\*\* per short ton in 2011 to \$\*\*\* per short ton in 2012 before increasing to \$\*\*\* per short ton in 2013, for an overall 2011 to 2013 decline of \*\*\* percent. *Id.* Although the AUV for both categories declined in 2012, the AUV for the other specialty/50 percent category declined by \*\*\* percent from 2011 to 2012, whereas the AUV for the regular/low aluminum category declined by \*\*\* percent in that period. *Id.*

present indicate that factors other than subject imports were responsible for the declines in U.S. ferrosilicon prices.<sup>96</sup> This difference in sales value declines between grades also rebuts petitioners' contention that subject import prices caused prices in the grades in which subject imports were not present to decline in tandem across all grades, including those grades without subject import competition.<sup>97</sup>

We have also examined whether subject imports have prevented price increases, which otherwise would have occurred, to a significant degree during the POI. We find that there was not significant underselling by subject imports and that subject imports were not responsible for the movements in domestic producers' prices. Moreover, as the domestic industry's unit COGS was decreasing from 2011 to 2013, we would not have expected domestic prices to increase even without the subject imports.<sup>98</sup> Therefore, the record includes no indication that the increase in the domestic industry's ratio of COGS as a share of net sales from 2011 to 2013<sup>99</sup> was caused by the subject imports. Accordingly, the record does not support that subject imports had significant price suppressing or depressing effects. We thus conclude that subject imports did not have a significant effect on prices of the domestic like product.<sup>100</sup>

#### **E. Impact of the Subject Imports<sup>101</sup>**

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."<sup>102</sup> These factors include output, sales, inventories, capacity

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<sup>96</sup> Generally declining prices for ferrosilicon appear to have been a global phenomenon during the period, with prices in markets other than the United States lower at the end of the period than at the beginning. See, e.g., FerroAtlantica's Prehearing Brief at Exhibit 4, Petitioners' Posthearing Brief at Exhibit 13 (citing \*\*\* for prices in the Japan and the EU as well as the United States); see also CR/PR at Appendix E, Tables E-1-E-4 (quarterly prices for nonsubject imports from Russia, China, and Canada were lower in \*\*\* than in \*\*\*).

<sup>97</sup> E.g., Petitioners' Prehearing Brief at 11-12; Petitioners' Posthearing Brief, Responses to Questions at 10-17.

<sup>98</sup> CR/PR at Table C-1.

<sup>99</sup> CR/PR at Table C-1.

<sup>100</sup> Even though there were confirmed lost sales, CR/PR at Table V-15, as previously stated, instances of lower prices did not result in adverse shifts in the domestic industry's market share. Moreover, that there was only a single confirmed lost revenue allegation, CR/PR at Table V-16, is consistent with the absence of price reductions by domestic producers in response to subject import prices.

<sup>101</sup> The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determinations of sales at less than fair value regarding ferrosilicon from Venezuela, Commerce found antidumping duty margins of 22.84 percent for FerroAtlantica and all others. 79 Fed. Reg. 44397 (Jul. 31, 2014).

<sup>102</sup> 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 (Continued...)

utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, research and development, and factors affecting domestic prices. 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.”

Many of the domestic industry’s trade and employment indicators improved from 2011 to 2013, and in most cases the improvements outpaced the \*\*\* percent growth in apparent U.S. consumption over that period. As discussed above, the U.S. producers’ share of the U.S. market initially declined slightly from \*\*\* percent in 2011 to \*\*\* percent in 2012 but subsequently increased to \*\*\* percent in 2013.<sup>103</sup> The domestic industry’s capacity increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2012, and then declined to \*\*\* short tons in 2013, for an increase of \*\*\* percent overall from 2011 to 2013, while capacity utilization increased by \*\*\* percentage points overall, declining slightly from \*\*\* percent in 2011 to \*\*\* percent in 2012 before increasing to \*\*\* percent in 2013.<sup>104</sup> The domestic industry’s production increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2012, then declined to \*\*\* short tons in 2013, representing an overall increase of \*\*\* percent.<sup>105</sup> The domestic industry’s U.S. shipments increased steadily by \*\*\* percent overall between 2011 and 2013, starting at \*\*\* short tons in 2011 and then increasing to \*\*\* short tons in 2012 and \*\*\* short tons in 2013.<sup>106</sup> The domestic industry’s end-of-period inventories increased both on an absolute basis and relative to production and shipments from 2011 to 2013.<sup>107</sup>

The number of production related workers and hours worked increased steadily from 2011 to 2013. Productivity increased overall, while wages paid and hourly wages declined.<sup>108</sup>

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(...Continued)

may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.”).

<sup>103</sup> CR/PR at Table C-1. The domestic industry’s market share was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.*

<sup>104</sup> CR/PR at Tables III-2, III-3, C-1. The domestic industry’s production capacity was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. CR/PR at Table III-2. The domestic industry’s capacity utilization was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. CR/PR at Table III-3.

<sup>105</sup> CR/PR at Tables III-2, C-1. The domestic industry’s production was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

<sup>106</sup> CR/PR at Tables III-4, C-1. The domestic industry’s U.S. shipments were \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. CR/PR at Table III-4.

<sup>107</sup> CR/PR at Tables III-5, C-1. The domestic industry’s end-of-period inventories were \*\*\* short tons in 2011, \*\*\* short tons in 2012, and \*\*\* short tons in 2013; they were \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. CR/PR at Table III-4.

<sup>108</sup> CR/PR at Table III-6. The number of production workers was \*\*\* in 2011, \*\*\* in 2012, and \*\*\* in 2013, and was \*\*\* in interim 2013 and \*\*\* in interim 2014. *Id.* The total hours worked were \*\*\* in 2011, \*\*\* in 2012, and \*\*\* in 2013, and were \*\*\* in interim 2013 and \*\*\* in interim 2014. *Id.* Wages paid were \$\*\*\* in 2011, \$\*\*\* in 2012, and \$\*\*\* in 2013, and were \$\*\*\* in interim 2013 and \$\*\*\* in interim 2014. *Id.* Productivity was \*\*\* short tons per hour in 2011, \*\*\* short tons per hour in  
(Continued...)

We do not agree with petitioners that the improvements in some output- and employment-related factors were attributable to the filing of the petition in this investigation on July 19, 2013. The volume of subject imports increased in 2013 and, thus, did not retreat from the market in response to the petition.<sup>109</sup> Nor did the petition lead to changes in pricing behavior by subject imports given that the predominance of overselling by subject imports began prior to the filing of the petition.<sup>110</sup> Moreover, the majority of sales of the subject imports in 2013 were made pursuant to annual contracts, which were negotiated at the end of 2012; prices under those contracts, therefore, would not have been affected by the filing of petition in July 2013.<sup>111</sup>

We acknowledge that the industry's financial performance did not improve. Although the domestic industry's sales quantities increased each year from 2011 to 2013, its sales revenues did not.<sup>112</sup> The industry's lower unit sales values contributed to the industry's declining profitability.<sup>113</sup> The domestic industry's operating income declined from \$\*\*\* in 2011 to \$\*\*\* in 2012, before increasing to \$\*\*\* in 2013.<sup>114</sup> The industry's operating income margin declined from \*\*\* percent in 2012 to \*\*\* percent in 2012, before increasing to \*\*\* percent in 2013.<sup>115</sup> Its capital expenditures decreased from \$\*\*\* in 2011 to \$\*\*\* in 2012, before increasing to \$\*\*\* in 2013.<sup>116</sup>

The declines in the domestic industry's financial performance during the period were not caused by the subject imports. As explained above, the increasing volume of the subject

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(...Continued)

2012, and \*\*\* short tons per hour in 2013, and was \*\*\* short tons per hour in interim 2013 and \*\*\* short tons per hour in interim 2014. *Id.*

<sup>109</sup> CR/PR at Table IV-2.

<sup>110</sup> CR/PR at Tables V-7-V-9.

<sup>111</sup> CR/PR at Table V-3, Hearing Transcript at 125 (Hopkins); *see also* Hearing Transcript at 57-58 (Perkins). Petitioners claim that one indication of the effect of the investigation is the much lower level of shipments of subject imports (but not imports), and higher AUVs of those shipments, in interim 2014 compared to interim 2013. *See* Petitioners' Final Comments at 12. Based on the discussion above, we find that the investigation was not responsible for any changes in volume, price effects, or impact of the subject imports through 2013, and that the data show the absence of material injury by reason of the imports. This conclusion would not be altered even if we were to accord less weight to interim 2014 developments.

<sup>112</sup> CR/PR at Table VI-1.

<sup>113</sup> CR/PR at Tables VI-1, VI-4.

<sup>114</sup> CR/PR at Table C-1. The domestic industry's operating income was \$\*\*\* in interim 2013 and \$\*\*\* in interim 2014. *Id.*

<sup>115</sup> The industry's operating income margin was \*\*\* percent in interim 2013 and \*\*\* percent in interim 2014. *Id.* We have considered petitioners' proposal of alternative ways in which its financial data might be adjusted to reflect insurance proceeds Globe received in 2013. *E.g.*, Petitioners' Final Comments at 1-2. Allocating the insurance proceeds to a year other than 2013, the year they were received, however, would be inconsistent with generally accepted accounting practices (GAAP), which indeed were followed by Globe itself in its annual financial reporting.

<sup>116</sup> CR/PR at Table VI-5. The industry's capital expenditures were \$\*\*\* in interim 2013 and \$\*\*\* in interim 2014. *Id.* The industry reported \*\*\* research and development expenses during the POI. *Id.*

imports did not displace domestic production, as the domestic industry's output, shipments, and market share all increased from 2011 to 2013. The decline in the domestic industry's revenues during this period, notwithstanding increasing production, was driven heavily by two factors. One was the decline in shipments in certain high-value specialty grades, particularly low titanium grade ferrosilicon.<sup>117</sup> This was not a function of the subject imports, which were not sold in many of the specialty grades, including low titanium grade.<sup>118</sup> The second was a decline in prices. We found in the price effects section above that the decline in prices was also not due to the subject imports.

That the subject imports did not cause the declines in the domestic industry's financial performance is corroborated by comparing the industry's combined financial performance in regular and low aluminum 75 percent grades, where the domestic industry faced subject import competition, with its combined performance in other specialty 75 percent grades and the 50 percent grades, where it faced limited or no import competition. From 2011 to 2013, the operating performance of the domestic industry fell only modestly overall in the regular and low aluminum grades in which subject imports were present but deteriorated substantially in the grades in which it did not face subject import competition.<sup>119</sup> The industry's ratio of COGS to net sales was significantly higher in 2013 than in 2011 for the product group in which subject imports did not compete, and was lower in 2013 than in 2011 for the product group in which subject imports did compete.<sup>120</sup> Accordingly, the record indicates that the domestic industry's overall financial performance declined when production, shipments, and unit values of the specialty grades declined for reasons unrelated to subject import competition.<sup>121 122</sup>

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<sup>117</sup> CR/PR at Table III-2. Specialty grades of ferrosilicon are more costly to produce and therefore are priced higher in the market than regular grade ferrosilicon. Hearing Transcript at 46 (Perkins), CR at II-18-19, PR at II-10-11, Petitioners' Prehearing Brief at 11-12. However, evidence provided by the domestic industry indicates that the COGS/net sales ratios are substantially lower, and the profit margins are substantially higher, for the domestic industry's specialty grade sales. Petitioners' Posthearing Brief, Attachment B at Exhibits 1 & 2.

<sup>118</sup> CR/PR at Table IV-4.

<sup>119</sup> Petitioners' Posthearing Brief, Attachment B at Exhibits 1 & 2. The industry's operating income for the other specialty 75 and 50 percent grades declined steadily from \$\*\*\* in 2011 to \$\*\*\* in 2012, and to \$\*\*\* in 2013. *Id.* In the regular plus low aluminum 75 percent ferrosilicon category, the industry's operating income declined from \*\*\* \$\*\*\* in 2011 to \*\*\* \$\*\*\* in 2012, before increasing to \*\*\* \$\*\*\* in 2013. *Id.* Thus, the ratio of operating income to net sales for the specialty and 50 percent ferrosilicon category declined \*\*\* percentage points from 2011 to 2013 (from \*\*\* percent in 2011 to \*\*\* percent in 2012, and to \*\*\* percent in 2013), whereas the ratio of operating income to net sales for the regular and low aluminum 75 percent sales increased overall by \*\*\* percentage points (from \*\*\* percent in 2011, to \*\*\* percent in 2012, and \*\*\* percent in 2013). *Id.*

<sup>120</sup> Petitioners' Posthearing Brief, Attachment B at Exhibits 1 & 2.

<sup>121</sup> We have also examined the role of the volume and prices of nonsubject imports in the U.S. market. We find that the large volume of nonsubject imports, particularly those sold at prices lower than those of subject imports, further attenuate any causal connection that might have existed between the subject imports and the domestic industry's condition. *See, e.g.*, CR/PR at Table IV-6, Appendix E.

<sup>122</sup> Vice Chairman Pinkert finds that the limited volume and market share of subject imports from Venezuela are not materially injurious to the domestic industry. To the extent that the subject (Continued...)

Based on the foregoing reasons, we find that subject imports have not had a significant impact on the domestic industry. Thus, we conclude that the industry is not materially injured by reason of subject imports.

## V. No Threat of Material Injury by Reason of Subject Imports

### A. Legal Standard

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing whether “further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted.”<sup>123</sup> The Commission may not make such a determination “on the basis of mere conjecture or supposition,” and considers the threat factors “as a whole” in making its determination whether dumped or subsidized imports are imminent and whether material injury by reason of subject imports would occur unless an order is issued.<sup>124</sup> In making our determination, we consider all statutory threat factors that are relevant.<sup>125</sup>

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(...Continued)

imports may be associated with injury to the industry during the POI, that injury is not “by reason of” the subject imports as that statutory term has been interpreted by the Federal Circuit in such cases as *Bratsk* and *Mittal Steel*. As explained below, the industry would have experienced the same difficulties if the subject imports had exited the market because they would have been replaced by competitively priced nonsubject imports from Russia.

Nonsubject imports from Russia, which are frequently sold here at prices lower than those of the subject imports, enjoy a very substantial U.S. presence, and their market share exceeds substantially the market share of the subject imports. CR/PR at Table E-6, revised by Memorandum INV-MM-079 (Aug. 18, 2014); CR/PR at Table IV-6. In addition, as pointed out by FerroAtlantica in its posthearing brief, such nonsubject imports would have replaced the subject imports had the subject imports exited the market. There was substantial domestic demand for 75 percent regular grade ferrosilicon, and Russian producers maintained sufficient unused capacity and end-of-period inventories to meet it. Moreover, between 2011 and 2012, imports from Russia demonstrated the ability to increase supply here in response to increased demand – increasing supply by an amount almost equal to the total volume of imports from Venezuela in 2012 – and Russia could also have shifted over to the United States some of its exports to other countries. FerroAtlantica’s Posthearing Brief, Response to Commissioner Questions at 23-25. That it would have had an incentive to shift its export pattern in that way is indicated by the relatively attractive prices available in this market. See Petitioners’ Posthearing Brief at 55.

<sup>123</sup> 19 U.S.C. § 1677(7)(F)(ii).

<sup>124</sup> 19 U.S.C. § 1677(7)(F)(ii).

<sup>125</sup> These factors are as follows:

...

(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the  
(Continued...)

## B. Analysis of Threat of Material Injury by Reason of Subject Imports

### Likely Subject Import Volume

We find that the increase in subject import volume and market share during the POI does not indicate a likelihood of substantially increased imports in the imminent future. As detailed above, although subject import volume increased over the POI, the rate of increase slowed from 2012 to 2013.<sup>126</sup> Moreover, subject imports increased their share of the U.S. market in 2013 entirely at the expense of nonsubject imports. The domestic industry increased its market share in 2013 to a level above its market share in 2011.<sup>127</sup> There is no evidence that these factors will change in the imminent future. Apparent U.S. consumption increased overall by \*\*\* percent from 2011 to 2013 and was \*\*\* percent higher in the first quarter of 2014 than in the first quarter of 2013.<sup>128</sup> Petitioners' economic consultant testified at the hearing that U.S. demand for ferrosilicon increased during the POI and that it has increased during the first half of 2014 and, thus, beyond the POI timeframe into the second quarter of 2014.<sup>129</sup> No party

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(...Continued)

subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,

(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,

(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices and are likely to increase demand for further imports,

(V) inventories of the subject merchandise,

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

...

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).

19 U.S.C. § 1677(7)(F)(i). To organize our analysis, we discuss the applicable statutory threat factors using the same volume/price/impact framework that applies to our material injury analysis. Statutory threat factors (II), (III), (V), and (VI) are discussed in the analysis of subject import volume. Statutory threat factor (IV) is discussed in the analysis of subject import price effects. Statutory factors (VIII) and (IX) are discussed in the analysis of impact. Statutory factors (I) concerning countervailable subsidies and (VII) concerning agricultural products are inapplicable to this determination.

<sup>126</sup> CR/PR at Table C-1.

<sup>127</sup> CR/PR at Table IV-6.

<sup>128</sup> CR/PR at Table C-1.

<sup>129</sup> Hearing Transcript at 34 (Lutz); *see also* Petitioners' Posthearing Brief, Answers to Questions at 56.

argues and nothing on the record suggests that there will be less than a modest increase in U.S. demand for ferrosilicon in the near term, notwithstanding declines in demand for specific ferrosilicon grades that occurred during the POI.<sup>130</sup> In light of these likely trends, as well as the trends in market shares observed during the POI, any continued increase in subject import volume is unlikely to significantly displace domestic production.

We also find that capacity and excess capacity in Venezuela do not indicate the likelihood of substantially increased imports of the subject merchandise. FerroVen reported that its ferrosilicon capacity \*\*\* and is projected to \*\*\* through 2015.<sup>131</sup> FerroVen's excess capacity during the POI increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2012 and \*\*\* short tons in 2013.<sup>132</sup> We acknowledge that FerroVen was export oriented and that its exports to the United States as a share of its total shipments increased from \*\*\* percent in 2011 to \*\*\* percent in 2012, before declining to \*\*\* percent in 2013.<sup>133</sup> Notwithstanding FerroVen's excess capacity and export orientation, subject imports to the United States did not increase rapidly in 2013.<sup>134</sup> There is nothing to indicate that there will likely be a significant rate of increase in the volume or market penetration of subject imports, particularly as the record indicates that FerroVen, the only producer of ferrosilicon in Venezuela, served its home market and other significant export markets during the POI and anticipates continuing to serve those markets in the imminent future.<sup>135</sup>

We recognize that U.S. importers' end-of-period inventories increased from \*\*\* short tons in 2011 to \*\*\* short tons in 2013, but nonetheless remained at a relatively modest level throughout the period.<sup>136</sup> Based on the above, we conclude that there is no likelihood of substantially increased imports of subject merchandise, particularly not as a share of likely increased apparent U.S. consumption, in the imminent future.<sup>137</sup>

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<sup>130</sup> Petitioners state that demand even for specialty grades of ferrosilicon increased overall during the POI, notwithstanding the decline in demand for the specialty low titanium grade of ferrosilicon during the POI. Petitioners' Posthearing Brief, Answers to Questions at 19.

<sup>131</sup> CR/PR at Table VII-2.

<sup>132</sup> CR/PR at Table VII-2. Excess capacity was \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

<sup>133</sup> CR/PR at Table VII-2.

<sup>134</sup> CR/PR at Table C-1. FerroVen reports that \*\*\*. CR at VII-4 n.7, PR at VII-3 n.7. In light of this and FerroVen's existing excess capacity, we do not find that there is a significant potential for product shifting.

<sup>135</sup> CR/PR at Table VII-2, Hearing Transcript at 124-25, 130-31 (Hopkins). The parties contest whether economic and political conditions in Venezuela will hinder FerroVen's ability to produce and export ferrosilicon in the imminent future. *See, e.g.,* FerroAtlantica's Prehearing Brief at 72-73, Petitioners' Posthearing Brief at 11-12. We have not relied on these asserted issues in finding that subject imports from Venezuela are not likely to substantially increase in the imminent future.

<sup>136</sup> CR/PR at Table C-1. U.S. importers' end-of-period inventories were \*\*\* short tons in interim 2013 and \*\*\* short tons in interim 2014. *Id.*

<sup>137</sup> We also note that ferrosilicon from Venezuela is not subject to antidumping or countervailing duty orders in any country. CR at VII-7, PR at VII-4.

## Likely Price Effects of Subject Imports

We do not find that subject imports likely will have effects on domestic producers' prices in the imminent future. We found in section IV.B. above that during the POI the subject imports did not significantly undersell the domestic like product and did not have significant price-depressing or price-suppressing effects.<sup>138</sup> Because the likely volume of subject imports will not increase significantly, there is also no basis to find price effects in the imminent future. We consequently find that the subject imports are unlikely to enter at prices that would have significant depressing or suppressing effects on domestic prices, or that would likely increase demand for further imports.

## Likely Impact of Subject Imports

Nothing in the record of this investigation gives us reason to conclude that subject imports, which caused no material injury during the POI, would likely have a significant adverse impact on the condition of the domestic industry in the imminent future. In section IV.E. above, we found that many indicators of industry performance improved during the POI. In particular, notwithstanding the increasing volume and market share of subject imports, the domestic industry was able to increase its output, shipments, and market share. Although we did find that financial performance declined, we found that this decline was not caused by the subject imports.<sup>139</sup>

Thus, the volume and market share of subject imports are not likely to increase significantly in the imminent future and the subject imports are not likely to have significant price effects. Moreover, in light of information indicating recent increases in ferrosilicon demand, we find that the increases in the domestic industry's output and shipments observed during the POI will likely continue in the imminent future. The record does not contain any information that indicates that subject imports will have actual or potential negative effects on the existing development and production efforts of the domestic industry. Based on these findings and our previous findings that any declines in the domestic industry's condition during the POI were not caused by the subject imports, we do not find that there is likely to be material injury by reason of imports of the subject merchandise in the imminent future.<sup>140</sup>

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<sup>138</sup> Although Vice Chairman Pinkert found the underselling by the subject imports to be significant, he did not find adverse price effects during the POI. He does not anticipate significant changes to these market conditions in the imminent future.

<sup>139</sup> Petitioners argue that the domestic industry is in a weakened condition and vulnerable to material injury. Petitioners' Posthearing Brief at 2. To the extent the industry's financial performance declined during the POI, we have found that these declines were not due to subject imports. Any further deterioration would similarly not be by reason of subject imports given our finding that the domestic industry is not threatened with material injury by reason of subject imports.

<sup>140</sup> Indeed, as previously stated, capacity increased from 2011 to 2013 and \*\*\*. CR/PR at Table III-2, CR at III-7, n.9, PR at III-3 n.9. The industry \*\*\* research and development expenses during the POI. CR/PR at Table IV-5.

Based on the foregoing, we conclude that an industry in the United States is not threatened with material injury by reason of subject imports.

## **VI. Conclusion**

For the reasons stated above, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of subject imports of ferrosilicon from Venezuela that are sold in the United States at less than fair value.

## PART I: INTRODUCTION

### BACKGROUND

These investigations result from a petition filed with the U.S. Department of Commerce (“Commerce”) and the U.S. International Trade Commission (“USITC” or “Commission”) by Globe Specialty Metals, Inc. (“Globe”), New York, NY; CC Metals and Alloys, LLC (“CC Metals”), Calvert City, KY, the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (“USW”); and the International Union, United Automobile, Aerospace and Agricultural Implement Workers of America (“UAW”), on July 19, 2013, alleging that an industry in the United States is materially injured or is threatened with material injury by reason of U.S. imports of ferrosilicon<sup>1</sup> from Russia<sup>2</sup> and Venezuela that are allegedly being sold at less-than-fair value (“LTFV”) in the United States. The following tabulation provides information relating to the background of these investigations.<sup>3 4</sup>

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<sup>1</sup> See the section entitled “The Subject Merchandise” in *Part I* of this report for a complete description of the merchandise subject to these investigations.

<sup>2</sup> On July 31, 2014, Commerce issued a negative determination in its final phase investigation on Russia finding that U.S. imports of ferrosilicon from Russia are not being, nor are likely to be, sold in the United States at less than fair value. *Ferrosilicon From the Russian Federation: Final Determination of Sales at Not Less Than Fair Value*, 79 FR 44393, July 31, 2014. Therefore, on July 31, 2014, the Commission terminated its investigation with regard to Russia. *Ferrosilicon From Russia: Termination of Investigation*, 79 FR 46450, August 8, 2014. As a result, throughout this report, U.S. imports of ferrosilicon from Russia are treated as U.S. imports from a nonsubject country.

<sup>3</sup> Pertinent *Federal Register* notices are referenced in app. A, and may be found at the Commission’s website ([www.usitc.gov](http://www.usitc.gov)).

<sup>4</sup> A list of witnesses that appeared at the hearing is presented in app. B of this report.

Effective date	Action
July 19, 2013	Petition filed with Commerce and the Commission; institution of Commission investigation (78 FR 44969, July 25, 2013)
August 14, 2013	Commerce's notice of initiation (78 FR 49471)
September 9, 2013	Commission's preliminary determinations (78 FR 55096)
March 11, 2014	Commerce's preliminary antidumping determinations (Russia; 79 FR 13620)(Venezuela; 79 FR 13619)
March 31, 2014	Commission's scheduling of its final phase investigations (79 FR 18065)
July 29, 2014	Commission's hearing
July 31, 2014	Commerce's final results of its final phase investigations (79 FR 44393, Russia)(79 FR 44397, Venezuela)
July 31, 2014	Commission's termination of final phase investigation on Russia (79 FR 46450, August 8, 2014)
August 26, 2014	Commission's vote
September 8, 2014	Commission's determinations and views transmitted to Commerce

## STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

### Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

*shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--

*In evaluating the volume of imports of merchandise, 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.*

. . .

*In evaluating the effect of imports of such merchandise on prices, 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.*

*. . .*

*In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to . . . (I) actual and potential decline in output, sales, market share, profits, productivity, return on investments, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.*

### **Organization of report**

*Part I* of this report presents information on the subject merchandise, dumping margins, and domestic like product. *Part II* of this report presents information on conditions of competition and other relevant economic factors. *Part III* presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. *Part VI* presents information on the financial experience of U.S. producers. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

### **MARKET SUMMARY**

In 2013, U.S. apparent consumption for ferrosilicon totaled approximately \$\*\*\* and \*\*\* short tons of contained silicon.<sup>5</sup> Ferrosilicon is primarily used as an alloying agent in the

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<sup>5</sup> Ferrosilicon is generally purchased by total net weight; however, the customary basis of payment in the industry is per pound of contained silicon. In these final phase investigations, questionnaire recipients were requested to submit all volume data to the Commission in short tons "of contained silicon." Also, the second unit of quantity in the official Commerce import statistics compiles U.S.

*(continued...)*

production of steel and cast iron. There are two U.S. producers of ferrosilicon, Globe and CC Metals, which accounted for 100 percent of ferrosilicon produced in the United States during the period of investigation. The sole producer of ferrosilicon in Venezuela is FerroAtlántica de Venezuela, S.A. (“FerroVen”). The sole U.S. importer of ferrosilicon from Venezuela is FerroAtlántica North America Inc. (“FerroAtlantica”). Major U.S. purchasers of ferrosilicon are firms that manufacture steel or operate iron foundries.

U.S. producers’ U.S. shipments of ferrosilicon totaled \*\*\* short tons (valued at \$\*\*\*) in 2013, and accounted for \*\*\* percent of apparent U.S. consumption by quantity and \*\*\* percent by value. U.S. imports from Venezuela totaled 25,922 short tons (valued at \$44.8 million) in 2013 and accounted for \*\*\* percent of apparent U.S. consumption by quantity and \*\*\* percent by value. U.S. imports from nonsubject sources totaled 137,783 short tons (valued at \$270.0 million) in 2013 and accounted for \*\*\* percent of apparent U.S. consumption by quantity and \*\*\* percent by value.

### **SUMMARY DATA AND DATA SOURCES**

A summary of data collected in these investigations is presented in appendix C, table C-1. U.S. industry data are based on the questionnaire responses of CC Metals and Globe, which accounted for all U.S. production of ferrosilicon during the period of investigation. The volume and value of U.S. imports during the period of investigation are based on official import data from Commerce. Foreign industry data for Venezuela are based on the questionnaire response of FerroVen, which reported that it accounted for \*\*\* percent of total ferrosilicon exports to the United States from Venezuela in 2013.

### **PREVIOUS AND RELATED INVESTIGATIONS**

The Commission has conducted several investigations concerning ferrosilicon. In 1983, the Commission instituted an investigation under section 406(a)(1) of the Trade Act following a request received from the United States Trade Representative. In 1984, the Commission found that market disruption did not exist.<sup>6</sup>

The Commission instituted investigations concerning ferrosilicon from Argentina, China, Kazakhstan, Russia, Ukraine, and Venezuela in June 1992. In March 1993, the Commission determined that a domestic industry was materially injured by reason of dumped ferrosilicon imports from China, Kazakhstan, and Ukraine, and in June 1993, the Commission determined that a domestic industry was materially injured by reason of dumped and subsidized

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(...continued)

imports of ferrosilicon on a contained silicon basis. For the sake of brevity, however, throughout this report, references to short tons of contained silicon may be referred to simply as “short tons.”

<sup>6</sup> *Ferrosilicon from the Union of Soviet Socialist Republic, Inv. No. TA-406-10*, USITC Publication 1484 (February 1984).

ferrosilicon imports from Venezuela and dumped ferrosilicon imports from Russia.<sup>7</sup> Commerce reached a negative determination with respect to Argentina.<sup>8</sup>

The Commission instituted investigations concerning ferrosilicon from Brazil and Egypt in January 1993. In January 1994, the Commission determined that a domestic industry was materially injured by reason of dumped ferrosilicon imports from Brazil.<sup>9</sup> The Commission reached a negative determination with respect to Egypt.<sup>10</sup>

In April 1998, the Commission received a request for a changed circumstance review of its affirmative determination with respect to imports of ferrosilicon from Brazil, alleging that since the Commission's original investigation, a nationwide criminal ferrosilicon price-fixing conspiracy maintained by major U.S. ferrosilicon producers from as early as late 1989 to at least mid-1991 was uncovered and successfully prosecuted. The Commission determined that reconsideration was a more appropriate procedure for review of the original determinations, and in May 1999, the Commission suspended the changed circumstances review and instituted a reconsideration of the original determination. In August 1999, it determined on reconsideration that the domestic ferrosilicon industry was not materially injured or threatened with material injury by reason of subject imports from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela.<sup>11</sup> The Commission's determination was then appealed to the U.S. Court of International Trade (CIT), which remanded the matter to the Commission four times. The Commission made negative determinations in all four remands.<sup>12</sup>

## NATURE AND EXTENT OF SALES AT LTFV

### Russia

On July 31, 2014, Commerce issued a negative determination in its final phase investigation on Russia finding that U.S. imports of ferrosilicon from Russia are not being, nor are likely to be, sold in the United States at less than fair value.<sup>13</sup>

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<sup>7</sup> *Ferrosilicon from the People's Republic of China, Inv. No. 731-TA-566 (Final)*, USITC Publication 2606 (March 1993); *Ferrosilicon from Kazakhstan and Ukraine, Inv. Nos. 731-TA-566 and 569 (Final)*, USITC Publication 2616 (March 1993); *Ferrosilicon from Russia and Venezuela, Inv. Nos. 731-TA-568 and 570 (Final)*, USITC Publication 2650 (June 1993).

<sup>8</sup> 58 FR 27534, May 10, 1993.

<sup>9</sup> *Ferrosilicon from Brazil, Inv. No. 731-TA-641 (Final)*, USITC Publication 2722 (Jan 1994).

<sup>10</sup> 58 FR 58709, November 3, 1993.

<sup>11</sup> *Ferrosilicon from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela, Invs. 303-TA-23, 731-TA-566-570 and 731-TA-641 (Final) (Reconsideration)*, USITC Publication 3218 (August 1999).

<sup>12</sup> *Ferrosilicon from Brazil, China, Kazakhstan, Russia, Ukraine, and Venezuela, Invs. 303-TA-23, 731-TA-566-570 and 731-TA-641 (Final) (Reconsideration) (Fourth Remand)*, USITC Publication 3890 (October 2006).

<sup>13</sup> *Ferrosilicon From the Russian Federation: Final Determination of Sales at Not Less Than Fair Value*, 79 FR 44393, July 31, 2014.

## Venezuela

On July 31, 2014, Commerce published a notice in the *Federal Register* announcing its final affirmative determination in its antidumping duty investigation on ferrosilicon from Venezuela. Commerce announced an estimated dumping margin of 22.84 percent for ferrosilicon exported by FerroAtlantica de Venezuela and “all others.”<sup>14</sup>

### THE SUBJECT MERCHANDISE

#### Commerce’s scope

Commerce has defined the scope of these investigations as follows:<sup>15</sup>

*The merchandise covered by these investigations is all forms and sizes of ferrosilicon, regardless of grade, including ferrosilicon briquettes. Ferrosilicon is a ferroalloy containing by weight 4 percent or more iron, more than 8 percent but not more than 96 percent silicon, 3 percent or less phosphorus, 30 percent or less manganese, less than 3 percent magnesium, and 10 percent or less any other element. The merchandise covered also includes product described as slag, if the product meets these specifications.*

*Ferrosilicon is currently classified under U.S. Harmonized Tariff Schedule (“HTSUS”) subheadings 7202.21.1000, 7202.21.5000, 7202.21.7500, 7202.21.9000, 7202.29.0010, and 7202.29.0050. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise is dispositive.*

#### Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations is classifiable under the following provisions of the 2014 HTS: 7202.21.10, 7202.21.50, 7202.21.75, 7202.21.90, and 7202.29.00. The Column-1 General rates of duty for these provisions are, respectively, 1.1 percent, 1.5 percent, 1.9 percent, 5.8 percent, and “Free.”<sup>16</sup>

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<sup>14</sup> *Ferrosilicon From Venezuela: Final Determination of Sales at Not Less Than Fair Value*, 79 FR 44397, July 31, 2014.

<sup>15</sup> *Ferrosilicon From the Russian Federation: Preliminary Determination of Sales at Not Less Than Fair Value*, 79 FR 13620, March 11, 2014.

<sup>16</sup> Duty rates are in percent ad valorem. U.S. imports of ferrosilicon from Venezuela under HTS 7201.21.10 and 7201.21.50 (covering ferrosilicon containing by weight more than 55 percent but not

(continued...)

## THE PRODUCT

### Description and applications

Ferrosilicon is a ferroalloy composed of iron and silicon, along with very small proportions of minor elements, such as aluminum, calcium, carbon, manganese, phosphorus, and sulfur. Ferrosilicon is silver in color.

Commercially, ferrosilicon is differentiated by grade and size. Ferrosilicon grades are defined by the percentages by weight of silicon and minor elements contained in the product. The principal characteristic is the percentage of silicon contained in the alloy; grades are referred to primarily by reference to that percentage. In the United States, almost all ferrosilicon produced and/or consumed is either 75 percent ferrosilicon or 50 percent ferrosilicon, containing, by weight, approximately 75 percent or 50 percent of silicon, respectively.<sup>17</sup>

Ferrosilicon grades are further defined by the percentages of minor elements present in the product. "Regular grade 75 percent ferrosilicon" and "regular grade 50 percent ferrosilicon" denote products containing the indicated percentages of silicon and recognized maximum percentages of minor elements. Other grades of ferrosilicon differ from regular grades by having more restrictive limits on the content of elements such as aluminum, titanium, and/or calcium in the alloy.<sup>18</sup>

Domestic and foreign producers also manufacture ferrosilicon that contains controlled amounts of minor elements for the purpose of adding them to steel or foundry iron using ferrosilicon as the carrier. Such ferrosilicon products are sometimes called "inoculants."

Ferrosilicon is used mainly in the production of steel and cast iron. In steel production, the silicon contained in ferrosilicon serves as a deoxidizer by combining with dissolved oxygen in molten steel. Deoxidation is necessary to permit casting of the steel without undesirable

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(...continued)

more than 80 percent of silicon) are eligible for duty-free treatment under the Generalized System of Preferences ("GSP") when that program is in effect. The GSP program expired on July 31, 2013 and has not been renewed. The program has expired on several previous occasions, for periods of about one month to 15 months. After each of the previous expirations the program was renewed retroactively and duties paid by importers of eligible goods during the period of expiration were refunded.

<sup>17</sup> A standard specification for ferrosilicon is ASTM A 100 *Standard Specification for Ferrosilicon*. To be in compliance with this specification, 75 percent ferrosilicon must contain from 74.0 through 79.0 percent of silicon, and 50 percent ferrosilicon must contain from 47.0 through 51.0 percent silicon. Individual producers and consumers may have their own specifications that may be broader or narrower than the ASTM standard.

<sup>18</sup> ASTM A 100 includes chemical requirements for a number of grades of ferrosilicon. Grade C, regular 75 percent ferrosilicon, for example, may contain a maximum of 1.50 percent of aluminum, by weight, whereas grade CA may contain a maximum of 0.50 percent, and grade CB a maximum of 0.10 percent of aluminum. Further, grades C1 and C2 are required to contain at least 1.00 percent but not more than 1.50 percent of aluminum and must contain a minimum of 0.50 percent or 1.50 percent of calcium, respectively.

bubbles in the solidified steel. Ferrosilicon is also used as a reducing agent, particularly in the production of stainless steel. As a reducing agent, silicon reacts with chromium oxides to form silicon oxides, returning chromium to the molten steel, and increasing the overall chromium recovery of the process. Finally, ferrosilicon is used as the source of silicon for alloying purposes in the production of certain steel alloys, particularly silicon electrical steel, which may contain three percent or more of silicon.

Ferrosilicon is used by iron foundries as the source of silicon needed for alloying purposes in iron castings.

Ferrosilicon is sold primarily in sized lump form.<sup>19</sup> Size is important because it affects the performance of the ferrosilicon in its designated use. Large lumps are generally used in primary steelmaking furnaces because they penetrate the layer of slag on top of the molten metal more readily. Smaller lumps are more commonly used for alloying purposes to insure rapid dissolution in molten steel. Fines are less desirable than lumps because it is more difficult to recover the silicon content in them.

\*\*\*. It contains about 15 percent silicon. \*\*\*.<sup>20</sup> Such 15 percent ferrosilicon powder is not used for metallurgical purposes by steel or iron castings firms; rather, it is combined with water to create a dense medium for gravity (sink/float) separation of minerals, aggregates, and metals.<sup>21</sup>

### **Manufacturing processes**

Ferrosilicon is produced by smelting iron-containing materials and silicon-containing materials in submerged-arc electric furnaces. Iron is in the form of iron or steel scrap and silicon is in the form of quartz gravel or sand. These are combined with carbonaceous material such as coal or petroleum coke and a bulking agent such as wood chips. The raw materials are weighed, combined in the required proportions, and fed into the furnace. High-current, low-voltage electricity is delivered through a transformer and into the furnace through carbon electrodes. The process is very energy-intensive, requiring about 8,000 to 9,000 kilowatt-hours of electricity to produce one short ton of 75 percent ferrosilicon. To operate efficiently and reduce unit fixed cost, a submerged-arc furnace must run continuously, 24 hours per day.

In the furnace, the charge is heated to approximately 3,300 degrees Fahrenheit. At that temperature, the quartzite combines with the carbon in the reductants forming carbon monoxide and releasing silicon, which forms an alloy with molten iron. Molten ferrosilicon accumulates in the bottom of the furnace, from which it is drawn off into ladles on either a

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<sup>19</sup> Ferrosilicon sizes are stated as the maximum and minimum dimensions of the lumps found in a given shipment. The dimensions refer to the openings in standardized sieves used to size the product. Sizes vary from eight inches by four inches to one-quarter inch by down.

<sup>20</sup> \*\*\*.

<sup>21</sup> Westbrook Resources. <http://www.wbri.co.uk/atomised-ferro-silicon.html>, Accessed Aug. 21, 2013.

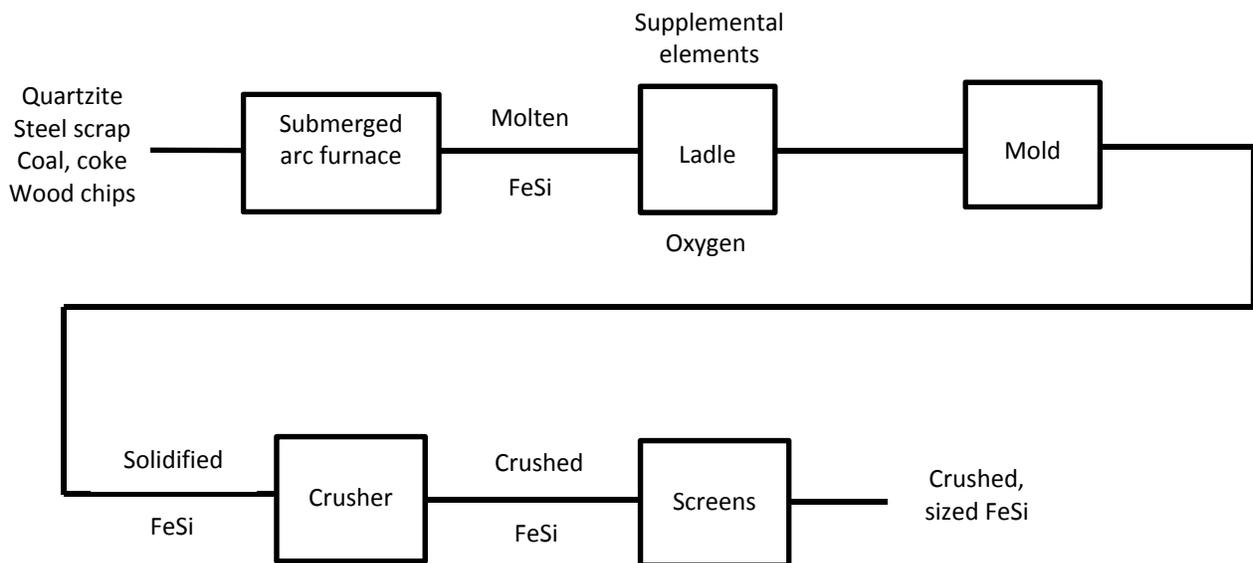
continuous or intermittent basis. Refinement of the ferrosilicon to remove unwanted impurities and the addition of special alloying elements occur in the ladles.

Molten ferrosilicon is poured from the ladles into large, flat cast-iron molds or onto a bed of ferrosilicon fines to cool. After cooling and solidification, the ferrosilicon is crushed and screened to produce the required lump sizes. In the process of crushing, some product may be too small for sale; such material may be further ground to a powder, combined with a binder, and formed into briquettes. All sizes of ferrosilicon, including briquettes and fines, are subject to these investigations.

All grades of ferrosilicon are produced using essentially the same process, but certain additional steps are required to produce higher-purity grades of ferrosilicon. Such grades are produced using raw materials containing lower amounts of impurities. In addition, higher-purity ferrosilicon undergoes further processing known as ladle metallurgy while in the molten state to further reduce its content of impurities.<sup>22</sup> Specialty grade 15 percent ferrosilicon for dense medium application is typically produced by remelting 75 percent ferrosilicon with steel scrap in an electric arc furnace and casting into a high-pressure water spray.<sup>23 \*\*\*.</sup><sup>24</sup>

Figure I-1 illustrates the manufacture of ferrosilicon.

**Figure I-1**  
**Ferrosilicon production process**



Source: *Ferrosilicon from China, Inv. No. 731-TA-567 (Final)*, USITC Publication 2606, p. I-9.

<sup>22</sup> Ladle metallurgy involves injection of oxygen into the molten metal in the ladle to oxidize impurities. Proprietary processing involving specialized equipment is also performed in the ladle.

<sup>23</sup> Westbrook Resources. <http://www.wbri.co.uk/atomised-ferro-silicon.html>, Accessed Aug. 21, 2013.

<sup>24</sup> \*\*\*.

## DOMESTIC LIKE PRODUCT ISSUES

Petitioners contended that there is a single domestic like product consisting of all forms and sizes of ferrosilicon, regardless of grade.<sup>25</sup> They stated that the physical characteristics of all grades of ferrosilicon are determined by their chemical composition and that few physical differences exist among grades. Within a single grade, domestic and imported ferrosilicon have the same physical characteristics.<sup>26</sup>

Respondent did not raise any issues with respect to the definition of the domestic like product.<sup>27</sup> In its preliminary views, the Commission did find a single domestic like product coextensive with the scope and stated:

*We find that all grades of ferrosilicon within the scope of these investigations share similarities with respect to the six factors we consider when defining the domestic like product. Therefore, based on the record in the preliminary phase of these investigations and the lack of argument to the contrary, we define a single domestic like product, consisting of ferrosilicon corresponding to Commerce's scope definition.*<sup>28</sup>

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<sup>25</sup> Petitioners' prehearing brief, pp. 3-6.

<sup>26</sup> Ibid; Petition, p. 14.

<sup>27</sup> FerroVen stated that although it believes competition amongst grades of ferrosilicon is attenuated, it does not contest the domestic like product as defined in the petition. FerroVen's prehearing brief, p. 29; see Part IV of this report for a discussion of FerroVen's attenuated competition argument.

<sup>28</sup> *Ferrosilicon from Russia and Venezuela, Inv. Nos. 731-TA-1224-1225 (Preliminary)*, USITC Publication 4426, September 2013, p. 7.

In previous ferrosilicon investigations, the Commission determined that there was a single domestic like product consisting of all grades of ferrosilicon. *Ferrosilicon From the People's Republic of China*, Inv. No. 731-TA-567 (Final), USITC Publication 2606 (March 1993), p. 5; *Ferrosilicon From Russia and Venezuela*, Inv. Nos. 303-TA-23, 731-TA-568 and 570 (Final), USITC Publication 2650 (June 1993), p. 7; and *Ferrosilicon From Egypt*, Inv. No. 731-TA-641 (Final), USITC Publication 2688 (October 1993), p. 1-8.

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

### U.S. MARKET CHARACTERISTICS

Ferrosilicon is mainly used in the production of steel and iron to introduce silicon into molten steel or iron. U.S. demand trends for ferrosilicon follow U.S. steel production. Different grades of ferrosilicon can be manufactured, such as regular, high purity, low aluminum, and foundry grade. Each grade is defined by the percentage of silicon and minor elements contained in the product by weight. The lower the amount of other elements besides silicon and iron, the higher the purity level of the ferrosilicon.<sup>1</sup> U.S. producers supply many grades of ferrosilicon, but Venezuelan imports consist mostly of regular-grade and low aluminum product.

### U.S. PURCHASERS

The Commission received responses from 25 purchasers of ferrosilicon. One purchaser, \*\*\*,<sup>2</sup> Eighteen purchasers described themselves as steel producers or steel foundries, three (\*\*\*) described themselves as distributors, two (\*\*\*) described themselves as iron foundries, and one (\*\*\*) described itself as a specialty metals producer. Distributors sold mainly to steel producers and foundries. \*\*\* distributor purchasers reported that they do compete with the manufacturers or importers from which they purchase. In their questionnaires, steel-producing purchasers sometimes referred to distributors as “traders” and described them as selling ferrosilicon from multiple countries.<sup>3</sup>

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<sup>1</sup> Petition, p. 6.

<sup>2</sup> In 2013, purchasers reported purchases of regular-grade ferrosilicon produced in the United States (\*\* short tons), Venezuela (\*\* short tons), Russia (nonsubject- \*\* shorts tons), and other nonsubject countries (\*\* short tons). For other grade ferrosilicon, purchasers reported purchases of U.S. product (\*\* short tons), Venezuelan product (\*\* short tons), Russian (nonsubject) product (\*\* short tons), and other nonsubject country product (\*\* short tons). Total 2013 purchaser purchases of all ferrosilicon represented \*\* percent of U.S. shipments of U.S. product, \*\* percent of U.S. shipments of Venezuelan product, \*\* percent of U.S. shipments of Russian product, and \*\* percent of U.S. shipments of products from all other countries.

<sup>3</sup> Petitioners named U.S. Steel, Nucor, AK Steel, Steel Dynamics, and Arcelor Mittal as large steel producers with multiple plants that use ferrosilicon. In purchase data reported to the Commission, the seven largest purchases (by volume) of ferrosilicon in 2013 were \*\*\*, which together accounted for \*\* percent of all 2013 ferrosilicon purchases reported in Commission questionnaires. See petitioners’ prehearing brief, p. 10.

## CHANNELS OF DISTRIBUTION

As shown in table II-1, U.S. producers reported that approximately \*\*\* of their US shipments were to steel producers and \*\*\* were to iron foundries. U.S. importers of ferrosilicon from all other sources reported that over \*\*\* of their shipments of ferrosilicon were to steel producers.

**Table II-1**

**Ferrosilicon: U.S. producers' and importers' U.S. shipments, by sources and channels of distribution, January 2011-March 2014** *Source: Compiled from data submitted in response to Commission questionnaires.*

\* \* \* \* \*

## GEOGRAPHIC DISTRIBUTION

U.S. producers reported selling ferrosilicon to \*\*\*, except the \*\*\* (table II-2). Venezuelan and Russian importers of ferrosilicon reported selling to \*\*\*.

Most U.S. and subject-country ferrosilicon is sold between 100 and 1,000 miles from the production facilities or point of importation. For U.S. producers, \*\*\* percent of 2013 sales were within 100 miles of their production facility, \*\*\* percent were between 101 and 1,000 miles, and \*\*\* percent were over 1,000 miles. Importers of Venezuelan ferrosilicon sold \*\*\* percent within 100 miles of their U.S. point of shipment, \*\*\* percent between 101 and 1,000 miles, and \*\*\* percent over 1,000 miles. Importers of (nonsubject) Russian ferrosilicon sold \*\*\* percent within 100 miles of their U.S. point of shipment, \*\*\* percent between 101 and 1,000 miles, and \*\*\* percent over 1,000 miles.

**Table II-2**

**Ferrosilicon: Geographic market areas in the United States served by U.S. producers and importers, by number of responding firms**

\* \* \* \* \*

## SUPPLY AND DEMAND CONSIDERATIONS

### U.S. supply

#### Domestic production

Based on available information, U.S. producers of ferrosilicon have the ability to respond to changes in demand with low-to-moderate changes in the quantity of shipments of U.S.-produced ferrosilicon to the U.S. market. The main contributing factors to the low-to-moderate degree of responsiveness of supply are an ability to produce other products and

some ability to use inventories to increase shipments; supply responsiveness is constrained by high capacity utilization levels and limited alternative markets.

### ***Industry capacity***

Domestic capacity utilization \*\*\* from 2011 to 2013. Overall capacity to produce in-scope ferrosilicon \*\*\* from 2011 to 2012, and then fell in 2013. In 2013, capacity utilization was over \*\*\* percent.<sup>4</sup> Domestic producers' level of capacity utilization suggests that U.S. producers may have a somewhat limited capacity to increase production of ferrosilicon in response to an increase in demand. At the hearing, however, CC Metals reported that it has had a smaller furnace idle since June 2013.<sup>5</sup> U.S. producers can switch between producing grades of ferrosilicon without significant downtime.<sup>6</sup> FerroAtlantica stated that Globe shifted its capacity into ferrosilicon (from silicon metal) in 2012 in response to lower prices for silicon metal.<sup>7</sup> Petitioners stated that \*\*\*.<sup>8</sup>

### ***Alternative markets***

U.S. producers' exports, as a percentage of total shipments, \*\*\* from \*\*\* percent in 2011 to \*\*\* percent in 2013, after rising to \*\*\* percent in 2012. CC Metals reported shipping to \*\*\*, and Globe reported exporting to \*\*\*. U.S. producers may have limited ability to shift shipments between the U.S. market and other markets in response to demand changes.

### ***Inventory levels***

U.S. producers' inventories increased over the period of investigation from \*\*\* percent of total shipments in 2011 to \*\*\* percent in 2012 before decreasing slightly to \*\*\* percent in 2013. These inventory levels suggest that U.S. producers may have the ability to respond to changes in demand with changes in the quantity shipped from inventories.

### ***Production alternatives***

\*\*\* responding U.S. producers stated that they could switch production from ferrosilicon to other products. Other products that producers reportedly can produce on the same equipment as ferrosilicon are \*\*\*.<sup>9</sup> <sup>10</sup>

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<sup>4</sup> During the interim period (January-March 2014), U.S. producers' capacity utilization decreased slightly to \*\*\* percent from \*\*\* percent in the 2013 interim period (January-March 2013).

<sup>5</sup> Hearing transcript, p. 24 (Nuss).

<sup>6</sup> Hearing transcript, p. 70 (Joiner).

<sup>7</sup> Hearing transcript, p. 127 (Hopkins).

<sup>8</sup> Petitioners' posthearing brief, p. 20.

<sup>9</sup> In early 2011, Globe reported switching production lines between ferrosilicon and silicon metal production to improve product mix and capture higher returns. *Globe converts alloy furnace to silicon, (continued...)*

### ***Supply constraints***

Both domestic producers reported \*\*\* since January 1, 2011.

### **Subject imports from Venezuela**

Based on available information, producers of ferrosilicon from Venezuela have the ability to respond to changes in demand with moderate-to-high changes in the quantity of shipments of ferrosilicon to the U.S. market. FerroVen is the only producer of ferrosilicon in Venezuela.<sup>11</sup> The main contributing factors to the moderate-to-high degree of responsiveness of supply is FerroVen's high levels of exports to non-U.S. markets and some spare capacity. Dampening FerroVen's responsiveness is the lack of production alternatives as well as low inventory levels.

### ***Industry capacity***

Venezuelan capacity utilization decreased from \*\*\* percent in 2011 to \*\*\* percent in 2013. Overall capacity to produce ferrosilicon \*\*\* during the period of investigation. FerroVen's level of capacity utilization suggests that FerroVen has the ability to increase production of ferrosilicon in response to an increase in demand. However, FerroAtlantica indicated that economic conditions in Venezuela limited its ability to increase capacity there.<sup>12</sup> It added that FerroVen could not produce high purity, low titanium grade ferrosilicon.<sup>13</sup>

### ***Alternative markets***

Over 2011-13, FerroVen shipped between \*\*\* percent of its total commercial shipments to its home market. Over the same period, the share of FerroVen's shipments going to the United States increased from \*\*\* percent to \*\*\* percent while the share going to other export markets fell from \*\*\* to \*\*\* percent. Counsel for FerroAtlantica indicated that the Venezuelan

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(...continued)

American Metal Market Today, February 9, 2011, <http://www.amm.com/Article/2769076/Globe-converts-alloy-furnace-to-silicon.html>, retrieved August 14, 2013.

<sup>10</sup> In petitioners' briefs in the preliminary phase of these investigations, Globe explained the conditions in which the company can shift production are based on \*\*\*. \*\*\*. Petitioner's postconference brief, p. 1 of Responses of Globe Specialty Metals, Inc. and CC Metals and Alloys, LLC to Questions at the staff conference. FerroAtlantica described U.S. producers as switching from silicon metal to ferrosilicon production in response to lower silicon metal prices. Prehearing brief of FerroAtlantica, p. 6. Petitioners responded that CC Metals has never produced silicon metal, and that \*\*\*. Petitioners' posthearing brief, attachment A, pp.51-52.

<sup>11</sup> Conference transcript, p. 71 (Salinas).

<sup>12</sup> Hearing transcript, p. 117-120 (Larrea).

<sup>13</sup> Hearing transcript, p. 121 (Hopkins).

government expects FerroVen to supply Venezuelan national steel producers with a certain amount of ferrosilicon, constraining FerroVen's ability to shift those sales.<sup>14</sup>

### ***Inventory levels***

FerroVen's total end-of-period inventories decreased from \*\*\* percent of total shipments in 2011 to \*\*\* percent in 2013. The 2013 inventory level suggests that FerroVen may have limited ability to respond to changes in demand with changes in the quantity shipped from inventories. FerroAtlantica reported that, due to an expectation of irregular supply from FerroVen, it purchases and inventories material from FerroVen when available, and then sells out of inventory.<sup>15</sup>

### ***Production alternatives***

FerroVen reported that it \*\*\* switch production from ferrosilicon to other products.<sup>16</sup>

### ***Supply constraints***

FerroVen indicated that the \*\*\*. Importer \*\*\* reported that \*\*\*.<sup>17</sup>

### ***Nonsubject imports***

#### ***Nonsubject imports from Russia***

Russia was the largest source of U.S. imports of ferrosilicon in 2013. U.S. imports from Russia were similar in 2011 and 2013, but over \*\*\* percent higher in 2012 than in either of those years.

The second largest source of nonsubject imports during 2011-13 was China. Imports from China fell 30.4 percent from 2011 to 2012 and then rose 2.0 percent from 2012 to 2013. In 2010, Chinese officials capped levels of ferrosilicon production at 2009 levels.<sup>18</sup> In addition, Chinese products are subject to a 25 percent export tax,<sup>19</sup> although there is some smuggling of Chinese material through Vietnam. (See *Part VII*). Canada is another large source of nonsubject imports.

Two U.S. importers of ferrosilicon from nonsubject countries indicated that they had not had difficulties in supplying ferrosilicon since January 1, 2011.

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<sup>14</sup> Hearing transcript, p. 187 (Mendoza).

<sup>15</sup> Hearing transcript, pp. 123-124 (Hopkins).

<sup>16</sup> Petitioners stated that FerroVen likely \*\*\*. Petitioners' posthearing brief, attachment A, p. 61.

<sup>17</sup> At the hearing, FerroAtlantica described currency controls and other constraints FerroVen faced in producing in Venezuela. Hearing transcript, pp. 209-210 (Larrea).

<sup>18</sup> Conference transcript, p. 93.

<sup>19</sup> Conference transcript, p. 85.

## Product Range, Mix, and Marketing

\*\*\* indicated that there had not been any changes to the product range, mix, or marketing of ferrosilicon since January 1, 2011. However, \*\*\* stated that there was an oversupply of Russian ferrosilicon in the U.S. market, and added that nonsubject Russian suppliers “control” ferroalloys in the U.S. market. \*\*\* stated that the large supply of Chinese-produced ferrosilicon smuggled through Vietnam (to avoid Chinese export taxes) had had a negative impact on U.S. ferrosilicon prices.

### U.S. demand

Based on available information, the overall demand for ferrosilicon would likely experience small changes in response to changes in price due to the lack of economically viable substitutes and the small cost share of ferrosilicon in most of its end-use products. U.S. demand for ferrosilicon depends on the demand for U.S.-produced downstream products, mostly steel as well as iron products.

### End uses

Ferrosilicon is used primarily as an alloying agent in the production of steel and iron castings. Ferrosilicon increases the silicon content in the steel, increases the tensile strength of carbon and other steels, improves the resistance to corrosion and high-temperature oxidation of stainless steels, and improves electrical characteristics of electrical steels.<sup>20</sup> Globe indicated that approximately two-thirds of the U.S. ferrosilicon demand is for regular-grade ferrosilicon, while one-third is for specialty ferrosilicon.<sup>21</sup> Specialty grades of ferrosilicon are used in particular types of steel, for example stainless steel or electrical steel.<sup>22</sup>

\*\*\* named steel, iron castings, and/or slag as the end uses for ferrosilicon, and estimated that ferrosilicon accounted for 1-3 percent of the cost of those end products.<sup>23</sup> Purchasers named a wide variety of steel products (including plate, bar, tubular goods, castings, electrical steel, structural steel, specialty steel, and more) as end uses for the ferrosilicon that they purchased. In general, purchasers reported that ferrosilicon was a very small part (0.2 to 5.0 percent) of the total cost of these products. Purchasers also reported producing iron castings and ferromolybdenum using ferrosilicon, with ferrosilicon accounting for \*\*\* percent of the cost of producing the latter.

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<sup>20</sup> Petition, p. 8.

<sup>21</sup> Hearing transcript, p. 78 (Perkins)

<sup>22</sup> Hearing transcript, p. 44 (Lutz) and p. 113 (Larrea), and petitioners’ posthearing brief, attachment A, p. 19.

<sup>23</sup> \*\*\*.

Purchasers reported a variety of demand trends for their end use products since 2011. Five reported increasing demand, seven reporting fluctuating demand, five reported no change in demand, and five reported decreased demand. Fifteen purchasers described changes in demand for their products having affected their demand for ferrosilicon, while seven reported that these changes (or lack of changes) in demand for their products had not affected their demand for ferrosilicon. Several purchasers described their demand for ferrosilicon as following demand for their end use products, with \*\*\* elaborating that there can be slight variations in the relationship depending on the grade of steel demanded. Steel producers described demand for their product as varying due to general economic conditions and competition from low-cost imports.<sup>24</sup>

## **Business cycles**

Most U.S. producers and importers described the U.S. ferrosilicon market as subject to distinctive business cycles and/or conditions of competition, usually citing the close relationship between ferrosilicon demand and steel production. Most purchasers did not describe distinctive conditions of competition in the U.S. ferrosilicon market, but those that did also cited the relationship with steel production.

\*\*\*, four importers, and four purchasers indicated that the ferrosilicon market was subject to distinct business cycles. Specifically, \*\*\* and two purchasers cited demand for ferrosilicon by end users, particularly steel production, as being distinct to the ferrosilicon market.

Importer FerroAtlantica indicated that in the \*\*\*. Importers \*\*\* also indicated that ferrosilicon demand is seasonal, but did not elaborate. Purchaser \*\*\* described summer as a slow period for ferrosilicon market activity, and purchaser \*\*\* described the U.S. ferrosilicon market as affected by global economic conditions.

\*\*\*, three importers, and six purchasers described the ferrosilicon market as subject to distinctive conditions of competition. U.S. producer CC Metals reported that \*\*\*. \*\*\* described the ferrosilicon market as a commodity market in which competition takes place entirely on price. \*\*\* described lower silicomanganese and carbon product prices as driving some steel mills to switch away from ferrosilicon to other production inputs or methods. \*\*\* indicated that global supply and demand conditions had also affected the U.S. market. \*\*\* stated that two distinctive conditions of competition are first, the price impact (not reflected in *Ryan's Notes* (see Part V)) of surges in imports of Chinese material, and second, the decisions of U.S. producers about whether to produce ferrosilicon or silicon metal. The other five purchasers identified Chinese ferrosilicon supply, the status of individual production plants, tariffs and antidumping duties, end user requirements, and steel market trends as such conditions.

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<sup>24</sup> According to the World Steel Association, U.S. crude steel production rose from 86,398 metric tons in 2011 to 88,695 metric tons in 2012 before declining to 86,955 tons in 2013. Petitioner's prehearing brief, exhibit 1.

However, eighteen purchasers \*\*\* indicated that the ferrosilicon market was not subject to distinctive business cycles or other distinctive conditions of competition.

Five importers indicated that there had been changes to ferrosilicon business cycles or conditions of competition since January 1, 2011. \*\*\* indicated that the regular seasonal slowdown had become more prolonged. \*\*\* stated that before May 2012, European Union (EU) prices were higher than U.S. prices, but that since then, U.S. prices had been higher than EU prices. It added that a U.S. producer had increased ferrosilicon capacity by switching a furnace from other products, and that the EU had removed antidumping duties on ferrosilicon from Egypt and Kazakhstan.<sup>25</sup> \*\*\* described U.S. producer Globe as switching production from silicon metal to ferrosilicon in response to lower silicon metal prices. It added that U.S. ferrosilicon producers have shown increased interest in the regular-grade ferrosilicon market after a decline in U.S. stainless steel production led to a concomitant reduction in demand for the higher-grade ferrosilicon traditionally produced by U.S. producers.

Five purchasers also indicated that there had been changes to ferrosilicon business cycles or conditions of competition since January 1, 2011. The five purchasers cited decreased competition among ferrosilicon suppliers due to these investigations, decreased worldwide demand for ferrosilicon, decreased U.S. steel production due to increased U.S. imports of steel, and increased U.S. stainless steel production due to new U.S. stainless steel producers.

However, two producers and six purchasers indicated that the business cycles and/or conditions of competition in the ferrosilicon market had not changed since January 1, 2011.

## **Apparent consumption**

Apparent U.S. consumption of ferrosilicon increased \*\*\* percent during 2011-13. U.S. consumption in January-March 2014 was \*\*\* percent higher than in January-March 2013.

## **Demand trends**

### ***Demand Inside the United States***

U.S. producers, importers, and purchasers had widely-ranging descriptions of U.S. ferrosilicon demand since 2011 (table II-3). At the hearing, Globe described U.S. steel production as 11 percent below levels reached before the Great Recession.<sup>26</sup> Similarly, \*\*\* reported decreases in demand in the U.S. for ferrosilicon due to a 2.8 percent overall decrease in crude steel production since January 2011. \*\*\* described U.S. demand as having become

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<sup>25</sup> According to \*\*\*, Kazakhstan is no longer producing ferrosilicon.

<sup>26</sup> Hearing transcript, p. 14 (Perkins). Economic consultant for petitioners described U.S. steel production as rising from 2011 to 2012, and then falling back in 2013. Hearing transcript, p. 34 (Lutz). Production of steel that is more likely to be used in automobiles has recovered more quickly than steel used in construction, due to the higher growth in the automotive market than in the housing market. Hearing transcript, p. 45 (Perkins).

more stable since 2011, after rebounding sharply in 2010 from the earlier recession. It further described the U.S. ferrosilicon market as 67 percent regular-grade with the balance specialty-grade ferrosilicon. It continued that when China’s supply of regular-grade ferrosilicon became erratic, demand increased for regular-grade ferrosilicon under long-term contracts. \*\*\* described U.S. steel production as increasing since January 2011, but having fallen somewhat in 2012 before rising again in 2013.

Some purchasers cited increased U.S. steel production (sometimes of specific types, such as stainless, and sometime in specific sectors, such as automotive) as a reason for increased ferrosilicon demand, but other purchasers cited fluctuating or decreasing U.S. steel production (for one purchaser, due to imports of steel) as reasons for fluctuating or decreasing ferrosilicon demand.

***Demand outside the United States***

As discussed above, ferrosilicon demand is closely linked to steel production. In 2013, the EU produced 165,601 metric tons of steel, compared to 86,966 metric tons in the United States, 46,023 in Mexico, and 2,250 in Venezuela. Nonetheless, EU steel production fell slightly over 2011-13, while U.S. production rose somewhat.<sup>27</sup>

Ferrosilicon producers were more likely than importers and purchasers to describe global ferrosilicon demand as increased due to increased steel production since January 1, 2011. Among producers, \*\*\* reported that crude steel production and ferrosilicon demand increased outside of the United States, with \*\*\* indicating that such steel production had increased four percent, and \*\*\* stating that global steel production had increased a small amount. Among importers, \*\*\* reported that global demand had decreased at a time of global oversupply. However, \*\*\* indicated that global steel production (and thus ferrosilicon demand) had increased, except in Europe. At the hearing, FerroAtlantica stated that demand for specialty ferrosilicon had been “depressed” for specialty steels, due to a worldwide drop in demand for electrical steels. Among purchasers, \*\*\* described increased worldwide steel production, while \*\*\* described increased worldwide stainless steel production.

**Table II-3**  
**Ferrosilicon: Firms’ responses regarding U.S. demand, by number of responding firms**

\* \* \* \* \*

**Substitute products**

\*\*\*, four importers, and 18 purchasers reported that there were no substitutes for ferrosilicon. Six purchasers and two importers did identify substitutes, naming other silicon metals such as silicomanganese, silicon magnesium, and/or silica carbide. However, several purchasers naming these substitutes added that substitution would only be partial, or would

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<sup>27</sup> World Steel Association data, petitioners’ posthearing brief, exhibit 9.

only take place with sufficiently large price differentials between ferrosilicon and its substitutes. Similarly, \*\*\* indicated that the prices of some ferrosilicon substitutes are higher than the price of ferrosilicon, limiting substitution. It added that use of some substitutes requires that steelmakers be comfortable with the other chemicals (such as manganese if silicomanganese is used) in their steel. \*\*\* also named carbon products as substitutes for ferrosilicon in certain applications.

Purchasers naming substitutes reported that changes in the price of substitutes had not affected the price of ferrosilicon. However, \*\*\* stated that purchasers typically use the lowest-cost source of silicon they can find, and therefore, if purchasers substitute away from ferrosilicon, the demand for and price of ferrosilicon fall.

## **SUBSTITUTABILITY ISSUES**

The degree of substitution between domestic and imported ferrosilicon depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services). Based on available data, staff believes that there is high degree of substitutability between domestically produced ferrosilicon and ferrosilicon imported from Venezuela when the grade of ferrosilicon is the same. Parties disagree over the extent to which different grades of ferrosilicon compete with each other.

### **Interchangeability of ferrosilicon types**

U.S. producers, importers, and purchasers were asked to what extent regular- grade ferrosilicon is interchangeable with other grades of ferrosilicon, and to what extent 50 percent ferrosilicon is interchangeable with 75 percent ferrosilicon.

### **Interchangeability between regular and other grades of ferrosilicon**

Importers and purchasers were more likely than producers to describe regular and other grade ferrosilicon as only sometimes or never interchangeable. Among producers, \*\*\* described regular and other grades of ferrosilicon as \*\*\* interchangeable. It stated that grades with low levels of impurities (other grades) “can be and are” substituted for regular grades. However, it added that the reverse (substituting regular grade for other grades) is not possible when the application requires lower impurities. Similarly, \*\*\* stated that low aluminum and low titanium grades can \*\*\* be substituted for regular grades, but not the reverse. It added that regular and foundry grades are \*\*\* interchangeable, and that regular and inoculant grades are \*\*\* interchangeable.

One importer described regular and other grade ferrosilicon as sometimes interchangeable, two described them as sometimes or never interchangeable, and three described them as never interchangeable. \*\*\* stated that, in general, a purer ferrosilicon can be used as a substitute for a less-pure one, but not vice versa. Similarly, \*\*\* stated that regular grade could not substitute for other grades such as low aluminum or low titanium grades. They

added that some other grades could substitute for regular grades, but at a higher cost (as the other grades are more expensive).

Most purchasers described regular-grade and other grade ferrosilicon as sometimes (8 purchasers) or never (11 purchasers) interchangeable, citing their specifications as demanding particular chemistries. Several of these purchasers explained that other grades could be used in place of regular grades, but at a higher cost, and that regular grades could not be used in place of higher grades. However, \*\*\* answered that regular- and other-grade ferrosilicon were always interchangeable, and \*\*\* answered that they were frequently interchangeable.

### **Interchangeability between 50 percent and 75 percent ferrosilicon**

Producers, importers, and purchasers reported varying degrees of interchangeability between 50 percent and 75 percent ferrosilicon. U.S. producer \*\*\* described 50 percent and 75 percent ferrosilicon as \*\*\* interchangeable, and stated that within grade categories (e.g., regular grade, low-impurity grade, or foundry grade), 50 percent and 75 percent ferrosilicon can be substituted. \*\*\* stated that 50 percent and 75 percent ferrosilicon are \*\*\* interchangeable, and that purchasers select which product to use based on scrap prices, using more or less scrap metal depending on which product is used.

Among importers, \*\*\* described 50 percent and 75 percent ferrosilicon as frequently interchangeable, although \*\*\* added that while 75 percent product could be used in place of 50 percent product, the reverse was not true. \*\*\* described the two products as frequently or sometimes interchangeable, adding that steel producers prefer 75 percent but sometimes still use 50 percent. \*\*\* described the two products as never interchangeable.

\*\*\* described 50 percent ferrosilicon as rarely imported into the United States due to the costs of transporting it in special holds (due to gas emission issues). (\*\*\*). \*\*\* added that while steel foundries and some ferritic stainless steel producers may prefer 50 percent ferrosilicon, most steel producers (including most other stainless steel producers) prefer or require 75 percent ferrosilicon. Several steel producers noted their specifications require only 75 percent ferrosilicon.

Most purchasers that were familiar with both 50 percent and 75 percent ferrosilicon described them as sometimes (six purchasers) or never (seven purchasers) interchangeable. Two purchasers stated that 50 percent and 75 percent ferrosilicon were frequently interchangeable, and two stated that they were always interchangeable. These purchasers' comments included noting that price would play a role in interchangeability and that more 50 percent ferrosilicon would be required than 75 percent ferrosilicon. \*\*\* described the interchangeability as "not desirable."

### **Lead times**

Ferrosilicon is primarily sold from inventories. Among U.S. producers, CC Metals reported that \*\*\* of its sales were from its inventories with an average lead time of \*\*\* days. U.S. producer Globe reported that \*\*\*. \*\*\* indicated that \*\*\* percent of its sales of \*\*\* were from inventory with a lead time of \*\*\* days, while \*\*\* percent were from foreign manufacturer's inventory and \*\*\* percent were produced to order, both with lead times of \*\*\*

days. \*\*\* reported that \*\*\* percent of its sales of \*\*\* were from inventory with a lead time of \*\*\* days. \*\*\* reported that \*\*\* percent of its sales were from inventory.

### Knowledge of country sources

Twenty purchasers indicated they had marketing/pricing knowledge of domestic ferrosilicon, ten of Russian ferrosilicon, six of Venezuelan ferrosilicon, one of Canadian ferrosilicon, ten of Chinese ferrosilicon, and eight of ferrosilicon from other nonsubject countries (including Brazil, Egypt, Iceland, and Kazakhstan).<sup>28</sup>

Most purchasers purchased from more than one country source. \*\*\* noted that it orders from multiple sources in order to have secure sources of supply, and because not all suppliers can provide all the desired products when it needs them. Those that reported purchasing from only one country stated that they did so for reasons of availability, cost/pricing, formula pricing, logistics, quality, and security of supply. \*\*\* stated that it purchased primarily Russian ferrosilicon because U.S. ferrosilicon had lower aluminum content than \*\*\* customers required.

As shown in table II-4, most purchasers and their customers never make purchasing decisions based on the producer or country of origin. Of the purchasers that reported that they always, usually, or sometimes make decisions based the manufacturer, reasons cited included a history of producing a reliable product, quality of product, and qualification. \*\*\* stated that it would have liked to purchase from U.S. producers \*\*\*, but that \*\*\*. \*\*\* reported considering a list of factors that would ensure the producer would be a reliable part of its supply chain.

Regarding country-of-origin, four purchasers indicated that they have a preference for buying from U.S. producers. Of these three, \*\*\* qualified that it only actually buys from U.S. producers when prices are close, and \*\*\* added that the product offered by U.S. producers must still be “competitive.” \*\*\* reported considering country of origin in order to ensure a reliable supply chain, and \*\*\* stated that they consider country of origin for reasons of logistics and lead time. \*\*\* stated that it buys from U.S. producers for reasons of logistics and product quality. \*\*\* stated that its customer consider country of origin for contracts of over 12 months or more, and added that U.S. producers are not considered consistent suppliers of ferrosilicon over such periods. (See “Comparisons of U.S. and imported product,” below.)

**Table II-4**  
**Ferrosilicon: Purchasing decisions based on producer and country of origin, by number of reporting firms**

Purchaser/Customer Decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	2	2	4	16
Purchaser’s customers make decision based on producer	0	1	0	17
Purchaser makes decision based on country	1	3	5	15
Purchaser’s customers make decision based on country	0	1	1	17

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

<sup>28</sup> However, 14 purchasers reported purchases of Russian ferrosilicon, and 13 purchasers reported purchases of Venezuelan ferrosilicon.

## Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for ferrosilicon were price (22 firms), quality (19 firms), and availability (13 firms) as shown in table II-5. Among other factors listed, no factor other than delivery (listed by six firms) was named by more than three firms.

**Table II-5**  
**Ferrosilicon: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by number of reporting firms**

Factor	First	Second	Third	Total
Price	9	8	5	22
Quality <sup>1</sup>	9	6	4	19
Availability (including of specific sizes)	4	6	3	13
Meeting firm or government specifications	1	1	0	2
***	1	0	0	1
Supplier capacity	1	0	0	1
Delivery (including on-time and JIT)	0	1	5	6
Service	0	1	0	1
Total cost (including price and yield)	0	1	0	1
Reliability/responsiveness/relationship	0	0	3	3
Indexed-based pricing	0	0	1	1
Extension of credit	0	0	1	1
Logistics	0	0	1	1
Terms	0	0	1	1

<sup>1</sup> Purchasers described quality as meaning meeting chemical specifications, size, packaging, and delivery.

Note.-- Other factors listed include country of origin, credit extension, and logistics costs

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

The majority of purchasers (15 of 25) reported that they usually purchase the lowest-priced ferrosilicon offered. Three purchasers stated that they always do, but four stated that they only sometimes do, and three stated that they never do.

When asked why they purchased ferrosilicon from one source although a comparable product was available at a lower price from another source, twelve purchasers reported reasons including quality, availability, specific size requirements, product trials, large quantity for purchase, and long-term contracts. \*\*\* indicated that it prefers to buy U.S.-origin product when possible. \*\*\* stated that it purchases on price first, but will purchase on availability when there is an urgent need.

Twenty-one purchasers reported that they did not ever specifically order ferrosilicon from one country source over other possible sources of supply. However, four stated that they did. \*\*\* stated that its customers preferred product from Russia for reasons of reliability of supply. Five other purchasers, (including both those that did order from one country source over others, and those that did not), stated that they had a preference for U.S. material, with two adding that it must be competitively priced.

Twenty-one of 25 purchasers did not report any type of ferrosilicon that was available from only one source. Four others reported either that some specific grades came only from U.S. sources, or that Russian imports were only regular-grade ferrosilicon.

### Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table II-6). The factors rated most often as “very important” were price, product consistency, reliability of supply, availability, quality meeting industry standards, and delivery time (each named “very important” by at least 19 purchasers). In further comments, \*\*\* stated that prior to the last 1-2 years, U.S. ferrosilicon producers were not consistently quoting for supplies of 75 percent grade ferrosilicon, because the rest of their capacity was devoted to higher purity product. It added that the U.S. ferrosilicon market is larger than U.S. suppliers’ capacity, and thus requires an import presence.

**Table II-6**  
**Ferrosilicon: Importance of purchase factors, as reported by U.S. purchasers, by number of responding firms**

Factor	Very important	Somewhat important	Not important
Availability	22	2	0
Delivery terms	9	11	4
Delivery time	21	2	1
Discounts offered	8	11	5
Extension of credit	6	10	8
Minimum quantity requirements	3	10	11
Packaging	10	7	7
Price	23	1	0
Product consistency	23	0	1
Product range	5	10	9
Quality exceeds industry standards	2	14	8
Quality meets industry standards	22	2	0
Reliability of supply	23	1	0
Technical support/service	2	16	6
U.S. transportation costs	8	10	6

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

### Supplier certification

Twenty-one of 25 responding purchasers (consisting of \*\*\*) require that all of the ferrosilicon they purchase be certified, while four (consisting of \*\*\*) did not. Qualification can involve trial loads, ISO certification, provision of chemical specification sheets, purchaser visits to the production site, availability, delivery, and agreement to purchaser terms. Purchasers reported that the time to qualify a new supplier ranged from 30 to 120 days, although only four purchasers usually needed more than 60 days. Nineteen of the purchasers requiring

certification reported that no domestic or foreign supplier had failed in its attempt to qualify ferrosilicon, or had lost its approved status since 2011.<sup>29</sup> FerroAtlantica stated that specialty grades of ferrosilicon often have longer qualification periods than regular grades.<sup>30</sup>

### **Changes in purchasing patterns**

Purchasers were asked about changes in their purchasing patterns from different sources since year (table II-7). Purchasers reported a wide variety of changes in purchasing patterns for U.S.-produced ferrosilicon. Among those reporting decreased, fluctuating, or no purchases of U.S. product, \*\*\* reported that U.S. product was not “competitive.” \*\*\* stated that it had decreased purchases of U.S. product because of quality problems with one U.S. producer’s product. \*\*\* reported decreased demand driving their decreased purchases of U.S.-produced ferrosilicon. \*\*\* also reported that fluctuations in demand for their output led to fluctuations in their purchases of U.S. product. \*\*\* stated that U.S. producers did not want to produce ferrosilicon when the silicon metal market was strong. \*\*\* described purchasing U.S. material only to fill gaps in their ability to supply specialty product. \*\*\* described U.S. producers as not always quoting regular-grade material. However, purchasers describing increased purchase of U.S. material cited increased demand for their end products, competitive U.S. pricing, and their own process improvements as reasons for increased U.S. purchases. \*\*\* described purchasing less from Russia and fluctuating amounts from nonsubject countries due to price and quality.

Those purchasers that purchased Venezuelan product most often described increased purchases, citing price, demand, and portfolio optimization. Price was also a reason cited by purchasers that reported fluctuating or decreased purchases of Venezuelan product. Purchasers were more likely to report decreased or no purchases from Russia, citing non-competitive pricing and changes in end-use product mix and demand. However, those citing increased purchases of Russian product also cited demand as the reason. Purchasers of product from other sources reported a wide variety of changes in purchasing patterns, with price and demand changes again explaining both increased and decreased purchases.

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<sup>29</sup> Two purchasers reported that there had been failures to certify since 2011, but did not provide names of those suppliers.

<sup>30</sup> Hearing transcript, p. 113 (Larrea).

**Table II-7**  
**Ferrosilicon: Changes in purchase patterns from the United States, Venezuela, and nonsubject countries**

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	3	6	6	4	5
Venezuela	8	3	5	2	4
Russia (nonsubject)	8	8	2	2	4
Other nonsubject	5	5	4	2	7

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

Fifteen purchasers reported that they had changed suppliers since January 1, 2011, while eight indicated that they had not. \*\*\* reported eliminating traders from its suppliers and establishing relationships with producers, resulting in lower volumes of Brazilian and Chinese material purchased. \*\*\* reported switching from Russian FerroAlloys to Globe, with \*\*\* stating that U.S. producers had not quoted it consistently in earlier years and \*\*\* stating that it needed an alternative source of supply due to these investigations. \*\*\* described changing suppliers often for reasons of price, and gave an example of dropping \*\*\* in 2011 due to a lack of competitive pricing. \*\*\* described allocating purchases among a list of suppliers based on price and availability. In general, purchasers changing suppliers reported doing so on the basis of price, availability, and quality. \*\*\* stated that it had added suppliers due to finding “better” priced material. \*\*\* indicated that it purchased product from \*\*\*, switched to \*\*\*, and switched back to \*\*\* in 2014.

Twenty-two purchasers reported that they were not aware of any new ferrosilicon suppliers since January 1, 2011. Three stated that they were, with \*\*\* citing new Chinese suppliers and two other purchasers citing new traders or other firms, but with no country of origin known.

### **Importance of purchasing domestic product**

Twenty-three of 25 purchasers reported that 100 percent of their purchases did not require domestic product due to regulation, customer preference, or any other reason. However, \*\*\* reported that 100 percent of its purchases required domestic ferrosilicon for reasons of price and on-time delivery.

### **Comparisons of domestic products, subject imports, and nonsubject imports**

Purchasers were asked to compare ferrosilicon produced in the United States, Venezuela, and nonsubject countries on the same 15 factors (tables II-8 and II-9) for which they were asked to rate the importance. Most responding purchasers reported that U.S., Venezuelan, and nonsubject country ferrosilicon were comparable on all factors, although a larger minority indicated that U.S. product was inferior to Venezuelan product on price.

**Table II-8****Ferrosilicon: Purchasers' comparisons between U.S.-produced and imported product**

Factor	U.S. vs. Venezuela			U.S. vs. Russia (nonsubject)			U.S. vs. Other nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	2	9	3	0	10	5	4	9	3
Delivery terms	1	12	1	0	14	1	2	13	1
Delivery time	1	12	1	3	11	1	2	13	1
Discounts offered	0	12	2	0	11	3	0	14	2
Extension of credit	0	12	1	0	13	0	1	14	0
Minimum quantity requirements	1	13	0	0	15	0	2	14	0
Packaging	0	14	0	0	15	0	0	16	0
Price <sup>1</sup>	0	8	6	0	10	5	0	12	4
Product consistency	1	12	1	1	13	1	4	11	1
Product range	2	10	1	2	12	0	2	12	1
Quality exceeds industry standards	3	8	1	2	9	1	4	9	1
Quality meets industry standards	0	13	1	0	14	1	0	15	1
Reliability of supply	1	9	4	2	9	4	2	10	4
Technical support/service	1	11	1	1	13	0	1	13	1
U.S. transportation costs <sup>1</sup>	3	9	1	3	11	0	5	9	1

<sup>1</sup> A rating of superior means that price/U.S. transportation costs is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

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

**Table II-9**  
**Ferrosilicon: Purchasers' comparisons between imported products**

Factor	Russia (nonsubject) vs. Venezuela			Venezuela vs. other nonsubject countries			Russia (nonsubject) vs. other nonsubject countries		
	S	C	I	S	C	I	S	C	I
Availability	1	10	0	3	10	0	3	10	0
Delivery terms	0	11	0	1	12	0	1	12	0
Delivery time	1	10	0	2	10	1	2	10	1
Discounts offered	0	11	0	1	11	0	1	11	0
Extension of credit	0	10	0	1	10	0	1	10	0
Minimum quantity requirements	0	11	0	1	12	0	1	12	0
Packaging	0	11	0	0	13	0	0	13	0
Price <sup>1</sup>	2	8	1	2	9	2	2	9	2
Product consistency	0	10	1	0	13	0	0	13	0
Product range	0	9	1	1	10	1	1	10	1
Quality exceeds industry standards	1	8	1	1	10	0	1	10	0
Quality meets industry standards	0	11	0	0	13	0	0	13	0
Reliability of supply	1	10	0	1	12	0	1	12	0
Technical support/service	0	10	1	2	11	0	2	11	0
U.S. transportation costs <sup>1</sup>	0	10	1	0	13	0	0	13	0

<sup>1</sup> A rating of superior means that price/U.S. transportation costs is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

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

### Comparison of U.S.-produced and imported product

In order to determine whether U.S.-produced ferrosilicon can generally be used in the same applications as imports from Venezuela and other countries, U.S. producers, importers, and purchasers were asked whether the products can "always," "frequently," "sometimes," or "never" be used interchangeably. As shown in table II-10, \*\*\* U.S. producers and a \*\*\* of responding purchasers report U.S-produced ferrosilicon and Venezuelan ferrosilicon were "always" interchangeable. However, importers and some purchasers were more likely to describe U.S. ferrosilicon and that imported from Venezuela as "frequently" or "sometimes" interchangeable.

**Table II-10**  
**Ferrosilicon: Perceived interchangeability between ferrosilicon produced in the United States and in other countries, by country pairs**

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of U.S. purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
<b>U.S. vs. subject country:</b> United States vs. Venezuela	***	***	***	***	2	2	2	0	10	3	4	0
<b>Nonsubject countries comparisons:</b> United States vs. Canada	***	***	***	***	2	3	1	0	6	1	2	0
United States vs. China	***	***	***	***	2	2	2	0	8	5	6	0
United States vs. Russia	***	***	***	***	2	2	2	0	9	5	4	0
United States vs. Other	***	***	***	***	2	2	2	0	5	4	3	0
Venezuela vs. Canada	***	***	***	***	4	0	1	0	6	1	1	0
Venezuela vs. China	***	***	***	***	4	1	0	0	9	5	1	0
Venezuela vs. Russia	***	***	***	***	4	2	0	0	9	5	1	0
Venezuela vs. Other	***	***	***	***	4	0	1	0	5	4	0	0
Canada vs. China	***	***	***	***	4	0	1	0	6	2	1	0
Canada vs. Russia	***	***	***	***	5	0	1	0	5	1	2	0
Canada vs. Other	***	***	***	***	4	0	1	0	4	3	0	0
China vs. Russia	***	***	***	***	5	1	0	0	8	6	2	0
China vs. Other	***	***	***	***	4	0	1	0	5	5	0	0
Russia vs. Other	***	***	***	***	5	1	0	0	5	5	0	0

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

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

In further comments, \*\*\* stated that as long as all ASTM specifications are met, identical specifications are interchangeable. It added that while U.S. producers supply both regular and other grades, Russian product is only available as regular grade, and Venezuelan product is only available as regular grade and low aluminum grade. \*\*\* stated that U.S., Russian, and Venezuelan ferrosilicon's interchangeability is limited because U.S. producers target the higher-purity and specialty grades that Russian, Venezuelan, and some nonsubject producers do not make. It added that U.S. producers also supply the foundry market (which uses ferrosilicon with higher levels of calcium or magnesium) while Russian and Venezuelan suppliers do not.

Among purchasers, \*\*\* stated that it buys imported ferrosilicon because U.S. producers do not always produce regular-grade ferrosilicon. \*\*\* described experiencing quality problems with a U.S. supplier. \*\*\* stated that interchangeability depends on the ferrosilicon producer's ability to meet specifications. \*\*\* indicated that high titanium levels in Chinese ferrosilicon made it less desirable than U.S. and Russian ferrosilicon. \*\*\* stated that identical grades of ferrosilicon are interchangeable as long as ASTM specifications are met. However, it added that while U.S. producers produce both regular and specialty grades, Russian producers produce

only regular grade. It continued that Venezuelan producers produce some low aluminum grade ferrosilicon that is not interchangeable with regular-grade ferrosilicon.

As can be seen from table II-11, most responding purchasers reported that domestically-produced and imported ferrosilicon “always” or “usually” met minimum quality specifications.

**Table II-11**  
**Ferrosilicon: Ability to meet minimum quality specifications, by source and number of reporting firms<sup>1</sup>**

Source	Always	Usually	Sometimes	Rarely or never
United States	15	7	0	0
Venezuela	11	4	0	0
Canada	3	3	0	0
China	8	8	1	0
Russia	13	4	0	0
Other <sup>2</sup>	7	8	0	0

<sup>1</sup> Purchasers were asked how often domestically produced or imported product meets minimum quality specifications for their own or their customers’ uses.

<sup>2</sup> Other includes Brazil, Iceland, Norway, and South Africa.

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

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in the sale of ferrosilicon from the United States, Venezuela, or nonsubject countries. As seen in table II-12, U.S. producers and a majority of purchasers reported that there were \*\*\* between U.S.-produced ferrosilicon and ferrosilicon imported from Venezuela. Importers, however, were somewhat more likely to report that there were \*\*\*.

**Table II-12**  
**Ferrosilicon: Significance of differences other than price between ferrosilicon produced in the United States and in other countries, by country pairs**

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of U.S. purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
<b>U.S. vs. subject country:</b> U.S. vs. Venezuela	***	***	***	***	2	0	3	0	1	1	8	5
<b>Nonsubject countries comparisons:</b>												
United States vs. Canada	***	***	***	***	2	0	3	0	1	1	4	2
United States vs. China	***	***	***	***	0	3	2	0	3	1	10	4
United States vs. Russia	***	***	***	***	3	0	3	0	3	1	7	7
United States vs. Other	***	***	***	***	2	0	3	0	2	1	7	2
Venezuela vs. Canada	***	***	***	***	2	1	2	0	1	1	4	2
Venezuela vs. China	***	***	***	***	2	0	3	0	1	1	7	5
Venezuela vs. Russia	***	***	***	***	2	0	4	0	1	1	5	7
Venezuela vs. Other	***	***	***	***	2	0	3	0	1	1	6	2
Canada vs. China	***	***	***	***	2	1	2	0	1	1	4	3
Canada vs. Russia	***	***	***	***	3	1	2	0	2	1	3	2
Canada vs. Other	***	***	***	***	2	0	3	0	1	1	4	2
China vs. Russia	***	***	***	***	3	0	3	0	3	1	6	5
China vs. Other	***	***	***	***	2	0	3	0	1	1	6	3
Russia vs. Other	***	***	***	***	3	0	3	0	2	1	5	2

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

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

In further comments, \*\*\* described U.S. producers as unable to supply 75 percent grade ferrosilicon in large quantity under long-term contracts, because those producers are focused on producing higher-grade ferrosilicon products and/or other silicon products (such as silicon metal). It stated that when U.S. producer Globe had a fire that shut down 42,000 short tons of ferrosilicon capacity in 2011, \*\*\* did not receive any additional orders because the shutdown had no effect on the regular-grade ferrosilicon market. \*\*\* stated that chemical characteristics (citing the alleged lack of U.S. production of non-specialty grades) are the most frequent reason why ferrosilicon from different countries is not interchangeable, but added that \*\*\*, as well as U.S. producers' logistical advantages over importers, allowed U.S. producers to charge a premium for their product.

Among purchasers, \*\*\* stated that delivery times for product from China and Iceland were much longer than delivery times for U.S. product. Similarly, \*\*\* described logistics concerns as a difference other than price when comparing U.S. product with Chinese and Russian product. \*\*\* described the significance of non-price differences as depending on the end user's chemistry requirements. \*\*\* indicated that availability was a significant non-price difference, and added that it was not always able to obtain regular-grade ferrosilicon from U.S. producers. Similarly, \*\*\* stated that while quality is rarely a difference between supply sources,

availability is a problem in the U.S. market, forcing it to plan three months in advance to obtain material. \*\*\* stated that Russian material is distinguished from U.S. material because suppliers of Russian material can enter into long-term contracts to supply regular-grade ferrosilicon, while U.S. producers produce either specialty-grade ferrosilicon or silicon metal instead.

## **ELASTICITY ESTIMATES**

This section discusses elasticity estimates; parties were encouraged to comment on these estimates; none did so.

### **U.S. supply elasticity**

The domestic supply elasticity<sup>31</sup> for ferrosilicon measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of ferrosilicon. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced ferrosilicon. Analysis of these factors earlier indicates that the U.S. industry has a low-to-moderate ability to increase shipments to the U.S. market; an estimate in the range of 1 to 3 is suggested.

### **U.S. demand elasticity**

The U.S. demand elasticity for ferrosilicon measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of ferrosilicon. This estimate depends on factors discussed earlier such as the existence, availability, and commercial viability of substitute products, as well as the component share of the ferrosilicon in the production of any downstream products. Based on the available information, the aggregate demand for ferrosilicon is likely to be inelastic; a range of -0.2 to -0.5 is suggested.

### **Substitution elasticity**

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.<sup>32</sup> Product differentiation, in turn, depends upon such factors as quality (*e.g.*, chemistry, appearance, etc.) and conditions of sale (*e.g.*, availability, sales terms/ discounts/ promotions, etc.). Parties disagree over the extent to which ferrosilicon of different grades competes with each other, and the extent to which U.S.

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<sup>31</sup> A supply function is not defined in the case of a non-competitive market.

<sup>32</sup> The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

producers are willing and able to supply regular grade ferrosilicon. Based on available information, the elasticity of substitution between U.S.-produced ferrosilicon and imported ferrosilicon is likely to be in the range of 2 to 6.



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

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the margins of dumping was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of two firms, Globe and CC Metals, that accounted for all U.S. production of ferrosilicon during the period of investigation.

### U.S. PRODUCERS

The petitioners, CC Metals and Globe, are the only U.S. producers of ferrosilicon during the period of investigation.<sup>1</sup> The Commission issued U.S. producer questionnaires to CC Metals and Globe and both firms provided useable data on their ferrosilicon operations. These responses accounted for 100 percent of U.S. production of ferrosilicon during the period of investigation. Table III-1 lists U.S. producers of ferrosilicon, their production locations, positions on the petition, production locations, total production in 2013, and shares of total production in 2013.

**Table III-1**  
**Ferrosilicon: U.S. producers of ferrosilicon, their positions on the petition, production locations, production, and shares of reported production, 2013**

Firm	Position on petition	Production location(s)	U.S. total production (short tons)	Share of total production (percent)
CC Metals and Alloys, LLC <sup>1</sup>	Support	Calvert City, KY	***	***
Globe Specialty Metals, Inc. <sup>2</sup>	Support	Beverly, OH Bridgeport, AL	***	***
Total			***	100.0

<sup>1</sup>CC Metals is a wholly owned subsidiary of Georgian American Alloys, Inc. of Miami, FL. CC Metals also notes that \*\*\*. Georgian American Alloys, Inc. is also the parent company of Felman Production, Inc., which produces silicomanganese in Letart, West Virginia, and Felman Trading, founded in 2008, which represents a number of large alloy producers in Ukraine, Georgia, Romania and the United States, provides ferroalloy supplies to steel makers and foundries in the Americas, and is the distributor of ferrosilicon produced by CC Metals and Alloys, LLC.

Optima Group, LLC acquired CC Metals in March 2011 and transferred its interest in the firm to affiliated Georgian American Alloys, Inc. in August 2012. Importer CCMA, LLC was previously affiliated with the Optima Group, but there has been no affiliation since March 2011. Conference transcript, p. 45 (Nuss); *“Optima Group*

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<sup>1</sup> Petition, p. 3.

*Acquires CC Metals & Alloys,*” PR Newswire, March 15, 2011; *“Georgian American Alloys, Inc. Acquires CC Metals and Alloys, LLC,”* Businesswire, October 1, 2012.

<sup>2</sup> Globe Specialty Metals, Inc. (Globe) produces ferrosilicon at its subsidiaries Globe Metallurgical, Inc., Beverly, OH, and Core Metals Group, LLC, Bridgeport, AL. Globe also owns Globe Metales S.A. of Buenos Aires, Argentina, a producer of ferrosilicon in Argentina and, in November 2013 acquired Siltech, a producer of ferrosilicon in South Africa.

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

Producers were asked to report any changes in operations since January 2011. CC Metals reported that it \*\*\*.<sup>2</sup> Globe reported that it \*\*\*. Globe also \*\*\*. Globe’s Beverly, OH plant experienced \*\*\*.<sup>3</sup>

### U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-2 presents U.S. producers’ total production and capacity. Table III-3 presents U.S. producers’ capacity utilization and shares of U.S. production, by grade of ferrosilicon. As shown, U.S. producers’ reported capacity increased by \*\*\* percent between 2011 and 2013 and was higher by \*\*\* in January-March 2014 than in January-March 2013.<sup>4</sup> Domestic producers were requested to report constraints on their capacity to produce ferrosilicon. CC Metals reported that \*\*\*, and Globe reported \*\*\* as constraints.<sup>5</sup> Reported U.S. production increased by \*\*\* percent between 2011 and 2013 and was higher by \*\*\* percent in January-March 2014 than in January-March 2013.

**Table III-2**

**Ferrosilicon: U.S. producers’ production and capacity, by grade of ferrosilicon, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

**Table III-3**

**Ferrosilicon: U.S. producers’ capacity utilization and share of production, by grade of ferrosilicon, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

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<sup>2</sup> U.S producer questionnaire response of CC Metals, answer to question II-2.

<sup>3</sup> U.S producer questionnaire response of Globe, answer to question II-2. Globe specifically reported that its Beverly, OH plant had \*\*\*.

<sup>4</sup> Petitioners stated that increases in capacity during the period of investigation were the result of \*\*\*. Petitioners’ posthearing brief, exh. A, p. 20.

<sup>5</sup> U.S producer questionnaire response of CC Metals, answer to question II-3d; U.S producer questionnaire response of Globe, answer to question II-3d.

## Product shifting in U.S. manufacturing facilities

Both U.S. producers reported producing other products that are not within the scope of these investigations on the same manufacturing equipment employed to produce ferrosilicon. CC Metals reported that it produced \*\*\* and \*\*\* during the period of investigation. Globe reported that it also produced \*\*\*.<sup>6</sup> Both CC Metals and Globe reported that all decisions to shift production, whether from a ferrosilicon grade to another grade or to another product not within the scope of these investigations, were made in response to “normal sales demands.”<sup>7</sup>

### Production shifts between ferrosilicon and other ferroalloys

Petitioners stated that the equipment and processes used to manufacture ferrosilicon are virtually identical to those used to produce other bulk ferroalloys such as ferrochrome and silicomanganese. Because of the similarity in the equipment and processes to produce these products, furnaces currently used to produce ferrochrome or silicomanganese may be shifted to the production of ferrosilicon simply by the addition of the required raw materials and without a furnace conversion.<sup>8</sup> CC Metals reported a decrease \*\*\*. Globe reported \*\*\* of \*\*\* throughout the period of investigation, \*\*\*.<sup>9</sup>

### Production shifts between ferrosilicon and silicon metal

Petitioners reported that a furnace conversion is necessary when shifting production between ferrosilicon and silicon metal. Globe reported that \*\*\* during the period of investigation.<sup>10</sup> As shown in table III-2, \*\*\* percent from 2011 to 2013 and \*\*\* by January-March 2014 while its production of ferrosilicon increased by \*\*\* percent from 2011 to 2013 and was higher by \*\*\* percent in January to March 2014 than in January to March 2013. Globe stated that \*\*\*.<sup>11</sup> Globe, however, did not report \*\*\* during the period of investigation. CC Metals stated that its manufacturing facilities are not configured to produce silicon metal, and therefore, does not have the capability to convert furnaces from the production of silicon metal to ferrosilicon.<sup>12</sup>

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<sup>6</sup> U.S producer questionnaire response of CC Metals, answer to question II-3e; U.S producer questionnaire response of Globe, answer to question II-3e.

<sup>7</sup> Ibid.

<sup>8</sup> U.S producer questionnaire response of CC Metals, answer to question II-3e.

<sup>9</sup> U.S producer questionnaire response of CC Metals, answer to question II-3e and II-7a; U.S producer questionnaire response of Globe, answer to question II-3e and II-7a.

<sup>10</sup> Globe reported that \*\*\*. U.S producer questionnaire response of Globe, answer to question II-3e.

<sup>11</sup> Petition, p. 1 and 43. \*\*\*. Petitioners’ postconference brief, Responses to Questions at the Staff Conference, p. 1.

<sup>12</sup> U.S producer questionnaire response of CC Metals, answer to question II-3e.

## Production shifts between regular grade ferrosilicon and specialty grade ferrosilicon

Petitioners stated that the production process of specialty ferrosilicon grades, such as inoculants, like that of other ferroalloys, does not require a furnace conversion to shift production from or to ferrosilicon. The production process only requires the use of different raw materials and minor additional processing of the molten metal.<sup>13</sup> As shown in table III-3, radical shifts in production volumes amongst the grades of ferrosilicon are infrequent. One noticeable shift, however, is the decrease of U.S. production share of \*\*\*.

### U.S. production by grade of ferrosilicon

Domestic producers were required to report their U.S production by grade of ferrosilicon.<sup>14</sup> As shown in tables III-2 and III-3, 75 percent ferrosilicon accounted for over \*\*\* percent of total U.S. production throughout the period of investigation. In 2013, \*\*\* percent of total ferrosilicon production was 75 percent ferrosilicon. Of the 75 percent ferrosilicon grades, regular grade ferrosilicon accounted for the highest share at \*\*\* percent of total U.S. ferrosilicon production in 2013. Low titanium grade 75 percent ferrosilicon accounted for the second highest share at 19.1 percent of total U.S. ferrosilicon production in 2013.<sup>15</sup>

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<sup>13</sup> U.S producer questionnaire response of CC Metals, answer to question II-3e; U.S producer questionnaire response of Globe, answer to question II-3e.

<sup>14</sup> Ferrosilicon products were defined as: (1) 75 percent Ferrosilicon: a ferrosilicon product that contains 74-79 percent silicon; (2) 50 percent Ferrosilicon: a ferrosilicon product that contains 47-51 percent silicon; (3) Other in-scope Ferrosilicon products: a ferrosilicon product that does not meet the requirements of products (1) and (2), above, yet is a ferrosilicon product within the scope of these investigations.

Ferrosilicon grades were defined as: (1) Regular ferrosilicon: a ferrosilicon product that contains over 0.50 but not over 1.50 percent aluminum; (2) Low-aluminum: a ferrosilicon product that contains over 0.10 but not over 0.50 percent aluminum; (3) High-purity: a ferrosilicon product that contains not over 0.10 percent aluminum and over 0.04 percent titanium; (4) Low Titanium: a ferrosilicon product that contains not over 0.10 percent aluminum and 0.04 percent or less titanium; (5) Foundry: a ferrosilicon product containing a minimum of 0.50 percent calcium and 0.75 percent or more but not more than 1.50 percent of aluminum; (6) Inoculant/supplemental element: a ferrosilicon product containing a controlled amount of one or more minor elements for the purpose of adding them to steel or foundry iron using ferrosilicon as the carrier; (7) Other: an in-scope ferrosilicon product that does not conform to definitions (1) through (6) above. U.S. Producer questionnaire, p. 6.

<sup>15</sup> See section IV of this report for a comparison of ferrosilicon grades produced in the United States and those grades imported into the United States during the period of investigation.

## U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-4 presents U.S. producers' U.S. shipments, export shipments, and total shipments. The quantity of U.S. producers' U.S. commercial shipments increased by \*\*\* percent from 2011 to 2013, and were higher by \*\*\* percent in January-March 2014 than in January-March 2013. The value of U.S. producers' U.S. commercial shipments increased by \*\*\* percent from 2011 to 2013, and were higher by \*\*\* percent in January-March 2014 than in January-March 2013. Export shipments fluctuated throughout the period of investigation, and were lower by \*\*\* percent in January to March 2014 than January to March 2013. Export shipments as a share of total shipments based on quantity were \*\*\* percent in 2013, a decrease from \*\*\* percent in 2011, and were \*\*\* percent in January to March 2014. CC Metals reported \*\*\* and Globe reported \*\*\*.

**Table III-4**  
**Ferrosilicon: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

## U.S. PRODUCERS' INVENTORIES

Table III-5 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments during the period of investigation. The domestic industry's inventories of ferrosilicon increased by \*\*\* percent from 2011 to 2013, but were lower by \*\*\* percent in January-March 2014 than in January-March 2013. Inventories, relative to total shipments increased by \*\*\* percentage points from 2011 to 2013 and were lower by \*\*\* percentage points in January to March 2014 than in January to March 2013.

**Table III-5**  
**Ferrosilicon: U.S. producers' inventories, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

## U.S. PRODUCERS' IMPORTS AND PURCHASES

\*\*\* reported U.S. imports or purchases of U.S. imports from Venezuela or any direct affiliation with producers of ferrosilicon in Venezuela.

## U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-6 shows U.S. producers' employment-related data during the period of investigation. Production-related workers (PRWs) increased by \*\*\* percent from 2011 to 2013. CC Metals reported that it laid off 20 workers as of July 1, 2013.<sup>16</sup> Globe reported that it laid off 45 workers in May and June 2013.<sup>17</sup> Total hours worked increased by \*\*\* percent from 2011 to 2013, while productivity increased by \*\*\* percent between 2011 and 2013.

### Table III-6

**Ferrosilicon: U.S. producers' employment-related data, 2011-13, January-March 2013, and January-March 2014**

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<sup>16</sup> Conference transcript, p. 32 (Joiner).

<sup>17</sup> Conference transcript, p. 22 (Perkins).

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

### U.S. IMPORTERS

The Commission issued U.S. importer questionnaires to eight firms believed to be U.S. importers of ferrosilicon, as well as to all U.S. producers of ferrosilicon.<sup>1</sup> Usable questionnaire responses were received from seven companies,<sup>2</sup> accounting for all U.S. imports from Venezuela during the period of investigation. The Commission received a questionnaire response from FerroAtlantica, the only known U.S. importer of ferrosilicon from Venezuela. Table IV-1 lists all responding U.S. importers of ferrosilicon from Venezuela and from other sources, their locations, and their shares of U.S. imports, in 2013.

**Table IV-1  
Ferrosilicon: U.S. importers, headquarters, sources of U.S. imports, and shares of U.S. imports, 2013**

Firm	Headquarters	Source of imports (short tons contained Si)			Share of imports by source (percent)		
		Venezuela	Other	Total	Venezuela	Other	Total
Allegheny Alloys <sup>1</sup>	Pittsburgh, PA	***	***	***	***	***	***
CCMA, LLC <sup>2</sup>	Amherst, NY	***	***	***	***	***	***
Century Alloys, Inc.	Huntington, NY	***	***	***	***	***	***
Elkem Materials Inc. <sup>3</sup>	Moon Township, PA	***	***	***	***	***	***
FerroAtlantica SA <sup>4</sup>	Madrid, Spain	***	***	***	***	***	***
Minerais US LLC <sup>5</sup>	Hillsborough, NJ	***	***	***	***	***	***
Russian Ferro Alloys <sup>6</sup>	Mishawaka, IN	***	***	***	***	***	***
Total		***	***	***	***	***	***

<sup>1</sup>\*\*\*.

<sup>2</sup>\*\*\*.

<sup>3</sup>Elkem Materials, Inc. is a wholly owned subsidiary of Elkem AS of Oslo, Norway. In 2011, China National Bluestar Group Co., Ltd., a large Chinese chemical company, acquired Elkem AS. Elkem Materials is a large U.S. importer of ferrosilicon from \*\*\*.

<sup>4</sup>\*\*\*.

<sup>5</sup>\*\*\*.

<sup>6</sup>\*\*\*.

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

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<sup>1</sup> The Commission issued questionnaires to those firms identified as U.S. importers in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection (“Customs”), may have accounted for more than one percent of total imports under HTS subheadings 7202.21.1000, 7202.21.5000, 7202.21.7500, 7202.21.9000, 7202.29.0010 and 7202.29.0050 between January 2011 and March 2014.

The Commission issued U.S. importer questionnaires to the following firms: \*\*\*.

<sup>2</sup> \*\*\* reported that they did not import ferrosilicon during the period of investigation. \*\*\* did not submit a U.S. importer questionnaire. Washington Mills submitted a U.S. importer questionnaire on behalf of Washington Mills North Grafton, Inc., of Grafton, MA, \*\*\*.

## U.S. IMPORTS

Table IV-2 presents data for the volume and value of U.S. imports of ferrosilicon from Venezuela and all other nonsubject countries including Russia.<sup>3</sup> These data are compiled using official Commerce statistics<sup>4</sup> of HTS statistical reporting numbers 7202.21.1000, 7202.21.5000, 7202.21.7500, 7202.21.9000, and 7202.29.0050.<sup>5</sup>

The volume of U.S. imports from Venezuela increased by 45.6 percent from 2011 to 2013, and were 10.2 percent higher in January-March 2014 compared to January-March 2013.<sup>6</sup> The value of U.S. imports from Venezuela increased by 34.6 percent from 2011 to 2013, and were 13.6 percent higher in January-March 2014 compared to January-March 2013. The volume of U.S. imports from nonsubject countries decreased by 5.3 percent from 2011 to 2013,

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<sup>3</sup> The petition originally included U.S. imports of ferrosilicon from Russia as subject imports. However, on July 31, 2014, Commerce issued a negative determination in its final phase investigation on Russia finding that U.S. imports of ferrosilicon from Russia are not being, nor are likely to be, sold in the United States at less than fair value. *Ferrosilicon From the Russian Federation: Final Determination of Sales at Not Less Than Fair Value*, 79 FR 44393, July 31, 2014. Therefore, on July 31, 2014, the Commission terminated its investigation with regard to Russia. As a result, throughout this report, U.S. imports of ferrosilicon from Russia are treated as U.S. imports from a nonsubject country.

<sup>4</sup> Commission staff opted to compile U.S. import data throughout this report using official import statistics because the HTS statistical reporting numbers correspond accurately with the definition of the scope of these investigations. Also, the volume and value of U.S. imports compiled using responses to the Commission's U.S. importer questionnaires, especially from nonsubject countries, may be understated. The volume of reported U.S. imports in 2013 from Venezuela accounted for \*\*\* percent of U.S. imports reported in the official statistics. The volume of U.S. imports from Russia, as submitted in the Commission's U.S. importer questionnaire for 2013, accounted for \*\*\* percent of U.S. imports reported in the official Commerce statistics. The volume of reported U.S. imports from nonsubject countries other than Russia in 2013 accounted for \*\*\* percent of U.S. imports reported in the official statistics.

Respondent argued that due to political and economic instability in Venezuela and the resultant problems with the transportation infrastructure, its shipments of ferrosilicon to the United States have been erratic. As a result, respondent maintained that its reported U.S. shipments of U.S. imports from Venezuela are a more accurate representation of its U.S. import volumes for the purposes of assessing U.S. import volumes, apparent U.S. consumption, and U.S. market shares. Respondent's prehearing brief, p. 5; Respondent's posthearing brief, ex. A, pp. 45-46. When comparing the two data sets, by volume, U.S. shipments of U.S. imports from Venezuela are generally lower by up to \*\*\* percent in annual comparisons. The trends are similar for the annual periods of 2011-2013; however, the trends diverge in the interim periods. Appendix D, table D-2 presents apparent U.S. consumption and U.S. market shares using reported U.S. shipments of U.S. imports from Russia and Venezuela. *See also* Respondent's posthearing brief, ex. 1.

<sup>5</sup> Subject ferrosilicon may be imported under HTS statistical reporting number 7202.29.0010 (ferrosilicon containing over 2 percent magnesium); however, ferrosilicon containing over 3 percent magnesium is outside the scope, and there is no commercial product containing more than 2 percent, but less than 3 percent magnesium. Thus, 7202.29.0010 is not included in official import data.

<sup>6</sup> Respondent maintained that the volume of U.S. imports from Venezuela is not significant. Respondent's posthearing brief, pp. 1-4 and ex. A, pp. 38-39.

but were 26.7 percent higher in January-March 2014 compared to January-March 2013. The value of U.S. imports from nonsubject countries decreased by 20.1 percent from 2011 to 2013, but were 29.3 percent higher in January-March 2014 compared to January-March 2013. The leading sources of nonsubject imports, in order of descending magnitude of volume in 2013, are Russia, China and Canada, which represented 52.0 percent, 25.9 percent, and 10.4 percent of total imports from nonsubject countries, and 43.8 percent, 21.8 percent, and 8.7 percent of total U.S. imports in 2013, respectively.

Table IV-2

## Ferrosilicon: U.S. imports by source, 2011-13, January-March 2013, and January-March 2014

Item	Calendar year			January to March	
	2011	2012	2013	2013	2014
	<b>Quantity (short tons contained silicon)</b>				
U.S. imports from subject sources.-- Venezuela	17,802	23,245	25,922	7,801	8,595
U.S. imports from nonsubject sources.-- Russia	71,303	93,965	71,686	19,707	18,927
China	50,348	35,036	35,729	3,815	10,932
Canada	11,706	13,177	14,295	4,337	3,441
Iceland	1,629	4,868	5,063	1,332	3,091
France	2,277	1,938	2,061	308	448
Brazil	3,958	2,611	4,141	369	1,572
All other sources	4,344	9,491	4,808	1,625	1,490
Subtotal, nonsubject	145,566	161,087	137,783	31,493	39,901
Total U.S. imports	163,367	184,332	163,705	39,294	48,495
	<b>Value (1,000 dollars)<sup>1</sup></b>				
U.S. imports from subject sources.-- Venezuela	33,239	39,801	44,752	13,559	15,409
U.S. imports from nonsubject sources.-- Russia	146,016	158,713	120,956	32,541	34,174
China	106,984	73,229	67,566	7,566	19,522
Canada	42,037	46,413	44,634	12,752	10,774
Iceland	5,843	8,407	8,566	2,149	5,768
France	8,160	7,051	7,917	1,107	1,874
Brazil	16,021	5,386	7,244	631	2,843
All other sources	12,858	21,351	13,102	4,398	4,077
Subtotal, nonsubject	337,918	320,550	269,985	61,145	79,033
Total U.S. imports	371,157	360,351	314,738	74,704	94,442
	<b>Unit value (dollars per short ton contained silicon)</b>				
U.S. imports from subject sources.-- Venezuela	1,867	1,712	1,726	1,738	1,793
U.S. imports from nonsubject sources.-- Russia	2,048	1,689	1,687	1,651	1,806
China	2,125	2,090	1,891	1,983	1,786
Canada	3,591	3,522	3,122	2,941	3,131
Iceland	3,588	1,727	1,692	1,614	1,866
France	3,583	3,639	3,841	3,596	4,182
Brazil	4,047	2,063	1,749	1,713	1,809
All other sources	2,960	2,250	2,725	2,706	2,737
Subtotal, nonsubject	2,321	1,990	1,959	1,942	1,981
Total U.S. imports	2,272	1,955	1,923	1,901	1,947

**Table IV-2--Continued**  
**Ferrosilicon: U.S. imports by source, 2011-13, January-March 2013, and January-March 2014**

Item	Calendar year			January to March	
	2011	2012	2013	2013	2014
<b>Share of quantity (percent)</b>					
U.S. imports from subject sources.-- Venezuela	10.9	12.6	15.8	19.9	17.7
U.S. imports from nonsubject sources.-- Russia	43.6	51.0	43.8	50.2	39.0
China	30.8	19.0	21.8	9.7	22.5
Canada	7.2	7.1	8.7	11.0	7.1
Iceland	1.0	2.6	3.1	3.4	6.4
France	1.4	1.1	1.3	0.8	0.9
Brazil	2.4	1.4	2.5	0.9	3.2
All other sources	2.7	5.1	2.9	4.1	3.1
Subtotal, nonsubject	89.1	87.4	84.2	80.1	82.3
Total U.S. imports	100.0	100.0	100.0	100.0	100.0
<b>Share of value (percent)</b>					
U.S. imports from subject sources.-- Venezuela	9.0	11.0	14.2	18.2	16.3
U.S. imports from nonsubject sources.-- Russia	39.3	44.0	38.4	43.6	36.2
China	28.8	20.3	21.5	10.1	20.7
Canada	11.3	12.9	14.2	17.1	11.4
Iceland	1.6	2.3	2.7	2.9	6.1
France	2.2	2.0	2.5	1.5	2.0
Brazil	4.3	1.5	2.3	0.8	3.0
All other sources	3.5	5.9	4.2	5.9	4.3
Subtotal, nonsubject	91.0	89.0	85.8	81.8	83.7
Total U.S. imports	100.0	100.0	100.0	100.0	100.0
<b>Ratio to U.S. production (percent)</b>					
U.S. imports from subject sources.-- Venezuela	***	***	***	***	***
U.S. imports from nonsubject sources.-- Russia	***	***	***	***	***
China	***	***	***	***	***
Canada	***	***	***	***	***
Iceland	***	***	***	***	***
France	***	***	***	***	***
Brazil	***	***	***	***	***
All other sources	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***
Total U.S. imports	***	***	***	***	***

<sup>1</sup>Landed, duty-paid.

Source: Official U.S. import statistics of the U.S. Department of Commerce using the second unit of quantity (on a contained silicon basis) of HTS statistical reporting number(s) 7202.21.1000, 7202.21.5000, 7202.21.7500, 7202.21.9000, 7202.29.0050. Data through December 2013 contain official Census revisions available as of July 2014.

## U.S. Imports, by Grade of Ferrosilicon

Respondent argued that competition between subject imports and the domestic like product was attenuated because subject imports consisted largely of standard grades of ferrosilicon whereas the domestic like product was predominantly specialty grades.<sup>7</sup> Table IV-3 presents the volume of U.S. producers' U.S. commercial shipments and U.S. importers' U.S. commercial shipments, by grade of ferrosilicon in 2013. Table IV-4 presents the share of total volume of U.S. producers' U.S. commercial shipments and U.S. importers' U.S. commercial shipments, by grade of ferrosilicon in 2013.<sup>8</sup> The questionnaire instructions defined "standard" grade silicon as "regular" grade 50 or 75 percent ferrosilicon (shown in the shaded columns in tables IV-3 and IV-4). All "other" grades of ferrosilicon may be considered specialty.<sup>9</sup> As shown in table IV-4, \*\*\* percent of U.S. producers' U.S. commercial shipments in 2013 were of standard grade ferrosilicon. In the same period, \*\*\* percent of U.S. commercial shipments of imports from Venezuela, \*\*\* percent of the volume of U.S. commercial shipments of imports from Russia, and \*\*\* percent of U.S. commercial shipments of imports from nonsubject countries other than Russia were of standard ferrosilicon grades. The remaining shares were shipments of "specialty" grades of ferrosilicon.

Respondent argued that upon examination of the U.S. shipment data, by grade, it is clear that the U.S. ferrosilicon market is segmented by grade<sup>10</sup> and that competition between

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<sup>7</sup> In the preliminary phase of this investigation, the Commission found that the limited preliminary record showed some head-to-head competition between subject imports and the domestic like product. It stated that in the final phase of these investigations, it would seek specific data on the mix of ferrosilicon grades that make up capacity, production, and shipments of the domestic like product and subject imports and provide specific definitions of standard and specialty grades of ferrosilicon in the questionnaire instructions. In the final phase of this investigation, this requested data, subdivided by grade is presented in Parts III and IV of this staff report. *Ferrosilicon from Russia and Venezuela, Inv. Nos. 731-TA-1224-1225 (Preliminary)*, USITC Publication 4426, September 2013, pp. 16-17.

<sup>8</sup> See also Respondent's posthearing brief, exh. 2 (U.S. shipment data, by grade, for the entire period of investigation).

<sup>9</sup> Ferrosilicon grades were defined in the U.S. producer and U.S. importer questionnaires as:

(1) Regular ferrosilicon: a ferrosilicon product that contains over 0.50 but not over 1.50 percent aluminum; (2) Low-aluminum: a ferrosilicon product that contains over 0.10 but not over 0.50 percent aluminum; (3) High-purity: a ferrosilicon product that contains not over 0.10 percent aluminum and over 0.04 percent titanium; (4) Low Titanium: a ferrosilicon product that contains not over 0.10 percent aluminum and 0.04 percent or less titanium; (5) Foundry: a ferrosilicon product containing a minimum of 0.50 percent calcium and 0.75 percent or more but not more than 1.50 percent of aluminum; (6) Inoculant/supplemental element: a ferrosilicon product containing a controlled amount of one or more minor elements for the purpose of adding them to steel or foundry iron using ferrosilicon as the carrier; (7) Other: an in-scope ferrosilicon product that does not conform to definitions (1) through (6) above. U.S. Producer questionnaire, p. 6; U.S. importer questionnaire, p. 7.

<sup>10</sup> Respondent's market segmentation argument divided the market into two segments: (1) 75 percent, regular grade ferrosilicon along with 75 percent, low aluminum ferrosilicon; (2) all other grades of ferrosilicon. Respondent's posthearing brief, p. 6. Petitioners disputed respondent's segmentation of the market in such a manner claiming that low aluminum grade ferrosilicon is itself a specialty grade and

(continued...)

domestic producers and shipments of U.S. imports from Venezuela is attenuated. Respondent stated that during the entire period of investigation, \*\*\* percent of the domestic industry's U.S. shipments were of 75 percent, regular and low aluminum grade ferrosilicon while \*\*\* percent of U.S. shipments of U.S. imports from Venezuela were in those market segments. Therefore, it concluded that during the entire period of investigation, \*\*\* percent of U.S. producers' U.S. shipments of ferrosilicon faced no competition from U.S. imports from Venezuela.<sup>11</sup> Petitioners countered by stating that extensive competition does occur in the U.S. ferrosilicon market with both the domestic producers and FerroAtlantica selling significant volumes of 75 percent, regular and low aluminum grade ferrosilicon in the U.S. market. Moreover, petitioner claimed that the 75 percent, regular grade segment of the U.S. market is the largest and most important, accounting for the majority of domestic consumption.<sup>12</sup> Petitioners also observed that respondent also competes in the high purity and "other" grades segments of the U.S. ferrosilicon market.

**Table IV-3**  
**Ferrosilicon: U.S. producers' U.S. commercial shipments and U.S. imports, by source and by grade, 2013**

\* \* \* \* \*

**Table IV-4**  
**Ferrosilicon: U.S. producers' U.S. commercial shipments and U.S. imports, share of total shipments, by source and by grade, 2013**

\* \* \* \* \*

**NEGLIGENCE**

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.<sup>13</sup> Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise

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(...continued)

that large steel producers purchase all grades of ferrosilicon using the same process at the same time and expect all grades to be priced in relation to the published price of 75 percent, regular grade ferrosilicon. Petitioners' posthearing brief, p. 3, 13, and ex. A, pp. 1-3.

<sup>11</sup> Respondent's posthearing brief, pp. 4-6; Respondent's prehearing brief, ex. 3 (U.S. shipment data, by grade, for the entire period of investigation).

<sup>12</sup> Petitioners' posthearing brief, ex. A, pp. 1-3. The share of the U.S. ferrosilicon market estimated to be 75 percent, regular grade is approximately two-thirds (66 percent). Ibid., ex. A, p. 9.

<sup>13</sup> Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible. U.S. imports from Venezuela accounted for 15.3 percent of total imports of ferrosilicon by quantity from July 2012 to June 2013.<sup>14</sup> In the preliminary phase of these investigations, the Commission determined that U.S. imports from Russia and Venezuela exceeded the 3 percent statutory threshold.<sup>15</sup>

### **APPARENT U.S. CONSUMPTION**

Table IV-5 presents data on apparent U.S. consumption for ferrosilicon over the period of investigation. Apparent U.S. consumption based on quantity, increased by \*\*\* percent from 2011 to 2013, and was higher in January-March 2014 by \*\*\* percent than in January-March 2013. Based on value, apparent U.S. consumption decreased by \*\*\* percent from 2011 to 2013, but was higher in January-March 2014 by \*\*\* percent than in January-March 2013. In 2013, U.S. capacity accounted for \*\*\* percent of apparent U.S. consumption.<sup>16</sup>

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<sup>14</sup> Computed from monthly official Commerce statistics.

<sup>15</sup> *Ferrosilicon from Russia and Venezuela, Inv. Nos. 731-TA-1224-1225 (Preliminary)*, USITC Publication 4426, September 2013, p. 8 fn. 28 (“Negligibility is not an issue in these investigations.”)

<sup>16</sup> Petitioners acknowledged that they lack the production capacity to supply the entire U.S. demand for ferrosilicon. Hearing transcript, 62 (Lutz).

**Table IV-5**

**Ferrosilicon: U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, 2011-13, January-March 2013, and January-March 2014**

Item	Calendar year			January to March	
	2011	2012	2013	2013	2014
<i>Quantity (short tons contained silicon)</i>					
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
Venezuela	17,802	23,245	25,922	7,801	8,595
Russia	71,303	93,965	71,686	19,707	18,927
All other sources	74,263	67,122	66,097	11,785	20,974
Subtotal, nonsubject	145,566	161,087	137,783	31,493	39,901
Total U.S. imports	163,367	184,332	163,705	39,294	48,495
Apparent U.S. consumption	***	***	***	***	***
<i>Value (1,000 dollars)</i>					
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
Venezuela	33,239	39,801	44,752	13,559	15,409
Russia	146,016	158,713	120,956	32,541	34,174
All other sources	191,902	161,838	149,029	28,604	44,859
Subtotal, nonsubject	337,918	320,550	269,985	61,145	79,033
Total U.S. imports	371,157	360,351	314,738	74,704	94,442
Apparent U.S. consumption	***	***	***	***	***

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

### U.S. MARKET SHARES

U.S. market share data are presented in table IV-6. U.S. producers' market share of U.S. consumption, based on quantity, fluctuated from 2011 to 2013, but increased by \*\*\* percentage points. U.S. producers' market share was \*\*\* percentage points higher in January-March 2014 compared with January-March 2013. The U.S. market share of U.S. imports of ferrosilicon from Venezuela increased by \*\*\* percentage points from 2011 to 2013, but was lower by \*\*\* percentage points in January-March 2014 than in January-March 2013. The U.S. market share of U.S. imports of ferrosilicon from nonsubject countries decreased by \*\*\* percentage points from 2011 to 2013, but was higher by \*\*\* percentage points in January-March 2014 than in January-March 2013.

**Table IV-6**

**Ferrosilicon: U.S. consumption and market shares, 2011-13, January-March 2013, and January-March 2014**

\*   \*   \*   \*   \*   \*   \*



## PART V: PRICING DATA

### FACTORS AFFECTING PRICES

#### Raw material costs

Quartzite (gravel),<sup>1</sup> iron or steel scrap, low-ash coal or petroleum coke, and wood chips are the principal raw materials used to produce ferrosilicon.<sup>2</sup> U.S. producers' raw materials costs as a share of cost of goods sold increased from \*\*\* percent in 2011 to \*\*\* percent in 2013, making raw material costs likely an important component of ferrosilicon prices. \*\*\* described raw materials prices as increasing since 2011, naming \*\*\* prices in particular. \*\*\* expected raw materials prices to continue to rise at or above the rate of inflation.<sup>3</sup>

During the period of investigation, iron scrap prices decreased by a little over 10 percent, although they reached a period low in July 2012, down more than 27 percent from January 2011 levels (figure V-1).

Producing ferrosilicon is an energy intensive process.<sup>4</sup> As seen in figure V-2, the cost of electricity had seasonal peaks, but overall remained somewhat constant during the period of investigation. However, March 2014 electricity prices were about six percent higher than March 2011 electricity prices.

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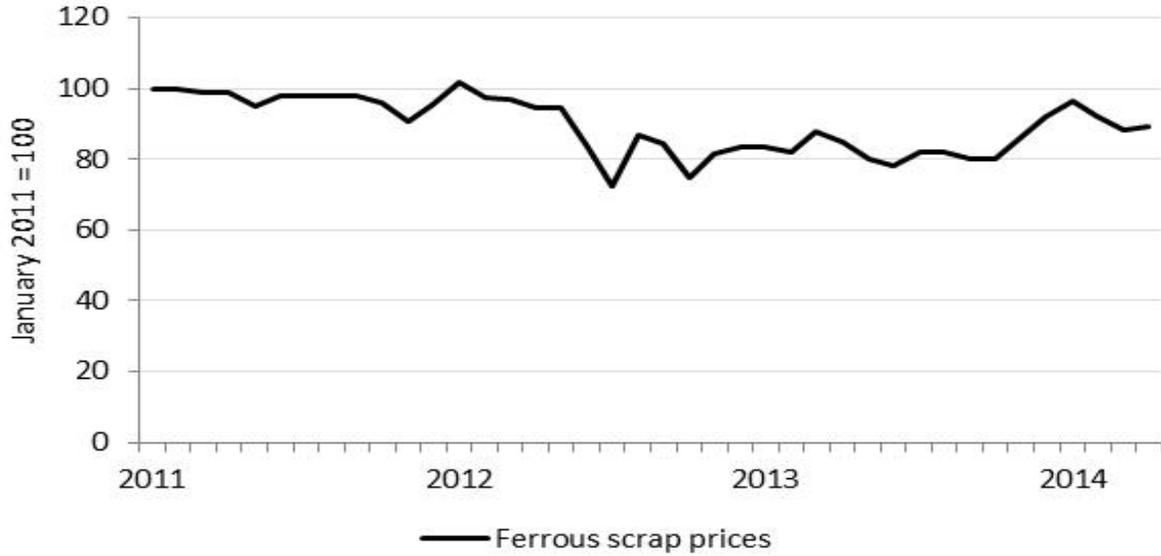
<sup>1</sup> Quartzite is also referred to as gravel. See \*\*\*.

<sup>2</sup> Petition, pp. 9-10.

<sup>3</sup> \*\*\* indicated that they suspected U.S. raw material prices were rising, but another indicated that U.S. coal and power prices, although volatile, had not been rising. It added that oil prices can be an important determinant of logistics costs for ferrosilicon suppliers. \*\*\* described electricity prices in Venezuela as rising.

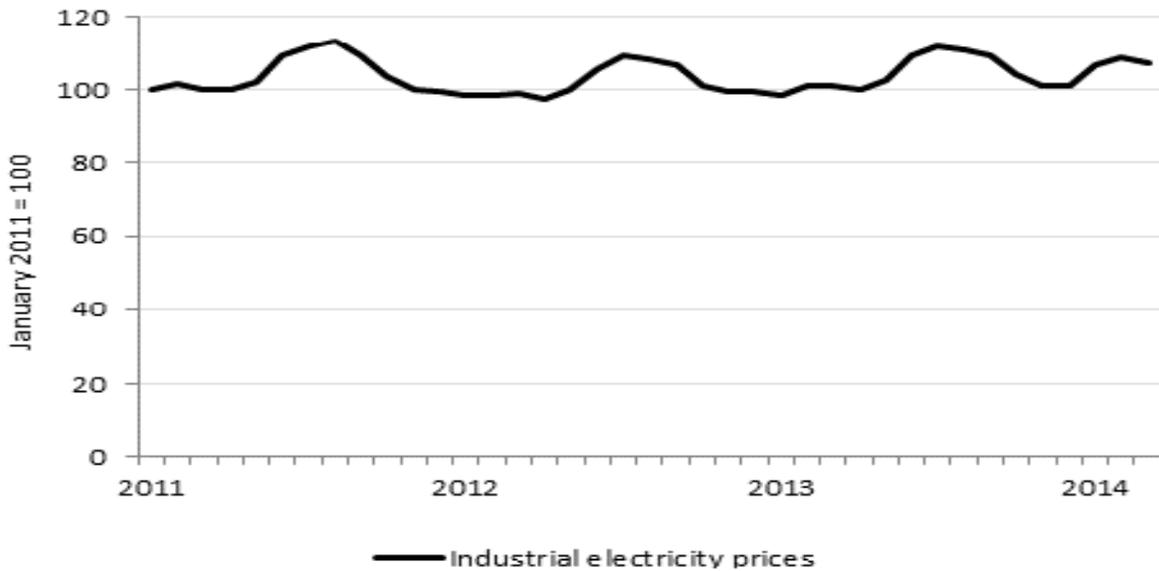
<sup>4</sup> Petition, p. 10, conference transcript, p. 29 (Joiner), and hearing transcript, p. 63 (Nuss).

**Figure V-1**  
**Ferrosilicon: Average consumer ferrous scrap prices (No. 1 heavy melt, Chicago), monthly, January 2011-April 2014**



Source: American Metal Market.

**Figure V-2**  
**Industrial price of electricity: Monthly prices for January 2011-March 2014**



Source: U.S. Energy Information Administration, <http://www.eia.doe.gov>, accessed on June 3, 2014.

## U.S. inland transportation costs

\*\*\* responding U.S. producers and \*\*\* importers reported that they typically arrange transportation to their customers. \*\*\* importers also indicated that they sell subject ferrosilicon from a U.S. storage facility (rather than the point of importation). U.S. producers reported that their U.S. inland transportation costs ranged from \*\*\* percent while importers reported costs of \*\*\* percent.

## PRICING PRACTICES

### Pricing methods

#### Published price indexes

Sales of ferrosilicon in the U.S. market can be spot sales or contract sales, but contract sales are often linked to published ferrosilicon prices. For example, at the hearing, Globe stated that its contracts normally do not fix quantities, but instead adjust based on published prices for ferrosilicon.<sup>5</sup>

\*\*\* indicated that their sales of ferrosilicon are often indexed to data from *Ryan's Notes*. In addition to *Ryan's Notes*, both \*\*\* and \*\*\* sometimes use *Platts Metals Week* as a source of published prices. Sixteen purchasers indicated that, for their contracts that were indexed to an outside source, that outside source was *Ryan's Notes*. Four purchasers stated that their source was *Platts Metals Week*. Three of those purchasers used *Platts Metals Week* in addition to *Ryan's Notes*.

According to *Ryan's Notes* documentation supplied with \*\*\*, *Ryan's Notes* surveys traders and sellers for "closed spot market prices" for deliveries within 30-45 days, above minimum sizes, and conforming to particular specifications.<sup>6</sup> Using the results of the surveys, *Ryan's Notes* releases published prices twice a week, and at the end of each month, low, mid-point, and high prices and averages are reported. *Ryan's Notes* does not include prices set in long-term or formula contracts.<sup>7</sup>

Producers and purchasers were also asked what type of price information was used by their outside pricing sources. \*\*\*, three importers, and eight purchasers indicated spot prices. Five purchasers and one importer indicated fixed-price contract prices, and four purchasers indicated indexed contract prices.

\*\*\* described *Ryan's Notes* price index as based on spot prices or fixed prices set out in quarterly contracts. It stated that contracts based on formula pricing; i.e., where the price term

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<sup>5</sup> Hearing transcript, p. 16 (Perkins).

<sup>6</sup> FerroAtlantica described the history of *Ryan's Notes* as evolving into a more and more influential publication, and indicated that now large steel producers demand price indexing in their contracts. Hearing transcript, pp. 185-187, 189 (Hopkins).

<sup>7</sup> Conference transcript, p. 103.

is tied to an index, are not included in the calculation of *Ryan's Notes'* index. It continued that as the majority of subject imports are sold through formula-based indexes, their prices were not reflected in *Ryan's Notes*, while the prices of U.S.-produced product and of Chinese material is. In particular, \*\*\* cited a surge in low-priced Chinese imports in 2011 and 2012, some being smuggled through Vietnam, as having pulled down the prices in the *Ryan's Notes* index, and thus having an impact on U.S. prices of ferrosilicon.

At the hearing, U.S. producers stated that when published prices for regular grade ferrosilicon fall, the effect ripples through to the prices of specialty grades, as purchasers demand the same base price for regular grade plus a fixed premium for the specialty grade. They added that as a result, specialty and regular grade ferrosilicon prices follow the same trends.<sup>8</sup> However, FerroAtlantica stated that its contract prices do not affect the published price indexes for ferrosilicon at all,<sup>9</sup> and that regular-grade and specialty-grade ferrosilicon pricing is "completely separate."<sup>10 11</sup>

**Contract and spot sales**

U.S. producers and importers reported primarily using \*\*\* to set prices (table V-1). \*\*\* that reported using \*\*\* also reported using \*\*\*. In addition, U.S. producers reported using \*\*\*. Globe indicated that annual contracts are typically negotiated in October or November of the prior year.<sup>12</sup>

**Table V-1  
Ferrosilicon: U.S. producers and importers reported price setting methods, by number of responding firms<sup>1</sup>**

\* \* \* \* \*

U.S. producers' contracts \*\*\* price renegotiation and \*\*\* meet or release provisions. For \*\*\*, short-term contracts \*\*\*. For \*\*\*, contracts \*\*\* price renegotiation, fixed \*\*\*, and \*\*\* meet or release provisions. \*\*\* elaborated that \*\*\*. \*\*\* stated that \*\*\* contracts \*\*\* price renegotiation \*\*\* meet or release provisions. However, \*\*\* reported that \*\*\* contracts \*\*\*. FerroAtlantica stated that it does not have any short-term contracts of less than 45 days.<sup>13</sup>

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<sup>8</sup> See hearing transcript, pp. 17-21, 46-47 (Perkins), 26 (Nuss), 39 (Lutz), and 44 (Kramer).

<sup>9</sup> Hearing transcript, p. 130 (Hopkins) and 134 (Klett).

<sup>10</sup> Hearing transcript, pp. 146-147 (Larrea).

<sup>11</sup> In their posthearing briefs, parties submitted \*\*\*. See petitioners' posthearing brief at attachment A, pp. 11-12, 14 and exhibits 6-7, and posthearing brief of FerroAtlantica, exhibit 7.

<sup>12</sup> Hearing transcript, p. 57 (Perkins). Similarly, FerroAtlantica sets its annual sales plan in October of the prior year. Hearing transcript, p. 124 (Hopkins).

<sup>13</sup> Hearing transcript, p. 123 (Hopkins).

Producers, importers, and purchasers were asked detailed data about their contracts, including whether their sales were under long-term, annual, or short-term contracts, and whether their contracts were under fixed or indexed price terms. Their responses are summarized in tables V-2 to V-5.<sup>14</sup> In the tables, the percentages reported by producers, importers, and/or purchasers were weighted by their shipments or purchases, as appropriate.

As can be seen in the tables, U.S. producers reported that the bulk of their sales were under annual or short-term contracts, with about \*\*\* of those in turn using fixed prices and the rest using indexed prices of other terms.<sup>15</sup> Importers of ferrosilicon from Venezuela reported that most of their sales were under annual contracts, with some sales under both longer and shorter-term contracts, \*\*\*. Importers of ferrosilicon from Russia reported that the bulk of their sales were under annual or long-term contracts, \*\*\*.

\*\*\* reported competing with suppliers of \*\*\* ferrosilicon for spot and contract sales of ferrosilicon. However, \*\*\* stated that only about \*\*\* percent of its sales take place \*\*\*. It added that \*\*\*. Similarly, importer \*\*\* stated that it does not compete often with U.S. producers because they are focused on \*\*\*. It added that U.S. producers rarely quote even short-term contracts for standard grade or high titanium ferrosilicon. \*\*\* stated that U.S. producers only supply about 40 percent of the U.S. ferrosilicon market, and imports supply the rest.

**Table V-2  
Ferrosilicon: U.S. producers' shares of U.S. commercial shipments by type, 2012 and 2013**

\* \* \* \* \*

**Table V-3  
Ferrosilicon: U.S. importers' contracts, and shares of U.S. sales, for imports of ferrosilicon from Venezuela, by type, 2012 and 2013**

\* \* \* \* \*

**Table V-4  
Ferrosilicon: U.S. importers' contracts, and shares of U.S. sales, for imports of ferrosilicon from Russia, by type, 2012 and 2013**

\* \* \* \* \*

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<sup>14</sup> FerroAtlantica's prehearing brief, at p. 20 and exhibit 10, presents data compiled from purchasers' questionnaires, and notes that the prehearing staff report did not correct for purchasers that reported their data incorrectly. Staff has corrected these errors, and while there are still some slight discrepancies with FerroAtlantica's data, the revised table V-5 is much closer to FerroAtlantica's data.

<sup>15</sup> Purchasers, however, reported that nearly two-thirds of their purchases from U.S. producers were under annual, indexed-price contracts.

**Table V-5**

**Ferrosilicon: U.S. purchasers' shares of U.S. purchases by type, 2012 and 2013**

\* \* \* \* \*

Five purchasers contact no more than three suppliers before making a purchase of ferrosilicon, but 16 more reported contacting a maximum of 4 to 11 suppliers. \*\*\* reported contacting 15 to 25 for its annual sourcing, and \*\*\* reported contacting 10 to 30.

Four purchasers reported that they purchase ferrosilicon weekly, seven purchase monthly, one purchases quarterly, three purchase semi-annually, six purchase annually, and one purchases for multi-year periods. Among those purchasing semi-annually or less frequently, \*\*\* reported purchasing under contracts, but then issuing daily or "as needed" orders. Distributor \*\*\* reported purchasing in the spot market when needed.

Eighteen of 25 responding purchasers reported that they had not changed their purchasing pattern since January 1, 2011. However, seven did report changes. \*\*\* stated that it had moved from contract to spot purchases, while \*\*\* reported moving in the opposite direction. \*\*\* described moving to annual contracts and eliminating purchases from traders wherever possible. \*\*\* indicated that it moved to quarterly and then semi-annual contracts when prices were more volatile. \*\*\* described \*\*\*. \*\*\* reported exiting the ferrosilicon business, while \*\*\* described closing one of its plants and thus ordering less ferrosilicon.

Nineteen purchasers indicated that they do not vary their purchases from a given supplier based on the price offered within a period. Six indicated that they did, with the time period varying from spot purchases to one year contracts.

Twenty purchasers indicated that purchases usually involve negotiations, while four indicated that they usually do not. Those reporting negotiations often reported sending out request for quotes (or bids) and then often having some negotiations over prices and volumes. Some of these purchasers reported negotiating discounts off of established indexes, such as *Ryan's Notes*. No purchaser reported quoting competitors' prices to suppliers, but one did report speaking in generalities about other bids to suppliers.

**Sales terms and discounts**

\*\*\* typically quote prices on \*\*\*. \*\*\* reported quoting prices on an f.o.b. basis. \*\*\* and \*\*\* importers reported offering \*\*\* and using sales terms of \*\*\*. \*\*\* offers discounts for early payment and also uses sales terms of \*\*\*. \*\*\* reported using sales terms of \*\*\*.<sup>16</sup>

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<sup>16</sup> Producers and importers were also asked if any of their responses on contracts, sales terms, and discounts would vary by customer type. \*\*\* answered that they would not.

### Price leadership

Purchasers were asked to list any firms that they considered price leaders in the U.S. ferrosilicon market. Several firms stated that they did not know of any price leaders, and four answered that there were no price leaders. Four firms stated that published price indexes (including *Ryan's Notes*) drove prices rather than any one firm. Purchasers listing specific leaders cited Russian FerroAlloys (cited by three purchasers), Globe or Core Metals (cited by three purchasers), CC Metals or Felman (cited by two purchasers), and Ferro Atlantica (cited by one purchaser). Purchasers that cited these firms and explained how these firms were leaders described them as leaders due to the large volumes they supplied into the market.

### U.S. and world prices

Petitioners submitted data from \*\*\* on monthly ferrosilicon prices from the United States, China, Japan, and \*\*\*. The data show U.S. prices as consistently higher than Chinese and Japanese prices, and \*\*\* over January 2011 through July 2014.<sup>17</sup>

### Packaging costs

Ferrosilicon is sold in bulk form and also as a packaged product. Super sacks<sup>18</sup> are the most commonly used packaging, but ferrosilicon is also shipped in pallet boxes, drums, and 25 and 50 pound bags.<sup>19</sup> U.S. producers charge their customers for packaging through \*\*\*.<sup>20</sup> Three importers (\*\*\*) charged their customers for packaging using a higher per pound price, while \*\*\* used both a higher per-pound price and a separate charge. \*\*\* reported that they had no additional charge as they obtain their material already in super sacks.

Producers and importers reported packaging charges as indicated in table V-6.

**Table V-6**  
**Ferrosilicon: U.S. producers' and importers' costs of packaging, by method**

\* \* \* \* \*

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<sup>17</sup> Petitioners' posthearing brief, attachment A, p. 55 and exhibit 13.

<sup>18</sup> Super sacks are large bags used for transporting various products.

<sup>19</sup> Petition, p. 11.

<sup>20</sup> In the preliminary phase of these investigations, U.S. producer Globe estimated that it charges a separate fee for packaging which accounts for \*\*\* percent of its total sales. U.S. producer CC Metals charges a separate fee for packaging for approximately \*\*\* percent of its sales. Petitioner's postconference brief, p. 3.

## PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following ferrosilicon products shipped to unrelated steel producers during January 2011-March 2014. These products are virtually identical to the products for which data was requested in the preliminary phase of these investigations, with the only difference being that a minimum aluminum level was specified for product 2 in this final phase.<sup>21</sup>

**Product 1**-- **Regular grade 75 percent ferrosilicon**. – Ferrosilicon containing by weight 74.0 to 79.0 percent silicon; 0.10 percent or less carbon; 0.025 percent or less sulfur; 0.035 percent or less phosphorus; more than 0.50 percent, but not more than 1.50 percent aluminum; and 0.40 percent or less manganese.

Regular grade 75 percent ferrosilicon does not include any form of high purity ferrosilicon (ferrosilicon containing substantially lower amounts of impurities than the maximum levels specified for regular grade ferrosilicon), magnesium ferrosilicon, or other ferrosilicon-based specialty/proprietary grades.

**Product 2**-- **Low aluminum grade 75 percent ferrosilicon**. – Ferrosilicon containing by weight 74.0 to 79.0 percent silicon; 0.10 percent or less carbon; 0.025 percent or less sulfur; 0.035 percent or less phosphorus; not more than 0.50 percent aluminum but more than 0.10 percent aluminum ; and 0.40 percent or less manganese.

Low aluminum 75 percent ferrosilicon does not include any other form of high purity ferrosilicon, regular grade ferrosilicon, magnesium ferrosilicon, or other ferrosilicon-based specialty/proprietary grades.

\*\*\* U.S. producers, \*\*\* of Venezuelan product, \*\*\* of Russian product, and \*\*\* of Chinese product provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.<sup>22</sup> Pricing data reported by these firms accounted for approximately \*\*\* percent of U.S. producers' shipments of ferrosilicon and \*\*\* percent of U.S. shipments of subject imports from Venezuela in 2013.

Among their own shipments of pricing products, U.S. producers shipped the highest volumes of \*\*\*. Among their own shipments of pricing products, importers shipped the highest volumes of \*\*\*.

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<sup>21</sup> See preliminary-phase staff report at V-6 for a discussion of questionnaire respondents' different understanding of the term "high purity."

<sup>22</sup> There are some differences between the data submitted by some firms in the preliminary phase and the final phase of these investigations. \*\*\*.

Price data for products 1-2 in bulk and super sacks are presented in tables V-7 to V-10 and figure V-3. Nonsubject country prices are presented in Appendix E. (Prices are presented on a per-pound basis to match the lost sales and lost revenue allegations, as well as *Ryan's Notes* and general practice in the U.S. ferrosilicon market.<sup>23</sup> Quantities are expressed in short tons of contained silicon (shortened in the tables to "short tons").

**Table V-7**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 in bulk and margins of underselling/(overselling), by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table V-8**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 in bulk and margins of underselling/(overselling), by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table V-9**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 in super sacks and margins of underselling/(overselling), by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table V-10**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 in super sacks and margins of underselling/(overselling), by quarters, January 2011-March 2014**

\* \* \* \* \*

**Figure V-3**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 1 in bulk, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Figure V-4**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 2 in bulk, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Figure V-5**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 1 in super sacks, by quarters, January 2011-March 2014**

\* \* \* \* \*

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<sup>23</sup> See staff conversation with counsel for petitioners, June 10, 2014.

**Figure V-6**

**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 2 by super sacks, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Price trends**

Prices increased/decreased during January 2011-March 2014. Table V-11 summarizes the price trends, by country and by product. As shown in the table, during the period, domestic prices decreased for most of the pricing products, with decreases ranging from \*\*\* to \*\*\* percent. Venezuelan prices also showed decreases, with prices decreasing \*\*\* to \*\*\* percent. At the hearing, FerroAtlantica stated that prices for silicon metal and specialty ferrosilicon have begun to improve in mid 2014, but had fallen 15 to 20 percent worldwide over 2011 and 2012.<sup>24</sup>

**Table V-11**

**Ferrosilicon: Summary of weighted-average f.o.b. prices for products 1 and 2 in bulk and super sacks from the United States and Venezuela**

\* \* \* \* \*

**Price comparisons**

As shown in table V-12, prices for ferrosilicon imported from Venezuela were below those for U.S.-produced ferrosilicon in 20 of 35 instances; margins of underselling ranged from \*\*\* to \*\*\* percent. In the remaining 15 instances, prices for ferrosilicon from Venezuela were between \*\*\* and \*\*\* percent above prices for the domestic product.

**Table V-12**

**Ferrosilicon: Instances of underselling/overselling and the range and average of margins, by country, January 2011-March 2014**

\* \* \* \* \*

**LOST SALES AND LOST REVENUE**

Imports from Russia were investigated as subject product until the Department of Commerce reached a negative determination on imports from Russia. Because producers were sometimes uncertain whether sales or revenue were lost to Russia or Venezuela, some

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<sup>24</sup> Hearing transcript, p. 136 (Klett) and p. 153 (Larrea). See also prehearing brief of FerroAtlantica, exhibit 4.

allegations name either Russia or Venezuela.<sup>25</sup> \*\*\*. Due to these issues, the following presentation covers allegations of sales and revenue lost to both Russian (nonsubject) and Venezuelan (subject) imports.

In the final phase of these investigations, the Commission requested U.S. producers of ferrosilicon to report any instances of lost sales or revenue they experienced due to competition from imports of ferrosilicon from Russia and/or Venezuela since the preliminary phase of these investigations.

Of the two responding U.S. producers, \*\*\* reported that \*\*\* had to either reduce prices or roll back announced price increases. The \*\*\* lost sales \*\*\* involving Venezuela<sup>26</sup> totaled \$\*\*\* and involved \*\*\* short tons contained silicon of ferrosilicon. The \*\*\* lost revenue \*\*\* involving Venezuela totaled \$\*\*\* and involved \*\*\* short tons contained silicon of ferrosilicon. Staff attempted to contact all the named purchasers and a summary of the information obtained follows in tables V-13 and V-14 and the following text. All the allegations involved \*\*\* ferrosilicon. In addition, most allegations were for \*\*\* ferrosilicon, unless otherwise indicated.

At the hearing, FerroAtlantica described losing sales to U.S. producers that “dramatically” underbid Venezuelan imports.<sup>27</sup> Elsewhere, it described the prices charged by U.S. producers in the lost sales allegations as \*\*\*.<sup>28</sup>

**Table V-13  
Ferrosilicon: U.S. producers’ final-phase lost sales allegations**

\* \* \* \* \*

**Table V-14  
Ferrosilicon: U.S. producers’ final-phase lost revenue allegations**

\* \* \* \* \*  
\* \* \* \* \*

**Preliminary Phase**

In the preliminary phase of this investigation, the Commission requested U.S. producers of ferrosilicon to report any instances of lost sales or revenue they experienced due to competition from imports of ferrosilicon from Russia and Venezuela during January 2010 to

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<sup>25</sup> Hearing transcript, p. 75 (Kramer). \*\*\*.

<sup>26</sup> “Allegations involving Venezuela” means allegations in which either the producer named Venezuela as a possible supply source and/or the purchaser named Venezuela as a supply source.

<sup>27</sup> Hearing transcript, p. 128 (Hopkins).

<sup>28</sup> Prehearing brief of FerroAtlantica, p. 32.

March 2013. Both U.S. producers reported that they \*\*\* to avoid losing sales to importers of ferrosilicon from Russia and Venezuela.

U.S. producers \*\*\*.<sup>29</sup> \*\*\*. The \*\*\* lost sales allegations involving Venezuela totaled between \$\*\*\* for allegations involving Venezuela and involved \*\*\* short tons of contained ferrosilicon. The \*\*\* lost revenue allegations involving Venezuela totaled \$\*\*\* and involved \*\*\* short tons of contained ferrosilicon for allegations involving Venezuela. Staff contacted \*\*\* purchasers using the contract pricing information and a summary of the information obtained follows.

Purchasers responding to the lost sales and lost revenue allegations also were asked whether they shifted their purchases of ferrosilicon from U.S. producers to suppliers of ferrosilicon from Russia and Venezuela since 2010. In addition, they were asked whether U.S. producers reduced their prices in order to compete with suppliers of ferrosilicon from Russia and Venezuela. \*\*\* of the responding purchasers reported that they had shifted purchases of ferrosilicon from U.S. producers to subject imports since 2010. Purchaser \*\*\* reported switching sales from Russian suppliers to \*\*\*. \*\*\* purchasers reported that U.S. producers had reduced their prices in order to compete with the prices of subject imports since January 2010.<sup>30</sup>

**Table V-15**

**Ferrosilicon: U.S. producers' preliminary-phase lost sales allegations**

\* \* \* \* \*

**Table V-16**

**Ferrosilicon: U.S. producers' preliminary-phase lost revenue allegations**

\* \* \* \* \*

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<sup>29</sup> \*\*\*.

<sup>30</sup> \*\*\*.

## PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

### BACKGROUND

Two U.S. producers, CC Metals and Globe, which together accounted for all U.S. production of ferrosilicon during the period for investigation, supplied financial data on their ferrosilicon operations. Even though Globe's fiscal year ends June 30, its financial data are based on calendar year.<sup>1</sup> \*\*\* reported internal consumption of ferrosilicon, and these sales accounted for less than \*\*\* percent of the industry's 2013 sales values. The unit sales values of \*\*\* than the unit sales values of its commercial sales for all periods, except 2013. However, since the quantities of \*\*\* than sales quantities of commercial sales, the effect of \*\*\* on the combined per-unit values. No firms reported any transfers to related parties.

The company records underlying the financial data of Globe were reviewed at Commission offices.<sup>2</sup> The office review adjustments have been incorporated in this final report. The financial data of Globe were changed to \*\*\*. The adjustments for \*\*\*.<sup>3</sup>

CC Metals \*\*\*.<sup>4</sup> The revisions made by CC Metals appeared to be reasonable compared to the factory overhead in the prior periods.

### OPERATIONS ON FERROSILICON

Aggregate income-and-loss data for the U.S. producers are presented in table VI-1. To summarize, the overall financial condition of the domestic ferrosilicon industry deteriorated between 2011 and 2013 (even though net sales quantities increased during the same period), while they continued to report operating income for the entire period of investigation, from \*\*\* in 2011 to \*\*\* in 2013. From 2011 to 2012, the decrease in unit sales price (\*\*\* per short ton) as well as the increase in unit total cost (\*\*\* per short ton), i.e., COGS and SG&A expenses combined, resulted in a much lower per-unit operating income in 2012 (a decrease by \*\*\* per short ton). As a result, operating income decreased from \*\*\* in 2011 to \*\*\* in 2012. From 2012 to 2013, both sales quantities and values increased, while both per-unit sales values and per-unit total costs decreased. However, the operating income increased to \*\*\* in 2013 because the decrease in unit total cost (by \*\*\* per short ton) was greater than the decrease in unit sales price (by \*\*\* per short ton).

Both net sales quantities and values were higher in January-March 2014 than January-March 2013 and operating income in January-March 2014 was higher (\*\*\* compared to the

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<sup>1</sup> \*\*\*. E-mail from \*\*\*, June 5, 2014.

<sup>2</sup> \*\*\*. Its financial data submitted for the final phase of the investigation, such as \*\*\* submitted for the preliminary phase of the investigation for the same year before verification. E-mails from \*\*\*, June 5, 2014. Globe's data were verified at Commission offices from June 17 through July 23, 2014 and its final revisions were submitted on July 28, 2014.

<sup>3</sup> E-mails from \*\*\*, July 23 and 28, 2014. Details are discussed in the later part of the section.

<sup>4</sup> E-mail from \*\*\*, July 18, 2014.

operating income of \*\*\* in January-March 2013), due mainly to higher per-unit sales value. However, the increase of per-unit total costs was more (by \*\*\* per short ton) than the increase in per-unit sales values (by \*\*\* per short ton), per-unit operating income decreased by \*\*\* per short ton between the two interim periods. As a result, the operating income margin, which was \*\*\* percent in interim 2013, decreased to \*\*\* percent in interim 2014. Both producers reported \*\*\*

\*\*\*.<sup>5</sup>

**Table VI-1  
Ferrosilicon: Results of operations of U.S. producers, fiscal years 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

Selected company-by-company data are presented in table VI-2. Total net sales (quantities and values), operating income (loss), the ratio of operating income (loss) to net sales, and per-unit values (sales, COGS, SG&A, and operating income), are presented in this table on a firm-by-firm basis. While \*\*\*. Both firms reported \*\*\* in 2012 while CC Metals reported \*\*\* in 2013. Globe reported \*\*\* in 2013. CC Metals per-unit COGS \*\*\* from 2012 to 2013. Globe reported \*\*\*.<sup>6</sup> \*\*\* in interim 2014 compared with interim 2013, Globe's operations results deteriorated between the two interim periods.

By-product revenues are treated as cost reductions for both producers. \*\*\*.<sup>7</sup> \*\*\*.<sup>8</sup>

CC Metals' per-unit sales price was somewhat \*\*\*. However, \*\*\*. Both producers reported \*\*\*. However, \*\*\*.<sup>9</sup> \*\*\*.<sup>10</sup> \*\*\*. \*\*\*<sup>11</sup>. Globe's financial data were \*\*\*. Globe had the fire damage at its Bridgeport plant in November 2011. In addition to \*\*\*.<sup>12</sup> Globe's factory overhead in 2011 and 2013, as well as the interim 2013, were reduced to reflect these business

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<sup>5</sup> \*\*\*. E-mails from \*\*\*, June 10 and 17, 2014. The initially reported these allocated \*\*\*.

<sup>6</sup> E-mail from \*\*\*, August 12, 2013.

<sup>7</sup> E-mails from \*\*\*, June 5 and July 23, 2014.

<sup>8</sup> E-mail from \*\*\*, July 2, 2014.

<sup>9</sup> E-mail from \*\*\*, August 7, 2013 and e-mail from \*\*\* June 6, 2014.

<sup>10</sup> E-mails from \*\*\*, August 7, 2013 and June 5, 2014.

<sup>11</sup> E-mail from \*\*\*, August 8, 2013.

<sup>12</sup> The business interruption insurance proceeds were recorded under a separate line item in Globe's Form 10-K to SEC. In its Form 8-K, Globe treated these proceeds as one-time items and excluded them from its adjusted net income before taxes. In its February 6, 2012 Form 8-K, Globe increased its fourth quarter 2011 adjusted net income before taxes by the proceeds. In its May 7, 2013 Form 8-K, Globe adjusted its first quarter 2013 net income before taxes to exclude the amount of the business interruption insurance proceeds related to the Bridgeport fire because it was related to the fire which occurred in 2011 and the operations result for the fourth quarter 2011 were already adjusted. E-mails from \*\*\*, July 23 and 28, 2014

interruption insurance proceeds, which resulted in much lower factory overhead in those periods. Globe's G&A expenses were \*\*\*.<sup>13</sup>

\*\*\*. \*\*\*. Both producers reported \*\*\* for the entire period.

**Table VI-2**  
**Ferrosilicon: Results of operations of U.S. producers, by firm, fiscal years 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

Selected aggregate per-short ton cost data of the producers on their operations, i.e., COGS and SG&A expenses, are presented in table VI-3. Overall per-short ton COGS and total cost (which includes SG&A expenses) increased slightly from 2011 to 2012, driven mainly by changes in \*\*\*. However, per-short ton COGS and total cost decreased somewhat from 2012 to 2013, due to the decreases in raw materials and fabrication costs. Per-short ton COGS and per-unit total costs were also higher in interim 2014 compared to interim 2013, due to the increases in the costs of fabrication costs. Per-unit SG&A expenses also increased between the two interim periods because of \*\*\*. The ratio of total COGS to net sales \*\*\* between 2011 and 2013, and also \*\*\* in interim 2014 from interim 2013.

**Table VI-3**  
**Ferrosilicon: Average unit costs of U.S. producers, fiscal years 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

A variance analysis for showing the effects of prices and volume on the producers' sales of ferrosilicon, and of costs and volume on their total costs is presented in table VI-4.<sup>14</sup> The information for this variance analysis is derived from table VI-1. The analysis indicates that the decrease in operating income between 2011 and 2013 (by \*\*\*) was the result of per-unit prices decreasing much more than the decrease of per-unit costs and expenses and the increase of sales volume. The summary at the bottom of the table illustrates that the negative effect of

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<sup>13</sup> E-mail from \*\*\*, July 28, 2014.

<sup>14</sup> The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the net volume variance is the sum of the price, COGS, SG&A volume variance. All things equal, a stable overall product mix generally enhances the utility of the Commission's variance analysis.

decreased prices (\*\*\*) was more than the positive effects of decreased costs and expenses (\*\*\*) and higher sales quantities (\*\*\*) between 2011 and 2013. Between the two interim periods, the variance analysis indicates that operating income increased by (\*\*\*) which resulted from the combined positive effects of increased price (\*\*\*), increased sales volume (\*\*\*), and the negative effect of the increase of per-unit costs and expenses (\*\*\*)).

**Table VI-4**  
**Ferrosilicon: Variance analysis of operations of U.S. producers, fiscal years 2011-13, January-March 2013, and January-March 2014**

\*       \*       \*       \*       \*       \*       \*

### CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

The responding firms’ aggregate data on capital expenditures and research and development (“R&D”) expenses are presented in table VI-5. Both producers reported capital expenditures during the period of investigation. Capital expenditures decreased from 2011 to 2012, and then, increased from 2012 to 2013. The majority of capital expenditures spent by both producers were \*\*\*.<sup>15</sup> Data for capital expenditures on a firm-by-firm basis are shown in table VI-6. No producer reported R&D expenses.

**Table VI-5**  
**Ferrosilicon: Capital expenditures and R&D expenses by U.S. producers, fiscal years 2011-13, January-March 2013, and January-March 2014**

\*       \*       \*       \*       \*       \*       \*

**Table VI-6**  
**Ferrosilicon: Capital expenditures by U.S. producers, by firms, fiscal years 2011-13, January-March 2013, and January-March 2014**

\*       \*       \*       \*       \*       \*       \*

### ASSETS AND RETURN ON ASSETS

Table VI-7 presents data on the U.S. producers’ total net assets and their return on assets (“ROA”). Total net assets \*\*\* as explained before).<sup>16</sup> At the same time, the return on assets decreased between 2011 and 2013. The trend of ROA over the period was the same as the trend of the operating income (loss) margin shown in table VI-1.

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<sup>15</sup> E-mails from \*\*\*, June 5, 2014.

<sup>16</sup> E-mail from \*\*\*, August 8, 2013.

**Table VI-7**  
**Ferrosilicon: Value of assets and return on assets of U.S. producers, fiscal years 2011-13**

\* \* \* \* \*

**CAPITAL AND INVESTMENT**

The Commission requested U.S. producers to describe any actual negative effects on their return on investment, or their growth, investment, ability to raise capital, existing development and production efforts, or the scale of capital investments as a result of imports of Ferrosilicon from Russia and Venezuela. Their comments are as follows:

**Actual Negative Effects**

*CC Metals.*—\*\*\*

*Globe.*—\*\*\*

**Anticipated Negative Effects**

*CC Metals.*—\*\*\*

*Globe.*—\*\*\*



## PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

*In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors<sup>1</sup>--*

- (I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
- (II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
- (III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
- (IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
- (V) inventories of the subject merchandise,*

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<sup>1</sup> Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that “The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition.”

- (VI) *the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,*
- (VII) *in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),*
- (VIII) *the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and*
- (IX) *any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).<sup>2</sup>*

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. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

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<sup>2</sup> Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

## THE INDUSTRY IN VENEZUELA

The Commission issued a foreign producer questionnaire to one firm in Venezuela believed to produce and/or export ferrosilicon.<sup>3</sup> FerroAtlántica de Venezuela, S.A. (“FerroVen”)<sup>4</sup> provided the Commission with a questionnaire response, and accounted for all production of ferrosilicon in Venezuela and all export shipments to the United States during the period of investigation.<sup>5</sup> FerroVen is the only producer of ferrosilicon in Venezuela and operates three ferrosilicon furnaces in Puerto Ordaz, Venezuela.<sup>6</sup> Table VII-1 presents all responding producers of ferrosilicon in Venezuela, their capacity, production, share of reported production, exports to the United States, and share of exports to the United States in 2013.

**Table VII-1**  
**Ferrosilicon: Responding Venezuelan producers’ reported production capacity, production, and U.S. exports, by firm, 2013**

Group	Capacity (short tons)	Production (short tons)	Share of reported 2013 production in Venezuela (percent)	Exports to the U.S. (short tons)	Share of exports relative to U.S. imports (percent)
FerroVen	***	***	***	***	***
Total	***	***	***	***	***

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

Table VII-2 presents data regarding FerroVen’s ferrosilicon operations in Venezuela. FerroVen reported that its ferrosilicon capacity \*\*\* from 2011 to 2013, and is projected to \*\*\* from 2013 to 2015.<sup>7</sup> FerroVen’s production decreased by \*\*\* percent from 2011 to 2013, but is projected to \*\*\* percent from 2013 to 2015.<sup>8</sup> In 2013, \*\*\* percent of FerroVen’s total

<sup>3</sup> This firm was identified through a review of information submitted in the petition and \*\*\*.

<sup>4</sup> FerroVen is a subsidiary of FerroAtlántica Group SA of Madrid, Spain, which produces silicon metal and manganese and ferrosilicon alloys. FerroAtlantica, the U.S importer, is also a wholly owned subsidiary of FerroAtlantica SA. U.S. importer questionnaire of FerroAtlantica, response to questions I-3 and I-4.

<sup>5</sup> In 2013, U.S. imports of ferrosilicon from Venezuela accounted for \*\*\* percent of reported export shipments from Venezuela to the United States. Compiled from U.S. imports from Venezuela, based on official import statistics of 25,922 short tons, and export shipments reported by FerroVen of \*\*\* short tons.

<sup>6</sup> Respondent’s Posthearing Brief, exh. A, pp. 64-65; Foreign producer questionnaire of FerroVen’s, response to question II-4. FerroVen reported that it \*\*\*. Respondent’s Posthearing Brief, exh. A, pp. 64-65.

<sup>7</sup> FerroVen reported that during the period of investigation, it \*\*\*.

It also reported that it \*\*\*.

FerroVen also reported that \*\*\*.

FerroVen reported that \*\*\*. Foreign Producer questionnaire of FerroVen, response to question II-2.

<sup>8</sup> FerroVen \*\*\*.

shipments of ferrosilicon were shipments within its home market, \*\*\* percent were export shipments to the United States, and \*\*\* percent of its total shipments were export shipments to other markets in \*\*\*. FerroVen reported that its \*\*\* U.S. importer of ferrosilicon during the period of investigation was \*\*\*.

**Table VII-2**

**Ferrosilicon: Data for FerroVen’s operations in Venezuela, 2011-13, January-March 2013, January-March 2014, and projected 2014-15**

\* \* \* \* \*

**U.S. INVENTORIES OF IMPORTED MERCHANDISE**

Table VII-3 presents data on U.S. importers’ reported inventories of ferrosilicon.

**Table VII-3**

**Ferrosilicon: U.S. importers’ inventories, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

**U.S. IMPORTERS’ OUTSTANDING ORDERS**

The Commission requested importers to indicate whether they imported or arranged for the importation of ferrosilicon from Venezuela after March 31, 2013. \*\*\* reported that they arranged such shipments.

**ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS**

In February, 2008, the European Union imposed antidumping duty orders on imports of ferrosilicon from China, Egypt, Kazakhstan, Macedonia, and Russia.<sup>9</sup> In 2009, the EU repealed the antidumping duties on Macedonia.<sup>10</sup> In 2013, the EU allowed the expiration of the antidumping duty orders on Egypt and Kazakhstan.<sup>11</sup> In April 2014, the EU reviewed the orders on China and Russia, and determined to continue the imposition of antidumping duties on

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<sup>9</sup> Official Journal of the European Union, Council Regulation (EC) No 172/2008, February 25, 2008.

<sup>10</sup> Council Implementing Regulation (EU) No 1297/2009 (3) repealed the anti-dumping duty imposed by Regulation (EC) No 172/2008 on imports of FeSi originating in the Former Yugoslav Republic of Macedonia.

<sup>11</sup> Official Journal of the European Union (EC) 2013/C 58/05, March 1, 2013.

ferrosilicon from China, with duty rates ranging from 15.6 percent to 31.2 percent, and Russia, with duty rates ranging from 17.8 percent to 22.7 percent.<sup>12</sup>

### INFORMATION ON NONSUBJECT COUNTRIES

In assessing whether the domestic industry is materially injured or threatened with material injury “by reason of subject imports,” the legislative history states “that the Commission must examine all relevant evidence, including any known factors, other than the dumped or subsidized imports, that may be injuring the domestic industry, and that the Commission must examine those other factors (including non-subject imports) ‘to ensure that it is not attributing injury from other sources to the subject imports.’”<sup>13</sup>

Table VII-4 presents world production of ferrosilicon from 2008 to 2012, excluding U.S. production.

**Table VII-4**  
**Ferrosilicon: World production, by country (excluding United States), 2008-2012**

Item	2008	2009	2010	2011	2012
	Quantity ( <i>short tons of ferrosilicon</i> )				
China	5,400,000	5,620,000	5,840,000	5,950,000	6,060,000
Russia	937,000	821,000	1,010,000	1,140,000	1,160,000
Norway	204,000	258,000	248,000	188,000	243,000
Brazil	160,000	160,000	160,000	160,000	160,000
South Africa	148,000	122,000	141,000	137,000	132,000
Ukraine	168,000	166,000	216,000	166,000	132,000
Iceland	119,000	125,000	126,000	132,000	127,000
India	101,000	112,000	111,000	116,000	119,000
Bhutan	34,000	100,000	108,000	104,000	104,000
Venezuela	97,000	57,000	85,000	77,000	89,000
Other countries	426,000	269,000	384,000	454,000	417,000
Total excluding United States	7,800,000	7,810,000	8,430,000	8,620,000	8,740,000

Source: U.S. Geological Survey, Minerals Yearbook 2012.

<sup>12</sup> Official Journal of the European Union, Imposing a definitive anti-dumping duty on imports of ferro-silicon originating in the People’s Republic of China and Russia, following an expiry review pursuant to Article 11(2) of Council Regulation (EC) No 1225/2009, L 107/13, April 10, 2014.

<sup>13</sup> *Mittal Steel Point Lisas Ltd. v. United States*, Slip Op. 2007-1552 at 17 (Fed. Cir., Sept. 18, 2008), quoting from Statement of Administrative Action on Uruguay Round Agreements Act, H.R. Rep. 103-316, Vol. I at 851-52; see also *Bratsk Aluminum Smelter v. United States*, 444 F.3d 1369 (Fed. Cir. 2006).

Table VII-5 presents world exports of ferrosilicon from 2008 to 2013.

**Table VII-5**  
**Ferrosilicon: World exports, by country, 2008-2013**

Item	2008	2009	2010	2011	2012	2013
	Quantity (short tons of ferrosilicon)					
Russia	321,795	361,415	465,209	417,140	502,272	449,892
China	1,407,792	492,655	859,530	685,117	500,766	351,874
Norway	224,691	125,920	230,657	267,082	269,872	269,213
Iceland	116,699	124,553	125,918	132,361	145,304	138,014
Brazil	111,257	156,889	181,352	158,294	159,948	123,440
Ukraine	58,437	72,887	102,153	79,185	42,205	75,444
EU27 (External Trade)	39,718	110,862	143,665	170,230	127,439	53,728
United States	37,181	22,597	50,926	51,502	55,241	53,234
Canada	42,361	31,212	46,319	48,559	51,447	52,653
India	35,724	22,833	43,039	55,264	30,206	32,587
All other countries	180,279	147,877	195,941	204,959	107,987	104,118
Total	2,756,213	1,817,577	2,640,652	2,474,653	2,100,674	1,808,314

Note.—U.S. export data is for total exports, including re-export of imported goods. Data for exports from China are understated because ferrosilicon may be transshipped from China through Vietnam to avoid payment of China's 25 percent export tax. Reported imports by all countries (mirror exports) of ferrosilicon from China were 1,006,223 short tons in 2011, 859,266 short tons in 2012, and 789,722 short tons in 2013.

Source: Compiled from Global Trade Atlas, HS 7202.21 and 7202.29.

### China

Production, consumption and exports of ferrosilicon by China are the largest in the world.<sup>14</sup> China accounted for about 70 percent of world production of ferrosilicon in 2012, according to data compiled by the U.S. Geological Survey.<sup>15</sup> China imposes a 25 percent tax on exports of ferrosilicon, in addition to its non-refundable, value-added tax of 17 percent. Since the export tax was increased to 25 percent effective January 1, 2008, trade has developed in Chinese ferrosilicon smuggled through Vietnam.<sup>16</sup> Such ferrosilicon is normally reported as being of China origin in import statistics of importing countries, including the United States. As a result, reported imports of ferrosilicon from China far exceed reported exports from China. For 2013, for example, reported imports by all countries of ferrosilicon from China and Vietnam

<sup>14</sup> Roskill Information Services Ltd., *Silicon and Ferrosilicon: Global Industry Markets and Outlook, Thirteenth Edition, 2011*, para. 5.9.

<sup>15</sup> U.S. Geological Survey, *2012 Minerals Yearbook (Advance Release): Silicon*, p. 67.13-14.

<sup>16</sup> American Metal Market, *Bulk Alloy exporters cringe over tax hikes*, Dec. 27, 2007, *Traders rely on smuggled ferrosilicon*, Oct. 7, 2011, *China's ferrosilicon exports pick up after smuggling clampdown*, Sep. 26, 2012.

combined totaled 850 thousand short tons, in contrast to only 352 thousand short tons of exports officially reported by China.<sup>17</sup>

The largest producer of ferrosilicon in China, Erdos Electrical Power & Metallurgical Co., Ltd., has capacity of over 600 thousand short tons.<sup>18</sup> The Japanese trading company Mitsui & Co., Ltd. owns a 25 percent interest in Erdos.<sup>19</sup> There are eight companies with annual ferrosilicon capacities in the range of 100 to 300 thousand tons.<sup>20</sup> There are reported to be over 1,000 producers of ferrosilicon in China, the vast majority of which are small, with average annual production of less than 5 thousand tons apiece.<sup>21</sup>

## Russia

Because U.S. imports from Russia were included in the petition, the Commission issued foreign producers' questionnaires to two Russian firms believed to produce and/or export the vast majority of ferrosilicon in Russia.<sup>22</sup> Useable responses to the Commission's questionnaire were received from one firm:<sup>23</sup> CHEMK Industrial Group ("CHEMK").<sup>24</sup> CHEMK reported that its production accounted for \*\*\* percent of total production of ferrosilicon in Russia in 2013.<sup>25</sup> It reported that its exports to the United States accounted for approximately \*\*\* percent of total exports of ferrosilicon from Russia to the United States in 2013.<sup>26</sup> Table VII-6 presents capacity,

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<sup>17</sup> Global Trade Information Service, Inc. (GTIS), World Trade Atlas Database, accessed June 6, 2014.

<sup>18</sup> Roskill, para. 5.9.2.

<sup>19</sup> Mitsui & Co., Ltd., [http://www.mitsui.com/jp/en/release/2010/1190176\\_1357.html](http://www.mitsui.com/jp/en/release/2010/1190176_1357.html), (accessed June 12, 2014).

<sup>20</sup> Roskill, table 24.

<sup>21</sup> Ibid.

<sup>22</sup> These firms included: (1) CHEMK Industrial Group; and (2) Bratsk Ferroalloys Plant, Ltd. ("Bratsk"). These firms were identified through a review of information submitted in the petition and \*\*\*.

<sup>23</sup> Although Bratsk did submit a foreign producer questionnaire in the preliminary phase of these investigations, it did not submit one in the final phase. In the preliminary phase, Bratsk reported \*\*\*.

<sup>24</sup> CHEMK's response was on behalf of the following establishments: RFA International in Switzerland, CHEMK's trading arm, Chelyabinski Electro-Metallurgical Plant OAO ("Chelyabinsk"), and Kuznetsk Ferroalloys OAO ("Kuznetsk"). Yurginski Ferroalloys Plant OAO ("Yurginsk") is part of Kuznetsk and is not a separate legal entity. CHEMK's posthearing brief, p. 42.

<sup>25</sup> In the preliminary phase of these investigations, Bratsk reported that its share of total production of ferrosilicon in Russia is \*\*\* percent in 2012. Two smaller producers of ferrosilicon in Russia are Novolipetsk Steel, a steel producer which has an annual capacity of about \*\*\* tons of ferrosilicon, and Serovsky Ferroalloy Plant, a producer of ferrosilicon and ferrosilicon-chromium. Recent production by Serovsky is not available; however, it produced \*\*\* tons of ferrosilicon in 2007.

<sup>26</sup> Official U.S. import data totaled 71,686 short tons of ferrosilicon from Russia in 2013. CHEMK reported export shipments to the United States of \*\*\* short tons of ferrosilicon in 2013, or \*\*\* percent of U.S. imports from Russia. A possible explanation for the larger export than import volume may be that virtually all U.S. imports from Russia are imported into a bonded warehouse, and therefore, there may be a gap between the date of importation and the actual date of entry for consumption.

production, share of reported production, exports to the United States, and share of exports to the United States for the responding producer of ferrosilicon in Russia in 2013.

**Table VII-6**  
**Ferrosilicon: Responding Russian producer’s reported production capacity, production, and U.S. exports, by firm, 2013**

Group	Capacity (short tons)	Production (short tons)	Share of reported 2013 production in Russia (percent)	Exports to the U.S. (short tons)	Share of exports relative to U.S. imports (percent)
CHEMK	***	***	***	***	***
Total	***	***	***	***	***

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

Table VII-7 presents data regarding CHEMK’s ferrosilicon operations in Russia. CHEMK reported that its ferrosilicon capacity \*\*\* from 2011 to 2013, but is projected to \*\*\* percent from 2013 to 2015.<sup>27</sup> CHEMK’s production increased by \*\*\* percent from 2011 to 2013, but is projected to \*\*\* percent from 2013 to 2015.<sup>28</sup> In 2013, \*\*\* percent of CHEMK’s total shipments of ferrosilicon were shipments within its home market (including internal consumption), \*\*\* percent were export shipments to the United States, and \*\*\* percent of its total shipments were export shipments to other markets in \*\*\*. CHEMK reported that its \*\*\* U.S. importer of ferrosilicon during the period of investigation was \*\*\*.

**Table VII-7**  
**Ferrosilicon: Data for CHEMK’s operations in Russia, 2011-13, January-March 2013, January-March 2014, and projected 2014-15**

\* \* \* \* \*

### Canada

There is a single plant producing ferrosilicon for metallurgical uses in Canada, Elkem Metals Canada Inc., located in Quebec and having its own hydroelectric power plant.<sup>29</sup> Elkem Metals Canada operates a single electric furnace having a capacity of about 30 thousand tons. Elkem Metals Canada is a wholly-owned subsidiary of the Norwegian producer Elkem ASA,

<sup>27</sup>CHEMK reported that \*\*\*.

<sup>28</sup>CHEMK indicated that it \*\*\*.

<sup>29</sup> Roskill, para. 5.7.3.

which also owns ferrosilicon production plants in Norway and Iceland.<sup>30</sup> Elkem ASA was acquired in February 2011 by China National Bluestar (Group) Co., Ltd., a Chinese firm.<sup>31</sup>

In Niagara Falls, Canada, Washington Mills produces 17 percent ferrosilicon for use in heavy-media separation and sink/float processes. The 17 percent ferrosilicon is manufactured in electric-arc furnaces as a co-product of bauxite-based aluminum oxide production and subsequently milled to standard sizes engineered specifically for heavy-media purposes.<sup>32</sup>

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<sup>30</sup>Elkem, <https://www.elkem.com/en/Foundry/Products/Ferrosilicon-to-steel/>, (accessed June 13, 2014).

<sup>31</sup> Elkem, <https://www.elkem.com/en/news/item/Agreement-on-sale-of-Elkem-to-Bluestar-completed/>, (accessed June 13, 2014).

<sup>32</sup> Washington Mills, <http://www.washingtonmills.com/products/ferro-silicon/>, (accessed June 12, 2014).



**APPENDIX A**

***FEDERAL REGISTER NOTICES***



The Commission makes available notices relevant to its investigations and reviews on its website, [www.usitc.gov](http://www.usitc.gov). In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
78 FR 44969 July 25, 2013	<i>Ferrosilicon From Russia and Venezuela; Institution of Antidumping Duty Investigations and Scheduling of Preliminary Phase Investigations.</i>	<a href="https://www.federalregister.gov/articles/2013/07/25/2013-17871/ferrosilicon-from-russia-and-venezuela-institution-of-antidumping-duty-investigations-and-scheduling">https://www.federalregister.gov/articles/2013/07/25/2013-17871/ferrosilicon-from-russia-and-venezuela-institution-of-antidumping-duty-investigations-and-scheduling</a>
78 FR 49471 August 14, 2013	<i>Ferrosilicon From the Russian Federation and Venezuela: Initiation of Antidumping Duty Investigations</i>	<a href="https://www.federalregister.gov/articles/2013/08/14/2013-19736/ferrosilicon-from-the-russian-federation-and-venezuela-initiation-of-antidumping-duty-investigations">https://www.federalregister.gov/articles/2013/08/14/2013-19736/ferrosilicon-from-the-russian-federation-and-venezuela-initiation-of-antidumping-duty-investigations</a>
78 FR 55096 September 9, 2013	<i>Ferrosilicon from Russia and Venezuela; Determinations</i>	<a href="https://www.federalregister.gov/articles/2013/09/09/2013-21842/ferrosilicon-from-russia-and-venezuela">https://www.federalregister.gov/articles/2013/09/09/2013-21842/ferrosilicon-from-russia-and-venezuela</a>
79 FR 13620 March 11, 2014	<i>Ferrosilicon From the Russian Federation: Preliminary Determination of Sales at Not Less Than Fair Value</i>	<a href="https://www.federalregister.gov/articles/2014/03/11/2014-05251/ferrosilicon-from-the-russian-federation-preliminary-determination-of-sales-at-not-less-than-fair">https://www.federalregister.gov/articles/2014/03/11/2014-05251/ferrosilicon-from-the-russian-federation-preliminary-determination-of-sales-at-not-less-than-fair</a>
79 FR 13619 March 11, 2014	<i>Ferrosilicon From Venezuela: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination</i>	<a href="https://www.federalregister.gov/articles/2014/03/11/2014-05250/ferrosilicon-from-venezuela-preliminary-determination-of-sales-at-less-than-fair-value-and">https://www.federalregister.gov/articles/2014/03/11/2014-05250/ferrosilicon-from-venezuela-preliminary-determination-of-sales-at-less-than-fair-value-and</a>
79 FR 18065 March 31, 2014	<i>Ferrosilicon From Russia and Venezuela; Scheduling of the Final Phase of Antidumping Investigations</i>	<a href="https://www.federalregister.gov/articles/2014/03/31/2014-07032/ferrosilicon-from-russia-and-venezuela-scheduling-of-the-final-phase-of-antidumping-investigations">https://www.federalregister.gov/articles/2014/03/31/2014-07032/ferrosilicon-from-russia-and-venezuela-scheduling-of-the-final-phase-of-antidumping-investigations</a>
79 FR 44393 July 31, 2014	<i>Ferrosilicon From the Russian Federation: Final Determination of Sales at Not Less Than Fair Value</i>	<a href="https://www.federalregister.gov/articles/2014/07/31/2014-18059/ferrosilicon-from-the-russian-federation-final-determination-of-sales-at-not-less-than-fair-value">https://www.federalregister.gov/articles/2014/07/31/2014-18059/ferrosilicon-from-the-russian-federation-final-determination-of-sales-at-not-less-than-fair-value</a>

79 FR 44397 July 31, 2014	<i>Ferrosilicon From Venezuela: Final Determination of Sales at Less Than Fair Value</i>	<a href="https://www.federalregister.gov/articles/2014/07/31/2014-18061/ferrosilicon-from-venezuela-final-determination-of-sales-at-less-than-fair-value">https://www.federalregister.gov/articles/2014/07/31/2014-18061/ferrosilicon-from-venezuela-final-determination-of-sales-at-less-than-fair-value</a>
79 FR 46450 August 8, 2014	<i>Ferrosilicon From Russia: Termination of Investigation</i>	<a href="https://www.federalregister.gov/articles/2014/08/08/2014-18806/ferrosilicon-from-russia-termination-of-investigation">https://www.federalregister.gov/articles/2014/08/08/2014-18806/ferrosilicon-from-russia-termination-of-investigation</a>

**APPENDIX B**

**LIST OF HEARING WITNESSES**



## CALENDAR OF PUBLIC HEARING

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

**Subject:** Ferrosilicon from Venezuela  
**Inv. No.:** 731-TA-1225 (Final)  
**Date and Time:** July 29, 2014 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (Room 101), 500 E Street, S.W., Washington, DC.

### **OPENING REMARKS:**

Petitioners (**William D. Kramer**, DLA Piper LLP (US))  
Respondents (**Julie C. Mendoza**, Morris, Manning & Martin LLP)

### **In Support of the Imposition of Antidumping Duty Orders:**

DLA Piper LLP (US)  
Washington, DC  
on behalf of

CC Metals and Alloys, LLC ("CCMA")  
Globe Specialty Metals, Inc. ("GSM")

**Barry C. Nuss**, Vice President, Treasurer *and* Chief Financial Officer, CCMA

**Gary Joiner**, Plant Manager, CCMA

**J. Marlin Perkins**, Vice President – Sales, Globe Metallurgical Inc.

**Steven Lawson**, President, United Steelworkers Local 2528

**Jennifer Lutz**, Senior Economist, Economic Consulting Services, LLC

**William D. Kramer** )  
 ) – OF COUNSEL  
**Martin Schaefermeier** )

**In Opposition to the Imposition of  
Antidumping Duty Orders:**

Morris, Manning & Martin LLP  
Washington, DC  
on behalf of

FerroAtlantica de Venezuela (“FerroVen”)  
FerroAtlantica S.A.

**Pedro Larrea Paguaga**, Chairman and Chief Executive Officer, Grupo FerroAtlantica

**Antonio Salinas Jimenez**, Export Director, FerroAtlantica S.A.

**Edward Hopkins**, General Manager, FerroAtlantica North America

**Daniel Klett**, Principal, Capital Trade Inc.

**Julie C. Mendoza** )  
**R. Will Planert** ) – OF COUNSEL  
**Mary S. Hodgins** )

**REBUTTAL/CLOSING REMARKS:**

Petitioners (**William D. Kramer**, DLA Piper LLP (US))  
Respondents (**R. Will Planert**, Morris, Manning & Martin LLP)

**APPENDIX C**  
**SUMMARY DATA**



Table C-1

## Ferrosilicon: Summary data concerning the U.S. market, 2011-13, January to March 2013, and January to March 2014

(Quantity=short tons contained silicon; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton contained silicon; Period changes=percent--exceptions noted)

	Report data					Period changes			
	Calendar year		January to March			Calendar year			Jan-Mar
	2011	2012	2013	2013	2014	2011-13	2011-12	2012-13	2013-14
U.S. consumption quantity:									
Amount.....	***	***	***	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
Venezuela.....	***	***	***	***	***	***	***	***	***
Russia.....	***	***	***	***	***	***	***	***	***
All others sources.....	***	***	***	***	***	***	***	***	***
Nonsubject sources.....	***	***	***	***	***	***	***	***	***
Total imports.....	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount.....	***	***	***	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
Venezuela.....	***	***	***	***	***	***	***	***	***
Russia.....	***	***	***	***	***	***	***	***	***
All others sources.....	***	***	***	***	***	***	***	***	***
Nonsubject sources.....	***	***	***	***	***	***	***	***	***
Total imports.....	***	***	***	***	***	***	***	***	***
U.S. imports from--									
Venezuela:									
Quantity.....	17,802	23,245	25,922	7,801	8,595	45.6	30.6	11.5	10.2
Value.....	33,239	39,801	44,752	13,559	15,409	34.6	19.7	12.4	13.6
Unit value.....	\$1,867	\$1,712	\$1,726	\$1,738	\$1,793	(7.5)	(8.3)	0.8	3.2
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Russia:									
Quantity.....	71,303	93,965	71,686	19,707	18,927	0.5	31.8	(23.7)	(4.0)
Value.....	146,016	158,713	120,956	32,541	34,174	(17.2)	8.7	(23.8)	5.0
Unit value.....	\$2,048	\$1,689	\$1,687	\$1,651	\$1,806	(17.6)	(17.5)	(0.1)	9.3
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
All other nonsubject sources:									
Quantity.....	74,263	67,122	66,097	11,785	20,974	(11.0)	(9.6)	(1.5)	78.0
Value.....	191,902	161,838	149,029	28,604	44,859	(22.3)	(15.7)	(7.9)	56.8
Unit value.....	\$2,584	\$2,411	\$2,255	\$2,427	\$2,139	(12.7)	(6.7)	(6.5)	(11.9)
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity.....	145,566	161,087	137,783	31,493	39,901	(5.3)	10.7	(14.5)	26.7
Value.....	337,918	320,550	269,985	61,145	79,033	(20.1)	(5.1)	(15.8)	29.3
Unit value.....	\$2,321	\$1,990	\$1,959	\$1,942	\$1,981	(15.6)	(14.3)	(1.5)	2.0
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Total imports:									
Quantity.....	163,367	184,332	163,705	39,294	48,495	0.2	12.8	(11.2)	23.4
Value.....	371,157	360,351	314,738	74,704	94,442	(15.2)	(2.9)	(12.7)	26.4
Unit value.....	\$2,272	\$1,955	\$1,923	\$1,901	\$1,947	(15.4)	(14.0)	(1.7)	2.4
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
U.S. producers:									
Average capacity quantity.....	***	***	***	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity.....	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity.....	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1).....	***	***	***	***	***	***	***	***	***
Production workers.....	***	***	***	***	***	***	***	***	***
Hours worked (1,000s).....	***	***	***	***	***	***	***	***	***
Wages paid (\$1,000).....	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour).....	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours).....	***	***	***	***	***	***	***	***	***
Unit labor costs.....	***	***	***	***	***	***	***	***	***
Net Sales:									
Quantity.....	***	***	***	***	***	***	***	***	***
Value.....	***	***	***	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***	***	***	***
Gross profit of (loss).....	***	***	***	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***	***	***	***

## Notes:

fn1.--Report data are in percent and period changes are in percentage points.

fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics.



**APPENDIX D**

**ALTERNATE APPARENT U.S. CONSUMPTION & U.S. MARKET SHARES**



**Table D-1**

**Ferrosilicon: Difference between FerroAtlantica's reported U.S. shipments of imports from Venezuela and U.S. imports from Venezuela as reported in official import statistics, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*

**Table D-2**

**Ferrosilicon: U.S. consumption and market shares using reported U.S. shipments of imports from Russia and Venezuela, 2011-13, January-March 2013, and January-March 2014**

\* \* \* \* \*



**APPENDIX E**

**NONSUBJECT COUNTRY PRICE DATA**



Commission questionnaires also requested pricing data for ferrosilicon pricing products imported from Canada, China, and Russia. For Canada, importer \*\*\* reported data for \*\*\*. In 2013, these data accounted for \*\*\* percent of U.S. imports from Canada. Importer \*\*\* reported price data for nonsubject imports from China<sup>1</sup> for products 1 and 2 in bulk and super sack shipments. \*\*\*.<sup>2</sup> Importer \*\*\* reported price data for nonsubject imports from China for product 2 in bulk shipments. For 2013, price data reported by these firms accounted for \*\*\* percent of U.S. imports from China.<sup>3</sup> \*\*\*. Pricing data reported by \*\*\* accounted for approximately \*\*\* percent of U.S. shipments of 2013 imports from Russia.

These price items and accompanying data are comparable to those presented in tables V-3 to V-6. Price and quantity data for China, Canada and Russia, along with comparisons to U.S. and Venezuelan prices, are shown in tables E-1 through E-4. A summary of price trends for U.S., Russian, and Venezuelan prices is presented in table E-5 (analogous to table V-11 in *Part V*), and a comparison of prices is presented in table E-6.

**Table E-1**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 in bulk, and percent price comparisons of nonsubject with domestic and Venezuelan product, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table E-2**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 in bulk, and percent price comparisons of nonsubject with domestic and Venezuelan product, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table E-3**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 in super sacks, and and percent price comparisons of nonsubject with domestic and Venezuelan product, by quarters, January 2011-March 2014**

\* \* \* \* \*

**Table E-4**  
**Ferrosilicon: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 in super sacks, and and percent price comparisons of nonsubject with domestic and Venezuelan product, by quarters, January 2011-March 2014**

\* \* \* \* \*

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<sup>1</sup> Nonsubject price data was requested for ferrosilicon imported from Canada and China.

<sup>2</sup> \*\*\*.

<sup>3</sup> U.S. import data compiled from official Commerce statistics. See Part IV for additional information on nonsubject imports.

**Figure E-1**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 1 in bulk, by quarters, January 2011-June 2014**

\* \* \* \* \*

**Figure E-2**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 2 in bulk, by quarters, January 2011-June 2014**

\* \* \* \* \*

**Figure E-3**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 1 in super sacks, by quarters, January 2011-June 2014**

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**Figure E-4**  
**Ferrosilicon: Weighted-average prices and quantities of domestic and imported product 2 in super sacks, by quarters, January 2010-June 2013**

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**Table E-5**  
**Ferrosilicon: Summary of weighted-average f.o.b. prices for products 1 and 2 in bulk and super sacks from the United States, Russia, and Venezuela**

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**Table E-6**  
**Ferrosilicon: Comparison of prices, by country, January 2011-March 2014**

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