Alloy Magnesium from China

Investigation No. 731-TA-1071 (Second Review)

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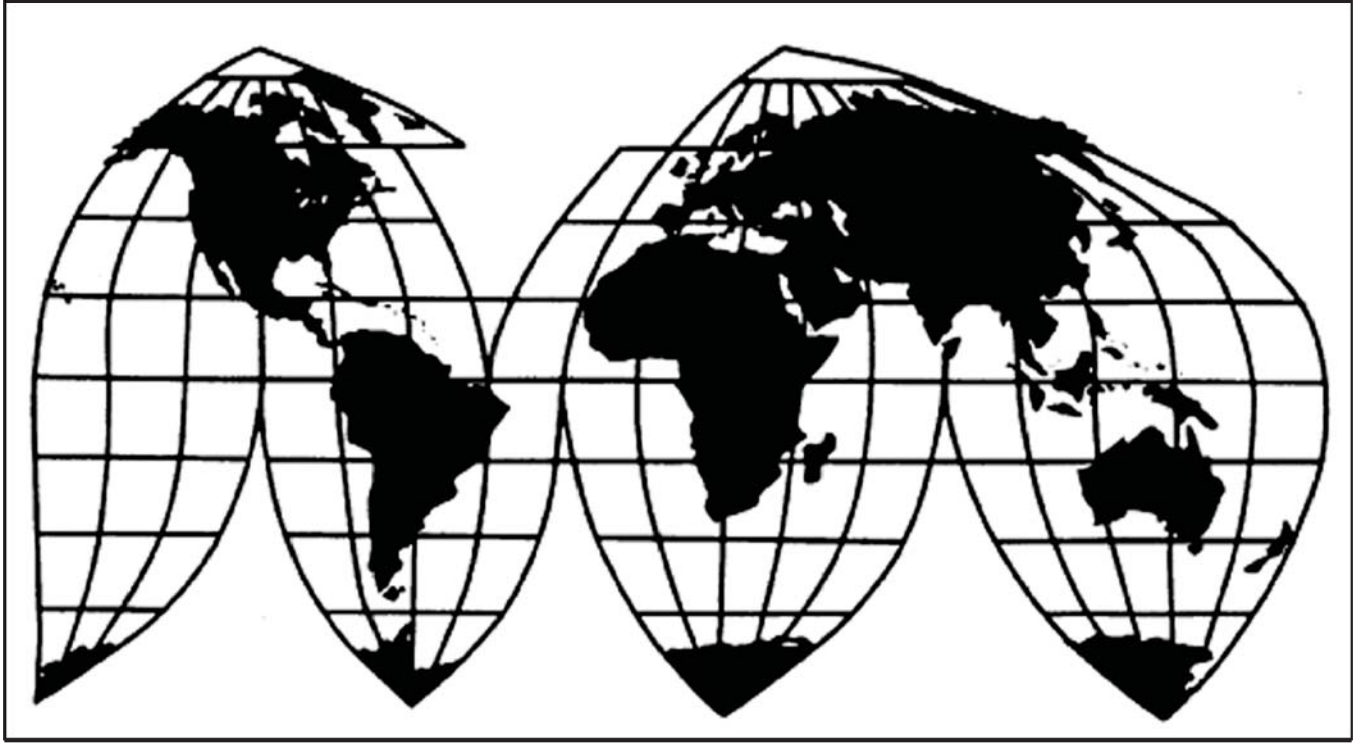
U.S. International Trade Commission



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U.S. International Trade Commission

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Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1071 (Second Review)

Alloy Magnesium from China

DETERMINATION

On the basis of the record[1] developed in the subject five-year review, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[2]

BACKGROUND

The Commission, pursuant to section 751(c) of the Act (19 U.S.C. 1675(c)), instituted this review on February 1, 2016 (81 F.R. 5136) and determined on May 6, 2016, that it would conduct an expedited review (81 F.R. 32346, May 23, 2016).

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

[2] Vice Chairman Dean A. Pinkert did not participate in this review.

Views of the Commission

Based on the record in this five-year review, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[1]

I. Background

The Original Investigations and Prior Reviews. In April 2005, the Commission determined that an industry in the United States was materially injured by reason of alloy magnesium from China and pure and alloy magnesium from Russia sold at less-than-fair value.[2] The U.S. Department of Commerce ("Commerce") issued antidumping duty orders on April 15, 2005.[3]

On March 1, 2010, the Commission instituted its first five-year reviews of the antidumping duty orders on alloy magnesium from China and pure and alloy magnesium from Russia.[4] It subsequently determined to conduct full reviews.[5] In February 2011, the Commission determined that revocation of the antidumping duty order covering pure and alloy magnesium from Russia would not be likely to lead to continuation or recurrence of material injury to an industry in the United States and that revocation of the antidumping duty order covering alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[6]

The Current Review. The Commission instituted this second five-year review on February 1, 2016.[7] It received a joint response to its notice of institution, filed by US Magnesium and Local 8319.[8] No respondent interested party filed a response. On May 6,

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[1] Commissioner Pinkert did not participate in this review.

[2] *Magnesium from China and Russia*, Inv. Nos. 731-TA-1071 and 1072 (Final), USITC Pub. 3763 (Apr. 2005) ("Original Determinations, USITC Pub. 3763") at 3, 24.

[3] 70 Fed. Reg. 19928 and 19930 (Apr. 15, 2005).

[4] 75 Fed. Reg. 9252 (Mar. 1, 2010).

[5] 75 Fed Reg. 48360 (Aug. 10, 2010). The Commission received a joint response from US Magnesium and Local 8319 as well as responses from several respondent interested parties in China and Russia. *Magnesium from China and Russia*, Inv. Nos. 731-TA-1071 and 1072 (Review), USITC Pub. 4214 (Feb. 2011) ("First Five-Year Reviews, USITC Pub. 4214") at 3.

[6] First Five-Year Reviews, USITC Pub. 4214 at 3, 31, 34. Commerce revoked the antidumping duty order on magnesium metal from Russia on April 15, 2010. 76 Fed. Reg. 13128 (Mar. 10, 2011).

[7] 81 Fed. Reg. 5136 (Feb. 1, 2016).

[8] Confidential Report, Memorandum INV-OO-034 (Apr. 25, 2016) ("CR") at I-2, Public Report, *Alloy Magnesium from China*, Inv. No. 731-A-1071 (Second Review), USITC Pub. 4618 (June 2016) ("PR") at I-2. US Magnesium is a domestic producer of magnesium and Local 8319 of the United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union represents workers producing magnesium metal in US Magnesium's plant in Rowley, Utah. *Id.*

2016, the Commission determined that the domestic interested party group response was adequate and that the respondent interested party group response was inadequate.[9] In the absence of other circumstances warranting a full review, the Commission unanimously determined to conduct this expedited review.[10]

Data/Response Coverage. U.S. industry data are based on information provided by the domestic interested parties in response to the notice of institution and information from the original investigations and the first reviews. US Magnesium is estimated to account for *** percent of domestic production of magnesium.[11] U.S. import data and related information are based on official import statistics.[12] No foreign producer, exporter, or importer of alloy magnesium from China participated in this review. Foreign industry data and related information are based on information submitted in the original investigations, the first reviews, and by domestic interested parties in the current review, as well as certain publicly available sources.[13]

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[14] 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 under this subtitle."[15] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[16]

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[9] *Explanation of Commission Determination on Adequacy in Alloy Magnesium from China*, Inv. No. 731-TA-1071 (Second Review), EDIS Doc. 581193 (May 13, 2016).

[10] 81 Fed. Reg. 32346 (May 23, 2016).

[11] CR/PR at Table I-1.

[12] CR at I-27-34, PR at I-21-26.

[13] These sources include the U.S. Geological Survey and Global Trade Atlas. CR/PR at Table I-9, CR at I-4-5, PR at 1-3-4.

[14] 19 U.S.C. § 1677(4)(A).

[15] 19 U.S.C. § 1677(10); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[16] *See*, *e.g.*, *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

Commerce has defined the imported merchandise within the scope of the order under review as follows:

> . . . magnesium metal from the PRC, which includes primary and secondary alloy magnesium metal, regardless of chemistry, raw material source, form, shape, or size. Magnesium is a metal or alloy containing by weight primarily the element magnesium. Primary magnesium is produced by decomposing raw materials into magnesium metal. Secondary magnesium is produced by recycling magnesium-based scrap into magnesium metal. The magnesium covered by this investigation includes blends of primary and secondary magnesium.
>
> The subject merchandise includes the following alloy magnesium metal products made from primary and/or secondary magnesium including, without limitation, magnesium cast into ingots, slabs, rounds, billets, and other shapes, magnesium ground, chipped, crushed, or machined into raspings, granules, turnings, chips, powder, briquettes, and other shapes; and products that contain 50 percent or greater, but less than 99.8 percent, magnesium, by weight, and that have been entered into the United States as conforming to an "ASTM Specification for Magnesium Alloy" and are thus outside the scope of the existing antidumping orders on magnesium from the PRC (generally referred to as "alloy" magnesium).
>
> The scope of this order excludes: (1) all forms of pure magnesium, including chemical combinations of magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight, that do not conform to an "ASTM Specification for Magnesium Alloy"; (2) magnesium that is in liquid or molten form; and (3) mixtures containing 90 percent or less magnesium in granular or powder form by weight and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures, including lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nephaline syenite, feldspar, alumina (Al_2O_3), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide, periclase, ferroalloys, dolomite lime, and colemanite.[17]

Magnesium, a silver-white metallic element, is the lightest of all structural metals with a density approximately 63 percent of that of aluminum, the principal metal with which it competes in the U.S. market. Magnesium's light weight and high vibrational-dampening properties have encouraged research to develop magnesium-based alloys with improved physical and mechanical properties for use as a structural metal in applications where minimizing weight is an important design consideration.[18]

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[17] 81 Fed. Reg. 36874 (June 8, 2016).

[18] CR at I-7, PR at I-6.

Magnesium is available in two principal forms: pure and alloy.[19] Pure magnesium in unwrought form contains at least 99.8 percent magnesium by weight. Pure magnesium is widely used in commercial and industrial applications because it is easily machined and lightweight, has a high strength-to-weight ratio, has special electrical properties, and has special metallurgical and chemical properties that allow it to alloy well with metals, such as aluminum.[20] Alloy magnesium (or magnesium alloy) consists of magnesium and other metals, typically aluminum and zinc, containing less than 99.8 percent magnesium by weight but more than 50 percent magnesium by weight, with magnesium the largest metallic element in the alloy by weight. Alloy magnesium has certain properties that improve its strength, ductility, workability, corrosion resistance, density, or castability compared to pure magnesium.[21] It is principally used in structural applications, primarily in castings (die, permanent mold, and sand) and extrusions for the automotive industry.[22]

Pure and alloy magnesium are produced as either primary or secondary magnesium. Primary magnesium is produced by decomposing raw materials into magnesium metal. Secondary magnesium is produced by recycling magnesium-based scrap.[23] Unwrought magnesium may be cast into ingots or may be granular magnesium, which consists of all other physical forms of magnesium, such as raspings, turnings, granules, and powders.[24]

In the original investigations, the Commission found pure and alloy magnesium to constitute a single domestic like product.[25] It based this decision on the shared essential physical characteristics of pure and alloy magnesium; the overlap in their uses, especially in aluminum production; the recognition by many industry participants of increased competition between pure and alloy magnesium; the same general channels of distribution for pure and alloy magnesium; and the convergence in prices for the two types of magnesium.[26] The

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[19] CR at I-7, PR at I-6.

[20] CR at I-7, PR at I-6. Pure magnesium is typically used in the production of aluminum alloy for use in beverage cans, in die cast automotive parts, in iron and steel desulfurization, as a reducing agent for various nonferrous metals (titanium, zirconium, hafnium, uranium, and beryllium), and in magnesium anodes for the protection of iron and steel in underground pipe and water tanks and various marine applications. It is also used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products for use in aerospace, medical, and industrial applications. *Id.* at I-7-8, PR at I-6-7.

[21] CR at I-8, PR at I-7. Pure magnesium is not used in structural applications because its tensile and yield strengths are low. *Id.*

[22] CR at I-8, PR at I-7. Alloy magnesium is typically produced to meet various industry-recognized ASTM specifications for alloy magnesium such as AM50A, AM60B, and AZ91D. CR at I-8, PR at I-7.

[23] CR at I-8-9, PR at I-7.

[24] CR at I-9, PR at I-8.

[25] Original Determinations, USITC Pub. 3763 at 6-11.

[26] Original Determinations, USTIC Pub. 3763 at 6-11.

Commission also found that cast and granular magnesium and primary and secondary magnesium were part of the same like product.[27]

In the full first five-year reviews, the Commission found that pure and alloy magnesium continued to be part of the same domestic like product.[28] No information developed in the reviews suggested that the physical characteristics, manufacturing facilities and employees, or the channels of distribution of the products had changed since the original investigations.[29] According to the Commission, the record generally supported a finding of limited one-way substitutability of alloy magnesium for pure magnesium in aluminum production (the market segment accounting for the largest share of U.S. magnesium producers' commercial shipments) and iron and steel desulfurization.[30] It observed that industry participants recognized increased competition between pure and alloy magnesium and that while aluminum producers may have had a preference for using pure magnesium in aluminum production, the record showed that they used alloy magnesium when it was available at relatively attractive prices.[31] Prices for the two types of magnesium correlated for much of the period examined in those reviews.[32]

In the current review, there is no new information in the record indicating that the characteristics of the product at issue have changed since the second five-year reviews.[33] Domestic interested parties state that they generally agree with the domestic like product definition the Commission adopted in the prior proceedings, as set forth in the notice of institution.[34] Accordingly, we again define the domestic like product as consisting of pure and alloy magnesium, including primary and secondary magnesium, and ingot (cast) and granular magnesium.

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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."[35] 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.

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[27] Original Determinations, USITC Pub. 3763 at 6.

[28] First Five-Year Reviews, USITC Pub. 4214 at 7-10.

[29] First Five-Year Reviews, USITC Pub. 4214 at 7-9.

[30] First Five-Year Reviews, USITC Pub. 4214 at 9-10.

[31] First Five-Year Reviews, USITC Pub. 4214 at 10.

[32] First Five-Year Reviews, USITC Pub. 4214 at 10.

[33] *See generally* CR at I-5-16, PR at I-6-12.

[34] *See Domestic Interested Parties' Response to the Notice of Institution* (March 2, 2016) ("Response") at 22.

[35] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

In the original investigations, the Commission found a single domestic industry consisting of all producers of magnesium, including grinders that produce granular magnesium and die casters that recycle magnesium scrap.[36] It found that *** had imported the subject merchandise and was a related party, but did not find appropriate circumstances to exclude it from the domestic industry.[37]

In the first five-year reviews, the Commission found a single domestic industry, composed of the domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form.[38] US Magnesium argued that die casters that recycled the scrap generated in their die casting operations should not be treated as domestic producers if the die casters simply recycled "run-around scrap" and did not produce a saleable product.[39] As a result, the Commission examined whether Spartan, a die caster that recycled magnesium scrap, engaged in sufficient production-related activity to be treated as a domestic producer, and found that it did.[40]

In the current review, domestic interested parties generally agree with the Commission's definition of the domestic industry from the prior reviews, as set forth in the notice of institution.[41] There are no related party issues in this review.[42] Accordingly, we again

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[36] Original Determinations, USITC Pub. 3763 at 11. The Commission included grinders that produce granular magnesium in the domestic industry based on the relatively high amount of value added by grinders and the fact that grinders were included in the most recent prior investigation involving magnesium. *Id.* at 11-12.

[37] Original Confidential Views at 15. *** imports of subject merchandise were *** compared to *** domestic production and ***. *Id.*

[38] First Five-Year Reviews, USITC Pub. 4214 at 11. ESM Group, Inc. ("ESM Group"), a magnesium grinder, was a related party by virtue of its ownership by ESM Tianjin Co., Ltd., a producer of magnesium in China. The Commission found that appropriate circumstances did not exist to exclude ESM Group from the domestic industry as there was no information on the record suggesting that it might be shielded from any injury on account of its affiliation with the Chinese magnesium producer and the fact that data submitted by U.S. grinders was not included in U.S. producer data presented in the report to avoid double counting. *Id.* at 12.

[39] First Five-Year Reviews, USITC Pub. 4214 at 11.

[40] First Five-Year Reviews, USITC Pub. 4214 at 12. The Commission highlighted Spartan's seemingly significant capital investment in its scrap recycling operations, the not insignificant employment in its operations, and the fact that the technical expertise involved in Spartan's scrap recycling production activities appeared to be comparable to that involved in secondary magnesium production at other producers. *Id.*

[41] *See* Response at 22. Domestic interested parties again take the position that die casters that recycle their own scrap generated in their die casting operations should not be treated as domestic producers if the die casters simply recycle "run-around scrap" and are not producing a saleable product. Response at 22. Because of the expedited nature of this review, there is limited information on the record regarding die casters' current production-related activities. Because of the absence of any new information on the issue, there is no basis in the current record to make any finding about the nature of die casters' production-related activities contrary to the first reviews. *Id.*

[42] *See* CR at I-26, PR at I-20.

define a single domestic industry composed of all domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot (cast) and granular form.

III. Revocation of the Antidumping Duty Order Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[43] The SAA states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports."[44] Thus, the likelihood standard is prospective in nature.[45] The U.S. Court of International Trade has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[46]

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[43] 19 U.S.C. § 1675a(a).

[44] SAA at 883-84. The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[45] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

[46] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[47] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[48]

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated."[49] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[50] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[51]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[52] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) the potential for product shifting if production facilities in the foreign

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[47] 19 U.S.C. § 1675a(a)(5).

[48] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.

[49] 19 U.S.C. § 1675a(a)(1).

[50] 19 U.S.C. § 1675a(a)(1). Commerce has made no duty absorption findings. *See Issues and Decision Memorandum for the Expedited Sunset Review of the Antidumping Duty Order on Magnesium Metal from the People's Republic of China*, A-570-896, ACCESS No. 3475375-01, Department of Commerce (June 1, 2016) at 4; CR at I-22, PR at I-17.

[51] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

[52] 19 U.S.C. § 1675a(a)(2).

country, which can be used to produce the subject merchandise, are currently being used to produce other products.[53]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[54]

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[55] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.[56]

No respondent interested party participated in this expedited review. The record, therefore, contains limited new information with respect to the alloy magnesium industry in China. There also is limited current information on the magnesium market in the United States. Accordingly, for our determination, we rely as appropriate on the facts available from the original investigations and first reviews, and the limited new information on the record in this second five-year review.

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[53] 19 U.S.C. § 1675a(a)(2)(A-D).

[54] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

[55] 19 U.S.C. § 1675a(a)(4).

[56] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, 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 may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[57] The following conditions of competition inform our determinations.

1. The Original Investigations and Prior Reviews

In the original determinations, the Commission explained that demand for magnesium is derived from the demand for the applications in which it is used and generally tracks overall economic activity.[58] Whereas parties reported no change or slight increases in demand, record data indicated that apparent U.S. consumption generally declined.[59] There were two domestic primary producers of both pure and alloy magnesium during the period of investigation in the original investigations (January 2000 to September 2004): US Magnesium and Northwest Alloys (which ceased production in 2001).[60] According to the Commission, primary magnesium producers that used the electrolytic process (*i.e.*, US Magnesium) had a strong incentive to maintain a continuous level of production.[61] Nonsubject imports from several countries had been an important source of supply throughout the period of investigation, but certain nonsubject supply sources were idled.[62] The Commission found that subject imports from China and Russia were generally substitutable for the domestic like product, that magnesium had few substitutes, and that magnesium of the same type (*i.e.*, pure or alloy) was a fungible commodity product, for which price was an important factor in purchasing decisions.[63] It also observed that domestically produced magnesium was sold predominantly through short- or long-term contracts, whereas subject imports were more likely to be sold on the spot market.[64]

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[57] 19 U.S.C. § 1675a(a)(4).

[58] Original Determinations, USITC Pub. 3763 at 16.

[59] *See* Original Determinations, USITC Pub. 3763 at 16.

[60] Original Determinations, USITC Pub. 3763 at 16. There were also four domestic secondary producers of magnesium and three grinders. The Commission observed that secondary magnesium production had become more significant in recent years. *Id.*

[61] Original Determinations, USITC Pub. 3763 at 17. This is because the electrolytic cells used to make primary magnesium must be kept in constant operation to avoid their deterioration and resulting significant rebuilding costs. *Id.*

[62] Original Determinations, USITC Pub. 3763 at 16-17. These included Norsk Hydro in Norway, Pechiney in France, and Noranda's Magnolia plant in Canada. *Id.*

[63] Original Determinations, USITC Pub. 3763 at 16, 18.

[64] Original Determinations, USITC Pub. 3763 at 16.

In the first five-year reviews, the drivers of demand and principal uses for magnesium remained largely the same as in the original investigations.[65] Apparent U.S. consumption declined over the period examined in those reviews (January 2004 to June 2010).[66] According to the Commission, US Magnesium was the only producer of primary magnesium in the United States for most of that period.[67] US Magnesium's production capacity increased over that period, while the production capacity of the Chinese alloy magnesium industry expanded sharply between 2004 and 2009.[68] The Commission observed that nonsubject imports still held a significant share of the U.S. market between 2004 and 2009.[69] The market for magnesium continued to be price competitive and magnesium of the same type continued to be a fungible, commodity product, with a moderately high degree of substitutability.[70]

2. The Current Review

Demand Conditions. Demand for magnesium continues to track demand for downstream products and therefore remains tied to general economic activity.[71] Apparent U.S. consumption of magnesium (pure and alloy) was *** metric tons ("MT") in 2015, higher than in 2009 when it was *** MT, but still below a peak level of *** MT in 2003.[72] Domestic interested parties assert that growth in demand for alloy magnesium due to greater use of aluminum in vehicles has been anticipated for many years, but that demand has not grown significantly.[73]

Supply Conditions. Domestic producers' share of apparent U.S. consumption was *** percent in 2015, higher than in the original investigations and up slightly from the first five-year reviews.[74] Subject imports were largely absent from the market in 2015, with *** percent share of apparent U.S. consumption.[75] Nonsubject imports accounted for *** percent of

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[65] First Five-Year Reviews, USITC Pub. 4214 at 23. According to the Commission, the use of magnesium in titanium sponge production was more significant than it was in the original investigations and was anticipated to grow. *Id.*

[66] First Five-Year Reviews, USITC Pub. 4214 at 23.

[67] First Five-Year Reviews, USITC Pub. 4214 at 24. The Commission observed that MagPro, primarily a ***, began producing ***. There were also at least five domestic secondary producers of magnesium and three grinders during January 2004 to June 2010. *Confidential Views in the First Five-Year Reviews*, EDIS Doc. 578100 ("Confidential First Five-Year Reviews") at 34-35.

[68] First Five-Year Reviews, USITC Pub. 4214 at 24.

[69] First Five-Year Reviews, USITC Pub. 4214 at 24. The most significant development among nonsubject suppliers was the shutdown of most or all of the magnesium industry in Canada and a subsequent increase in nonsubject imports from Israel. *Id.*

[70] First Five-Year Reviews, USITC Pub. 4214 at 24.

[71] Response at 12, 21.

[72] CR/PR at Table I-8.

[73] Final Comments at 5.

[74] CR/PR at Table I-8.

[75] CR/PR at Table I-8.

apparent U.S. consumption in 2015.[76] It is unclear whether the overall domestic industry's capacity has increased since the first reviews,[77] although US Magnesium increased capacity.[78] No purchaser responding to the questionnaire staff circulated in the adequacy phase identified changes in technology or production methods that affected the availability of magnesium, while all three either identified or anticipated changes in the ability to increase production of magnesium.[79]

Substitutability and Other Considerations. The information available indicates that subject imports and the domestic like product continue to be substitutable to at least a moderately high degree and that price remains an important factor in purchasing decisions.[80] Information on the record also indicates that the majority of US Magnesium's sales are through contracts and that most of these contracts cover a period of one year.[81]

C. Likely Volume of Subject Imports

The Original Investigations and First Five-Year Reviews. In the original investigations, the Commission found that the volume of cumulated subject imports of magnesium from China and Russia, and the increase in that volume, were significant, both in absolute terms and relative to production and consumption.[82] The volume of cumulated subject imports increased by 70.2 percent between January 2000 and September 2004, while apparent U.S. consumption fell over the same period.[83] The market share of cumulated subject imports increased markedly from 2000 to 2003, while the domestic industry's market share declined, although not to the same degree.[84] The ratio of cumulated subject imports to domestic production increased *** between January 2000 and September 2004.[85]

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[76] CR/PR at Table I-8. As indicated above, Commerce revoked the antidumping duty order on imports of pure and alloy magnesium from Russia in 2010 as a result of the Commission's negative determination in the first five-year review of that order.

[77] Due to differences in coverage, available questionnaire data for the domestic industry's capacity in 2003, 2009, and 2015 are not comparable. CR/PR at Table I-5.

[78] Response at 11-12, 20. US Magnesium reports that it increased its nameplate capacity by over 30 percent since the first reviews and that it plans to expand capacity further, to 76,500 MT. *Id.* at 11-12. Nevada Clean Magnesium is also reportedly proposing to build a new magnesium production facility in Nevada. *Id.* at 20.

[79] CR at D-4, PR at D-3. Two purchasers pointed to *** while one purchaser cited *** *Id.*

[80] Response at 12.

[81] Response at 17. US Magnesium's contract with *** contains a condition allowing for ***. Response at 17-18.

[82] Original Determinations, USITC Pub. 3763 at 18.

[83] Original Determinations, USITC Pub. 3763 at 17.

[84] Original Determinations, USITC Pub. 3763 at 17.

[85] *Confidential Views in the Original Investigations,* EDIS Doc. 578092 ("Confidential Original Views") at 23; Original Determinations, USITC Pub 3763 at 18.

In the first five-year reviews, the Commission found that subject import volume from China was likely to be significant, both in absolute terms and as a share of the U.S. market, in the event of revocation.[86] According to the Commission, the magnesium industry in China had developed rapidly to become the world's largest manufacturer and exporter of magnesium and had the capability to significantly increase shipments of subject magnesium to the United States.[87] The Commission found that this increased capacity, along with a decline in the relative importance of the home market in China, led producers in China to rely to a significant degree on export markets.[88] It concluded that the existing antidumping duty order on pure magnesium, the ease with which producers in China could shift production to alloy magnesium, and the tendency for magnesium producers to operate at full capacity, created a powerful incentive for producers in China to export large volumes of subject imports to the United States should the order be revoked.[89]

The Current Review. Subject import volume from China peaked in 2003 at 12,906 MT.[90] Between 2010 and 2015, the annual volume of subject imports never exceeded 60 MT.[91] The market share of subject imports in 2015 was *** percent, down from *** percent in 2009 (the last year of the first five-year reviews) and *** percent in 2003 (the last year of the original investigations).[92]

Due to the expedited nature of this review, the record contains limited information on the industry in China. The information available indicates that the magnesium industry in China has substantial capacity and excess capacity to produce alloy magnesium. Domestic interested parties provided information that the magnesium industry in China increased its capacity by

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[86] First Five-Year Reviews, USITC Pub. 4214 at 26. The Commission did not exercise its discretion to cumulate imports of alloy magnesium from China with subject imports from Russia for its determinations in those reviews. *Id.* at 19.

[87] First Five-Year Reviews, USITC Pub. 4214 at 25.

[88] First Five-Year Reviews, USITC Pub. 4214 at 26. The Commission found that the elimination of a value added tax rebate on magnesium exports in 2006 and the imposition of a 10 percent export tax in 2008 appeared to do little to dampen Chinese magnesium exports. *Id.*

[89] First Five-Year Reviews, USITC Pub. 4214 at 26. As observed above, magnesium producers using the electrolytic process had an incentive to operate at full capacity to avoid deterioration of electrolytic cells. *Id.*

[90] First Five-Year Reviews, USITC Pub. 4214 at Table I-1 (indicating that the volume of subject imports from China increased from 6,671 MT in 2000 to 9,321 MT in 2001, 11,964 MT in 2002, and 12,906 MT in 2003).

[91] CR/PR at Table I-6. Available import data indicate that there were less than 0.5 MT of alloy magnesium imports from China in 2015. CR/PR at Table I-7. Notwithstanding, domestic interested parties observe that some of the volume of U.S. imports entering under HTS 8104.19 may consist of non-ASTM specification alloy magnesium that is properly classified as alloy magnesium for importation purposes, but which falls within the scope of the order on pure magnesium from China. Response at 13 n.42.

[92] CR/PR at Table I-8; *see also* First Five-Year Reviews, USITC Pub. 4214 at Table I-1 (indicating that subject imports from China increased their share of the U.S. market from *** percent in 2000 to *** percent in 2001, *** percent in 2002, and *** percent in 2003).

48.1 percent from 2010 to 2014 and that its capacity is expected to increase.[93] Domestic interested parties assert that in 2014 the industry in China had an estimated capacity of 1.6 million MT to produce primary magnesium and a capacity utilization rate of 54.5 percent.[94]

The record indicates that the alloy magnesium industry in China is significantly export oriented. China is presently the world's largest exporter of alloy magnesium, with its exports increasing annually since 2013.[95] That same year, China removed a 10 percent export tax on magnesium alloy.[96] Magnesium from China (including alloy magnesium) is currently subject to antidumping duties in Brazil.[97]

Given their available and growing capacity, their export orientation, and the increase in subject imports from China during the original investigations before the imposition of the order, if the order were revoked, producers in China would likely export additional quantities of subject merchandise to the United States.[98] We consequently find that upon revocation, the volume of subject imports would likely be significant.[99]

D. Likely Price Effects

In the original investigations, the Commission found that the quarterly price comparison data showed significant underselling by cumulated subject imports from China and Russia during most of the January 2000 to September 2004 period of investigation.[100] The Commission observed that instances of overselling by cumulated subject imports occurred largely in the first

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[93] Response at 14-15. Available information published by the U.S. Geological Survey indicates that production in China decreased during the first half of 2015 due to the shutdown of older, smaller producers which had higher costs. More magnesium capacity in China is expected to be shut down as the Government enforces environmental regulations. However, new capacity for magnesium production is being built in locations in China with lower energy costs, and is expected to result in increased magnesium production in China. CR/PR at I-4.

[94] Response at 14. US Magnesium asserts that 2015 capacity utilization levels may be as low as 43.7 percent, due to soft worldwide demand and low prices for magnesium. *Id.*

[95] CR/PR at Table I-10.

[96] Final Comments at 8.

[97] CR at I-38, PR at I-29. Additionally, the United States currently maintains antidumping duty orders on imports of pure ingot magnesium and pure granular magnesium from China. CR/PR at Table I-2.

[98] In the first reviews, the record indicated that the U.S. market was attractive because prices in the United States were higher than in other markets. First Five-Year Reviews, USITC Pub. 4214 at 27. There is no indication on the current record that the U.S. market is not attractive.

[99] Because producers and importers of subject merchandise did not participate in this review, the record does not contain data addressing existing inventories of subject merchandise or the potential for product shifting.

[100] Original Determinations, USITC Pub. 3763 at 18-19. Subject imports undersold the domestic like product in 54 of 74 possible quarterly comparisons. *Id.*

three quarters of 2004, and may have been due at least in part to the filing of the petitions.[101] The Commission also observed that purchasers confirmed a number of the lost sales and lost revenue allegations made by petitioners, and that these confirmed allegations involved substantial tonnage.[102] Additionally, the Commission found that the pricing data indicated that cumulated subject imports depressed domestic prices to a significant degree during the part of that period that preceded the filing of the petitions.[103]

In the first five-year reviews, the only available pricing data on subject imports from China were for the first quarter of 2004, when subject imports from China undersold the domestic like product by a margin of *** percent.[104] The Commission found that if the order were revoked, underselling was likely to be significant and that as a result subject imports from China would likely have significant price-depressing or -suppressing effects.[105] It based this conclusion on the likely significant increase in subject import volume, the continued importance of price in purchasing decisions and substitutability between the domestic like product and subject imports, the demonstrated willingness of producers in China to undersell the domestic like product during the original investigations, and the higher prices available for magnesium in the United States as compared to other markets.[106]

The Current Review. The record does not contain current pricing comparisons due to the expedited nature of this review. As observed earlier, subject import volume from China would likely increase to significant levels upon revocation. Additionally, subject producers would likely resume the behavior observed in the original investigations, exporting subject merchandise at low prices to gain market share. These subject imports would likely undersell domestically produced magnesium, as they did during the original investigations.[107] Consequently, there would likely be significant underselling by subject imports from China.

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[101] Original Determinations, USITC Pub. 3763 at 19. The Commission explained overselling was due, in part, to the fact that subject imports from China were more likely than the domestic like product to be sold on the spot market. Spot prices adjusted to market conditions more quickly than contract prices. Thus, the prices of subject imports would be expected to increase more quickly than those for the domestic like product during a period of rising prices. *Id.* at 19-20.

[102] Original Determinations, USITC Pub. 3763 at 20.

[103] Original Determinations, USITC Pub. 3763 at 19.

[104] Confidential First-Five Year Reviews at 39, First Five Year-Reviews, USITC Pub. 4214 at 27.

[105] First Five-Year Reviews, USITC Pub. 4214 at 27.

[106] First Five-Year Reviews, USITC Pub. 4214 at 27.

[107] Domestic interested parties highlight weekly pricing data for the last week of 2015, indicating that U.S. spot prices were $2.00 per pound for pure magnesium and $1.90 per pound for alloy magnesium, while the Chinese spot price for alloy magnesium was $0.95 per pound. Response at 16. They argue Chinese prices are likely to fall further in 2016, citing an offer at *** per pound. *Id.* at 16-17. Domestic interested parties assert that imports are likely to enter the United States at $1.25 per pound, the price at which imports of alloy magnesium enter the Canadian market, where imports from China account for 80 percent of imports of alloy magnesium. *Id.* at 17. According to domestic interested parties, US Magnesium would still be affected by price declines, despite the fact that the majority of its (Continued…)

Because price continues to be an important factor in purchasing decisions and the substitutability of subject imports and the domestic like product, the likely significant volume of subject imports, which would likely undersell the domestic like product, would likely force the domestic industry either to lower prices or lose sales. In light of these considerations, we conclude that, absent the disciplining effect of the order, subject imports from China would likely have significant depressing or suppressing effects on prices for the domestic like product.

E. Likely Impact[108]

In the original investigations, the Commission found that cumulated subject imports from China and Russia were having a significant adverse impact on the domestic magnesium industry.[109] Most of the domestic industry's trade and financial indicators were unfavorable and worsened during January 2000 to December 2003, until after the February 27, 2004 petitions in the original investigations were filed.[110] The Commission recognized that the domestic industry's performance improved at the end of the period of investigation, especially in the first nine months of 2004, but attributed this improvement, at least in part, to the pendency of the investigations.[111]

In the first five-year reviews, the domestic industry's performance indicators generally fluctuated or improved over the period of review, before falling sharply in 2009, when demand for magnesium collapsed, then recovering somewhat in the first six months of 2010 as compared with the first six months of 2009.[112] The Commission observed that the industry's financial performance was the exception to this trend, as it was *** in 2008 and 2009.[113] It

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(…Continued)
sales are through contract, because most of its contracts are for a period of one year and its two-year supply contract with the ***. *Id.* at 17-18.

[108] In its expedited review, Commerce determined that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to the continuation or recurrence of dumping at weighted-average margins of up to 141.9 percent. 81 Fed. Reg. 36874 (June 8, 2016).

[109] Original Determinations, USITC Pub. 3763 at 20.

[110] Original Determinations, USITC Pub. 3763 at 21-22.

[111] Original Determinations, USITC Pub. 3763 at 21.

[112] First Five-Year Reviews, USITC Pub. 4214 at 28. The industry's production declined from 2004 to 2005, and then increased irregularly until 2009, when it fell ***. Production was *** higher in the first six months of 2010 than in the first six months of 2009. After declining from 2004 to 2005, the industry's capacity generally rose through the first six months of 2010. Capacity utilization fluctuated over the period, before falling *** in 2009, and then showed some improvement in the first six months of 2010 as compared with the first six months of 2009. Domestic producers' U.S. shipments showed a similar pattern. Inventories fluctuated over the period, before falling *** in 2009, and then showed some improvement in the first six months of 2010 as compared with the first six months of 2009. Productivity fluctuated over the period, before falling *** in 2009, and then showed some improvement in the first six months of 2010 as compared with the first six months of 2009. Confidential First Five-Year Reviews at 41-42, First Five-Year Reviews, USITC Pub. 4214 at 28-29.

[113] Confidential First Five-Year Reviews at 41, First Five-Year Reviews, USITC Pub. 4214 at 29. The industry's financial performance showed mixed and generally weak results from the 2004 to 2007
(Continued…)

found that the likely significant volume of low-priced subject imports, when combined with the likely adverse price effects of those imports, would likely have a significant adverse impact on the domestic industry's production, shipments, sales, revenue, employment, and profitability.[114]

The Current Review. Because of the expedited nature of this review, information on the record concerning the recent performance of the domestic industry producing magnesium is limited. This limited information is insufficient for us to make a finding as to whether the domestic industry is vulnerable to continuation or recurrence of material injury in the event of revocation of the order.

Available information indicates that the condition of the domestic industry has generally improved since the original investigations.[115] Capacity utilization in 2015 was *** percent, which was higher than the *** percent reported in 2009 and the *** percent reported in 2003.[116] U.S. commercial shipments were higher in 2015 (*** MT) than those reported in the original investigations in 2003 (*** MT) and in the first reviews in 2009 (*** MT).[117] In 2015, the domestic industry reported operating income of ***. Its ratio of operating income to sales, *** percent, was lower than that reported in 2009, when it was *** percent, but higher than in 2003, when it was ***.[118]

As previously discussed, revocation of the order on alloy magnesium from China would be likely to lead to a significant increase in the volume of subject imports that would undersell the domestic like product and have significant price effects on the domestic industry. Consequently, given the substitutable nature of subject imports from China and the domestic like product and available information on capacity in China, the likely significant volume of subject imports from China would place pricing pressure on domestic producers, forcing them to cut prices or cede market share to subject imports. The likely significant volume of subject imports and their price effects would negatively affect domestic capacity, production, capacity utilization, shipments, net sales values and quantities, employment levels, operating income, operating income margins, and capital investments.[119]

(…Continued)
period, followed by increasingly *** results in 2008 and 2009, which also carried over into the first six months of 2010. After registering mainly operating *** in 2004 to 2007, the industry's operating margin *** percent in 2008 and *** percent in 2009. A comparison of the first six months of 2009 and 2010 showed further improvement. The unit values of the industry's U.S. shipments and net sales generally rose over that period of review, although so did its costs and selling, general and administrative expenses increased. The industry's *** financial performance allowed it to ***. *Id.* at 42-43, First Five-Year Reviews, USITC Pub. 4214 at 29. The Commission pointed to the industry's financial performance at the end of the period of review as evidence for not finding the industry vulnerable to material injury. First Five-Year Reviews, USITC Pub. 4214 at 29.

[114] First Five-Year Reviews, USITC Pub. 4214 at 29.

[115] CR/PR at Table I-5; CR/PR at Table I-7.

[116] CR/PR at Table I-5. As noted earlier, questionnaire coverage for the domestic industry in 2003, 2009, and 2015 differ.

[117] CR/PR at Table I-7.

[118] CR/PR at Table I-5.

[119] Response at 18-19.

We have also considered the role of factors other than subject imports, including the presence of nonsubject imports, so as not to attribute injury from other factors to the subject imports. We observe that there are several nonsubject countries whose industries supply magnesium to the U.S. market. The volume of nonsubject imports as a whole has been relatively steady since the first reviews. Nonsubject imports of pure magnesium ingot and pure granular magnesium from China are subject to separate antidumping duty orders.[120] Moreover, imports from the largest source of nonsubject imports, Israel, declined between 2010 and 2015.[121] Finally, the information available indicates that the average unit value of nonsubject imports was higher than that for the domestic like product in 2015.[122] Notwithstanding the presence of nonsubject imports in the U.S. market, the domestic industry's performance in 2015 generally improved over its condition in the first reviews. In the event of revocation, the continued presence of nonsubject imports would not preclude subject imports from having a significant effect on the domestic industry. We therefore find that the likely price effects of subject imports in the reasonably foreseeable future are distinguishable from those of nonsubject imports.

Accordingly, we conclude that, if the antidumping duty order on alloy magnesium from China were revoked, subject imports from China would likely have a significant impact on domestic producers of magnesium within a reasonably foreseeable time.

IV. Conclusion

For the above reasons, we determine that revocation of the antidumping duty order on alloy magnesium from China would likely lead to continuation or recurrence of material injury to the industry in the United States producing magnesium within a reasonably foreseeable time.

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[120] *See* 76 Fed. Reg. 72172 (Nov. 22, 2011); 77 Fed. Reg. 63787 (Oct. 17, 2012); CR/PR at Table I-2.

[121] CR/PR at Table I-6 (indicating that imports from Israel accounted for 60.1 percent of nonsubject imports in 2010 and 45.9 percent in 2015).

[122] *See* CR/PR at Table I-5; CR/PR at Table I-6.

INFORMATION OBTAINED IN THIS REVIEW

BACKGROUND

On February 1, 2016, the U.S. International Trade Commission ("Commission") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted a review to determine whether revocation of antidumping duty order on alloy magnesium from China[2] would likely lead to the continuation or recurrence of material injury to a domestic industry.[3] All interested parties were requested to respond to this notice by submitting certain information requested by the Commission.[4] [5] The following tabulation presents information relating to the background and schedule of this proceeding:

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[1] 19 U.S.C. 1675(c).

[2] The imported merchandise from China that is the subject of this review consists of alloy magnesium metal products made from primary and/or secondary magnesium that contain 50 percent or greater, but less than 99.8 percent, magnesium by weight, that conform to an "American Society of Testing and Materials ("ASTM") Specification for Magnesium Alloy." In addition to the antidumping duty order concerning alloy magnesium from China that is the subject of this review, there is currently an antidumping duty order on pure magnesium ingot from China (60 FR 25691, May 12, 1995) that was continued after affirmative first, second, and third five-year reviews (65 FR 55047, September 12, 2000; 71 FR 38860, July 10, 2006; and 76 FR 69284, November 8, 2011), and an antidumping duty order on pure magnesium in granular form from China (66 FR 57936, November 19, 2001) that was continued after affirmative first and second five-year reviews (72 FR 10258, March 7, 2007 and 77 FR 59979, October 1, 2012).

[3] *Magnesium From China; Institution of a Five-Year Review*, 81 FR 5136, February 1, 2016. In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of a five-year review of the subject antidumping duty order concurrently with the Commission's notice of institution. *Initiation of Five-Year ("Sunset") Review*, 81 FR 5418, February 2, 2016. Pertinent *Federal Register* notices are referenced in app. A, and may be found at the Commission's website (www.usitc.gov).

[4] As part of their response to the notice of institution, interested parties were requested to provide company-specific information. That information is presented in app. B. Summary data compiled in prior proceedings is presented in app. C. App. C begins with reproductions of the summary tables from the original investigations, which retain their original staff report table and page numbers and are identified as follows: Table C-4 (pure magnesium), table C-5 (alloy magnesium), and table C-6 (all magnesium). These tables are followed by reproductions of the summary tables from the first five-year reviews and are identified as follows: Table C-1 (all magnesium), table C-2 (pure magnesium), table C-3 (alloy magnesium), and table C-4 (data for U.S. grinders of magnesium).

[5] Interested parties were also requested to provide a list of three to five leading purchasers in the U.S. market for the subject merchandise. The following five firms individual were named as the largest purchasers of magnesium: ***. Presented in app. D are the responses received from purchaser surveys transmitted to the purchasers identified in the adequacy phase of this review.

Effective or statutory date	Action
February 1, 2016	Notice of initiation and institution by Commerce and Commission
May 6, 2016	Commission vote on adequacy
May 31, 2016	Commerce results of its expedited review
July 1, 2016	Commission statutory deadline to complete expedited review
January 27, 2017	Commission statutory deadline to complete full review

RESPONSES TO THE COMMISSION'S NOTICE OF INSTITUTION

Individual responses

The Commission received one submission in response to its notice of institution in the subject review. It was filed on behalf of US Magnesium LLC ("US Magnesium"), a domestic producer of magnesium, and The United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union, Local 8319 ("Local 8319") (collectively referred to herein as "domestic interested parties"). Local 8319 represents workers producing magnesium metal in US Magnesium's plant in Rowley, Utah.[6]

A complete response to the Commission's notice of institution requires that the responding interested party submit to the Commission all the information listed in the notice. Responding firms are given an opportunity to remedy and explain any deficiencies in their responses. A summary of the number of responses and estimates of coverage for each is shown in table I-1. The Commission did not receive any responses from Chinese producers or importers of the subject merchandise from China.

Table I-1
Magnesium: Summary of responses to the Commission's notice of institution

Type of interested party	Completed responses	
	Number	Coverage
Domestic producer	1	***%[1]
Respondents	0	0%

[1] The coverage figure represents US Magnesium's estimate of primary and secondary magnesium ingot produced in the United States as well as the granular magnesium produced from non-US Magnesium produced magnesium ingot. Granular magnesium produced from magnesium ingot supplied by US Magnesium was not included so as to avoid double counting. Although US Magnesium does not consider die-casters, which recycle their own scrap, to be domestic producers of magnesium, it has included estimates of their recycled product in estimated total production.

Source: Domestic Interested Parties' Response to the Notice of Institution, Attachment 12.

[6] The domestic interested parties are represented by the law firm of King & Spalding LLP.

Party comments on adequacy

The Commission received one submission from US Magnesium commenting on the adequacy of responses to the notice of institution and whether the Commission should conduct an expedited or full review. US Magnesium noted that it is the most significant domestic interested party and that it provided sufficient information to enable the Commission to undertake a substantive evaluation and reach a determination in this review. US Magnesium also noted that no respondent company filed a response to the Commission's notice of institution. Thus, based on the adequacy of US Magnesium's and the domestic industry's response to the notice of institution, and the absence of any response by any of the respondents, US Magnesium asserted that the Commission should conduct an expedited review.[7]

RECENT DEVELOPMENTS IN THE INDUSTRY

Since the Commission's last five-year review, the following global developments have occurred in the magnesium industry.[8]

1) R&D has taken place to adapt magnesium and its alloys to new applications, such as bio-absorbable materials and medical orthopedic implants. Magnesium continues to be used increasingly in the automobile industry as a way to decrease the weight of vehicles to improve fuel economy and carbon emissions savings. For example, in 2015, Spartan Light Metal Products Inc. (St. Louis, Missouri) expanded its use of magnesium in the production of die-cast parts for automobiles. Shiloh Industries Inc. (Valley City, Ohio), a metals processor that manufactures automotive body structures and interior components that use magnesium, increased its volume of new products from 61 to 146 in 2015.[9]
2) US Magnesium is expanding capacity by 20 percent and is expected to be completed with its expansion in 2017, with incremental capacity increased in 2016. Nevada Clean Magnesium Inc. (Canada) received design plans for a project site near Ely, Nevada that is assessed to produce 30,000 tons of magnesium per year. Three Canadian companies, Alliance Magnesium Inc., Mag One Products Inc., and West High Yield Resources Inc., proposed projects to produce magnesium in Canada. Latrobe Magnesium Ltd. (Australia) is conducting a feasibility study for a 5,000 ton per year plant to produce magnesium. SilMag (Norway) received funding from Innovation Norway's Scheme for Environmental Technologies to develop a magnesium smelter with a capacity of 15,000 tons per year.

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[7] *Domestic Interested Parties' Comments on Adequacy*, p. 2.

[8] These developments are based on U.S. Geological Survey ("USGS") annual publications for magnesium metal from 2011-16. http://minerals.usgs.gov/minerals/pubs/commodity/magnesium/.

[9] *American Metal Market*, "Shiloh in new deals for Tenn. plant output," September 2015.

3) Chinese production decreased during the first half of 2015 due to the shutdown of older, smaller producers which had higher costs. More Chinese magnesium capacity is expected to be shut down as the Government enforces environmental regulations. However, new capacity for Chinese magnesium production is being built in locations with lower energy costs, and is expected to result in increased Chinese magnesium production.
4) Wenxi Baiyu Magnesium Corp. (China) completed a 30,000 ton-per-year plant producing magnesium in Wenxi, Shanxi Province in 2014. Century Sunshine Group Holdings Ltd. (Hong Kong) expanded magnesium production from 16,000 tons per year to 25,000 tons per year, with further expansion to 75,000 tons per year planned by the end of 2016. SRM Science and Technology Co. (China) built a magnesium alloy plant with an annual capacity of 30,000 tons per year. Qinghai Salt Lake Magnesium Co. Ltd. (China) continued construction of a 100,000 ton per year magnesium smelter, with expansion to 400,000 tons per year planned, but a schedule has not been announced. China Magnesium Industry Ltd. was expanding its annual magnesium capacity from 3,000 tons to 15,000 tons. Globright Optical Technology Co. was planning to construct a magnesium plant in China, but the size of the project and a schedule were not released.
5) On January 1, 2013, the Government of China removed a 10 percent export tax on magnesium ingot and alloys in accordance with a 2011 World Trade Organization complaint filed by the European Union, Mexico, and the United States.
6) The U.S. Environmental Protect Agency ("EPA") has issued rulings that require magnesium producers to produce annual greenhouse gas reports. US Magnesium lost its appeal of the EPA's decision to include its production plant in Rowley as a Superfund site, which gives the EPA authority to investigate the site further and determine if a cleanup is necessary.

THE PRODUCT

Commerce's scope

Commerce defined the scope of the imported product subject to the antidumping duty order on alloy magnesium from China as follows:[10]

> *The merchandise covered by the order is magnesium metal, which includes primary and secondary alloy magnesium metal, regardless of chemistry, raw material source, form, shape, or size. Magnesium is a metal or alloy containing by weight primarily the element magnesium. Primary magnesium is produced by decomposing raw materials into*

[10] *Magnesium Metal From the People's Republic of China: Continuation of Antidumping Duty Order*, 76 FR 13356, March 11, 2011.

magnesium metal. Secondary magnesium is produced by recycling magnesium-based scrap into magnesium metal. The magnesium covered by the order includes blends of primary and secondary magnesium.

The subject merchandise includes the following alloy magnesium metal products made from primary and/or secondary magnesium including, without limitation, magnesium cast into ingots, slabs, rounds, billets, and other shapes, magnesium ground, chipped, crushed, or machined into raspings, granules, turnings, chips, powder, briquettes, and other shapes: Products that contain 50 percent or greater, but less than 99.8 percent, magnesium, by weight, and that have been entered into the United States as conforming to an "ASTM Specification for Magnesium Alloy"[11] and thus are outside the scope of the existing antidumping order on magnesium from the PRC (generally referred to as "alloy" magnesium).

The scope of the order excludes the following merchandise: (1) All forms of pure magnesium, including chemical combinations of magnesium and other material(s) in which the pure magnesium content is 50 percent or greater, but less than 99.8 percent, by weight, that do not conform to an "ASTM Specification for Magnesium Alloy;"[12] (2) magnesium that is in liquid or molten form; and (3) mixtures containing 90 percent or less magnesium in granular or powder form, by weight, and one or more of certain non-magnesium granular materials to make magnesium-based reagent mixtures, including lime, calcium metal, calcium silicon, calcium carbide, calcium carbonate, carbon, slag coagulants, fluorspar, nephaline syenite, feldspar, alumina (Al_2O_3), calcium aluminate, soda ash, hydrocarbons, graphite, coke, silicon, rare

[11] The meaning of this term is the same as that used by the ASTM in its Annual Book of ASTM Standards: Volume 01.02 Aluminum and Magnesium Alloys.

[12] This material is already covered by existing antidumping orders. See *Notice of Antidumping Duty Orders: Pure Magnesium From the People's Republic of China, the Russian Federation and Ukraine; Notice of Amended Final Determination of Sales at Less Than Fair Value: Antidumping Duty Investigation of Pure Magnesium From the Russian Federation*, 60 FR 25691, May 12, 1995; and *Antidumping Duty Order: Pure Magnesium in Granular Form From the People's Republic of China*, 66 FR 57936, November 19, 2001.

earth metals/mischmetal, cryolite, silica/fly ash, magnesium oxide, periclase, ferroalloys, dolomite lime, and colemanite.[13]

Description and uses[14]

Magnesium, the eighth most abundant element in the earth's crust and the third most plentiful element dissolved in seawater, is a silver-white metallic element. It is the lightest of all structural metals with a density approximately 63 percent of that of aluminum, the principal metal with which it competes in the U.S. market. Magnesium's light weight and high vibrational-dampening properties have encouraged research to develop magnesium-based alloys with improved physical and mechanical properties for use as a structural metal in applications where minimizing weight is an important design consideration. Magnesium is available in two principal forms, pure[15] and alloy.

Pure magnesium in unwrought form[16] contains at least 99.8 percent magnesium by weight.[17] Pure magnesium is widely used in commercial and industrial applications because it is easily machined and lightweight, has a high strength-to-weight ratio, and has special chemical and electrical properties. Pure magnesium also has special metallurgical and chemical properties that allow it to alloy well with metals, such as aluminum. Pure magnesium is typically used in the production of aluminum alloys for use in beverage cans, in die cast automotive parts, in iron and steel desulfurization, as a reducing agent for various nonferrous metals (titanium, zirconium, hafnium, uranium, and beryllium), and in magnesium anodes for the

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[13] This exclusion for magnesium-based reagent mixtures is based on the exclusion for reagent mixtures in the 2000-01 investigations of magnesium from China, Israel, and Russia. See *Notice of Final Determination of Sales at Less Than Fair Value: Pure Magnesium in Granular Form From the People's Republic of China, 66 FR 49345,September 27, 2001; Notice of Final Determination of Sales at Less Than Fair Value: Pure Magnesium From Israel, 66 FR 49349, September 27, 2001; Notice of Final Determination of Sales at Not Less Than Fair Value: Pure Magnesium From the Russian Federation, 66 FR 49347, September 27, 2001.* These mixtures are not magnesium alloys because they are not chemically combined in liquid form and cast into the same ingot. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011, p.5.

[14] Unless otherwise noted, this information is based on *Magnesium From China and Russia, Inv. Nos. 731-TA-1071-1072 (Review)*, USITC Publication 4214, February 2011, pp. I-21 through I-22.

[15] Unless otherwise noted, the term "pure magnesium" consists of pure magnesium ingot and pure granular magnesium.

[16] "Unwrought" magnesium is pure magnesium that has not been worked in any way. "Wrought" magnesium is magnesium that has been worked into a desired shape, for example the working of the magnesium to produce extrusions, rolled product, forgings, etc. Wrought magnesium is not within the scope of this review.

[17] Ultra-high purity ("UHP") magnesium is unwrought magnesium containing at least 99.95 percent magnesium by weight and is used as a reagent in the pharmaceutical and chemical industries. Commodity-grade pure magnesium is unwrought magnesium containing at least 99.8 percent magnesium but less than 99.95 percent magnesium by weight and is most commonly used in the aluminum alloying industry.

protection of iron and steel in underground pipe and water tanks and various marine applications. Pure magnesium is used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products for use in aerospace, medical, and industrial applications.

Alloy magnesium (or magnesium alloy) consists of magnesium and other metals, typically aluminum and zinc, containing less than 99.8 percent magnesium by weight but more than 50 percent magnesium by weight, with magnesium the largest metallic element in the alloy by weight. Alloy magnesium is typically produced to meet various industry-recognized ASTM specifications for alloy magnesium such as AM50A, AM60B, and AZ91D.[18] It is principally used in structural applications, primarily in castings (die, permanent mold, and sand) and extrusions for the automotive industry. Alloy magnesium has certain properties that improve its strength, ductility, workability, corrosion resistance, density, or castability compared to pure magnesium. Pure magnesium is not used in structural applications because its tensile and yield strengths are low.

Primary magnesium is magnesium produced by decomposing raw materials into magnesium metal.

Secondary magnesium is pure or alloy magnesium that is produced by recycling magnesium-based scrap. Magnesium scrap is typically separated into two categories: old scrap and new scrap.

Old scrap becomes available to producers of secondary magnesium when durable and nondurable consumer products are discarded from end-use categories, such as packaging, building and construction, consumer durables (such as automobiles), electrical, and machinery and equipment.

New scrap is metal that never reaches the consumer. The scrap is generated from wrought and cast products as they are processed by fabricators into consumer or industrial products. Home scrap is new scrap that is recycled within the company that generated the scrap and consequently seldom enters the commercial secondary magnesium market. Prompt industrial scrap is new scrap from a fabricator that does not choose to or is not equipped to recycle the scrap. This scrap then enters the secondary magnesium market. New scrap may include solids, clippings, stampings, and cuttings; borings and turnings that are generated during machining operations; and melt residues, such as skimmings, drosses, spillings, and sweepings.

[18] The ASTM specifications designate the chemical composition of the alloy. The first two letters designate the two alloying elements most prevalent in the alloy (e.g., “A” for aluminum, “M” for manganese, or “Z” for zinc), while the numbers represent the percent of other elements contained in the alloy, by weight. For example, AZ91D contains 9 percent aluminum, 1 percent zinc, and 90 percent magnesium.

Granular magnesium consists of all physical forms of unwrought magnesium other than ingots, such as raspings, turnings, granules, and powders.[19] Granular magnesium is typically used in the production of magnesium-based desulfurizing reagent mixtures that are used in the steelmaking process to reduce the sulfur content of steel.[20] Lesser amounts of granular magnesium are used in defense applications, such as military ordnance and flares.

Manufacturing process[21]

Primary Magnesium

Worldwide, most magnesium is derived from magnesium-bearing ores (dolomite, magnesite, brucite, and olivine) or seawater and well and lake brines.[22] Large deposits of dolomite are widely distributed throughout the world, and dolomite is the principal magnesium-bearing ore found in the United States. Magnesium-bearing ores are mined by the open-pit method. In the United States, the production of *** primary magnesium is currently from the extraction of magnesium from brines of the surface waters of the Great Salt Lake in Utah by US Magnesium, while former U.S. producer Northwest Alloys used dolomite in its process.[23]

Magnesium metal is normally produced by either an *electrolytic process* or a *silicothermic process*, with the electrolytic process dominating in terms of the volume of United States and world production. The silicothermic process (also known as the Pidgeon process) is used by a majority of the largest producers in China.[24]

US Magnesium uses the electrolytic method to produce magnesium. A schematic diagram of US Magnesium's production process is presented in figure I-1. In the electrolytic process, seawater or brine is evaporated and treated to produce a concentrated solution of

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[19] Granular magnesium may be either pure or alloy magnesium. However, based on information obtained in previous proceedings on granular magnesium from China, granular magnesium is typically pure magnesium or "off-specification pure" magnesium (alloy magnesium not meeting ASTM specifications for alloy magnesium).

[20] U.S. grinders typically sell three different steel desulfurization blends: (1) containing 90 percent pure magnesium powder and 10 percent lime; (2) containing 25 percent magnesium and 75 percent lime; and (3) containing 8-10 percent magnesium with the remainder lime and calcium carbonate. Fluorspar and a fluidizer are also incorporated in these products.

[21] Unless otherwise noted, this information is based on *Magnesium From China and Russia, Inv. Nos. 731-TA-1071-1072 (Review)*, USITC Publication 4214, February 2011, pp. I-22 through I-25.

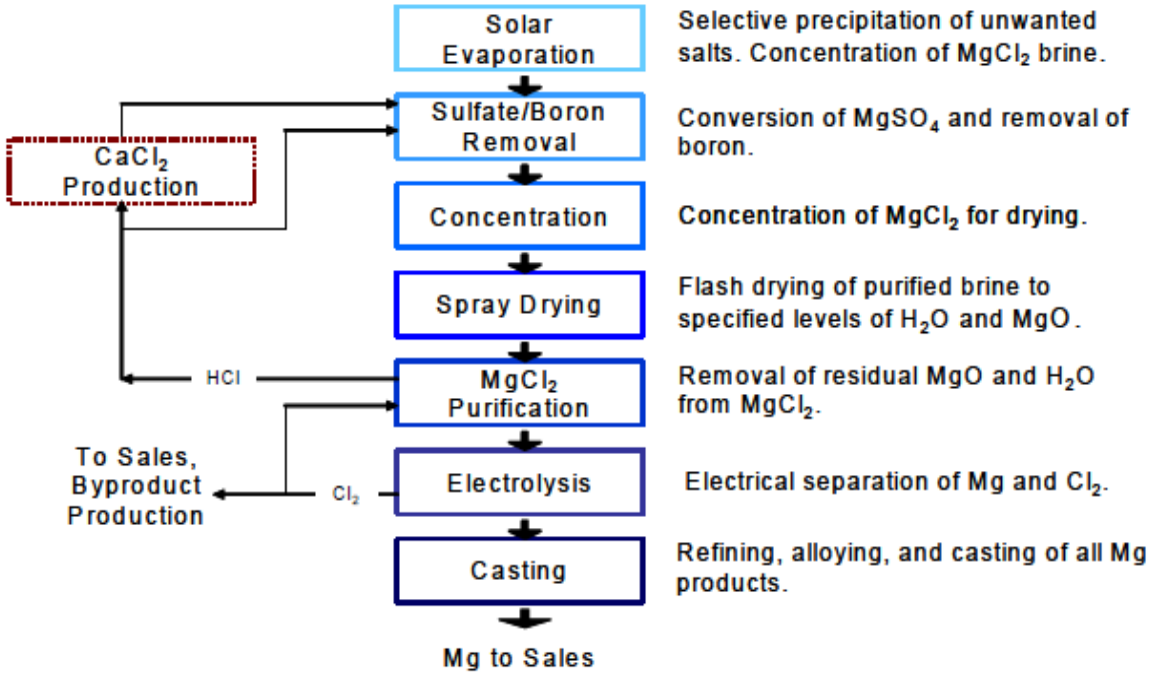
[22] The magnesium content of magnesium-bearing ores typically ranges from nearly 22 percent for dolomite to 69 percent for brucite. The magnesium content of seawater is 0.13 percent, which is much lower than that of the lowest grade of magnesium ore deposits; however, seawater has the advantage of being abundant, accessible, and extremely uniform in its magnesium content, allowing for easier standardization of the refining process.

[23] Northwest Alloys ceased production of magnesium in October 2001. MagPro began primary production of pure magnesium ingot in 2009.

[24] The raw material source for silicothermic production in China is dolomite ($MgCO_3 \bullet CaCO_3$).

magnesium chloride, which is further concentrated and dried to yield magnesium chloride powder. The powder is then melted, further purified, and fed into electrolytic cells operating at 700 degrees Celsius. Direct electrical current is sent through the cells to break down the magnesium chloride into chlorine gas and molten magnesium metal.[25] The metal rises to the surface where it is guided into storage wells and cast into ingots.

Figure I-1
Magnesium: Schematic diagram of US Magnesium's production process flow chart



Source: US Magnesium.

Once the electrolytic or silicothermic reduction of magnesium is completed, the manufacturing processes used for the production of both pure and alloy magnesium ingot are very similar. In the U.S. facility that produces both pure magnesium and alloy magnesium (US Magnesium's facility), the same production workers work on both lines.

Both primary pure magnesium and primary alloy magnesium begin with the production of liquid pure magnesium. The liquid pure magnesium is either cast directly into pure magnesium ingots or is alloyed by the addition of alloying elements (typically aluminum and zinc) and scrap magnesium and then cast to produce alloy magnesium ingots.

Primary magnesium is typically cast into ingots or slabs. Aluminum producers typically purchase larger pure cast shapes such as rounds, billets, peg-lock ingots, or T-shapes. Producers of magnesium powder for steel desulfurization applications typically purchase smaller ingots or

[25] The electrolytic cells must be kept in constant operation. If they are shut down, a "refractory lining" requires rebuilding, which is costly and time consuming.

magnesium "chips" that are then ground into powder[26] and used internally to produce magnesium-based reagent mixtures or, to a lesser extent, pyrotechnic products. Die casters can purchase ingots and granular primary alloy magnesium for use in magnesium alloy castings, and/or recycle scrap magnesium generated in their die casting operations into secondary alloy magnesium.

Magnesium, in a molten or ingot form, is also used in the production of titanium sponge, which is a precursor metal product in the production of titanium metal products. In the Kroll reduction process, titanium sponge results from the reduction of titanium tetrachloride ($TiCl_4$) with magnesium. The titanium tetrachloride is reacted in a molten pool of magnesium metal in which the temperature and composition of the mixture are carefully controlled. Along with pure titanium metal sponge, molten magnesium chloride (the result of magnesium reacting with the titanium tetrachloride liquid) is a product of the reaction. The magnesium chloride can be further refined back to pure magnesium in an electrolytic cell. The electrolytic cell separates the magnesium metal from the chlorine which is also collected for sale. All titanium tetrachloride producers use chlorine gas in the production of titanium tetrachloride.

Secondary Magnesium

Secondary magnesium is produced from recycling magnesium-based "scrap."[27] Magnesium scrap arrives at the recycler either in a loose form or contained in boxes. After the magnesium is separated from other alloys by the recycler, the sorted magnesium is heated in a steel crucible to nearly 675 degrees Celsius. Alloying elements such as aluminum, manganese, or zinc can then be added to the liquid magnesium and the alloyed magnesium can then be transferred to ingot molds by hand ladling, pumping, or tilt pouring. Magnesium scrap can also be generated by the direct grinding of scrap into powder for iron and steel desulfurization applications. Finally, recycled alloy magnesium contained in used aluminum beverage cans typically remains with the recycled can since virtually all aluminum beverage can scrap is melted and converted into body stock and then converted into new aluminum beverage cans.[28]

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[26] Magnesium chips are ground into powder using a particle reduction process. Magnesium powder can also be produced by atomization of molten pure magnesium; however, this technique is less frequently used than grinding.

[27] Magnesium-based scrap is typically divided into one of two categories (old and new). Old magnesium-based scrap consists of postconsumer scrap such as automotive parts, helicopter parts, lawnmower decks, and used tools. Old magnesium-based scrap is sold to scrap processors. New magnesium-based scrap typically falls into one of four types. Type I is high-grade scrap recovered from die casting operations and uncontaminated with oils. Types II, III, and IV are lower grade scraps, typically either oil-contaminated scrap; dross from magnesium-processing operations; or chips and fines. Type I scrap is either reprocessed at the die casting facility or sold to a scrap processor. The other types of scrap are either used directly in steel desulfurization applications (chips and fines) or sold to scrap processors.

[28] Aluminum beverage can manufacturers are sensitive to the presence of beryllium in melted scrap. Therefore, these firms generally do not purchase recycled alloy magnesium produced from scrap.

"Off-Specification Pure" Magnesium

"Off-specification pure" magnesium is pure primary magnesium containing magnesium scrap, secondary magnesium, oxidized magnesium, or impurities (whether or not intentionally added) that cause the primary magnesium content to fall below 99.8 percent by weight. "Off-specification pure" magnesium products contain 50 percent or greater, but less than 99.8 percent primary magnesium, by weight, do not conform to ASTM specifications for alloy magnesium, and generally do not contain individually or in combination, 1.5 percent or more, by weight, of the following alloying elements: aluminum, manganese, zinc, silicon, thorium, zirconium, and rare earths. The Commission reported in its full first five-year review that no U.S. producers reported producing "off-specification pure" magnesium.[29]

U.S. tariff treatment

Subject import data for China presented throughout this report are based on subheading 8104.19.00 (alloy magnesium ingots) of the Harmonized Tariff Schedule of the United States ("HTSUS").[30] Imports from China of pure magnesium in ingot (HTS subheading 8104.11.00) and granular form (HTS subheading 8104.30.00) are currently subject to separate antidumping duty orders[31] and are not part of this current five-year review of the order on alloy magnesium from China.[32]

Definition of the domestic like product and the domestic industry

The domestic like product is defined as the domestically produced product or products, which are like, or in the absence of like, most similar in characteristics and uses with, the subject merchandise. In its original determinations, the Commission majority found one domestic like product to include pure and alloy magnesium, primary and secondary

[29] Typically, producers do not set out to produce "off-specification pure" magnesium. Rather, its production results from starting or re-starting the primary magnesium production process, or is the result of some malfunction in the production process.

[30] Subject imports under HTS 8104.19.00 from China are subject to a 6.5 percent ad valorem duty rate under column 1 general (normal trade relations).

[31] *Notice of Antidumping Duty Orders: Pure Magnesium From the People's Republic of China, the Russian Federation and Ukraine; Notice of Amended Final Determination of Sales at Less Than Fair Value: Antidumping Duty Investigation of Pure Magnesium From the Russian Federation*, 60 FR 25691, May 12, 1995; and *Antidumping Duty Order: Pure Magnesium in Granular Form From the People's Republic of China*, 66 FR 57936, November 19, 2001.

[32] The antidumping duty orders on pure magnesium include "off-specification" pure magnesium (alloy magnesium that contains 50 percent or greater but less than 99.8 percent magnesium by weight, that does not conform to an ASTM specification for alloy magnesium).

magnesium, and ingot (cast) and granular magnesium.[33] In its first five-year review determinations, the Commission again determined that pure and alloy magnesium, primary and secondary magnesium, and cast and granular magnesium to be part of the same domestic like product.[34]

The domestic industry is defined as the U.S. producers as a whole of the domestic like product, or those producers whose collective output of the domestic like product constitutes a major proportion of the total domestic production of the product. The Commission majority found in its original determinations one domestic industry consisting of all producers of the domestic like product, including grinders that produce granular magnesium and die casters that recycle magnesium scrap.[35] In its full first five-year review determination, the Commission found no new facts to warrant defining the domestic industry differently than it did in the original investigations and determined there was one domestic industry composed of the domestic producers of pure and alloy magnesium, including primary and secondary magnesium, and magnesium in ingot and granular form. It also found that die casters engaged in sufficient production-related activity to quality as domestic producers.[36]

According to their response to the notice of institution, the domestic interested parties generally agree with the Commission's definitions of the domestic like product and domestic industry, with the exception of the Commission's determination that magnesium die casters that recycle their own scrap generated in their die-casting operations are domestic producers of magnesium. Rather, domestic interested parties assert that "to the extent that these die-casters are simply recycling 'runaround scrap' and are not producing a saleable product, the Commission should not consider them to be the domestic producers of magnesium."[37]

THE ORIGINAL INVESTIGATION AND SUBSEQUENT REVIEW

The original investigation

The original investigations were instituted in response to a petition filed on February 27, 2004, by primary magnesium producer US Magnesium[38] Salt Lake City, Utah; the United Steelworkers of America, Local 8319 ("Local 8319"), Salt Lake City, Utah; and the Glass,

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[33] Two Commissioners defined the domestic like product differently in the original investigations, instead finding cast and granular magnesium to be separate domestic like products. *Magnesium from China and Russia*, *Investigation Nos. 731-TA-1071-1072 (Final)*, USITC Publication 3763, April 2005, p. 6.

[34] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214*,* February 2011, p. 10.

[35] Two Commissioners defined the domestic industry differently in the original investigations, instead finding caster and grinders to be separate industries. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final), USITC Publication 3763*, April 2005, p. 12.

[36] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011, p. 12.

[37] *Domestic Interested Parties' Response to the Notice of Institution,* p. 22.

[38] US Magnesium is the successor company to Magnesium Corp. of America ("Magcorp").

Molders, Pottery, Plastics & Allied Workers International, Local 374 ("Local 374"), Long Beach, California.[39] The original petitions included not only alloy magnesium from China, but also pure and alloy magnesium from Russia. The Commission made its final affirmative injury determinations on April 4, 2005,[40] and Commerce issued the antidumping duty orders on U.S. imports of alloy magnesium from China and pure and alloy magnesium from Russia on April 15, 2005.[41]

The first five-year review

In February 2011, the Commission completed its full first five-year review on the subject order and determined that revocation of the antidumping duty order on alloy magnesium from China would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. The Commission also determined that revocation of the antidumping duty order on pure and alloy magnesium from Russia would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[42] Effective April 15, 2010, Commerce revoked the antidumping duty order on imports of pure and alloy magnesium from Russia.[43] Effective November 22, 2011, Commerce issued a continuation of the antidumping duty order on imports of alloy magnesium from China.[44]

PRIOR RELATED INVESTIGATIONS

Title VII investigations and reviews

The Commission has conducted a series of Title VII investigations and five-year reviews of orders on magnesium from Canada, China, Israel, Norway, Russia, and Ukraine. Table I-2 summarizes these investigations and five-year reviews. The only orders on magnesium currently in place concern imports from China. In addition to the order on alloy magnesium

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[39] Local 8319 represented workers at US Magnesium's production facility in Rowley, Utah. Local 374 represented workers at secondary magnesium producer Halaco Engineering Co. ("Halaco") in Oxnard, California. Halaco ceased production of magnesium in 2004. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final)*, USITC Publication 3763, April 2005, p. I-4 fn. 7.

[40] *Magnesium from China and Russia: Determinations*, 70 FR 19969, April 15, 2005.

[41] *Notice of Antidumping Duty Order: Magnesium Metal From the People's Republic of China*, 70 FR 19928, April 15, 2005 and *Notice of Antidumping Duty Order: Magnesium Metal From the Russian Federation*, 70 FR 19930, April 15, 2005.

[42] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011.

[43] *Magnesium Metal From the Russian Federation: Revocation of Antidumping Duty Order Pursuant to Five-Year Sunset Review*, 76 FR 13128, March 10, 2011.

[44] *Magnesium Metal From the People's Republic of China: Continuation of Antidumping Duty Order*, March 11, 2011, 76 FR 13356.

imports from China subject to this review, there are existing antidumping duty orders on imports from China of pure magnesium in ingot and granular form that are not part of this five-year review.[45] The Commission's fourth five-year review of the antidumping duty order on imports of pure magnesium in ingot form from China is scheduled to be instituted on October 3, 2016. The Commission's third five-year review of the antidumping duty order on imports of pure magnesium in granular form from China is scheduled to be instituted on September 1, 2017.

Table I-2
Magnesium: Actions taken by the Commission and Commerce

Action	Date	*Federal Register* citation
Canada:[1]		
Commission's affirmative determinations in 701-TA-309 and 731-TA-528 (Final)	08/26/1992	57 FR 38696
Countervailing duty ("CVD") orders issued (C-122-814) *(pure and alloy ingot)*	08/31/1992	57 FR 39390
Antidumping duty ("AD") order issued (A-122-814) *(pure ingot)*	08/31/1992	57 FR 39392
Institution of first five-year reviews of AD and CVD orders (full)	08/02/1999	64 FR 41961
Commission's affirmative determinations in first five-year reviews	08/02/2000	65 FR 47517
Continuation of AD and CVD orders	08/16/2000	65 FR 49964
Revocation of AD order	12/07/2004	69 FR 70649
Institution of second five-year reviews of CVD orders (full)	07/01/2005	70 FR 38199
Commission's negative CVD determinations in second five-year reviews	06/26/2006	71 FR 36359
Revocation of CVD orders	07/06/2006	71 FR 38382
China (Inv. No. 731-TA-696):		
Commission's affirmative determination in 731-TA-696 (Final)[2]	05/17/1995	60 FR 26456
AD order issued (A-570-832) (*pure ingot*)	05/12/1995	60 FR 25691
Institution of first five-year review (expedited)	04/03/2000	65 FR 17531
Commission's affirmative determination in first five-year review	09/12/2000	65 FR 55047
Continuation of AD order	10/27/2000	65 FR 64422
Institution of second five-year review (full)	07/01/2005	70 FR 38101
Commission's affirmative determination in second five-year review	06/26/2006	71 FR 36359
Continuation of AD order	07/10/2006	71 FR 38860
Institution of third five-year review (expedited)	06/01/2011	76 FR 31635
Commission's affirmative determination in third five-year review	11/08/2011	76 FR 69284
Continuation of AD order	11/22/2011	76 FR 72172

Table continued on following page.

[45] Antidumping duty order (A-570-832) (pure magnesium ingot) was issued on May 12, 1995 (60 FR 25691, May 12, 1995). Antidumping duty order (A-570-864) (granular magnesium) was issued on November 19, 2001 (66 FR 57936, November 19, 2001).

Table I-2--*Continued*
Magnesium: Actions taken by the Commission and Commerce

Action	Date	*Federal Register* citation
China (Inv. No. 731-TA-895)*:*		
Commission's affirmative determination in 731-TA-895 (Final)	11/20/2001	66 FR 58162
AD order issued (A-570-864) (*pure granular*)	11/19/2001	66 FR 57936
Institution of first five-year review (expedited)	10/02/2006	71 FR 58001
Commission's affirmative determination in first five-year review	03/07/2007	72 FR 10258
Continuation of AD order	03/26/2007	72 FR 14076
Institution of second five-year review (expedited)	02/01/2012	77 FR 5049
Commission's affirmative determination in second five-year review	10/01/2012	77 FR 59979
Continuation of AD order	10/17/2012	77 FR 63787
China (Inv. No. 731-TA-1071):[3]		
Commission's affirmative determination in 731-TA-1071 (Final)	04/15/2005	70 FR 19969
AD order issued (A-570-896) *(alloy)*	04/15/2005	70 FR 19928
Institution of first five-year review (full)	03/01/2010	75 FR 9252
Commission's affirmative determination in first five-year review	03/03/2011	76 FR 11813
Continuation of AD order	03/11/2011	76 FR 13356
Institution of second five-year review	02/01/2016	81 FR 5136
Israel:		
Commission's institution of 701-TA-403 and 731-TA-896 (Preliminary)	10/25/2000	65 FR 63888
Commission's negative determinations in 701-TA-403 and 731-TA-896 (Final)	11/20/2001	66 FR 58162
Norway:		
Commission's institution of 701-TA-310 and 731-TA-529 (Preliminary)	09/12/1991	56 FR 46443
Commerce's dismissal of CVD petition and termination of CVD proceeding	10/01/1991	56 FR 49748
Commission's termination of CVD investigation (701-TA-310 (Preliminary))	10/23/1991	56 FR 54887
Commerce's final negative AD determination (A-403-803) *(pure)* and rescission of investigation and partial dismissal of petition *(alloy)*	07/13/1992	57 FR 30942
Commission terminates 731-TA-529 (Final)	08/04/1992	57 FR 34303
Russia (731-TA-697):[4]		
Commission's affirmative determination in 731-TA-697 (Final)	05/17/1995	60 FR 26456
AD issued (A-821-805) *(pure ingot)*	05/12/1995	60 FR 25691
Institution of five-year review (expedited)	04/03/2000	65 FR 17531
Revocation of AD order	07/07/2000	65 FR 41944
Termination of five-year review	07/17/2000	65 FR 44076
Russia (731-TA-897):		
Institution of 731-TA-897 (Preliminary)	10/25/2000	65 FR 63888
Commerce's negative final AD determination (A-821-813) (*pure ingot and granules*)	09/27/2001	66 FR 49347
Commission terminates 731-TA-897 (Final)	10/04/2001	66 FR 50680
Russia (731-TA-1072):		
Commission's affirmative determination in 731-TA-1072 (Final)	04/15/2005	70 FR 19969
AD order issued (A-821-819) (*pure and alloy*)	04/15/2005	70 FR 19930
Institution of first five-year review (full)	03/01/2010	75 FR 9252
Commission's negative determination in first five-year review	03/03/2011	76 FR 11813
Revocation of the AD order	03/10/2011	76 FR 13128

Table continued on following page.

Table I-2--*Continued*
Magnesium: Actions taken by the Commission and Commerce

Action	Date	*Federal Register* citation
Ukraine:		
Commission's affirmative determination in 731-TA-698 (Final)[5]	05/17/1995	60 FR 26456
AD order issued (A-823-806) (*pure ingot*)	05/12/1995	60 FR 25691
Commission's negative determination on remand	June 1998	([6])
Revocation of the AD order	08/24/1999	64 FR 46182

[1] Excluded from the AD and CVD orders was Timminco Canada. On October 7, 2004, an Extraordinary Challenge Committee issued a determination which affirmed the final remand opinion of the Binational panel concerning alloy magnesium from Canada (69 FR 67703, November 19, 2004). Subsequently, Commerce revoked the AD order on pure magnesium ingot from Canada retroactively effective August 1, 2000, after the NAFTA Binational Panel's final decision. Commerce revoked the CVD orders on pure and alloy magnesium ingot from Canada retroactively effective August 16, 2005 after the Commission's negative second five-year review determinations.
[2] The Commission made a negative determination with respect to alloy magnesium.
[3] In its original determination and its expedited first five-year review determination, Commerce found the weighted-average AD margin for Tianjin Magnesium International Co., Ltd. and Beijing Guangling Jinghua Science & Technology Co., Ltd. to be 49.66 percent *ad valorem* and 141.49 percent *ad valorem* for all other manufacturers and exporters in China (70 FR 19928, April 15, 2005; and 75 FR 38983, July 7, 2010).
[4] The Commission made a negative determination with respect to alloy magnesium. On September 5, 2000, Commerce issued a correction to the revocation order making the effective date of revocation May 12, 2000, the fifth anniversary of the date of publication of the original order (65 FR 53700, September 5, 2000).
[5] The Commission made a negative determination with respect to alloy magnesium.
[6] No corresponding *Federal Register* citation.

Source: Various *Federal Register* notices.

Other investigations

On December 17, 1999, the Commission received a request from the United States Trade Representative ("USTR") for an investigation under section 332(g) of the Tariff Act of 1930 for the purpose of providing advice concerning possible modifications to the U.S. Generalized System of Preferences ("GSP") for several products including alloy and granular magnesium. Subsequently, on December 23, 1999, the Commission instituted investigation No. 332-410.[46] After a public hearing was held on February 2, 2000, the Commission presented its advice to the USTR on March 16, 2000. In a Presidential Proclamation of June 29, 2000, the President added granular magnesium to the list of GSP-eligible articles.[47]

[46] *Advice Concerning Possible Modifications to the U.S. Generalized System of Preferences*, 64 FR 73574, December 30, 1999.
[47] *Proclamation 7325 of June 29, 2000 to Modify Duty-Free Treatment Under the Generalized System of Preferences and for Other Purposes*, 65 FR 41313, July 3, 2000.

ACTIONS AT COMMERCE

Commerce has made not made any duty absorption findings, anti-circumvention findings, or initiated new shipper reviews since the imposition of the antidumping duty order.

Administrative reviews

Since the issuance of the antidumping duty order concerning alloy magnesium imports from China, Commerce has completed four administrative reviews. In the two administrative reviews of the order concerning U.S. imports of alloy magnesium from China covering April 1, 2006 to March 31, 2007 and April 1, 2008 to March 31, 2009, Commerce published one company-specific weighted-average dumping margin of zero percent for Tianjin Magnesium International Co., Ltd.[48] In the two administrative reviews covering April 1, 2011 to March 31, 2012 and April 1, 2012 to March 31, 2013, Commerce found that the one respondent company, Tianjin Magnesium International, Co., Ltd. had no shipments during the period of review.[49]

Scope rulings

There have been two scope inquiry reviews requested since the imposition of the antidumping duty order. These scope rulings are presented in table I-3.

[48] Commerce rescinded two administrative reviews covering April 1, 2007 to March 31, 2008 and April 1, 2010 to March 31, 2011. *Magnesium Metal from the People's Republic of China: Notice of Rescission of the 2007-2008 Administrative Review of the Antidumping Duty Order*, 73 FR 72448, November 28, 2008. *Magnesium Metal From the People's Republic of China: Rescission of Antidumping Duty Administrative Review*, 76 FR 57021, September 15, 2011.

[49] *Magnesium Metal From the People's Republic of China: Final Results of Antidumping Duty Administrative Review; 2011–2012*, 78 FR 27185, May 9, 2015. *Magnesium Metal From the People's Republic of China: Final Results of Antidumping Duty Administrative Review*; 2013-2014, 80 FR 15555, March 24, 2015.

Table I-3
Magnesium: Commerce's scope rulings

Requestor	Scope ruling	Date of completion	Federal Register citation
US Magnesium	Scope inquiry terminated. Exclusion request made regarding whether alloy magnesium produced in France using pure magnesium from China is within the scope of the antidumping duty order.	8/31/2006	71 FR 66167, November 13, 2006
US Magnesium	Exclusion request granted. Alloy extrusion billets produced in Canada by Timminco Ltd. from pure magnesium of Chinese origin are not within the scope of the antidumping duty order.	11/09/2006	72 FR 5677, February 7, 2007

Source: Cited Federal Register notices.

Five-year review results

Table I-4 presents the dumping margins calculated by Commerce in its original investigation and the first five-year review.

Table I-4
Magnesium: Commerce's original and first five-year review dumping margins for producers/ exporters

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
Tianjin Magnesium International Co., Ltd.	49.66	49.66
Beijing Guangling Jinghua Science & Technology Co., Ltd.	49.66	49.66
PRC-Wide Rate	141.49	141.49

Source: *Notice of Antidumping Duty Order: Magnesium Metal From the People's Republic of China*, 70 FR 19928, April 15, 2005 and *Magnesium Metal From the People's Republic of China and the Russian Federation: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders*, 75 FR 38983, July 7, 2010.

Commerce notified the Commission that it had not received adequate responses from respondent interested parties to its notice initiating the second five-year review of the antidumping duty finding on imports of alloy magnesium from China. As a result, Commerce intends to conduct an expedited review of the finding and to issue its final results by May 31, 2016.

THE INDUSTRY IN THE UNITED STATES

U.S. producers

In the original investigations, the Commission received responses from six firms believed to have represented virtually all U.S. production of pure and alloy magnesium during January 2001-September 2004. These firms consisted of two primary magnesium producers: US Magnesium and Northwest Alloys, Inc.[50] and four secondary magnesium producers: Advanced Magnesium Alloys Corp. ("Amacor"); Garfield Alloys, Inc. ("Garfield"); Halaco; and MagReTech, Inc. ("MagReTech").[51]

In the full first five-year reviews, the Commission received questionnaire responses from two primary magnesium producers US Magnesium and MagPro LLC ("MagPro").[52] The Commission also received responses from five producers of secondary magnesium (including die casters and alloyers): Amacor; KB Alloys;[53] MagPro; MagReTech; and Spartan Light Metal Products, Inc. ("Spartan").[54] The Commission also received questionnaire responses from three grinders (ESM Group, Inc. ("ESM"); Hart Metals, Inc. ("Hart"); and Reade Manufacturing, Inc. ("Reade")).[55]

In response to the Commission's notice of institution in this current second five-year review, the domestic interested parties identified the following ten firms as U.S. producers of the domestic like product: US Magnesium; MagPro; Amacor; MagReTech; Rossborough (an

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[50] Primary magnesium producers produce magnesium from raw material. Northwest Alloys ceased production of magnesium in 2001, leaving US Magnesium to be the only producer of primary magnesium at the time. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final),* USITC Publication 3763, April 2005, p. I-13 fn. 46.

[51] Secondary magnesium producers produce magnesium from recycling aluminum alloys or magnesium-based scrap. Garfield Alloys ceased production of magnesium in 2003. Halaco ceased production of magnesium in 2004. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final)*, USITC Publication 3763, April 2005, p. I-4 fn. 7.

[52] MagPro, *** a secondary producer of magnesium, ***. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review)-- Staff Report,* INV-JJ-006, January 25, 2011*,* p. III-6.

[53] KB Alloys reported production of magnesium alloys by melting purchased magnesium ingot with other elements (e.g., aluminum) in induction furnaces and making castings from the cooled alloys. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214*,* February 2011, p. I-38.

[54] Spartan is a die caster that produces alloy magnesium for internal consumption from internally generated scrap and scrap that it purchases. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214*,* February 2011, p. I-38.

[55] Magnesium grinders purchase magnesium ingot, slab, or granules (typically pure magnesium), and grind magnesium for use in the production of reagents or other magnesium-containing products. *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214*,* February 2011, p. I-39.

Opta Minerals Company); ESM; Hart; Reade; Meridian Technologies ("Meridian"); and Spartan.[56]

Related parties issues

In the first five-year reviews, the Commission addressed whether ESM was a related party by virtue of common ownership—ESM was wholly-owned by SKW Stahl-Metallurgie Holding AG in Germany, which also owned ESM Tianjin Co., Ltd., a producer of magnesium in China. The Commission found that appropriate circumstances did not exist to exclude U.S. grinder ESM from the domestic industry. The Commission noted that there was no information in the record suggesting that ESM might be shielded from any injury on account of its affiliation with a Chinese magnesium producer. The Commission furthered noted that the decision whether to exclude ESM had no bearing on the data considered, given that data submitted by the U.S. grinders were not included in the aggregated U.S. producer data presented in the staff report, in order to avoid double-counting.[57] There were no related parties identified by the domestic interested parties in their response to the Commission's notice of institution in this second five-year review.[58]

U.S. producers' trade and financial data

The Commission asked domestic interested parties to provide trade and financial data in their response to the notice of institution of the current five-year review.[59] Table I-5 presents a compilation of the data submitted from the responding U.S. producer in this current second five-year review, as well as trade and financial data submitted by U.S. producers in the first five-year reviews and the original investigations.

[56] *Domestic Interested Parties' Response to the Notice of Institution,* Attachment 13. All but two firms listed (Rossborough (an Opta Minerals Company) and Meridian Technologies) provided responses to the Commission's producer questionnaire in the full first five-year review.

[57] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011, p. 12.

[58] *Domestic Interested Parties' Response to the Notice of Institution,* p. 19.

[59] US Magnesium's responses are presented in app. B.

Table I-5
Magnesium: Trade and financial data submitted by U.S. producers, 2003, 2009, and 2015

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U.S. IMPORTS AND APPARENT CONSUMPTION

U.S. importers

In the original investigations, the Commission received usable responses from 18 U.S. importers. In the full first five-year reviews, the Commission received usable responses from 16 U.S. importers. Due to less-than-complete questionnaire coverage during portions of the period for which data were collected in the original investigations and the first five-year reviews, official import statistics were used.

In their response to the Commission's notice of institution in this review, domestic interested parties provided a list of three known and currently operating U.S. importers of magnesium from China.[60]

U.S. imports

In its original investigations, the Commission found that the volume of cumulated subject imports of magnesium and the increase in that volume, both in absolute terms and relative to production and consumption in the United States, were significant.[61] The Commission found the volume of alloy magnesium from China increased by 93.5 percent from 2000 to 2003, as imports of pure magnesium, subject to an existing antidumping duty order, declined by 99.3 percent over the same period.[62]

In the first five-year reviews, the Commission found that the sharp decline in subject alloy magnesium imports from China after 2004 resulted from the imposition of the order. The Commission found that if the antidumping duty order were revoked, Chinese magnesium producers would again have a powerful incentive to switch production to export large volumes of alloy magnesium to the United States. Thus, the Commission found that upon revocation of the order, the likely volume of subject imports from China would be significant, both in absolute terms and as a share of the U.S. market.[63]

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[60] *Domestic Interested Parties' Response to the Notice of Institution,* Attachment 14.

[61] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final)*, USITC Publication 3763, April 2005, p. 18.

[62] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Final)*, USITC Publication 3763, April 2005, p. 17.

[63] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011, pp. 37-38.

The domestic interested parties noted the volume of subject alloy magnesium imports from China, which had been rapidly increasing during the original period of investigations, began to decline with the imposition of preliminary duties in October 2004 and then fell sharply after the imposition of the antidumping duty order.[64] The domestic interested parties added that if the order were revoked, "the increasing volume of dumped imports would cause the industry to suffer significant declines in capacity, production, capacity utilization, domestic shipments, net sales values and quantities, employment levels, operating income, operating income margins, and capital investments, just as subject imports did before the imposition of the antidumping duty order."[65]

Table I-6 presents the quantity and value of magnesium imports from China, as well as the other top sources of U.S. imports (shown in descending order of 2015 imports by quantity). During 2010-15, U.S. subject alloy magnesium imports from China have not exceeded 60 metric tons and totaled less than 0.5 metric tons in 2015.

[64] *Domestic Interested Parties' Response to the Notice of Institution,* p. 11.
[65] *Domestic Interested Parties' Response to the Notice of Institution,* pp. 18-19.

Table I-6
Magnesium: U.S. imports, 2010-15

Item	2010	2011	2012	2013	2014	2015
	Quantity (*metric tons*)					
Subject source:						
China (alloy)[1]	21	6	38	60	21	(2)
Nonsubject sources:						
Israel (pure and alloy)	18,571	14,952	17,184	15,237	15,883	12,933
China (pure)	1,479	3,349	4,661	3,652	5,577	4,045
Canada (pure and alloy)	872	1,010	1,834	2,517	2,539	2,794
Russia (pure and alloy)[3]	618	470	931	1,430	2,351	2,014
All other sources (pure and alloy)	9,374	6,756	5,509	5,657	7,022	6,380
Subtotal, nonsubject	30,914	26,537	30,119	28,493	33,372	28,166
Total imports	30,935	26,543	30,157	28,553	33,393	28,167
	Landed, duty-paid value (*$1,000*)					
Subject source:						
China (alloy)[1]	78	33	142	232	89	3
Nonsubject sources:						
Israel (pure and alloy)	88,020	73,394	77,751	67,956	69,813	57,414
China (pure)	4,381	9,899	13,379	10,100	14,555	9,876
Canada (pure and alloy)	3,019	4,319	6,274	5,983	7,032	7,599
Russia (pure and alloy)[3]	2,024	1,886	3,329	5,023	8,670	7,526
All other sources (pure and alloy)	46,196	39,511	35,705	36,846	40,883	37,440
Subtotal, nonsubject	143,640	129,008	136,437	125,907	140,953	119,855
Total imports	143,718	129,041	136,579	126,139	141,042	119,858
	Average unit value (*$ per metric ton*)					
Subject source:						
China (alloy)[1]	$3,714	$5,500	$3,737	$3,867	$4,238	(4)
Nonsubject sources:						
Israel (pure and alloy)	4,740	4,909	4,525	4,460	4,395	4,439
China (pure)	2,962	2,956	2,870	2,766	2,610	2,442
Canada (pure and alloy)	3,462	4,276	3,421	2,377	2,770	2,720
Russia (pure and alloy)[3]	3,275	4,013	3,576	3,513	3,688	3,737
All other sources (pure and alloy)	4,928	5,848	6,481	6,513	5,822	5,868
Subtotal, nonsubject	4,646	4,861	4,530	4,419	4,224	4,255
Total imports	4,646	4,862	4,529	4,418	4,224	4,255

Footnotes on following page.

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

[1] Subject imports from China in this table consist of alloy magnesium ingot (HTS subheading 8104.19.00). Imports from China of pure magnesium ingot (HTS subheading 8104.11.00) and pure granular magnesium (HTS subheading 8104.30.00) are currently subject to separate antidumping duty orders and are not part of this five-year review. These data are identified in this table as imports from nonsubject sources (i.e., China (pure)).
[2] Less than 0.5 metric tons.
[3] Pure and alloy magnesium from Russia were part of the original petitions and the full first five-year reviews. The antidumping duty order on imports of pure and alloy magnesium from Russia were revoked effective April 15, 2010. *Magnesium Metal From the Russian Federation: Revocation of Antidumping Duty Order Pursuant to Five-Year Sunset Review*, 76 FR 13128, March 10, 2011.
[4] Not applicable.

Source: Official statistics of Commerce for HTS subheadings 8104.11.00 (pure magnesium ingot), 8104.19.00 (alloy magnesium ingot), and 8104.30.00 (pure granular magnesium).

Apparent U.S. consumption and market shares

Table I-7 presents data on U.S. producers' U.S. shipments, U.S. imports, and apparent U.S. consumption of magnesium (pure and alloy).

Table I-7
Magnesium: U.S. producers' U.S. shipments, U.S. imports, and apparent U.S. consumption, 2003, 2009, and 2015

Item	2003	2009	2015
	Quantity (*metric tons*)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from—			
Subject sources:			
China (alloy) [1]	12,906	142	([2])
Russia (pure and alloy) [3]	21,745	315	([3])
Subtotal, subject	34,651	458	([2])
Nonsubject sources:			
Canada (pure and alloy)	24,956	733	2,794
China (pure)	101	4,968	4,045
Russia (pure and alloy)[3]	([3])	([3])	2,014
Israel (pure and alloy)	5,747	16,491	12,933
All other sources (pure and alloy)	3,902	4,011	6,380
Subtotal, nonsubject	34,706	26,203	28,166
Total U.S. imports	69,356	26,661	28,167
Apparent U.S. consumption	***	***	***

Table continued on following page.

Table I-7--*Continued*
Magnesium: U.S. producers' U.S. shipments, U.S. imports, and apparent U.S. consumption, 2003, 2009, and 2015

Item	2003	2009	2015
	Value (*$1,000*)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from—			
Subject sources:			
China (alloy) [1]	24,020	723	3
Russia (pure and alloy) [3]	41,517	1,421	([3])
Subtotal, subject	65,537	2,144	3
Nonsubject sources:			
Canada (pure and alloy)	69,223	3,543	7,599
China (pure)	257	25,196	9,876
Russia (pure and alloy) [3]	([3])	([3])	7,526
Israel (pure and alloy)	14,267	65,320	57,414
All other sources (pure and alloy)	12,850	27,062	37,440
Subtotal, nonsubject	96,597	121,121	119,855
Total U.S. imports	162,134	123,265	119,858
Apparent U.S. consumption	***	***	***

[1] Subject imports from China in this table consist of alloy magnesium ingot (HTS subheading 8104.19.00). Imports from China of pure magnesium ingot (HTS subheading 8104.11.00) and pure granular magnesium (HTS subheading 8104.30.00) are currently subject to separate antidumping duty orders and are not part of this five-year review. These data are identified in this table as imports from nonsubject sources (i.e., China (pure)).
[2] Less than 0.5 metric tons.
[3] Not applicable. The antidumping duty order on imports of pure and alloy magnesium from Russia were revoked effective April 15, 2010. *Magnesium Metal From the Russian Federation: Revocation of Antidumping Duty Order Pursuant to Five-Year Sunset Review*, 76 FR 13128, March 10, 2011.

Source: For the year 2003, data are compiled using data submitted in the Commission's original investigation. For the year 2009, data are compiled using data submitted in the Commission's first five-year reviews. For 2015, U.S. producers' U.S. shipments are compiled from the domestic interested parties' response to the Commission's notice of institution and U.S. imports are compiled using official Commerce statistics under HTS subheadings 8104.11.00 (pure magnesium ingot), 8104.19.00 (alloy magnesium ingot), and 8104.30.00 (pure granular magnesium).

Table I-8 presents data on U.S. market shares of U.S. apparent consumption of magnesium (pure and alloy).

Table I-8
Magnesium: Apparent U.S. consumption and U.S. market shares, 2003, 2009, and 2015

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PRICES AND RELATED INFORMATION

In their response to the Commission's notice of institution in this current second five-year review, the domestic interested parties noted that they are aware of pricing data provided in Platts Metals Week, which lists weekly spot prices for U.S. Die Cast Alloy, U.S. Spot Western (pure magnesium), and U.S. Dealer Import (pure magnesium).[66] The domestic interested parties noted that they are not aware of public information regarding contract prices for magnesium in the United States. With respect to Chinese export and home market prices, the domestic interested parties are aware of prices published in Asian Metal.[67]

THE INDUSTRY IN CHINA

During the final phase of the original investigation, data concerning exports from China were based on the questionnaire responses of three exporting firms believed to have accounted for approximately *** percent of Chinese exports of subject alloy magnesium to the United States during 2003.[68]

During the full first five-year reviews, the Commission received questionnaire responses from four magnesium producers in China that represented approximately *** percent of total production of alloy magnesium in China in 2009.[69] The reported capacity of the responding firms grew from *** metric tons in 2004 to *** metric tons in 2009. Their production rose from *** metric tons in 2004 to *** metric tons in 2009, and their shipments increased from *** metric tons to *** metric tons over the same period. [70] In its first review determinations, the Commission noted that these sharp increases in capacity, production, and shipments were

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[66] *Platts Metal Week* also publishes spot pricing data for pure magnesium in the EU and pure and alloy magnesium in China.

[67] *Domestic Interested Parties' Response to the Notice of Institution,* pp. 19-20; Attachment 7.

[68] No producer of magnesium from China submitted a questionnaire response to the Commission in the final phase of the original investigations. *Magnesium from China and Russia, Investigations Nos. 731-TA-1071-1072 (Final)—Staff Report*, INV-CC-031, March 11, 2005, p. VII-1.

[69] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review)-- Staff Report,* INV-JJ-006, January 25, 2011*,* p. IV-41.

[70] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review)-- Staff Report,* INV-JJ-006, January 25, 2011*,* Table IV-12.

largely due to the fact that two of the responding producers started production during the period of review.[71] The Commission further noted that the increases in capacity, production, and shipments for the Chinese alloy magnesium industry overall was likely much larger than the data for the four responding producers, given that the capacity of the entire Chinese magnesium industry more than doubled during the period of review, rising from 447,000 metric tons in 2004 to 1.3 million metric tons in 2009.[72]

The Commission did not receive any responses to its notice of institution from producers or exporters of alloy magnesium in China in this current five-year review. In their response to the Commission's notice of institution in this current five-year review, the domestic interested parties identified 10 producers of magnesium in China.[73] The domestic interested parties noted that China has significant unused capacity, is highly export oriented, and that despite enormous unused capacity, more capacity is under construction. One such construction project cited is one by Qinghai Salt Management, a state-owned enterprise that is expected to produce 100,000 metric tons of primary magnesium per year upon completion, with a planned expansion of 450,000 metric tons. Another project cited involves Magontec, a recycler and producer of magnesium, which already supplies magnesium to the United States, and that is reportedly building a 56,000 metric ton per year cast house to be supplied by the Qinghai Salt Lake project.[74]

According to reports from the U.S. Geological Survey ("USGS"), Chinese production of magnesium decreased during the first half of 2015 due to the shutdown of older, smaller producers that had higher costs. In addition, more Chinese magnesium capacity is expected to be shut down as the Government enforces environmental regulations. However, USGS also notes that new capacity for Chinese magnesium production is being built in locations with lower energy costs, and is expected to result in increased Chinese magnesium production.[75] Table I-9 presents China's exports of alloy magnesium to top destinations.

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[71] *Magnesium From China and Russia, Inv. No. 731-TA-1071-1072 (Review)*, USITC Publication 4214, February 2011, p. 19 fn. 93.

[72] *Magnesium From China and Russia, Inv. Nos. 731-TA-1071-1072 (Review)*, USITC Publication 4214, February 2011, p. 19 fn. 93.

[73] *Domestic Interested Parties' Response to the Notice of Institution,* Attachment 15.

[74] Domestic interested parties asserted that in 2014, China's capacity to produce primary magnesium totaled 1.6 million metric tons and that China's estimated production of primary magnesium totaled 874,000 metric tons, operating at a 54.5 percent capacity utilization rate. *Domestic Interested Parties' Response to the Notice of Institution,* pp. 14-15.

[75] U.S. Geological Survey ("USGS") annual publications for magnesium metal from 2011-16. http://minerals.usgs.gov/minerals/pubs/commodity/magnesium/.

Table I-9

Magnesium: China's top export destinations, 2010-15

Exporting Country	2010	2011	2012	2013	2014	2015
	Quantity (*metric tons*)					
Netherlands	36,150	39,578	35,041	33,853	32,962	35,550
Canada	7,199	8,980	18,135	18,344	20,017	20,611
South Korea	5,030	4,788	4,359	9,717	7,743	8,124
Japan	8,163	8,274	7,022	5,867	5,883	6,542
Romania	2,403	3,420	3,610	4,850	6,940	6,423
All other sources	26,906	34,322	24,150	29,320	32,917	37,364
Total exports	85,852	99,362	92,318	101,951	106,462	114,614
	Value (*1,000 dollars*)					
Netherlands	109,896	132,261	106,262	99,937	91,678	87,367
Canada	21,297	28,479	57,416	55,060	56,125	52,850
South Korea	14,471	15,432	13,669	29,438	22,098	22,555
Japan	25,867	28,374	25,674	19,879	18,309	18,459
Romania	7,199	11,406	11,825	14,687	19,869	16,273
All other sources	80,851	112,425	78,363	89,574	95,701	97,500
Total	259,580	328,377	293,208	308,574	303,780	295,003
	Average unit value (*$ per metric ton*)					
Netherlands	$3,040	$3,342	$3,032	$2,952	$2,781	$2,458
Canada	2,958	3,171	3,166	3,002	2,804	2,564
South Korea	2,877	3,223	3,136	3,030	2,854	2,776
Japan	3,169	3,429	3,656	3,388	3,112	2,822
Romania	2,996	3,335	3,276	3,028	2,863	2,534
All other sources	3,005	3,276	3,245	3,055	2,907	2,609
Total	3,024	3,305	3,176	3,027	2,853	2,574

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

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.19.00 (alloy magnesium). Accessed April 22, 2016.

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

India reportedly applied definitive antidumping duties on imports of magnesium from China from July 24, 1998 until May 1, 2003. The duties were withdrawn upon a request by the affected domestic industry. Beginning in 1999, the EU had an antidumping duty order on

imports of pure magnesium (unwrought unalloyed magnesium) from China that expired in 2003.[76]

In April 2003, Brazil initiated antidumping investigations on imports from China of magnesium ingot and magnesium powder and on October 11, 2004, imposed antidumping duties of $1.18 per kilogram ($0.535 per pound) on pure magnesium ingot and $0.99 per kilogram ($0.449 per pound) on magnesium granules. In October 2005, Brazil expanded duties to include alloy magnesium from China. On October 7, 2010, Brazil made public its decision to continue the application of antidumping duties for five more years on the imports of magnesium from China. On September 24, 2015, the Brazilian authorities decided upon the continuation of the antidumping duties for five more years on imports of magnesium from China. The amount of the duty remains $1.18 per kilogram.[77]

THE GLOBAL MARKET

Table I-10 presents the largest global export sources of alloy magnesium during 2010-15.

[76] *Magnesium from China and Russia, Investigation Nos. 731-TA-1071-1072 (Review),* USITC Publication 4214, February 2011, p. IV-19.

[77] "Brazil: Further extension of antidumping duty on imports of metal magnesium from China," *Global Trade Alert*, http://www.globaltradealert.org/measure/brazil-further-extension-antidumping-duty-imports-metal-magnesium-china, retrieved April 11, 2016.

Table I-10

Magnesium: Reported worldwide exports by major sources, 2010-15

Exporting Country	2010	2011	2012	2013	2014	2015
	Quantity (*metric tons*)					
China	85,852	99,362	92,318	101,951	106,462	114,614
Netherlands	41,371	40,628	36,251	30,901	29,475	30,413
Czech Republic	5,914	7,699	7,147	8,118	9,121	9,330
Germany	3,417	4,944	5,697	4,668	5,789	9,235
United States	6,774	3,501	7,000	8,139	8,573	7,903
All other sources	41,366	36,656	20,754	19,066	15,943	18,778
Subtotal, nonsubject	98,842	93,428	76,849	70,892	68,901	75,658
Total	184,694	192,791	169,167	172,843	175,363	190,273
	Value (*1,000 dollars*)					
China	259,580	328,377	293,208	308,574	303,780	295,003
Netherlands	135,110	150,605	131,174	107,680	90,374	83,302
Czech Republic	14,580	20,953	19,265	24,993	26,567	25,576
Germany	13,955	20,554	24,148	19,460	23,306	26,395
United States	29,573	14,384	35,579	37,118	33,879	28,942
All other sources	166,611	174,955	118,431	139,599	108,875	89,032
Subtotal, nonsubject	359,830	381,451	328,596	328,850	283,001	253,247
Total	619,409	709,828	621,805	637,425	586,781	548,250
	Average unit value (*$ per metric ton*)					
China	$3,024	$3,305	$3,176	$3,027	$2,853	$2,574
Netherlands	3,266	3,707	3,618	3,485	3,066	2,739
Czech Republic	2,465	2,722	2,696	3,079	2,913	2,741
Germany	4,084	4,157	4,239	4,169	4,026	2,858
United States	4,366	4,108	5,083	4,560	3,952	3,662
All other sources	4,028	4,773	5,706	7,322	6,829	4,741
Subtotal, nonsubject	3,640	4,083	4,276	4,639	4,107	3,347
Total	3,354	3,682	3,676	3,688	3,346	2,881

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

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 8104.19.00 (alloy magnesium). Accessed April 22, 2016.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, 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
81 FR 5136, February 1, 2016	*Magnesium From China; Institution of a Five-Year Review*	https://www.gpo.gov/fdsys/granule/FR-2016-02-01/2016-01726
81 FR 5418, February 2, 2016	*Initiation of Five-Year ("Sunset") Review*	https://www.gpo.gov/fdsys/granule/FR-2016-02-02/2016-01999

APPENDIX B

COMPANY-SPECIFIC DATA

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APPENDIX C

SUMMARY DATA

Table C-4 (Reproduced from the original final staff report)
Pure magnesium: Summary data concerning the U.S. market, 2000-03

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Table C-5 (Reproduced from the original final staff report)
Alloy magnesium: Summary data concerning the U.S. market, 2000-03

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Table C-6 (Reproduced from the original final staff report)
All magnesium: Summary data concerning the U.S. market, 2000-03

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Table C-1
Total magnesium (pure and alloy): Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Subject sources:															
China:															
Quantity	13,262	36	34	46	287	142	111	21	-98.9	-99.7	-4.9	34.8	518.9	-50.5	-80.9
Value	35,765	89	101	129	1,697	723	616	78	-98.0	-99.8	13.1	28.5	1,214.3	-57.4	-87.4
Unit value	$2,697	$2,452	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	88.8	-9.1	19.0	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia:															
Quantity	23,439	12,573	13,038	6,105	2,210	315	20	298	-98.7	-46.4	3.7	-53.2	-63.8	-85.7	1,362.6
Value	50,843	32,162	29,616	14,198	8,475	1,421	136	951	-97.2	-36.7	-7.9	-52.1	-40.3	-83.2	601.1
Unit value	$2,169	$2,558	$2,272	$2,326	$3,835	$4,505	$6,660	$3,193	107.7	17.9	-11.2	2.4	64.9	17.5	-52.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (subject):															
Quantity	36,701	12,610	13,072	6,152	2,498	458	132	319	-98.8	-65.6	3.7	-52.9	-59.4	-81.7	142.5
Value	86,609	32,251	29,717	14,327	10,172	2,144	751	1,029	-97.5	-62.8	-7.9	-51.8	-29.0	-78.9	36.9
Unit value	$2,360	$2,558	$2,273	$2,329	$4,073	$4,687	$5,708	$3,224	98.6	8.4	-11.1	2.4	74.9	15.1	-43.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	26,265	31,003	29,108	15,261	3,228	733	396	472	-97.2	18.0	-6.1	-47.6	-78.9	-77.3	19.2
Value	77,352	99,703	87,626	53,304	17,921	3,543	1,615	1,986	-95.4	28.9	-12.1	-39.2	-66.4	-80.2	23.0
Unit value	$2,945	$3,216	$3,010	$3,493	$5,552	$4,833	$4,077	$4,207	64.1	9.2	-6.4	16.0	59.0	-13.0	3.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China:															
Quantity	6,812	1,503	335	3,476	19,113	4,968	4,269	439	-27.1	-77.9	-77.7	938.0	449.9	-74.0	-89.7
Value	16,255	4,246	809	11,386	106,024	25,196	21,553	1,325	55.0	-73.9	-81.0	1,308.1	831.1	-76.2	-93.9
Unit value	$2,386	$2,826	$2,415	$3,276	$5,547	$5,071	$5,048	$3,019	112.5	18.4	-14.5	35.7	69.3	-8.6	-40.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	13,320	15,074	10,757	17,188	26,148	16,491	8,043	8,875	23.8	13.2	-28.6	59.8	52.1	-36.9	10.3
Value	41,228	54,172	31,316	50,915	101,055	65,320	32,018	40,677	58.4	31.4	-42.2	62.6	98.5	-35.4	27.0
Unit value	$3,095	$3,594	$2,911	$2,962	$3,865	$3,961	$3,981	$4,583	28.0	16.1	-19.0	1.8	30.5	2.5	15.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	7,256	12,453	5,919	8,906	7,612	4,011	2,140	4,008	-44.7	71.6	-52.5	50.5	-14.5	-47.3	87.3
Value	24,131	40,524	21,631	31,752	47,519	27,062	15,487	20,201	12.1	67.9	-46.6	46.8	49.7	-43.0	30.4
Unit value	$3,326	$3,254	$3,655	$3,565	$6,243	$6,748	$7,238	$5,040	102.9	-2.1	12.3	-2.4	75.1	8.1	-30.4
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	53,653	60,033	46,119	44,831	56,101	26,203	14,848	13,794	-51.2	11.9	-23.2	-2.8	25.1	-53.3	-7.1
Value	158,966	198,645	141,382	147,358	272,520	121,121	70,672	64,189	-23.8	25.0	-28.8	4.2	84.9	-55.6	-9.2
Unit value	$2,963	$3,309	$3,066	$3,287	$4,858	$4,622	$4,760	$4,653	56.0	11.7	-7.4	7.2	47.8	-4.8	-2.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	90,355	72,642	59,191	50,982	58,599	26,661	14,980	14,113	-70.5	-19.6	-18.5	-13.9	14.9	-54.5	-5.8
Value	245,575	230,895	171,099	161,685	282,692	123,265	71,424	65,218	-49.8	-6.0	-25.9	-5.5	74.8	-56.4	-8.7
Unit value	$2,718	$3,179	$2,891	$3,171	$4,824	$4,623	$4,768	$4,621	70.1	16.9	-9.1	9.7	52.1	-4.2	-3.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued
Total magnesium (pure and alloy): Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

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

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

Table C-2
Pure magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Russia:															
Quantity	20,798	11,756	13,038	6,105	2,210	315	20	298	-98.5	-43.5	10.9	-53.2	-63.8	-85.7	1,362.6
Value	45,202	30,257	29,616	14,198	8,475	1,421	136	951	-96.9	-33.1	-2.1	-52.1	-40.3	-83.2	601.1
Unit value	$2,173	$2,574	$2,272	$2,326	$3,835	$4,505	$6,660	$3,193	107.3	18.4	-11.7	2.4	64.9	17.5	-52.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	2,680	5,564	9,753	1,942	1,029	583	246	472	-78.3	107.6	75.3	-80.1	-47.0	-43.4	91.7
Value	8,923	17,681	24,219	7,195	3,417	2,810	925	1,978	-68.5	98.2	37.0	-70.3	-52.5	-17.8	113.8
Unit value	$3,330	$3,178	$2,483	$3,705	$3,321	$4,823	$3,756	$4,189	44.9	-4.6	-21.9	49.2	-10.4	45.2	11.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
China:															
Quantity	6,812	1,503	335	3,476	19,113	4,968	4,269	439	-27.1	-77.9	-77.7	938.0	449.9	-74.0	-89.7
Value	16,255	4,246	809	11,386	106,024	25,196	21,553	1,325	55.0	-73.9	-81.0	1,308.1	831.1	-76.2	-93.9
Unit value	$2,386	$2,826	$2,415	$3,276	$5,547	$5,071	$5,048	$3,019	112.5	18.4	-14.5	35.7	69.3	-8.6	-40.2
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	8,794	9,041	7,917	14,539	21,846	15,361	7,674	7,790	74.7	2.8	-12.4	83.6	50.3	-29.7	1.5
Value	25,099	30,391	22,638	43,076	83,436	60,410	30,492	35,194	140.7	21.1	-25.5	90.3	93.7	-27.6	15.4
Unit value	$2,854	$3,362	$2,859	$2,963	$3,819	$3,933	$3,973	$4,518	37.8	17.8	-14.9	3.6	28.9	3.0	13.7
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	3,409	3,359	2,343	2,101	1,227	947	565	793	-72.2	-1.5	-30.2	-10.3	-41.6	-22.8	40.3
Value	9,120	10,866	6,683	7,290	7,496	5,971	4,221	4,230	-34.5	19.1	-38.5	9.1	2.8	-20.3	0.2
Unit value	$2,676	$3,235	$2,852	$3,470	$6,107	$6,303	$7,470	$5,335	135.6	20.9	-11.8	21.7	76.0	3.2	-28.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	21,694	19,466	20,348	22,057	43,216	21,859	12,755	9,494	0.8	-10.3	4.5	8.4	95.9	-49.4	-25.6
Value	59,397	63,185	54,349	68,948	200,373	94,387	57,191	42,726	58.9	6.4	-14.0	26.9	190.6	-52.9	-25.3
Unit value	$2,738	$3,246	$2,671	$3,126	$4,637	$4,318	$4,484	$4,501	57.7	18.6	-17.7	17.0	48.3	-6.9	0.4
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	42,492	31,222	33,386	28,162	45,426	22,174	12,776	9,792	-47.8	-26.5	6.9	-15.6	61.3	-51.2	-23.4
Value	104,599	93,442	83,966	83,146	208,848	95,808	57,327	43,678	-8.4	-10.7	-10.1	-1.0	151.2	-54.1	-23.8
Unit value	$2,462	$2,993	$2,515	$2,952	$4,598	$4,321	$4,487	$4,461	75.5	21.6	-16.0	17.4	55.7	-6.0	-0.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-2--Continued
Pure magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

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

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

Table C-3
Alloy magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

Item	Reported data						January-June		Period changes						Jan.-June
	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. consumption quantity:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. consumption value:															
Amount	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Importers' share (1):															
Subject sources:															
China	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, subject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. imports from:															
Subject sources:															
China:															
Quantity	13,262	36	34	46	287	142	111	21	-98.9	-99.7	-4.9	34.8	518.9	-50.5	-80.9
Value	35,765	89	101	129	1,697	723	616	78	-98.0	-99.8	13.1	28.5	1,214.3	-57.4	-87.4
Unit value	$2,697	$2,452	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	88.8	-9.1	19.0	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Russia:															
Quantity	2,641	817	0	0	0	0	0	0	-100.0	-69.1	-100.0	(3)	(3)	(3)	(3)
Value	5,642	1,905	0	0	0	0	0	0	-100.0	-66.2	-100.0	(3)	(3)	(3)	(3)
Unit value	$2,136	$2,332	(3)	(3)	(3)	(3)	(3)	(3)	(3)	9.2	(3)	(3)	(3)	(3)	(3)
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (subject):															
Quantity	15,903	853	34	46	287	142	111	21	-99.1	-94.6	-96.0	34.8	518.9	-50.5	-80.9
Value	41,407	1,994	101	129	1,697	723	616	78	-98.3	-95.2	-95.0	28.5	1,214.3	-57.4	-87.4
Unit value	$2,604	$2,337	$2,918	$2,781	$5,907	$5,091	$5,534	$3,663	95.5	-10.3	24.9	-4.7	112.4	-13.8	-33.8
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Nonsubject sources:															
Canada:															
Quantity	23,586	25,439	19,355	13,319	2,199	150	150	0.08	-99.4	7.9	-23.9	-31.2	-83.5	-93.2	-99.9
Value	68,429	82,021	63,407	46,109	14,504	733	690	9	-98.9	19.9	-22.7	-27.3	-68.5	-94.9	-98.7
Unit value	$2,901	$3,224	$3,276	$3,462	$6,597	$4,872	$4,605	$110,513	67.9	11.1	1.6	5.7	90.6	-26.2	2,299.9
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Israel:															
Quantity	4,526	6,033	2,840	2,649	4,302	1,130	369	1,085	-75.0	33.3	-52.9	-6.7	62.4	-73.7	194.5
Value	16,129	23,780	8,678	7,839	17,619	4,910	1,526	5,483	-69.6	47.4	-63.5	-9.7	124.8	-72.1	259.4
Unit value	$3,564	$3,941	$3,056	$2,959	$4,096	$4,343	$4,140	$5,051	21.9	10.6	-22.5	-3.2	38.4	6.0	22.0
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All other sources:															
Quantity	3,848	9,095	3,576	6,805	6,385	3,063	1,574	3,215	-20.4	136.4	-60.7	90.3	-6.2	-52.0	104.2
Value	15,011	29,658	14,948	24,462	40,024	21,091	11,266	15,971	40.5	97.6	-49.6	63.6	63.6	-47.3	41.8
Unit value	$3,901	$3,261	$4,181	$3,595	$6,269	$6,885	$7,155	$4,967	76.5	-16.4	28.2	-14.0	74.4	9.8	-30.6
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Subtotal (nonsubject):															
Quantity	31,959	40,567	25,770	22,774	12,885	4,344	2,093	4,301	-86.4	26.9	-36.5	-11.6	-43.4	-66.3	105.5
Value	99,569	135,459	87,032	78,410	72,147	26,734	13,481	21,463	-73.2	36.0	-35.8	-9.9	-8.0	-62.9	59.2
Unit value	$3,115	$3,339	$3,377	$3,443	$5,599	$6,154	$6,442	$4,991	97.5	7.2	1.1	1.9	62.6	9.9	-22.5
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
All sources:															
Quantity	47,863	41,420	25,805	22,820	13,172	4,486	2,204	4,322	-90.6	-13.5	-37.7	-11.6	-42.3	-65.9	96.1
Value	140,976	137,453	87,133	78,539	73,844	27,457	14,097	21,541	-80.5	-2.5	-36.6	-9.9	-6.0	-62.8	52.8
Unit value	$2,945	$3,319	$3,377	$3,442	$5,606	$6,120	$6,396	$4,984	107.8	12.7	1.8	1.9	62.9	9.2	-22.1
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

Table continued on next page.

Table C-3--Continued
Alloy magnesium: Summary data concerning the U.S. market, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

Item	Reported data								Period changes						
							January-June								Jan.-June
	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

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

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

Table C-4
Granular magnesium (pure): Summary domestic industry data concerning U.S. grinders, 2004-09, January-June 2009, and January-June 2010

(Quantity=metric tons, value=1,000 dollars, unit values, unit labor costs, and unit expenses are per metric ton; period changes=percent, except where noted)

	Reported data								Period changes						
							January-June								Jan.-June
Item	2004	2005	2006	2007	2008	2009	2009	2010	2004-09	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
U.S. producers':															
Average capacity quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
U.S. shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Export shipments:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Wages paid ($1,000s)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Productivity (tons/1,000 hours)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Net sales:															
Quantity	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Gross profit or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***
Operating income or (loss)/ sales (1)	***	***	***	***	***	***	***	***	***	***	***	***	***	***	***

(1) "Reported data" are in percent and "period changes" are in percentage points.

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

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

APPENDIX D

PURCHASER QUESTIONNAIRE RESPONSES

* * * * * * *