

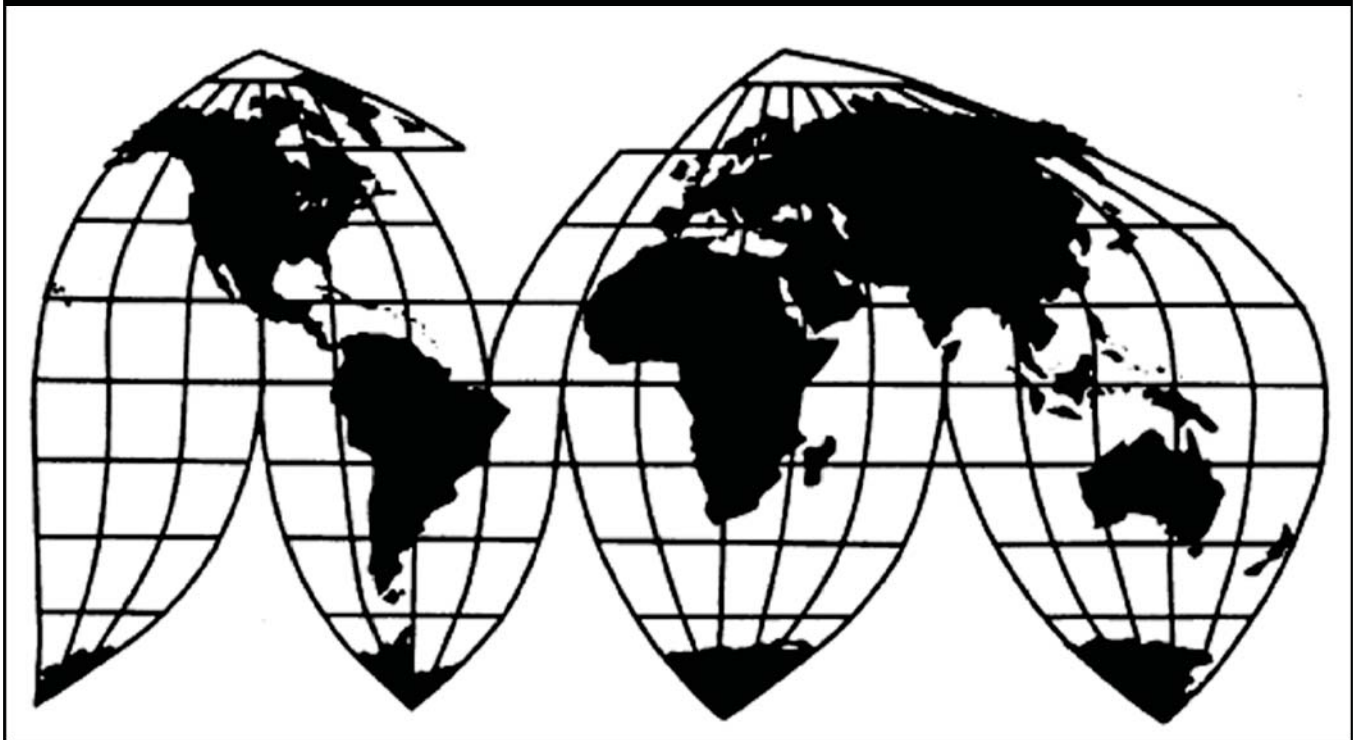
Chlorinated Isocyanurates from China and Spain

Investigation Nos. 731 TA 1082-1083 (Second Review)

Publication 4646

November 2016

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted.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

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 731-TA-1082-1083 (Second Review)

Chlorinated Isocyanurates from China and Spain

DETERMINATIONS

On the basis of the record¹ developed in the subject five-year reviews, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that revocation of the antidumping duty orders on chlorinated isocyanurates from China and Spain would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission, pursuant to section 751(c) of the Act (19 U.S.C. 1675(c)), instituted these reviews on September 1, 2015 (80 F.R. 52789) and determined on December 7, 2015 that it would conduct full reviews (80 F.R. 79358, December 21, 2015).

Notice of the scheduling of the Commission’s reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on April 20, 2016 (81 F.R. 23328). The hearing was held in Washington, DC, on September 13, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended (“the Tariff Act”), that revocation of the antidumping duty orders on chlorinated isocyanurates (“chlorinated isos”) from China and Spain would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

A. Original Investigations

In May 2004, Clearon Corporation (“Clearon”) and Occidental Chemical Company (“OxyChem”) filed antidumping duty petitions concerning imports of chlorinated isos from China and Spain. In June 2005, the Commission determined that an industry in the United States was materially injured by reason of imports of chlorinated isos from China and Spain.¹ Subsequently, the Department of Commerce (“Commerce”) issued antidumping duty orders covering these imports.²

B. The First Reviews

In May 2010, the Commission instituted its first five-year reviews. The Commission received a joint response to the notice of institution from Clearon and OxyChem but no responses from respondent interested parties. The Commission conducted expedited reviews and determined that revocation of the orders on chlorinated isos from China and Spain would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.³ Commerce published its notice of continuation of the antidumping duty orders in October 2010.⁴

¹ *Chlorinated Isocyanurates from China and Spain*, Inv. Nos. 731-TA-1082-1083 (Final), USITC Pub. 3782 (June 2005) (“Original Determinations”).

² *Chlorinated Isocyanurates from China*, 70 Fed. Reg. 36561 (June 25, 2005) (notice of antidumping duty order); *Chlorinated Isocyanurates from Spain*, 70 Fed. Reg. 36562 (June 25, 2005) (notice of antidumping duty order).

³ *Chlorinated Isocyanurates from China and Spain*, Inv. Nos. 731-TA-1083-1083 (Review), USITC Pub. 4184 (September 2010) (“First Five-Year Reviews”).

⁴ *Chlorinated Isocyanurates from Spain and China*, 75 Fed. Reg. 62764 (Oct. 13, 2010) (continuation of antidumping duty orders).

C. The Current Reviews

In September 2015, the Commission instituted these second reviews.⁵ Clearon, OxyChem, and Bio-Lab, Inc. (“BioLab”) (collectively, “domestic producers”) filed a joint response to the notice of institution containing company-specific information. The Commission did not receive any responses from producers or exporters of chlorinated isos in China and Spain or any U.S. importers of subject merchandise. Although the Commission found the domestic interested party group response to the notice of institution to be adequate and the respondent interested party group response for each order to be inadequate, it determined that other circumstances warranted conducting full reviews.⁶

The Commission received joint prehearing and posthearing submissions from the domestic producers. Representatives of Clearon, OxyChem, and BioLab appeared at the Commission’s hearing accompanied by counsel.

U.S. industry data are based on the questionnaire responses of three integrated U.S. producers of chlorinated isos (BioLab, Clearon, and OxyChem) that accounted for all domestic production of granular chlorinated isos during January 2013-December 2015 (the “period of review”) and four firms that performed only tableting operations on granular chlorinated isos.⁷ U.S. import data and related information are based on the questionnaire responses of eight U.S. importers of chlorinated isos that accounted for *** percent of total imports, *** percent of subject imports from Spain, and *** percent of subject imports from China in 2015, and supplementary data from proprietary Customs records.⁸ The Commission did not receive any questionnaire responses from subject producers in China or Spain.⁹ Foreign industry data and related information are therefore based on data from public sources and information submitted in the original investigations, expedited first five-year reviews, and these current full reviews.¹⁰

⁵ *Chlorinated Isocyanurates from China and Spain*, 80 Fed. Reg. 52789 (Sept. 1, 2015).

⁶ *Chlorinated Isocyanurates from China and Spain*, 81 Fed. Reg. 23328 (Apr. 20, 2016). Chairman Williamson and Commissioners Pinkert and Schmidlein voted to conduct expedited reviews, finding no circumstances that would warrant conducting full reviews.

⁷ Confidential Report, Memorandum INV-OO-091 (Oct. 7, 2016) (“CR”) at I-10; Public Report (“PR”) at I-4. “Integrated producers” produce granular chlorinated isos and also convert the granular product into tablets or contract to have tollers tablet the product. “Tableters” do not produce the granular product, but obtain it from various sources and convert it into tablets, either independently or as tollers. CR at I-27; PR at I-18.

The Commission received limited data from tableters. The Commission issued questionnaires to nine firms believed to be tableters, but received questionnaire responses from only four firms: LPM Manufacturing, Inc. (“LPM”), N. Jonas & Co., Inc. (“N. Jonas”), Oreq Corporation (“Oreq”), and Stellar Manufacturing Company, LLC (“Stellar”). CR/PR at Table I-8. Only two of the responding tableters, N. Jonas and Stellar, provided financial data in their questionnaire responses. CR at III-12, PR at III-5.

⁸ CR at I-32, PR at I-21.

⁹ CR at I-10, PR at I-6.

¹⁰ CR at IV-6-13, PR at IV-3-8.

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.”¹¹ 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.”¹² 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.¹³

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

Chlorinated isos, which are derivatives of cyanuric acid, described as chlorinated s-triazine triones. There are three primary chemical compositions of chlorinated isos: (1) Trichloroisocyanuric acid ($\text{Cl}_3(\text{NCO})_3$), (2) sodium dichloroisocyanurate (dihydrate) ($\text{NaCl}_2(\text{NCO})_3(2\text{H}_2\text{O})$), and (3) sodium dichloroisocyanurate (anhydrous) ($\text{NaCl}_2(\text{NCO})_3$). The orders cover all chlorinated isos.¹⁴

The scope definition has not changed substantively since the original investigations.

Chlorinated isos are chemical compounds used primarily as sanitizing agents for swimming pools, spas, and industrial water treatments, and as bleaching agents for detergents, bleaches, and cleansers.¹⁵ There are three primary chemical compositions of chlorinated isos (all of which fall within the scope definition), which vary with respect to the amount of available chlorine: (1) trichloroisocyanuric acid (“trichlor”), which has 90 percent available chlorine; (2) sodium dichloroisocyanurate (“dichlor”) in anhydrous form, which has 63 percent available

¹¹ 19 U.S.C. § 1677(4)(A).

¹² 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).

¹³ 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).

¹⁴ *Chlorinated Isocyanurates from Spain and China*, 81 Fed. Reg. 461, 462 (Jan. 6, 2016) (final results of the expedited sunset review of the antidumping duty orders).

¹⁵ CR at I-15, PR at I-10.

chlorine; and (3) dichlor in dihydrate form, which has 56 percent available chlorine.¹⁶ Trichlor and dichlor also differ in the rate of release of chlorine in the water. Trichlor, the bulk of which is ultimately consumed as tablets, has the highest chlorine content, but the chlorine is released relatively slowly in the water and therefore it is more widely used for water treatment applications.¹⁷ Dihydrate and anhydrous dichlor, which are mostly sold and used in granular form packaged in sacks or drums, contain less available chlorine, but the chlorine is released relatively quickly, making these products more widely used in detergents, bleaches, and cleansers and as “shock” treatments to instill chlorine rapidly in swimming pools.¹⁸

In the United States, sanitizing agents such as trichlor and dichlor are statutorily controlled pesticides and must be approved by the Environmental Protection Agency (“EPA”) for public use. Accordingly, any chlorinated isos destined for use in the pool and spa market must be tested and approved by the EPA prior to sale.¹⁹

1. The Original Investigations and First Five-Year Reviews

In the original investigations, the Commission rejected arguments that it should find multiple like products consisting of different forms of chlorinated isos. Instead, the Commission found a single domestic like product that was coextensive with Commerce’s scope consisting of all chlorinated isos.²⁰

In the expedited first five-year reviews, the Commission found that the record provided no basis to call into question the Commission’s prior definition of the domestic like product, and the domestic industry concurred with that definition. The Commission therefore again defined the domestic like product as all chlorinated isos, coextensive with Commerce’s scope.²¹

2. The Current Reviews

The domestic producers in these reviews contend that the Commission should continue to adopt the same definition of the domestic like product as in the original investigations and

¹⁶ CR at I-15, PR at I-11.

¹⁷ CR at I-15, I-17, PR at I-11.

¹⁸ CR at I-15-17, PR at I-11. Swimming pools that use saltwater chlorination systems rather than trichlor to maintain a steady chlorine level may use dichlor for shock treatments. CR at I-16 n.25, PR at I-11, n.25.

¹⁹ CR at I-16, PR at I-11.

²⁰ Original Determinations, USITC Pub. 3782 at 5-12. The Commission found that dichlor and trichlor were not distinct products due to their similar chemical compositions and uses and their common channels of distribution and production facilities and processes. *Id.* at 7. It found that blended tablets were not a separate domestic like product because they were very similar to regular trichlor tablets. *Id.* at 8. It found that powdered chlorinated isos were not a separate domestic like product because of similarities in chemistry, use, and production processes. *Id.* at 9-10.

²¹ First Five-Year Reviews, USITC Pub. 4184 at 4.

first five-year reviews.²² The record in these reviews indicates no material changes in the pertinent product characteristics.²³ We therefore continue to define the domestic like product as all chlorinated isos, coextensive with Commerce’s scope.

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.”²⁴ 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.

There are two sets of domestic industry issues in these reviews. The first concerns whether tableters engage in sufficient production-related activities to be considered members of the domestic industry. The second concerns whether appropriate circumstances exist to exclude any producer from the domestic industry pursuant to the statutory related parties provision.

1. Sufficient Production-Related Activities

In deciding whether a firm qualifies as a domestic producer, the Commission generally has analyzed the overall nature of a firm’s production-related activities in the United States, although production-related activity at minimum levels could be insufficient to constitute domestic production. The Commission generally considers six factors in this analysis: (1) source and extent of the firm’s capital investment; (2) technical expertise involved in U.S. production activities; (3) value added to the product in the United States; (4) employment levels; (5) quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product.²⁵

a. The Original Investigations and First Five-Year Reviews

In the original investigations, the Commission was evenly split with respect to whether tableters engaged in sufficient production related activities to be considered domestic producers.²⁶ Chairman Koplán and Commissioners Miller and Hillman found that although

²² Domestic Producers Response to the Notice of Institution at 20 (Oct. 1, 2015) (“Domestic Producers Response”); Domestic Producers Prehearing Brief at 9 (Aug. 29, 2016).

²³ See *generally* CR at I-15-21, PR at I-10-15.

²⁴ 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.

²⁵ *Diamond Sawblades and Parts Thereof from China and Korea*, Inv. Nos. 731-TA-1092-1093 (Final), USITC Pub. 3862 at 8-11 (July 2006).

²⁶ Original Determinations, USITC Pub. 3782 at 10-14.

there was variability in the reported capital investment necessary for tableting and the value added by tableting, the capital investment necessary for tableting was significant and the value added was reported to be in the range of 15 to 35 percent; a moderate level of technical expertise was required for tableting due to the heavy machinery and hazardous material involved; and a significant number of personnel were involved in tableting operations.²⁷ On balance, they found that tableters engaged in sufficient production-related activities to qualify as domestic producers and included them in the domestic industry.²⁸ Vice Chairman Okun and Commissioners Lane and Pearson found that the general capital investment necessary for tableting was not significant in comparison to that necessary to establish an integrated chlorinated isos operation, the level of technical expertise for tableting was not comparable to that necessary in the upstream process, a wage differential existed between workers that produced granular chlorinated isos and those that tableted the granular product, and tableters employed fewer workers than integrated producers of chlorinated isos. They found that on balance, tableters did not engage in sufficient production-related activities to qualify as domestic producers and therefore did not include them in the domestic industry.²⁹

In the expedited first five-year reviews, the Commission defined the domestic industry as all domestic integrated producers of chlorinated isos. It did not include tableters in the domestic industry.³⁰ Based on the record, the Commission found that although the capital investment necessary for tableting was not insubstantial, it was much less than that required for production of granular chlorinated isos and that the value added by the tableting and repackaging process reported by most producers during the original investigations was in the range of *** percent to *** percent.³¹ Additionally, the Commission found that only a moderate degree of technical expertise was necessary to conduct tableting and repackaging operations, which did not compare with that required by the upstream process; that producers of granular chlorinated isos employed *** times as many personnel as tableters; and that tableters reported significant employment of personnel who were not directly involved in tableting production, but instead were involved in support or prepacking positions.³² The Commission, therefore, concluded that tableters did not engage in sufficient production-related activities to qualify as domestic producers.³³

²⁷ Original Determinations, USITC Pub. 3782 at 12.

²⁸ Original Determinations, USITC Pub. 3782 at 12.

²⁹ Original Determinations, USITC Pub. 3782 at 14.

³⁰ First Five-Year Reviews, USITC Pub. 4184 at 7. Commissioners Williamson and Pinkert found that tableters engaged in sufficient production-related activities to be included in the domestic industry. First Five-Year Reviews, USITC Pub. 4184 at 6 n.26.

³¹ First Five-Year Reviews, USITC Pub. 4184 at 5-6; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 5. No tableters responded to the Commission's notice of institution and no new evidence was placed on the record regarding the issue of whether tableters should be included in the domestic industry definition. First Five-Year Reviews, USITC Pub. 4184 at 5.

³² First Five-Year Reviews, USITC Pub. 4184 at 6; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 5.

³³ First Five-Year Reviews, USITC Pub. 4184 at 5-6.

b. The Current Five-Year Reviews

The domestic producers do not dispute that the three integrated producers (Clearon, OxyChem, and BioLab) are domestic producers of chlorinated isos. They argue, however, that tableters do not qualify as domestic producers because the capital assets and expenditures of tableters are not comparable to those expended by the integrated producers for their granular operations, the value added by tableting is low, and the skill level and wage rate of employees who produce granular chlorinated isos are much greater than those of employees in tableting operations.³⁴

As explained below, we find that the record in these reviews indicates that tableters engage in sufficient production-related activities to be considered producers of the domestic like product.³⁵

Source and Extent of the Firm's Capital Investment. The capital investment and capital expenditures necessary for tableting operations are relatively modest and are considerably lower than the investment necessary to produce granular chlorinated isos. The tableters that provided financial data reported total assets of \$*** in 2013, \$*** in 2014, and \$*** in 2015,³⁶ whereas the three integrated chlorinated isos producers reported total assets of \$*** in 2013, \$*** in 2014, and \$*** in 2015.³⁷ The tableters reported capital expenditures of \$*** in 2013, \$*** in 2014, and \$*** in 2015.³⁸ Integrated chlorinated isos producers reported capital expenditures of \$*** in 2013, \$*** in 2014, and \$*** in 2015.³⁹

Technical Expertise Involved in U.S. Production Activities. The production of granular chlorinated isos involves a succession of chemical processes⁴⁰ whereas the tableting process is a physical process that forms the product, typically with a 1-inch or 3-inch diameter.⁴¹ Tableters and domestic integrated producers reported that while tableting operations entail less employee training than granular chlorinated isos production, they nevertheless involve hazardous chemicals, which require specialized equipment and maintenance, specific measures to prevent the release of caustic gas (which may result in respiratory and other health-related issues), and appropriately trained staff.⁴² Workers producing the granular product are paid

³⁴ Hearing Tr. at 31 (Cannon); Domestic Producers Final Comments at 8 (Oct. 19, 2016).

³⁵ Vice Chairman Johanson does not join this finding and instead finds that the tableters do not engage in sufficient production-related activities to qualify as domestic producers. See Separate Views of Vice Chairman David S. Johanson.

³⁶ CR/PR at Table III-16. These data are only for firms that are independent tableters.

³⁷ CR/PR at Table III-16.

³⁸ CR/PR at Table III-15. These data are only for firms that are independent tableters.

³⁹ CR/PR at Table III-15.

⁴⁰ CR at I-16-17, PR at I-11-12.

⁴¹ CR at I-17 n.30, PR at I-12, n.30.

⁴² Domestic Producers Email Response (Sept. 29, 2016); N. Jonas Email response (Sept. 27, 2016); Oreq Email Response (Sept. 30, 2016); LPM Email Response (Sept. 28, 2016); Stellar Email Response (Sept. 27, 2016) (EDIS Doc. 591787).

approximately \$*** per hour.⁴³ Workers who tablet the granular product are paid approximately \$*** per hour.⁴⁴

Value Added to the Product in the United States. During the period of review, the value added by *** through its U.S. tableting operations excluding selling, general, and administrative (“SG&A”) expenses ranged from *** percent, and the value added including SG&A expenses ranged from *** percent.⁴⁵ During this same period, the value added by *** through its U.S. tableting operations excluding SG&A expenses ranged from *** percent, and the value added including SG&A expenses ranged from *** percent.⁴⁶

Employment Levels. The tableters that responded to the Commission’s questionnaire reported an aggregate *** production and related workers (“PRWs”) in 2013, *** in 2014, and *** in 2015.⁴⁷ Integrated producers of chlorinated isos reported an aggregate *** PRWs in 2013, *** in 2014, and *** in 2015.⁴⁸

Quantity and Type of Parts Sourced in the United States. The record indicates that U.S. tableters source granular chlorinated isos from domestic producers and from subject and nonsubject sources.⁴⁹

Other Costs and Activities in the United States Leading to Production of the Like Product. Tableters report other significant costs incurred in the United States, including training, marketing, machinery repair, and licensing costs.⁵⁰

Conclusion. Based on the record in these second reviews, we find that the tableters are engaged in sufficient production-related activities to qualify as domestic producers. Tableting operations involve some technical expertise involving hazardous materials. The tableters

⁴³ *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016).

⁴⁴ *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016).

⁴⁵ CR/PR at Table III-11.

⁴⁶ CR/PR at Table III-12.

⁴⁷ *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016).

⁴⁸ *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016); *** U.S. Producer Questionnaire Response at II-13 (June 21, 2016). BioLab and Clearon reported between *** and *** PRWs for their tableting operations in the full years of the period of review, lending further support to a finding that tableting entails substantial employment levels.

⁴⁹ CR/PR at Table I-7.

⁵⁰ Domestic Producers Email Response (Sept. 29, 2016); N. Jonas Email response (Sept. 27, 2016); Oreq Email Response (Sept. 30, 2016); LPM Email Response (Sept. 28, 2016); Stellar Email Response (Sept. 27, 2016) (EDIS Doc. 591787).

employ a substantial number of PRWs in their U.S. operations. The value added to the finished product by tableting including SG&A expenses ranged from *** percent during the period of review, which is not insubstantial. The record indicates that U.S. tableters source granular chlorinated isos from domestic as well as subject and nonsubject sources. Tableters also reported other significant costs as part of their tableting operations, including training, marketing, machinery repair, and licensing costs. We accordingly find that tableters engage in sufficient production-related activities to be considered producers of the domestic like product.

2. Related Parties

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.⁵¹ Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.⁵²

a. The Original Investigation and First Five-Year Reviews

In the original investigations, the Commission found that one domestic integrated producer and certain tableters were related parties. It determined, however, that appropriate circumstances did not exist to exclude any integrated producer or tableter from the domestic industry as a related party under 19 U.S.C. § 1677(4)(B).⁵³

⁵¹ See *Torrington Co v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.*, 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

⁵² The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

- (1) the percentage of domestic production attributable to the importing producer;
- (2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);
- (3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;
- (4) the ratio of import shipments to U.S. production for the imported product; and
- (5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l Trade 2015); see also *Torrington Co. v. United States*, 790 F. Supp. at 1168.

⁵³ Original Determinations, USITC Pub. 3782 at 15-17. In the original investigations, the Commission identified BioLab, a domestic integrated producer, and Alden Leeds and Cadillac, tableters, as related parties by virtue of their importation of subject merchandise. See *id.* Regarding BioLab, the Commission found that subject import quantities were small when compared to its domestic production (Continued...)

In the expedited first five-year reviews, the Commission included all domestic integrated producers in the domestic industry. There were no related parties issues.⁵⁴

b. The Current Reviews

The record of these reviews indicates that no domestic integrated producer is a related party.⁵⁵ One tableter – *** – purchased chlorinated isos from China during the period of review.⁵⁶ Altogether, *** purchased *** short tons of chlorinated isos from China in 2013, *** short tons of chlorinated isos from China in 2014, and *** short tons of chlorinated isos from China in 2015.⁵⁷ The Commission has concluded that a domestic producer that does not itself import subject merchandise, or does not share a corporate affiliation with an importer, may nonetheless be deemed a related party if it controls large volumes of imports. The Commission has found such control to exist where the domestic producer was responsible for a predominant proportion of an importer's purchases and the importer's purchases were substantial.⁵⁸ Assuming *arguendo* that *** is a related party by virtue of its purchases of subject merchandise, we find that appropriate circumstances do not exist to exclude it from the domestic industry.⁵⁹ We therefore define the domestic industry as all U.S. integrated producers and tabletters of chlorinated isos.

(...Continued)

and that the financial data did not show that its production operations derived a substantial benefit from such imports during the period of investigation. *See id.* at 16-17. Regarding Alden Leeds and Cadillac, the Commission found that the companies used subject imports of granular chlorinated isos to produce tablets, which competed against imports of subject tablets, and that the companies were not shielded from the effects of injury caused by subject imports. *See id.* at 15-17.

⁵⁴ First Five-Year Reviews, USITC Pub. 4184 at 6.

⁵⁵ Because Vice Chairman Johanson does not find that tabletters engage in sufficient production-related activities to be domestic producers, he does not reach the issue addressed in the remainder of this paragraph. He defines the domestic industry to include all integrated producers of chlorinated isos.

⁵⁶ CR/PR at Table I-7.

⁵⁷ *** U.S. Producer Questionnaire Response at II-14(a) (June 21, 2016).

⁵⁸ *See, e.g., Foundry Coke from China*, Inv. No. 731-TA-891 (Final), USITC Pub. 3449 (September 2001) at 8-9; *Certain Cut-to-Length Steel Plate from the Czech Republic, France, India, Indonesia, Italy, Japan, Korea, and Macedonia*, Inv. Nos. 701-TA-387-392 and 731-TA-815-822 (Preliminary), USITC Pub. 3181 at 12 (April 1999); *Certain Brake Drums and Rotors from China*, Inv. No. 731-TA-744 (Final), USITC Pub. 3035 at 10 n.50 (April 1997).

⁵⁹ Although *** purchases of subject imports in 2013 and 2015 were very modest, its purchases in 2014 were greater and amounted to *** percent of total subject imports from China that year. *Compare* CR/PR at Table III-6 with *id.* at Table IV-1. *** purchased chlorinated isos from domestic sources as well as from China and arranged for the granular product to be tableted by toll producers. CR/PR at Table I-7. It then transferred the tablets to ***. CR/PR at Table I-7; *** Purchaser Questionnaire Response at III-3 (June 21, 2016). ***'s U.S. tablet production was *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. CR/PR at Table III-6. It accounted for *** percent of reported U.S. tablet production in 2015. CR/PR at Table I-8. The ratio of ***'s purchases of subject merchandise to its U.S. tablet production was *** percent in 2013, *** percent in 2014, and *** percent (Continued...)

III. Cumulation

A. Legal Standard

With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows: the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.⁶⁰

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.⁶¹ The Commission may exercise its discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

B. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.⁶² Neither the

(...Continued)

in 2015. CR/PR at Table III-6. *** reports that it entered into a supply contract with a domestic producer of granular chlorinated isos and that pursuant to this contract, the domestic producer supplied approximately *** percent of ***'s chlorinated isos purchases in 2015. *** Purchaser Questionnaire Response at III-11 (June 21, 2016). It takes *** with respect to the continuation of the antidumping duty orders. CR/PR at Table I-8. Particularly in light of ***'s contractual agreement with a domestic producer and the *** amount of ***'s purchases of subject imports in 2015, the record in these second reviews supports a finding that the interests of *** lie principally in domestic production operations.

⁶⁰ 19 U.S.C. § 1675a(a)(7).

⁶¹ 19 U.S.C. § 1677(7)(G)(i); *see also, e.g., Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

⁶² 19 U.S.C. § 1675a(a)(7).

statute nor the Uruguay Round Agreements Act (“URAA”) Statement of Administrative Action (“SAA”) provides specific guidance on what factors the Commission is to consider in determining that imports “are likely to have no discernible adverse impact” on the domestic industry.⁶³ With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each subject country takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations. For each subject country, in the first reviews, the Commission found that subject imports were not likely to have no discernible adverse impact if the relevant order were revoked.⁶⁴

China. In the original investigations, Chinese producers exported substantial volumes of chlorinated isos to the United States.⁶⁵ The volume of subject imports from China increased from *** short tons in 2002 to *** short tons in 2003 and *** short tons in 2004. Subject imports’ share of apparent U.S. consumption grew from *** percent in 2002 to *** percent in 2003 and *** percent in 2004.⁶⁶ The record showed prevalent underselling of the domestic like product by these subject imports.⁶⁷

In the expedited first five-year reviews, the Commission observed that official U.S. import statistics indicated that subject imports from China had a continued presence in the U.S. market; in 2009, their share of apparent U.S. consumption was *** percent.⁶⁸ Based on the quantities of subject imports from China during the original investigations, the volume of subject imports during the first reviews, the export orientation of the Chinese industry, the Chinese producers’ significant production capacity and excess capacity, the substitutability of subject imports and the domestic like product, the importance of price in purchasing decisions, and the underselling by subject imports from China during the original investigations, the Commission did not find that subject imports from China would likely have no discernible adverse impact on the domestic industry if the orders were revoked.⁶⁹

In the current reviews, the Commission did not receive questionnaire responses from any producer or exporter of chlorinated isos from China; it received questionnaire responses from two U.S. importers that imported subject merchandise from China in 2013 and 2014 but accounted for *** percent of total chlorinated imports from China in 2015.⁷⁰ Based on

⁶³ SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

⁶⁴ First Five-Year Reviews, USITC Pub. 4184 at 8-11.

⁶⁵ First Five-Year Reviews, USITC Pub. 4184 at 9.

⁶⁶ First Five-Year Reviews, USITC Pub. 4184 at 9; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 9-10.

⁶⁷ First Five-Year Reviews, USITC Pub. 4184 at 10; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 10.

⁶⁸ First Five-Year Reviews, USITC Pub. 4184 at 9; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 10.

⁶⁹ First Five-Year Reviews, USITC Pub. 4184 at 10.

⁷⁰ CR at I-32, PR at I-21; CR/PR at Table I-8.

questionnaire data and supplementary Customs data for 2013 and 2014 and Customs data for 2015, the volume of subject imports from China was *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015.⁷¹ Global exports of chlorinated isos from China fluctuated from 111,691 short tons in 2013 to 121,619 short tons in 2014 and 111,449 short tons in 2015.⁷² The domestic producers state that Chinese producers recently constructed two manufacturing facilities that added a combined capacity of 100,000 short tons to their existing capacity of 141,500 short tons.⁷³ Additionally, they state that Chinese firms have increased production of cyanuric acid, a raw material for chlorinated isos, and that there has been a commensurate increase in Chinese production of downstream products including chlorinated isos.⁷⁴

In light of the foregoing, we do not find that chlorinated isos imports from China would likely have no discernible adverse impact on the domestic industry if the antidumping duty order on these imports were revoked.

Spain. In the original investigations, two firms produced chlorinated isos in Spain: Aragonesas Delsa S.A. (“Aragonesas”) and Inquide Flix, S.A. (“Inquide”). Only Aragonesas exported chlorinated isos to the United States.⁷⁵ Aragonesas operated at a relatively *** level of capacity utilization and produced and exported significant volumes of granular chlorinated isos to the United States.⁷⁶ The volume of subject imports from Spain increased from *** short tons in 2002 to *** short tons in 2003, before declining to *** short tons in 2004. Subject imports’ share of apparent U.S. consumption was *** percent in 2002, *** percent in 2003, and *** percent in 2004.⁷⁷ These subject imports mostly undersold the domestic like product.⁷⁸

In the expedited first five-year reviews, the Commission observed that official U.S. import statistics indicated that subject imports from Spain had a continued presence in the U.S. market; in 2009, their share of apparent U.S. consumption was *** percent.⁷⁹ In light of the appreciable quantities of subject imports from Spain during the original investigations, the volume of subject imports from Spain during the first review, the export orientation of the Spanish industry, the substitutability of subject imports and the domestic like product, the importance of price in purchasing decisions, and evidence of underselling by subject imports

⁷¹ CR/PR at Table IV-1.

⁷² CR/PR at Table IV-5.

⁷³ Domestic Producers Response at 17, Exs. 5 & 6; Domestic Producer Prehearing Br. at 20.

⁷⁴ Domestic Producers Response at 17, Ex. 7.

⁷⁵ First Five-Year Reviews, USITC Pub. 4184 at 10.

⁷⁶ First Five-Year Reviews, USITC Pub. 4184 at 10; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 12.

⁷⁷ First Five-Year Reviews, USITC Pub. 4184 at 10; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 11.

⁷⁸ First Five-Year Reviews, USITC Pub. 4184 at 11; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 12.

⁷⁹ First Five-Year Reviews, USITC Pub. 4184 at 10; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 11.

from Spain during the original investigations, the Commission did not find that subject imports from Spain would likely have no discernible adverse impact on the domestic industry if the orders were revoked.⁸⁰

In the current reviews, the Commission did not receive questionnaire responses from any producer or exporter of subject chlorinated isos from Spain; it received a questionnaire response from one U.S. importer accounting for *** percent of total imports of chlorinated isos from Spain in 2015.⁸¹ Based on questionnaire data and supplementary Customs data for 2013 and 2014 and questionnaire data for 2015, the volume of subject imports from Spain was *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015.⁸² Global exports of chlorinated isos from Spain increased from 14,225 short tons in 2013 to 17,502 short tons in 2014 and 19,895 short tons in 2015.⁸³ The domestic producers report that Inquide ceased production of chlorinated isos in 2009. They contend that Inquide's closure is not significant because it had capacity of only 7,700 short tons and had not exported chlorinated isos to the United States during the original investigations.⁸⁴ Moreover, Aragonesas, now known as Ecros S.A. ("Ecros"), expanded its capacity from 16,000 metric tons to 21,000 metric tons in 2013 and recently announced plans to expand further its capacity to 28,000 metric tons.⁸⁵ In addition, the domestic producers state that another Spanish company, Electroquimica de Hernani S.A. ("Electroquimica"), which currently produces numerous chlorine-based chemicals, recently obtained government funding for a project to install capacity to produce chlorinated isos.⁸⁶ According to domestic producers, Electroquimica will begin chlorinated isos production in the "imminent" future as evidenced by its ***.⁸⁷

In light of the foregoing, we do not find that chlorinated isos imports from Spain would likely have no discernible adverse impact on the domestic industry if the antidumping duty order on these imports were revoked.

C. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like product.⁸⁸ Only a "reasonable overlap" of competition is required.⁸⁹ In five-year reviews, the

⁸⁰ First Five-Year Reviews, USITC Pub. 4184 at 11.

⁸¹ CR at I-32, PR at I-21.

⁸² CR/PR at Table IV-1.

⁸³ CR/PR at Table IV-6.

⁸⁴ Domestic Producer Posthearing Br. at Ex. 1, pp. 8 -9.

⁸⁵ CR at IV-10-11, PR at IV-6; Domestic Producers Prehearing Br. at 22, Ex. 4.

⁸⁶ Domestic Producer Prehearing Br. at 22, Exs. 2 & 5; *** Purchaser Questionnaire Response at III-14 (June 21, 2016).

⁸⁷ Domestic Producers Posthearing Br. at Ex. 1, pp. 9-10.

⁸⁸ The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like (Continued...)

relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.⁹⁰

In the original investigations, the Commission found a reasonable overlap of competition between subject imports from China and Spain and between imports from each subject source and the domestic like product.⁹¹ In the first five-year reviews, the Commission again found a likely reasonable overlap in competition between imports from the subject countries and between the domestic like product and subject imports from China and Spain.⁹²

As discussed below, the record in these current reviews with respect to the four factors the Commission generally considers in assessing whether imports compete with each other and with the domestic like product indicates a likely reasonable overlap in competition.

Fungibility. In the original investigations, the Commission found that a majority of producers, importers, and purchasers reported that chlorinated isos from China and Spain were always or frequently interchangeable with the domestic like product, although some importers and purchasers reported that subject imports from China were of a lower quality.⁹³

In the expedited first five-year reviews, the Commission observed that the record did not contain any new information concerning likely reasonable overlap of competition that would contradict the Commission's findings in the original investigations. It, therefore, found that the conclusions reached by the Commission in the original investigations concerning fungibility were applicable.⁹⁴

(...Continued)

product, including consideration of specific customer requirements and other quality-related questions; (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product; (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and (4) whether subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

⁸⁹ *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland Werke*, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel Group v. United States*, 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g., Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), *aff'd sub nom, Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

⁹⁰ *See generally, Cheflin Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).

⁹¹ Original Determinations, USITC Pub. 3782 at 19-20.

⁹² First Five-Year Reviews, USITC Pub. 4184 at 8-13.

⁹³ Original Determinations, USITC Pub. 3782 at 19-20.

⁹⁴ First Five-Year Reviews, USITC Pub. 4184 at 12.

The record in these current reviews indicates that domestically produced chlorinated isos and subject imports from China and Spain continue to be fungible.⁹⁵ While there may be some quality differences between the products, including inferiority of subject merchandise from China in terms of granular particle size and odor,⁹⁶ the majority of market participants reported that chlorinated isos from the United States, China, and Spain are always or frequently interchangeable.⁹⁷ Most purchasers also reported that subject merchandise from China and Spain are comparable to each other and to the domestic like product in terms of non-price factors such as product consistency, product range, and quality meeting industry standards.⁹⁸ The responses of market participants indicate that any perceived quality differences of subject imports from China and Spain do not significantly affect the fungibility of the products.

Channels of Distribution. In the original investigations and expedited first five-year reviews, the Commission found that, although there were some differences, the channels of distribution between subject imports from China, subject imports from Spain, and the domestic like product overlapped.⁹⁹

In these current five-year reviews, U.S. producers, which include domestic integrated producers and tableters, and importers of chlorinated isos from China and Spain shared similar channels of distribution for their shipments of tableted chlorinated isos. Specifically, they directed the *** majority of their commercial shipments of tableted chlorinated isos to retailers and distributors, with a substantial share of shipments of the domestic like product and imports from each subject country being directed to retailers.¹⁰⁰ For granular chlorinated isos, however, the record indicates some distinctions in the distribution patterns for the domestic like product and subject imports from China and Spain. The majority of the domestic like

⁹⁵ See, e.g., CR/PR at Tables II-9-10.

⁹⁶ CR at II-21, II-23, PR at II-13, II-15.

⁹⁷ CR/PR at Table II-10.

⁹⁸ CR/PR at Table II-9. Majorities or pluralities found the domestic like product superior to subject imports from China in factors such as availability, delivery terms and time, and technical support/service. *Id.*

⁹⁹ Original Determinations, USITC Pub. 3782 at 20; First Five-Year Reviews, USITC Pub. 4184 at 12.

¹⁰⁰ CR/PR at Table II-2. U.S. producers' U.S. shipments of tableted chlorinated isos to retailers were *** percent of their total shipments in 2013, *** percent in 2014, and *** percent in 2015; their shipments of this product to distributors were *** percent of their total shipments in 2013, *** percent in 2014, and *** percent in 2015. U.S. importers' U.S. shipments of tablets imported from China to retailers were *** percent of their total shipments in 2013 and *** percent in 2014; their U.S. shipments to distributors were *** percent of their total shipments in 2013 and *** percent in 2014. U.S. importers' U.S. shipments of tablets imported from Spain to retailers were *** percent of their total shipments in 2014 and *** percent in 2015; their U.S. shipments to distributors were *** percent of their total shipments in 2014 and *** percent in 2015. See *id.*

product was sold to retailers, while the majority of subject imports from China was sold to distributors and all subject imports from Spain were sold ***.¹⁰¹

Geographic Overlap. In the original investigations, the Commission found that domestic integrated producers, several tableters, and several large importers reported that they sold their products to national markets.¹⁰² In the expedited first five-year reviews, the Commission found that the conclusions it reached in the original investigations concerning geographic overlap were applicable.¹⁰³

In the current reviews, domestic producers, which include domestic integrated producers and tableters, and importers of subject merchandise from China and Spain reported selling chlorinated isos to all regions in the United States.¹⁰⁴

Simultaneous Presence in Market. In the original investigations and expedited first five-year reviews, the Commission found that subject imports from China and Spain and the domestic like product were simultaneously present in the U.S. market throughout the period examined.¹⁰⁵

In the current reviews, based on official import statistics, imports of chlorinated isos from China were present in 33 out of 36 months between January 2013 and December 2015, and imports of chlorinated isos from Spain were present in 18 out of 36 months during this same time period.¹⁰⁶

Conclusion. The record of these second reviews indicates that there has not been any change in the considerations that led the Commission in the prior reviews to conclude that there would be a likely reasonable overlap of competition between subject imports from China and Spain and between imports from each subject source and the domestic like product. In particular, the domestic like product and imports from China and Spain remain fungible. Upon revocation, subject imports from each source would likely have the geographic overlap and simultaneous presence in the market that they did prior to imposition of the orders. Notwithstanding that there was some disparity in the channels of distribution for domestically produced granular chlorinated isos and subject imports of the granular product from China and Spain, there nonetheless is a reasonable overlap in channels of distribution based on the record

¹⁰¹ CR/PR at Table II-1. U.S. producers' U.S. shipments of granular chlorinated isos to retailers were *** percent of their total shipments in 2013, *** percent in 2014, and *** percent in 2015. U.S. importers' U.S. shipments of granular chlorinated isos imported from China to distributors were *** percent of their total shipments in 2013 and *** percent in 2014; their U.S. shipments to retailers were *** percent in 2013 and *** percent in 2014. U.S. importers' U.S. shipments of granular chlorinated isos imported from Spain to the industrial market were *** percent of their total shipments in 2014. *See id.*

¹⁰² Original Determinations, USITC Pub. 3782 at 20.

¹⁰³ First Five-Year Reviews, USITC Pub. 4184 at 12.

¹⁰⁴ CR/PR at Table II-3.

¹⁰⁵ Original Determinations, USITC Pub. 3782 at 20; First Five-Year Reviews, USITC Pub. 4184 at

12.

¹⁰⁶ CR at IV-6, PR at IV-2-3.

of these second reviews. As discussed above, the record indicates considerable overlap in channels of distribution for tableted chlorinated isos, which represented a sizable portion of the U.S. market during the period of review.¹⁰⁷

Consequently, we find that there will be a likely reasonable overlap of competition between the domestic like product and subject imports, and between imports from China and Spain, should the orders be revoked.

D. Likely Conditions of Competition

We next consider whether subject imports from any source are likely to compete under different conditions of competition in the U.S. market than other subject imports.

In the first reviews, the Commission did not find that subject imports from either subject country were likely to compete under different conditions of competition in the U.S. market in the event of revocation.¹⁰⁸ Domestic producers argue that the Commission should not decline to cumulate subject imports from China and Spain based on likely conditions of competition.¹⁰⁹

In the current reviews, the record indicates that chlorinated isos products manufactured by subject producers in China and Spain and by producers in the United States are generally substitutable for one another and that subject producers in each of these subject countries have substantial capacity to produce chlorinated isos and are export oriented. In light of our consideration of these likely conditions of competition, we exercise our discretion to cumulate subject imports from China and Spain.

E. Conclusion

We find that the no discernible adverse impact exception to cumulation does not apply with respect to subject imports from China or Spain and that there would likely be a reasonable overlap of competition between imports from each of these countries and between imports from each country and the domestic like product. We also determine that subject imports from China and Spain would be likely to compete under similar conditions of competition. Accordingly, for the reasons discussed above, we exercise our discretion to cumulate subject imports from China and Spain.

¹⁰⁷ CR/PR at Tables III-3 & C-1.

¹⁰⁸ First Five-Year Reviews, USITC Pub. 4184 at 13.

¹⁰⁹ Domestic Producers Prehearing Br. at 19.

IV. Whether Revocation of the Antidumping Duty Orders 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.”¹¹⁰ 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.”¹¹¹ Thus, the likelihood standard is prospective in nature.¹¹² 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.¹¹³

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.”¹¹⁴ According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but

¹¹⁰ 19 U.S.C. § 1675a(a).

¹¹¹ 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.

¹¹² 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.

¹¹³ 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’”).

¹¹⁴ 19 U.S.C. § 1675a(a)(5).

normally will exceed the ‘imminent’ timeframe applicable in a threat of injury analysis in original investigations.”¹¹⁵

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.”¹¹⁶ 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).¹¹⁷ 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.¹¹⁸

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.¹¹⁹ 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 country, which can be used to produce the subject merchandise, are currently being used to produce other products.¹²⁰

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

¹¹⁵ 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.*

¹¹⁶ 19 U.S.C. § 1675a(a)(1).

¹¹⁷ 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings concerning chlorinated isos from China and Spain. CR at I-10 n.17; PR at I-6 n.17.

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

¹¹⁹ 19 U.S.C. § 1675a(a)(2).

¹²⁰ 19 U.S.C. § 1675a(a)(2)(A-D).

United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.¹²¹

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.¹²² 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.¹²³

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.”¹²⁴ The following conditions of competition inform our determinations.

Demand Conditions. In the original investigations, the Commission found that demand for chlorinated isos increased. Specifically, apparent U.S. consumption increased from 125,166 short tons in 2002 to 127,912 short tons in 2003 and 148,251 short tons in 2004.¹²⁵ The Commission observed that chlorinated isos were used for pool sanitization and industrial water treatments and in the production of cleansers, and that demand for the product was seasonal, peaking in the spring and summer months.¹²⁶ The Commission further observed that although U.S. demand for chlorinated isos generally tracked overall economic activity, market

¹²¹ 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.

¹²² 19 U.S.C. § 1675a(a)(4).

¹²³ 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.

¹²⁴ 19 U.S.C. § 1675a(a)(4).

¹²⁵ Original Determinations, USITC Pub. 3782 at 21.

¹²⁶ Original Determinations, USITC Pub. 3782 at 22.

participants reported that it was dependent on new home construction, installation of new pools, and weather conditions.¹²⁷

In the expedited first five-year reviews, Clearon and OxyChem reported that there was slow growth in demand in the U.S. market due to the decline in the U.S. housing market and the weak economy.¹²⁸ The Commission observed that apparent U.S. consumption in 2009, at *** short tons, was lower than at any time during the original investigations.¹²⁹

In these current reviews, most domestic producers reported that demand for chlorinated isos, which continues to be seasonal based on weather and swimming pool use, decreased since January 1, 2013.¹³⁰ *** indicated that, in addition to poor weather conditions, the decline in chlorinated isos sales since 2011 was due in part to competition with salt water chlorination systems.¹³¹ The domestic producers observe, however, that new pools, the majority of which now use salt water chlorination systems, account for only a small share of the entire market for chlorinated isos.¹³² They contend that because chlorinated isos are used primarily in the maintenance of existing pools, 40 percent of which are above-ground pools that are unlikely to switch to the higher-cost salt water chlorination systems, demand will be stable over the reasonably foreseeable future.¹³³ Other market participants provided mixed responses when asked about demand trends for chlorinated isos since January 2013, but a majority indicated that demand had either decreased or remained the same.¹³⁴ Additionally, a majority of market participants reported that future demand for chlorinated isos would either decrease or remain the same.¹³⁵

During the period of review, apparent U.S. consumption decreased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015. The overall decline in apparent consumption was *** percent from 2013 to 2015.¹³⁶

Supply Conditions. In the original investigations, the Commission found that the market was supplied by three large domestic integrated producers, several tableters, and imports from subject and nonsubject sources.¹³⁷ The Commission observed that these market participants

¹²⁷ Original Determinations, USITC Pub. 3782 at 22.

¹²⁸ First Five-Year Reviews, USITC Pub. 4184 at 16.

¹²⁹ First Five-Year Reviews, USITC Pub. 4184 at 16; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 19.

¹³⁰ CR/PR at Table II-4.

¹³¹ *** U.S. Producer Questionnaire Response at IV-11 (June 21, 2016).

¹³² Domestic Producers Posthearing Br. at 4. The domestic producers state that pools that are equipped with salt water chlorination systems still require the use of chlorinated isos tablets for shock treatments. Hearing Tr. at 41-42 (Viner).

¹³³ Domestic Producers Posthearing Br. at 4.

¹³⁴ CR/PR at Table II-4.

¹³⁵ CR/PR at Table II-4.

¹³⁶ CR/PR at Tables I-11, C-1. Apparent U.S. consumption for each year from 2013 to 2015 was higher than that for 2002 and 2003 but lower than that for 2004.

¹³⁷ Original Determinations, USITC Pub. 3782 at 22.

often had dual roles and overlapping customers.¹³⁸ Specifically, the Commission observed that the domestic integrated producers either sold their granular chlorinated isos to tableters or directly to retailers and that they had some of the same distributor, retail, and mass market customers as tableters, thereby competing downstream with companies that they supplied with granular product.¹³⁹ The Commission further observed that several tableters relied primarily on subject imports for their raw materials, although some of them also purchased nonsubject imports or domestically produced chlorinated isos.¹⁴⁰

The Commission also found that the Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”) affected the supply of chlorinated isos in the U.S. market. FIFRA required in-depth studies to be completed determining the environmental safety of chlorinated isos. It also required any company wishing to sell chlorinated isos in the United States to file an application with the EPA citing to these studies to obtain a license to sell the product. Because performing these studies was time-consuming and costly, individual producers were permitted to rely on studies that had been completed in 1986 by an Ad Hoc Committee comprised of the three domestic integrated producers, several nonsubject suppliers of chlorinated isos to the U.S. market, and the Spanish producer Aragonesas. The Ad Hoc Committee charged a \$400,000 fee to non-member applicants for use of the studies until 2001. Beginning in 2001, this research was available to importers without payment of any fees, which made it significantly less costly for importers to obtain the required EPA registration and easier for importers to sell chlorinated isos in the United States.¹⁴¹

In the expedited first five-year reviews, the Commission found that since the original investigations, the volume of nonsubject imports from Japan and Vietnam had increased, particularly in 2008 and 2009.¹⁴²

In the current reviews, the U.S. market has continued to be supplied by three domestic integrated producers (OxyChem, BioLab, and Clearon), several tableters (*e.g.*, LPM, N. Jonas, Oreq, Stellar), and imports from subject and nonsubject sources.

The domestic industry was the largest source of chlorinated isos in the U.S. market during the period of review; its share of apparent U.S. consumption increased from *** percent in 2013 to *** percent in 2014 and *** percent in 2015.¹⁴³ Cumulated subject imports decreased their presence in the U.S. market during the period of review; their share of apparent U.S. consumption decreased from *** percent in 2013 to *** percent in 2014 and *** percent in 2015.¹⁴⁴ Nonsubject imports also decreased their presence in the U.S. market; their

¹³⁸ Original Determinations, USITC Pub. 3782 at 22.

¹³⁹ Original Determinations, USITC Pub. 3782 at 22-23.

¹⁴⁰ Original Determinations, USITC Pub. 3782 at 23.

¹⁴¹ Original Determinations, USITC Pub. 3782 at 23.

¹⁴² First Five-Year Reviews, USITC Pub. 4184 at 17.

¹⁴³ CR/PR at Table I-11.

¹⁴⁴ CR/PR at Table I-11. In the 2014 investigations, the Commission made an affirmative threat determination on a non-cumulated basis with respect to subsidized chlorinated isos imports from China. *Chlorinated Isocyanurates from China and Japan*, Inv. Nos. 701-TA-501 and 731-TA-1226 (Final), USITC (Continued...)

share of apparent U.S. consumption decreased from *** percent in 2013 to *** percent in 2014 and *** percent in 2015.¹⁴⁵ The largest nonsubject sources of chlorinated isos imports in 2015 were Japan, Italy, and Mexico.¹⁴⁶

Substitutability. In the original investigations, the Commission observed that a majority of producers, importers, and purchasers reported that domestically produced chlorinated isos and subject imports from China and Spain were always or frequently interchangeable and that purchasers reported price to be an important consideration in purchasing decisions.¹⁴⁷ In the expedited first five-year reviews, the Commission found nothing on the record that indicated that it should reconsider its finding regarding substitutability or the importance of price in purchasing decisions since the time of the original investigations.¹⁴⁸

The record in the current reviews indicates that there is at least a moderate degree of substitutability between domestically produced chlorinated isos and chlorinated isos from both subject sources.¹⁴⁹ As discussed above, the majority of market participants reported that chlorinated isos from the United States, China, and Spain were always or frequently interchangeable, despite the fact that there were some quality differences between the products from the different sources.¹⁵⁰

The vast majority of responding purchasers reported that either price or quality was the most important factor in purchasing decisions.¹⁵¹ Price was the most frequently cited as one of the top three factors considered in purchasing decisions, followed by quality and availability.¹⁵² Because most responding purchasers reported that chlorinated isos from the United States and each subject country always or usually met minimum quality specifications,¹⁵³ we find that price plays an important role in purchasing decisions.

C. Likely Volume of Cumulated Subject Imports

1. The Original Investigations and First Five-Year Reviews

In the original investigations, the Commission found that the volume of cumulated subject imports was significant, both in absolute terms and relative to consumption. The volume of cumulated subject imports increased from *** short tons in 2002 to *** short tons

(...Continued)

Pub. 4494 at 3 (Nov. 2014) (“2014 Investigations”). Chlorinated isos from China have been subject to countervailing duties since November 13, 2014. *Chlorinated Isocyanurates from China*, 79 Fed. Reg. 67424 (Nov. 13, 2014) (countervailing duty order).

¹⁴⁵ CR/PR at Table I-11.

¹⁴⁶ CR at IV-1, PR at IV-1.

¹⁴⁷ Original Determinations, USITC Pub. 3782 at 24.

¹⁴⁸ First Five-Year Reviews, USITC Pub. 4184 at 17.

¹⁴⁹ CR at II-13, PR at II-7-8.

¹⁵⁰ CR/PR at Table II-10.

¹⁵¹ CR/PR at Table II-6.

¹⁵² CR/PR at Table II-6.

¹⁵³ CR/PR at Table II-11.

in 2003 and *** short tons in 2004.¹⁵⁴ Additionally, cumulated subject imports increased their market share by *** percentage points from 2002 to 2004 while the domestic producers' market share declined steadily and significantly by *** percentage points during that time period.¹⁵⁵ The Commission found that the significant increase in subject import volume prevented the domestic industry from benefitting from the large increase in apparent U.S. consumption over the period of investigation.¹⁵⁶

In the expedited first five-year reviews, the Commission observed that despite the discipline of the orders, cumulated subject imports had a substantial and continuing presence in the U.S. market, increasing overall from 2005 to 2009, and that the market share of cumulated subject imports in 2009 at *** percent was *** to that in 2004 at *** percent.¹⁵⁷ The Commission further observed that there was no evidence that the production capacities of subject producers from China and Spain declined since the original investigations.¹⁵⁸ Based on the increase in volume and market share of subject imports during the original investigations, the substantial production capacity of subject producers in China and Spain, the export orientation of the industries in China and Spain, as well as the continued presence and increase in volume of imports from China and Spain after imposition of the orders, the Commission found that subject producers had the ability and the incentive to increase exports significantly to the United States if the antidumping duty orders were revoked.¹⁵⁹ The Commission concluded that subject import volume would likely be significant both in absolute terms and relative to production and consumption in the United States if the orders were revoked.¹⁶⁰

2. The Current Five-Year Reviews

In the current reviews, subject imports maintained a presence in the U.S. market, although the volume of cumulated subject imports decreased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015.¹⁶¹ Cumulated subject imports accounted for *** percent of apparent U.S. consumption in 2013, *** percent in 2014, and *** percent in 2015.¹⁶²

¹⁵⁴ Original Determinations, USITC Pub. 3782 at 25; Confidential Original Determinations (EDIS Doc. 428831) at 36.

¹⁵⁵ Original Determinations, USITC Pub. 3782 at 25; Confidential Original Determinations (EDIS Doc. 428831) at 35.

¹⁵⁶ Original Determinations, USITC Pub. 3782 at 25.

¹⁵⁷ First Five-Year Reviews, USITC Pub. 4184 at 19; Confidential First Five-Year Reviews (EDIS Doc. 568446) at 24. According to official U.S. import statistics, cumulated subject imports increased overall from 1,197 short tons in 2005 to 12,947 short tons in 2009. *See id.*

¹⁵⁸ First Five-Year Reviews, USITC Pub. 4184 at 19.

¹⁵⁹ First Five-Year Reviews, USITC Pub. 4184 at 19.

¹⁶⁰ First Five-Year Reviews, USITC Pub. 4184 at 19.

¹⁶¹ CR/PR at Table IV-1.

¹⁶² CR/PR at Table C-1.

We find that, in the event of revocation of the antidumping duty orders, the volume of cumulated subject imports from China and Spain is likely to be significant. The record does not contain data from producers of chlorinated isos in China and Spain due to their failure to respond to the Commission's questionnaire.^{163 164} Information provided by the domestic producers indicates that there is substantial and growing production capacity in both subject countries.¹⁶⁵ The domestic producers report that subject producers in China recently added a combined capacity of 100,000 short tons to their existing capacity of 141,500 short tons.¹⁶⁶ Regarding the Spanish industry, the domestic producers report that although Inquide ceased production in 2009, Ercros expanded its capacity from 16,000 metric tons to 21,000 metric tons in 2013 and recently announced plans to expand further its capacity to 28,000 metric tons.¹⁶⁷ The domestic producers also submitted evidence demonstrating that another Spanish company, ***, will add significant capacity to the Spanish chlorinated isos industry in the "imminent" future.¹⁶⁸ In addition to having substantial and growing production capacity, subject producers in China and Spain are highly export oriented.¹⁶⁹ The subject industries in China and Spain, therefore, have the ability to increase exports of subject merchandise to the United States rapidly as they did during the original investigations.

¹⁶³ The Commission issued questionnaires to 17 chlorinated isos producers or exporters in China and to two chlorinated isos producers in Spain, none of which submitted a response. CR at IV-6, IV-9-10, PR at IV-3, IV-5-6. In the absence of any foreign producer questionnaire responses, we have used the facts available including public data sources and unrebutted information about the Chinese and Spanish industries provided by the domestic producers to assess the subject industries.

¹⁶⁴ Given the circumstances related in the preceding footnote, Commissioner Pinkert has relied in these reviews on the information in the record that is most adverse to the nonresponsive subject producers.

¹⁶⁵ Domestic Producers Response at 12, Ex. 2. The domestic producers estimate that, collectively, subject producers in China and Spain have an estimated production capacity that is *** the capacity of domestic producers. *See id.* at 12.

¹⁶⁶ Domestic Producers Response at 17, Exs. 5 & 6; Domestic Producer Prehearing Br. at 20.

¹⁶⁷ Domestic Producers Prehearing Br. at 22, Ex. 4. Information available on Ercros's website confirms that Ercros's current production capacity is 21,000 metric tons (23,149 short tons). CR at IV-11, PR at IV-6.

¹⁶⁸ Domestic Producers Posthearing Br. at Ex. 1, pp. 9-10.

¹⁶⁹ China is the largest global exporter of chlorinated isos and Spain is the seventh largest global exporter. CR/PR at Table IV-8. Official Chinese export statistics indicate that global exports of chlorinated isos from China fluctuated from 111,691 short tons in 2013 to 121,619 short tons in 2014 and 111,449 short tons in 2015. CR/PR at Table IV-5. These export volumes in each year of the period of review accounted for approximately 50 percent of the Chinese producers' estimated combined capacity. Domestic Producers Response at 17, Exs. 5 & 6; Domestic Producer Prehearing Br. at 20. Official Spanish statistics indicate that global exports of chlorinated isos from Spain increased from 14,225 short tons in 2013 to 17,502 short tons in 2014 and 19,895 short tons in 2015. CR/PR at Table IV-6. These export volumes in each year of the period of review accounted for between 68 percent and 95 percent of Ercros's production capacity. Domestic Producers Prehearing Br. at 22, Ex. 4; CR at IV-11, PR at IV-6.

Moreover, the United States, which the domestic producers assert is the largest market in the world for chlorinated isos products, is likely to be an attractive market for the subject producers.¹⁷⁰ The domestic producers state that U.S. market prices are, on average, higher than prices in other world markets.¹⁷¹ Average unit value data suggest that the U.S. market generally has higher prices than other markets to which subject producers export chlorinated isos.¹⁷² Indeed, notwithstanding the presence of the orders, cumulated subject imports continued to maintain a presence in the U.S. market during the period of review.¹⁷³ In addition, several purchasers have indicated that upon revocation of the orders, the volume of subject imports from China and Spain would increase and that they would consider shifting purchases from the domestic like product to subject imports.¹⁷⁴

Accordingly, based on subject producers' behavior during the original investigations, subject imports' continued presence in the U.S. market, and information available regarding the subject producers' substantial and growing production capacity and export orientation and the attractiveness of the U.S. market, we find that the likely volume of cumulated subject imports, in absolute terms and relative to both U.S. production and consumption, would be significant in the event of revocation.¹⁷⁵

¹⁷⁰ Domestic Producers Prehearing Br. at 11; Domestic Producers Final Comments at 2.

¹⁷¹ Domestic Producers Prehearing Br. at 11; Domestic Producers Final Comments at 2. ***, an importer of subject imports from China and ***, an importer of nonsubject imports from Japan, also reported that U.S. market prices are the highest in the world. *** U.S. Importers Questionnaire at III-19 (June 23, 2016); *** U.S. Importers Questionnaire at III-19 (June 21, 2016).

¹⁷² For example, in 2015, the average unit value of China's exports to the United States was \$1,702 per short ton, whereas the average unit value for their exports to other major destination markets ranged between \$1,221 per short ton to \$1,454 per short ton. CR/PR at Table IV-5. The average unit value of Spain's exports to the United States was \$1,931 per short ton, which was higher than that for its exports to most of its other major destination markets. CR/PR at Table IV-6.

¹⁷³ CR/PR at Table IV-I. The United States was one of the top three destination markets for chlorinated isos exports from China in each full year of the period of review. CR/PR at Table IV-4. It was the second largest destination market for chlorinated isos exports from Spain in 2014 and 2015. CR/PR at Table IV-6.

¹⁷⁴ CR/PR at Tables D-5-6. For instance, *** stated that it would ***, *** stated that it would ***, *** stated that ***, *** stated that it would ***, *** stated that it ***, *** stated that ***, *** stated that ***, and *** stated that ***. *See id.*

¹⁷⁵ We have also considered the other factors enumerated in the statute regarding analysis of likely subject import volume. Due to the subject producers' failure to respond to the questionnaire, there is no information available with respect to the potential for product shifting by the chlorinated isos industries in China and Spain. There is likewise no information available with respect to the existing inventories of subject merchandise held by subject producers. The limited evidence in the record with respect to inventories of subject merchandise held by importers in the United States shows that end-of-period inventories of the granular product from the subject sources decreased from *** short tons in 2013 to *** short tons in 2014 and 2015 and that end-of-period inventories of tablets from subject sources decreased from *** short tons in 2013 to *** short tons in 2014 and 2015. CR/PR at Tables IV-3-4.

(Continued...)

D. Likely Price Effects

1. The Original Investigations and First Five-Year Reviews

In the original investigations, the Commission found that subject imports had undersold the domestic like product in 78.6 percent of the available comparisons.¹⁷⁶ The Commission concluded that the underselling by subject imports was significant, particularly in light of the large influx of subject imports beginning in 2003 and the high degree of interchangeability between subject imports and the domestic like product.¹⁷⁷ The Commission also found that prices for the domestic like product declined due to lower-priced subject imports and that the domestic industry experienced a cost/price squeeze as downward pressure on prices exerted by increasing volumes of lower-priced subject imports prevented domestic producers from raising prices as demand and raw material costs increased.¹⁷⁸ The Commission concluded that subject imports depressed and suppressed prices for the domestic like product to a significant degree.¹⁷⁹

In the expedited first five-year reviews, the Commission observed that there was no evidence on the record indicating that price would not continue to be an important factor for purchasers.¹⁸⁰ The Commission consequently found that subject imports would likely undersell the domestic like product in order to gain market share as they had done during the original investigations.¹⁸¹ It concluded that revocation of the antidumping duty orders would likely lead to a significant increase in subject imports from China and Spain at prices that would significantly undersell the domestic industry and that those imports would likely enter the United States at prices that would have a depressing and suppressing effect on prices for the domestic like product.¹⁸²

(...Continued)

Regarding trade barriers in third-country markets, the European Union imposed antidumping duties on imports of trichlor from China in 2005 and continued the order in December 2011. In April 2016, the European Union commenced its second review of the order but has not published results of this review. CR at IV-13-14, PR at IV-8-9. The domestic producers contend that the European Union's order has not been effective, as evidenced by the substantial volume of chlorinated isos from China that continued to enter the European Union market during the period of review. Domestic Producers Posthearing Br. at Ex. 2, pp. 13-14.

¹⁷⁶ Original Determinations, USITC Pub. 3782 at 27.

¹⁷⁷ Original Determinations, USITC Pub. 3782 at 28.

¹⁷⁸ Original Determinations, USITC Pub. 3782 at 29-30.

¹⁷⁹ Original Determinations, USITC Pub. 3782 at 29-30.

¹⁸⁰ First Five-Year Reviews, USITC Pub. 4184 at 20.

¹⁸¹ First Five-Year Reviews, USITC Pub. 4184 at 20.

¹⁸² First Five-Year Reviews, USITC Pub. 4184 at 20.

2. The Current Five-Year Reviews

As described above, the record in the current reviews indicates that there is at least a moderate degree of substitutability between imports from the subject countries and the domestic like product and that price plays an important role in purchasing decisions.

The record contains limited pricing comparisons of the domestic like product and subject imports from China and Spain.¹⁸³ Five U.S. producers and two importers reported usable pricing data, which accounted for *** percent of the U.S. producers' commercial shipments of chlorinated isos, *** percent of the U.S. commercial shipments of subject imports from China, and *** percent of the U.S. commercial shipments of subject imports from Spain in 2015.¹⁸⁴ The pricing data indicate that subject imports from China undersold the domestic like product in 12 of 16 quarterly price comparisons by margins ranging from 0.3 percent to 20.0 percent¹⁸⁵ and that subject imports from Spain undersold the domestic like product in nine of 13 quarterly price comparisons by margins ranging from 2.3 percent to 15.5 percent.¹⁸⁶

In view of our finding of a likely significant volume of subject imports, the interchangeability between subject imports and the domestic like product, and the importance of price in purchasing decisions, we find that upon revocation of the orders, subject producers would likely significantly undersell the domestic like product to gain market share as had occurred in the original investigation period. This underselling would likely result in significant price effects, as domestic producers would be forced either to cut prices or risk losing sales to subject import competition. Indeed, several purchasers indicated in their responses to the Commission's questionnaire that if the orders were revoked, low-priced subject imports would enter the U.S. market creating significant downward pricing pressure on the domestic like product.¹⁸⁷ We consequently find that absent the disciplining effects of the orders, significant volumes of subject imports from China and Spain would likely significantly undersell the

¹⁸³ The Commission collected pricing data on the following four products: (1) Granular trichlor with approximately 90 percent available chlorine content sold in bulk packages equal to or greater than 1,000 pounds and less than or equal to 2,205 pounds; (2) Granular dichlor with approximately 56 percent available chlorine content, sold in bulk packages equal to or greater than 1,000 pounds and less than or equal to 2,205 pounds, sold for repackaging for pool treatment use; (3) Three-inch or comparable trichlor tablets, with tablet volume of six to eight ounces, in 35-55 pound containers; and (4) Blended three-inch or comparable tablets, with tablet volume of six to eight ounces, with approximately 85 to 90 percent available chlorine content, in 24-26 pound containers. CR at V-7, PR at V-5.

¹⁸⁴ CR at V-8, PR at V-5.

¹⁸⁵ CR/PR at Tables V-7-8. In three quarterly price comparisons, subject imports from China oversold the domestic like product by margins ranging from 2.2 percent to 12.4 percent. In one comparison, subject imports from China and the domestic like product were priced the same. *See id.*

¹⁸⁶ CR/PR at Tables V-7-8. In the remaining four quarterly price comparisons, subject imports from Spain oversold the domestic like product by margins ranging from 0.7 percent to 18.8 percent. *See id.*

¹⁸⁷ CR/PR at Tables D-5-6. For instance, *** stated that ***, *** stated that ***, *** stated that ***, *** stated that ***, *** stated that ***, and *** stated that ***. *See id.*

domestic like product to gain market share and likely would have significant depressing and/or suppressing effects on prices of the domestic like product.

E. Likely Impact

1. The Original Investigations and First Five-Year Reviews

In the original investigations, the Commission examined the relevant economic factors bearing on the industry in the United States and found that despite a substantial increase in demand, the domestic industry's production was relatively level, the industry's capacity increased slightly, and the industry's capacity utilization fell slightly.¹⁸⁸ Additionally, the domestic industry's share of the U.S. market fell steadily from 2002 to 2004, its employment indicators deteriorated, and it lost revenue as its prices and sales values declined.¹⁸⁹ As a result of the trends in costs and prices, the Commission found that the domestic industry's financial indicators eroded substantially between 2002 and 2004.¹⁹⁰ It attributed the deterioration in the domestic industry's condition to significant increases in subject import volume that took market share from the domestic industry and forced the domestic industry to cut prices despite increasing costs.¹⁹¹ The Commission concluded that subject imports had a significant adverse impact on the domestic industry.¹⁹²

In the expedited first five-year reviews, the Commission found that revocation of the antidumping duty orders would likely lead to a significant increase in the volume of subject imports and that the subject imports would likely significantly undersell the domestic like product, resulting in significant price depression and/or suppression.¹⁹³ The Commission determined that the intensified subject import competition that would likely occur upon revocation of the antidumping duty orders would likely have a significant adverse impact on the domestic industry.¹⁹⁴ Specifically, the Commission found that the domestic industry would likely lose market share to low-priced subject imports and would likely obtain lower prices due to competition from subject imports, which would adversely affect its production, shipments, sales, and revenue.¹⁹⁵ Accordingly, the Commission concluded that if the antidumping duty orders were revoked, subject imports from China and Spain would likely have a significant adverse impact on the domestic industry within a reasonably foreseeable time.¹⁹⁶

¹⁸⁸ Original Determinations, USITC Pub. 3782 at 32.

¹⁸⁹ Original Determinations, USITC Pub. 3782 at 32-33.

¹⁹⁰ Original Determinations, USITC Pub. 3782 at 34.

¹⁹¹ Original Determinations, USITC Pub. 3782 at 34.

¹⁹² Original Determinations, USITC Pub. 3782 at 35.

¹⁹³ First Five-Year Reviews, USITC Pub. 4184 at 23.

¹⁹⁴ First Five-Year Reviews, USITC Pub. 4184 at 23.

¹⁹⁵ First Five-Year Reviews, USITC Pub. 4184 at 23.

¹⁹⁶ First Five-Year Reviews, USITC Pub. 4184 at 23. Due to the limited evidence on the record of the expedited first five-year reviews, the Commission did not make a determination as to whether the domestic industry was vulnerable. *See id.* at 22.

2. The Current Five-Year Reviews

The condition of the domestic industry generally improved over the period of review. With respect to granular operations, the domestic industry's capacity, production, and capacity utilization increased.¹⁹⁷ U.S. shipments of the granular product increased from 2013 to 2015 while inventories declined during this same time period.¹⁹⁸ The number of production and related workers ("PRWs"), productivity, hours worked, and wages paid with respect to granular operations increased over the period while per unit labor costs decreased.¹⁹⁹

The domestic industry's financial performance indicia for its granular operations improved steadily during the period of review. Sales revenue increased²⁰⁰ as did operating income and operating income as a ratio to net sales.²⁰¹

With respect to tableting operations, the domestic industry's capacity, production, and capacity utilization increased throughout the period of review.²⁰² The domestic industry's U.S. shipments of tablets and inventories increased overall.²⁰³ The number of PRWs decreased, but

¹⁹⁷ Capacity for producing granular chlorinated isos increased from *** short tons in 2013 to *** short tons in 2014 and 2015. Production of granular chlorinated isos increased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015. Capacity utilization increased from *** percent in 2013 to *** percent in 2014 and *** percent in 2015. CR/PR at Table III-1.

¹⁹⁸ The domestic industry's U.S. shipments of granular chlorinated isos increased from *** short tons to *** short tons in 2014, before declining to *** short tons in 2015. CR/PR at Table III-2. Ending inventory quantities were *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. CR/PR at Table III-5.

¹⁹⁹ PRWs involved in granular chlorinated isos production increased from *** in 2013 to *** in 2014 and 2015. Worker productivity (pounds per hour) increased from *** in 2013 to *** in 2014 and *** in 2015. Total hours worked were *** hours in 2013, *** hours in 2014 and *** hours in 2015. Wages paid increased from \$*** in 2013 to \$*** in 2014 and \$*** in 2015. Per unit labor costs (dollars per pound) decreased from \$*** in 2013 to \$*** in 2014 and \$*** in 2015. CR/PR at Table III-7.

²⁰⁰ Revenues from sales of granular chlorinated isos were \$*** in 2013, \$*** in 2014, and \$*** in 2015. CR/PR at Table III-9.

²⁰¹ Operating income pertaining to granular chlorinated isos was \$*** in 2013, \$*** in 2014, and \$*** in 2015. As a ratio to net sales, operating income was *** percent in 2013, *** percent in 2014, and *** percent in 2015. CR/PR at Table III-9. Vice Chairman Johanson does not join the following two paragraphs concerning tableting operations.

²⁰² Capacity for producing tablets increased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015. Production of chlorinated isos tablets increased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015. Capacity utilization increased from *** percent in 2013 to *** percent in 2014 and *** percent in 2015. CR/PR at Table III-1.

²⁰³ The domestic industry's U.S. shipments of chlorinated isos tablets increased from *** short tons in 2013 to *** short tons in 2014 and *** short tons in 2015. CR/PR at Table III-3. Ending inventory quantities were *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. CR/PR at Table III-5.

productivity, hours worked, and wages paid increased from 2013 to 2015.²⁰⁴ Per unit labor costs decreased.²⁰⁵

The domestic industry's financial indicia for its tableting operations improved during the period of review. Sales revenues increased²⁰⁶ as did operating income and operating income as a ratio to net sales.²⁰⁷

The domestic industry's total capital expenditures for its operations increased overall from 2013 to 2015. Research and development expenses declined.²⁰⁸

Due to the domestic industry's improvements in market share, production, U.S. shipments, capacity utilization, and profitability, we do not find that the domestic industry is in a vulnerable condition. However, as discussed above, we conclude that revocation of the antidumping duty orders on imports of chlorinated isos from China and Spain would likely lead to a significant increase in the cumulated volume of subject imports that would likely undersell the domestic like product and significantly suppress or depress prices for the domestic like product. We find that the likely volume and price effects of cumulated subject imports would likely have a significant impact on the production, shipments, sales, market share, and revenue of the domestic industry. These reductions would have a direct adverse impact on the domestic industry's profitability and employment, as well as its ability to raise capital and make and maintain necessary capital investments.

We have also considered the likely role of nonsubject imports in the U.S. market. There is no indication or argument on this record that the presence of nonsubject imports, which decreased in volume during the period of review, would prevent chlorinated isos imports from China and Spain from re-entering the U.S. market in significant quantities in the event of revocation of the orders, given the large amount of capacity in these subject countries and the relative attractiveness of the U.S. market. Indeed, several purchasers indicated that upon revocation, the volume of low-priced subject imports from China and Spain would likely increase and that they would consider shifting purchases from the domestic like product to

²⁰⁴ PRWs involved in tableting operations decreased from *** in 2013 and 2014 to *** in 2015. Worker productivity (pounds per hour) increased from *** in 2013 to *** in 2014 and *** in 2015. Total hours worked were *** hours in 2013, *** hours in 2014, and *** hours in 2015. Wages paid increased from \$*** in 2013 to \$*** in 2014 and 2015. CR/PR at Table III-7.

²⁰⁵ Per unit labor costs (dollars per pound) decreased from \$*** in 2013 to \$*** in 2014 and to \$*** in 2015. CR/PR at Table III-7.

²⁰⁶ Revenues from sales of chlorinated isos tablets were \$*** in 2013, \$*** in 2014, and \$*** in 2015. CR/PR at Table III-10.

²⁰⁷ Operating income pertaining to chlorinated isos tablets was \$*** in 2013, \$*** in 2014, and \$*** in 2015. As a ratio to net sales, operating income was *** percent in 2013, *** percent in 2014, and *** percent in 2015. CR/PR at Table III-10.

²⁰⁸ The domestic industry's total capital expenditures totaled \$*** in 2013, \$*** in 2014, and \$*** in 2015. Research and development expenses totaled \$*** in 2013, \$*** in 2014, and \$*** in 2015. CR/PR at Table III-15. Because these data include expenditures made by tableters, Vice Chairman Johanson does not join this footnote.

subject imports.²⁰⁹ The likely adverse price effects and consequent impact of the likely increased volume of cumulated subject imports would be distinct from those of nonsubject imports in the event of revocation.

Thus, we conclude that revocation of the antidumping duty orders on subject imports from China and Spain would be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

V. Conclusion

For the foregoing reasons, we determine that revocation of the antidumping duty orders on chlorinated isos from China and Spain would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

²⁰⁹ CR/PR at Tables D-5-6.

SEPARATE VIEWS OF VICE CHAIRMAN DAVID S. JOHANSON

I. INTRODUCTION

I write separately as I do not find that those companies that merely tablet and repackage chlorinated isos (“tableters”) have sufficient production-related activities for me to consider them as part of the domestic industry. Therefore, I would exclude tableters from the domestic industry. My separate finding on this issue nevertheless leads me to the same determination as the majority, and I am able to join the majority’s views in all other respects except where noted.

II. DOMESTIC INDUSTRY AND RELATED PARTIES

In the 2005 original investigations of *Chlorinated Isocyanurates from China and Spain*, the Commission divided 3-3 on the question of whether to include the tableters in the domestic industry.¹ In the 2010 first reviews (expedited) of these orders, a four-vote majority determined not to include the tableters in the domestic industry.² In the 2014 original investigations of *Chlorinated Isocyanurates from China and Japan*, while Commission determined to include the tableters in the domestic industry, I determined to exclude the tableters and wrote separately to present my view on this issue.³

The following discussion, which is closely patterned after my 2014 separate views, provides my reasoning for not including the tableters⁴ in the domestic industry within the framework of the Commission’s standard six factors for analyzing whether a firm’s production-related activities are sufficient to be considered part of the domestic industry. As the inclusion of tableters was not a contested issue in these reviews—as it had been in the final phase of the 2014 investigations of China and Japan—the record here is necessarily less detailed. Nevertheless, domestic interested parties continue to advocate for the exclusion of tableters⁵ from the domestic industry and my review of this record has not changed my views.

¹ *Chlorinated Isocyanurates from China and Spain*, Inv. Nos. 731-TA-1082-1083, USITC Pub. 3782 (Final) (June 2005) (“USITC Pub. 3782”) at 10-14. Chairman Koplán and Commissioners Hillman and Miller included tableters as part of the domestic industry. Vice Chairman Okun and Commissioners Lane and Pearson did not include tableters in the domestic industry.

² *Chlorinated Isocyanurates from China and Spain*, Inv. Nos. 731-TA-1082-1083, USITC Pub. 4184 (Review) (Sept. 2010) (“USITC Pub. 4184”) at 5-7. The three Commissioners who did not include tableters in the original investigation—Chairman Okun and Commissioners Lane and Pearson—were joined by Commissioner Aranoff. *Id.* at 6 n.25. Commissioners Williamson and Pinkert found that tableters had sufficient production-related activities to qualify as domestic producers. *Id.* at n.26.

³ *Chlorinated Isocyanurates from China and Japan*, Inv. Nos. 701-TA-501 and 731-TA-1226, USITC Pub. 4494 (Final) (Nov. 2014) (“USITC Pub. 4431”) at 42-45 (Separate Views of Commissioner David S. Johanson).

⁴ For purposes of these views, I have included tollers in my discussion of tableters, where appropriate, to most closely parallel how the term tableters was used in my 2014 views.

⁵ Hearing Tr. at 31-32 (Mr. Cannon).

Source and Extent of the Firm's Capital Investment.

Capital assets: The responding tableters' reported total assets were \$*** in 2013, \$*** in 2014, and \$*** in 2015, whereas total assets reported for the granular/powder operations of the integrated producers were \$*** in 2013, \$*** in 2014, and \$*** in 2015.⁶ The ratio of the assets of the tableters to the assets of the granular/powder operations of the integrated producers was therefore never greater than *** percent over the three years of the POR. The capital assets of the tableters were *** of the assets employed in the granular/powder operations of the integrated producers.

Capital expenditures: Responding tableters reported capital expenditures of \$*** in 2013, \$*** in 2014, and \$*** in 2015. Capital expenditures by the granular/powder operations of integrated producers were \$*** in 2013, \$*** in 2014, and \$*** in 2015.⁷ The capital expenditures of the tableters did not therefore exceed *** percent of those of the granular/powder operations of the integrated producers over the three years of the POR. These significant differences in the capital involved in the two types of operations (granular/powder production vs. tableting) evince a fundamentally different character. The capital expenditures of the tableters were *** of the expenditures for the granular/powder operations of the integrated producers.

Technical Expertise Involved in U.S. Production Activities. The technical expertise involved in creating granular/powder chlorinated isos is much greater than that required to produce tablets from the granulated product. This is apparent from the wage differential. Production-related workers (PRWs) in the granular/powder segment earned on average between \$*** and \$*** per hour, whereas PRWs in the tableting segment earned on average between \$*** and \$*** per hour.⁸ Domestic interested parties offered that the "skill that it takes to tablet is nothing like – not comparable at all to manufacturing."⁹

Value Added to the Product in the United States. According to the response of one independent tableter to the Commission's questionnaire, the value added by its tableting processes ranged from *** to *** percent, excluding SG&A expenses. Including SG&A expenses, its response ranged from *** to *** percent.¹⁰ The data indicate that the value added by tableting is insufficient to demonstrate that tableters should be included as part of the domestic industry.

Employment levels. Tableters responding to the Commission's questionnaire reported *** PRWs in 2013, *** in 2014, and *** in 2015. The granular/powder operations of the integrated producers employed *** PRWs in 2013, *** in 2014, and *** in 2015.¹¹ As I noted in my 2014 views, "this is not a particularly illuminating factor for purposes of this analysis."¹²

⁶ CR/PR at Table III-16.

⁷ CR/PR at Table III-15.

⁸ CR/PR at Table III-7. The data for wages paid to employees in tableting operations in Table III-7 include those employees of integrated producers who perform tableting.

⁹ Hearing Tr. at 31 (Mr. Cannon).

¹⁰ CR/PR at Table III-11. Value-added data provided in CR/PR at Table III-12 for tollers is not comparable because tollers do not take title to raw materials.

¹¹ CR/PR at Table III-7. The data on the number of PRWs in tableting operations in Table III-7 include those employees of integrated producers who perform tableting.

¹² Separate Views of Commissioner David S. Johanson (2014) at 44.

Quantity and Type of Parts Sourced in the United States. Tableters report that they source granulated/powdered chlorinated isos from both domestic and import sources (both subject and non-subject).¹³ Of the three domestic integrated producers, ***.¹⁴ These *** domestic production.¹⁵

Summary. I do not find that the tableters have sufficient production-related activities for me to consider them as part of the domestic industry. I conclude that the following factors fully support a finding that the granular/powder operations of the integrated producers perform a fundamentally different function in this market than do the tableters: (1) the capital assets and expenditures of the tableters were only a *** of the expenditures for the granular/powder operations of the integrated producers; (2) the technical expertise involved in creating granular/powder chlorinated isos is much greater than that required to produce tablets from the granulated product; and (3) the tableters contribute comparatively little value added through the forming of the tablets.

III. CONCLUSION

I do not find that tableters have sufficient production-related activities for me to consider them as part of the domestic industry and, therefore, I would exclude tableters from the domestic industry. I nevertheless join the majority's views in all other respects except where noted.

¹³ CR at I-30 to -31; PR at I-19 to -20; and at Table III-6.

¹⁴ CR at I-30 to -31; PR at I-19 to -20; and at Table III-6.

¹⁵ CR/PR at Tables III-6.

PART I: INTRODUCTION

BACKGROUND

On September 1, 2015, the U.S. International Trade Commission (“Commission” or “USITC”) gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended (“the Act”),¹ that it had instituted reviews to determine whether revocation of antidumping duty orders on chlorinated isocyanurates (“chlorinated isos”) from China and Spain would likely lead to the continuation or recurrence of material injury to a domestic industry.² On December 7, 2015, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act.³ The following tabulation presents information relating to the background and schedule of this proceeding:⁴

¹ 19 U.S.C. 1675(c).

² *Chlorinated Isocyanurates from China and Spain; Institution of Five-Year Reviews*, 80 FR 52789, September 1, 2015. In accordance with section 751(c) of the Act, the U.S. Department of Commerce (“Commerce”) published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders concurrently with the Commission’s notice of institution. *Initiation of Five-Year (“Sunset”) Review*, 80 FR 52743, September 1, 2015.

³ *Chlorinated Isocyanurates From China and Spain; Notice of Commission Determinations To Conduct Full Five-Year Reviews*, 80 FR 79358, December 21, 2015. The Commission found that the domestic respondent interested party group response to its notice of institution was adequate and the respondent interested party group responses to its notice of institution were inadequate. The Commission, however, found that changes in conditions of competition that have occurred in the U.S. market since the first reviews warranted conducting full reviews. Vice Chairman Pinkert, Commissioner Williamson, and Commissioner Schmidlein voted to conduct expedited reviews.

⁴ The Commission’s notice of institution, notice to conduct full reviews, scheduling notice, and statement on adequacy are referenced in appendix A and may also be found at the Commission’s web site (internet address www.usitc.gov). Commissioners’ votes on whether to conduct expedited or full reviews may also be found at the web site. Appendix B contains a list of the witnesses that appeared at the Commission’s hearing.

Effective date	Action
June 25, 2005	Commerce issues antidumping duty orders on chlorinated isos from China (70 FR 36561) and Spain (70 FR 36562)
September 1, 2015	Commission's institution of five-year reviews (80 FR 52789)
September 1, 2015	Commerce's initiation of five-year reviews (80 FR 52743)
December 7, 2015	Commission's determinations to conduct full five-year reviews (80 FR 79358, December 21, 2015)
January 6, 2016	Commerce's final results of expedited five-year reviews of the antidumping duty orders (81 FR 461)
April 13, 2016	Commission's scheduling of the reviews (81 FR 23328, April 20, 2016)
September 13, 2016	Commission's hearing
October 26, 2016	Commission's vote
November 16, 2016	Commission's determinations and views

The original investigations

The original investigations resulted from a petition filed on May 14, 2004 with Commerce and the Commission by Clearon Corp. ("Clearon") and Occidental Chemical Corp. ("Oxy"). In June 2005, the Commission determined that an industry in the United States was materially injured by reason of less-than-fair-value ("LTFV") imports of chlorinated isos from China and Spain. After receiving the Commission's final affirmative determinations, Commerce issued antidumping duty orders on imports of chlorinated isos from China⁵ and Spain,⁶ with margins of 75.78 to 285.63 percent ad valorem for chlorinated isos from China and 24.83 percent ad valorem for chlorinated isos from Spain.

First expedited five-year reviews

On May 3, 2010, the Commission instituted the first five-year reviews on chlorinated isos from China and Spain. In August 2010, Commerce found in expedited reviews that revocation of the antidumping duty orders would be likely to lead to continuation or recurrence of dumping.⁷ In September 2010, the Commission determined in expedited reviews that revocation of the antidumping duty orders on chlorinated isos from China and Spain would likely lead to continuation or recurrence of material injury to an industry in the United States

⁵ *Notice of Antidumping Duty Order: Chlorinated Isocyanurates from the People's Republic of China*, 70 FR 36561, June 25, 2005.

⁶ *Chlorinated Isocyanurates from Spain: Notice of Antidumping Duty Order*, 70 FR 36562, June 25, 2005.

⁷ *Chlorinated Isocyanurates from Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders*, 75 FR 49464, August 13, 2010.

within a reasonably foreseeable time.⁸ Effective October 13, 2010, Commerce issued a notice of continuation of the antidumping duty orders on chlorinated isos from China and Spain.⁹

RELATED INVESTIGATIONS

Chlorinated isos have been the subject of several prior antidumping duty investigations and subsequent five-year reviews in the United States. In 1984, the Commission and Commerce conducted an antidumping investigation on cyanuric acid (a raw material used in the production of chlorinated isos) and its chlorinated derivatives, including the subject product, that resulted in an antidumping duty order on such products from Japan. In the absence of any review request or objection from a domestic interested party, Commerce revoked the order in 1995.¹⁰

On August 29, 2013, a petition was filed with Commerce and the Commission by Clearon and Oxy alleging that an industry in the United States was materially injured by reason of subsidized imports of chlorinated isos from China and LTFV imports of chlorinated isos from Japan. On October 9, 2014, the Commission made an affirmative threat determination with regard to U.S. imports from China and a negative determination with regard to U.S. imports from Japan.¹¹ Commerce subsequently issued a countervailing duty order on chlorinated isos from China.¹²

SUMMARY DATA

Table I-1 presents a summary of data covering one year from the original investigations (2004), the first expedited reviews (2009), and the current full reviews (2015). It should be noted that data for each year are compiled using the different databases created during the course of that particular investigation. Therefore, differences in the questionnaire response rate among investigations and the fact that certain data is not collected in expedited five-year reviews may affect the direct comparability of the data across years. In the original investigations, U.S. industry data was compiled, in part, using the responses of four U.S. tableters.¹³ Although the current review also compiled U.S. industry data with responses of

⁸ *Chlorinated Isocyanurates from China and Spain: Determinations*, 75 FR 61772, October 6, 2010.

⁹ *Chlorinated Isocyanurates From Spain and the People's Republic of China: Continuation of Antidumping Duty Orders*, 75 FR 62764, October 13, 2010.

¹⁰ *Cyanuric Acid from Japan, Revocation of the Antidumping Duty Order*, 60 FR 28576, June 1, 1995.

¹¹ *Chlorinated Isocyanurates from China and Japan: Determinations*, 79 FR 66404, November 7, 2014; *Chlorinated Isocyanurates from China and Japan, Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014.

¹² *Chlorinated Isocyanurates from the People's Republic of China: Final Affirmative Countervailing Duty Determination*, 79 FR 56560, September 22, 2014.

¹³ These firms obtain granular chlorinated isos from either foreign or domestic sources and produce tablets either for their own commercial shipment or pursuant to toll agreements. Throughout this report, U.S. producers that produce granular chlorinated isos (BioLab, Clearon, and Oxy) are referred to as "integrated producers" or "granular producers." U.S. firms that solely engage in tableting operations are referred to as "U.S. tableters."

four U.S. tableters, the firms are not identical.¹⁴ No U.S. tableter submitted data in the first expedited reviews.

U.S. import data in the original investigations were compiled using data submitted in Commission-issued questionnaires. In the expedited first reviews, official U.S. import statistics were used to compile data for U.S. imports.¹⁵ In the current review, U.S. imports are compiled using both data submitted in questionnaires and from proprietary U.S. import data obtained from U.S. Customs.¹⁶

Table I-1
Chlorinated isos: Comparative data from the original investigations, first reviews, and current reviews, 2002-05, 2009, and 2013-15

* * * * *

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation “would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury.”

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury—

(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--

(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,

(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,

¹⁴ In the original investigations, the Commission compiled U.S. industry data, in part, from data submitted by U.S. tableters: (1) Alden Leeds, (2) Cadillac (Qualco), (3) N. Jonas, and (4) Stellar. In the current reviews, the following U.S. tableters submitted usable data: (1) LPM, (2) N. Jonas, (3) Oreq, and (4) Stellar.

¹⁵ U.S. import data compiled using HTS 2933.69.6015. This statistical reporting number may include products outside the scope of these reviews. Also, small quantities of chlorinated isos may enter the United States under other HTS subheadings.

¹⁶ Proprietary U.S. import data obtained from Customs using HTS 2933.69.6015.

*(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and
(D) in an antidumping proceeding . . . , (Commerce's findings) regarding duty absorption . . .*

(2) VOLUME.--In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--

*(A) any likely increase in production capacity or existing unused production capacity in the exporting country,
(B) existing inventories of the subject merchandise, or likely increases in inventories,
(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and
(D) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products.*

(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

*(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and
(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.*

(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to--

*(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,
(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and
(C) 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.*

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, “the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement.”

Organization of report

Information obtained during the course of these reviews that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for chlorinated isos as collected in these reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of three U.S. producers of granular chlorinated isos that accounted for all domestic production of chlorinated isos granular during the period of review. U.S. industry data also includes data collected from four firms that obtain granular chlorinated isos from either foreign or domestic sources and produce tablets of chlorinated isos (“U.S. tableters”). U.S. import data are based on eight responses to the Commission’s U.S. importer questionnaire and supplemented using proprietary U.S. import data obtained from U.S. Customs. The Commission received no responses from foreign producers in China or Spain. Therefore, foreign industry export data are compiled using the Global Trade Atlas. Responses by U.S. producers, importers, and purchasers of chlorinated isos to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D.

COMMERCE’S REVIEWS

Administrative reviews¹⁷

During the period of review, Commerce has completed five administrative reviews of the outstanding antidumping duty order on chlorinated isos from China. Commerce has completed one administrative review of the outstanding antidumping duty order on chlorinated isos from Spain.

China

Since the continuation of the antidumping duty order in 2010, Commerce has completed five antidumping duty administrative reviews with regard to subject imports of chlorinated isos from China. Table I-2 presents the results of the administrative reviews.

¹⁷ Commerce has issued no duty absorption findings nor conducted any changed circumstances reviews with respect to chlorinated isos from China or Spain.

Table I-2
Chlorinated isos: Administrative reviews of the antidumping duty order for China

Date final results published	Period of review	Producer or exporter	Margin (percent)
November 16, 2011 76 FR 70957	June 1, 2009 to May 31, 2010	Hebei Jiheng Chemical Co., Ltd.	0.03
		Juancheng Kangtai Chemical Co., Ltd.	2.66
		Arch Chemicals (China) Co., Ltd.	2.66
		Zhucheng Taisheng Chemical Co., Ltd.	2.66
January 22, 2013 78 FR 4386	June 1, 2010 to May 31, 2011	Hebei Jiheng Chemical Co., Ltd.	29.91
		Juancheng Kangtai Chemical Co., Ltd.	38.25
		Nanning Chemical Industry Co., Ltd.	34.08
		Zhucheng Taisheng Chemical Co., Ltd.	34.08
January 30, 2014 79 FR 4875	June 1, 2011 to May 31, 2012	Arch Chemicals (China) Co. Ltd.	53.15
		Hebei Jiheng Chemical Co., Ltd.	47.17
		Juancheng Kangtai Chemical Co., Ltd.	59.12
		Sinoacarbon International Trading Co., Ltd.	53.15
		Zhucheng Taisheng Chemical Co., Ltd.	53.15
January 28, 2015 80 FR 4539	June 1, 2012 to May 31, 2013	Arch Chemicals (China) Co. Ltd.	53.15
		Hebei Jiheng Chemical Co., Ltd.	0.00
		Juancheng Kangtai Chemical Co., Ltd.	0.00
		Heze Huayi Chemical Co. Ltd.	53.15
		Zhucheng Taisheng Chemical Co., Ltd.	53.15
January 11, 2016 81 FR 1167	June 1, 2013 to May 31, 2014	Heze Huayi Chemical Co., Ltd.	0.00
		Hebei Jiheng Chemical Co., Ltd.	1.15
		Juancheng Kangtai Chemical Co., Ltd.	0.00

Source: Cited Federal Register notices.

Spain

Since the continuation of the antidumping duty order in 2010, Commerce has completed one antidumping duty administrative review with regard to subject imports of chlorinated isos from Spain. Table I-3 presents the results of this administrative review.¹⁸

Table I-3
Chlorinated isos: Administrative review of the antidumping duty order for Spain

Date final results published	Period of review	Producer or exporter	Margin (percent)
December 03, 2013 78 FR 72633	June 1, 2011 to May 31, 2012	Ercros, S.A.	<i>de minimis</i> (less than 0.5 percent)

Source: Cited Federal Register notices.

¹⁸ Commerce did initiate another administrative review of the antidumping duty order on chlorinated isos from Spain covering the period June 1, 2012 through May 31, 2013, but found that Ercros S.A. did not have reviewable entries during the period of review. *Chlorinated Isocyanurates From Spain: Final Results No Shipment Determination; 2012-2013*, 79 FR 44745, August 01, 2014.

Five-year reviews

Commerce has issued the final results of its second expedited reviews with respect to all subject countries.¹⁹ Table I-4 presents the dumping margins calculated by Commerce in its original investigations, first reviews, and second reviews on the antidumping duty order on China. Table I-5 presents the dumping margins issued by Commerce for the antidumping duty orders on Spain.

Table I-4
Chlorinated isos: Commerce's original and first five-year dumping margins for producers/exporters in China

Producer/exporter	Original margin (percent)	First five-year review margin (percent)	Second five-year review margin (percent)
Hebei Jiheng Chemical Co., Ltd.	75.78	75.78	75.78
Nanning Chemical Industry Co., Ltd.	285.63	285.63	285.63
Changzhou Clean Chemical Co., Ltd.	137.69	137.69	137.69
Liaocheng Huao Chemical Industry Co., Ltd.	137.69	137.69	137.69
Sinochem Hebei Import & Export Corp.	137.69	137.69	137.69
Sinochem Shanghai Import & Export Corp.	137.69	137.69	137.69
All others	285.63	285.63	285.63

Source: Notice of Final Determination of Sales at Less Than Fair Value: Chlorinated Isocyanurates From the People's Republic of China, 70 FR 24502, May 10, 2005; Chlorinated Isocyanurates from Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders, 75 FR 49464, August 13, 2010; Chlorinated Isocyanurates From Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders, 81 FR 461, January 6, 2016.

Table I-5
Chlorinated isos: Commerce's original and first five-year dumping margins for producers/exporters in Spain

Producer/exporter	Original margin (percent)	First five-year review margin (percent)	Second five-year review margin (percent)
Argonesas Delsa S.A. (Ercros, S.A.)	24.83	24.83	24.83
All others	24.83	24.83	24.83

Source: Chlorinated Isocyanurates From Spain: Notice of Final Determination of Sales at Less Than Fair Value, 70 FR 24506, May 10, 2005; Chlorinated Isocyanurates from Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders, 75 FR 49464, August 13, 2010; Chlorinated Isocyanurates From Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders, 81 FR 461, January 6, 2016.

¹⁹ *Chlorinated Isocyanurates From Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders, 81 FR 461, January 6, 2016.*

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of these reviews as follows:

Chlorinated isos, which are derivatives of cyanuric acid, described as chlorinated s-triazine triones. There are three primary chemical compositions of chlorinated isos: (1) Trichloroisocyanuric acid (Cl₃(NCO)₃), (2) sodium dichloroisocyanurate (dihydrate) (NaCl₂(NCO)₃(2H₂O)), and (3) sodium dichloroisocyanurate (anhydrous) (NaCl₂(NCO)₃). The orders cover all chlorinated isos.²⁰

Scope rulings

Commerce has considered two separate requests for scope rulings since the imposition of the original antidumping duty order.²¹ The requestors, outcomes, and completion dates of Commerce's scope rulings are presented in table I-6.

Table I-6
Chlorinated isos: Commerce's scope rulings

Requestor	Scope ruling	Date of completion	Federal Register cite
BioLab	Exclusion request denied. Chlorinated isos originating in China, that are packaged, tableted, blended with additives, or otherwise further processed in Canada by Capo Industries, Ltd. before entering the U.S., are within the scope of the antidumping duty order.	April 9, 2008	73 FR 49418 (Aug. 21, 2008)
BioLab	Exclusion request granted. Chlorinated isos produced in and exported from Vietnam by Tian Hua (Vietnam) SPC Industries Ltd. are not included in the scope of the antidumping order.	March 23, 2009	74 FR 43681 (Aug. 27, 2009)

Source: Cited *Federal Register* notices.

²⁰ *Chlorinated Isocyanurates from Spain and the People's Republic of China: Continuation of Antidumping Duty Order*, 75 FR 62764, October 13, 2010; *Chlorinated Isocyanurates From Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders*, 81 FR 461, January 6, 2016.

²¹ A third request for a scope ruling was initiated, but later terminated, by Enviro Tech Chemical regarding whether powdered trichloroisocyanuric acid should be considered a separate like product. *Notice of Scope Rulings*, 71 FR 5646, February 2, 2006.

Tariff treatment

Chlorinated isos is currently imported under HTS statistical reporting numbers 2933.69.6015,²² 2933.69.6021, 2933.69.6050, 3808.40.50, 3808.50.40, and 3808.94.50.00 of the Harmonized Tariff Schedule of the United States (“HTSUS”).²³ These subheadings have general rates of duty of 3.5 percent ad valorem (for the separate chemically identifiable compounds) and 5 percent ad valorem (for the disinfectants containing such compounds), respectively.

THE PRODUCT

Description and applications

Chlorinated isos are chemical compounds used primarily as sanitizing agents for swimming pools, spas, and industrial water, and as disinfecting and bleaching agents for detergents, bleaches, and cleansers. These products are sold to consumers as a solid, usually in granular, tablet, or stick form. The active ingredient for sanitizing purposes is chlorine, which acts as a biocide, killing algae and other microbes.

There are three primary chemical compositions of chlorinated isos (all of which are within Commerce’s scope), which vary with respect to the amount of available chlorine: (1) trichloroisocyanuric acid (“trichlor”) which has 90 percent available chlorine; (2) sodium dichloroisocyanurate (“dichlor”) in anhydrous form, which has 63 percent available chlorine; and (3) dichlor in dihydrate form, which has 56 percent available chlorine. Trichlor and dichlor differ mainly in the percentage of chlorine each has available for sanitizing and the rate of release of that chlorine in water.²⁴

Trichlor has the highest chlorine content, but the chlorine is released relatively slowly in water. This slow release rate is appropriate for maintaining swimming pool chlorine levels within safety guidelines (less than four parts per million) with weekly tablet applications and for other water treatment applications. Dihydrate and anhydrous dichlor contain less available

²² HTS statistical reporting numbers 2933.69.6021 and 2933.69.6050, 3808.50.40, and 3808.99.9500 are basket categories that include chlorinated isos and nonsubject compounds such as unfused triazine ring, disinfectants and other nonsubject products. In a related investigation, petitioners contended that statistical reporting number HTS 2933.69.6015 most accurately corresponded to the scope definition of chlorinated isos. *Investigation Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Japan--Staff Report*, INV-MM-092, September 25, 2014, p. IV-1, fn. 2.

²³ Commerce specifically noted in its last continuation order that the order on chlorinated isos from Spain covers HTSUS subheadings 2933.69.6015, 2933.69.6021, and 2933.69.6050, while the order on chlorinated isos from People’s Republic of China currently covers HTSUS subheadings 2933.69.6015, 2933.69.6021, 2933.69.6050, 3808.40.50, 3808.50.40, and 3808.94.50.00. *Chlorinated Isocyanurates from Spain and the People’s Republic of China: Continuation of Antidumping Duty Order*, 75 FR 62764, October 13, 2010.

²⁴ The physical form of the product also affects the rate of release of chlorine in water, with the granular form releasing chlorine more rapidly than tablet or stick forms. *Chlorinated Isocyanurates from China and Japan: Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, I-7.

chlorine, but the chlorine is released relatively quickly. Dichlor's rapid release rate is appropriate for "shock" swimming pool treatments to instill chlorine in swimming pools quickly and temporarily²⁵ as well as uses in detergents, bleaches, and cleansers.²⁶ Swimming pool and spa applications account for the bulk of the U.S. chlorinated isos market. Industrial applications, e.g., industrial water treatment, and use in cleansers and detergents, account for most of the remaining 10-15 percent of the market.²⁷

Some of the trichlor tablets produced in the United States and China are blended tablets that contain active ingredients other than chlorine that provide functions other than sanitizing. The ingredients in these tablets include copper sulfate, which acts as an algicide, and aluminum sulfate, which acts as a water clarifier.

In the United States, sanitizing agents such as trichlor and dichlor are statutorily controlled pesticides and must be approved by the United States Environmental Protection Agency (EPA) for public use. Accordingly, any chlorinated isos destined for use in the pool and spa market must be tested and approved prior to sale. The EPA testing and approval process, known as registration, is generally maintained by the producer, whether U.S. or foreign.²⁸

Manufacturing process²⁹

The raw materials for the production of both trichlor and dichlor are cyanuric acid, caustic soda, and chlorine gas. Cyanuric acid, which U.S. chlorinated isos producers make from urea, is refined, purified, and then neutralized with caustic soda to become sodium cyanurate, the basic feedstock for both trichlor and dichlor. Both trichlor and dichlor are produced in the same kilns to mix the cyanuric acid and caustic soda to form the sodium cyanurate feedstock, using the same equipment and the same employees. The feedstock then goes through dedicated production lines to produce either trichlor or dichlor. To produce trichlor, chlorine gas is introduced into the feedstock, resulting in a granular solid that is either packaged in 2,205-pound (1 metric ton) sacks or 300-pound drums and sold as such, or further processed into tablets or sticks and packaged into 10 to 50-pound pails. The bulk of trichlor is ultimately consumed as tablets.³⁰ To produce dichlor, a smaller amount of chlorine gas is introduced into the feedstock, resulting in an acid that is neutralized with caustic soda to produce the dichlor

²⁵ Pools that use saltwater chlorination systems, rather than trichlor, to maintain a steady chlorine level may use dichlor for shock treatments. Conference transcript, p. 39 (Viner).

²⁶ *Chlorinated Isocyanurates from China and Japan: Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, I-7.

²⁷ *Chlorinated Isocyanurates from China and Japan: Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, I-8.

²⁸ *Chlorinated Isocyanurates from China and Japan: Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, I-8.

²⁹ Unless otherwise noted, this information is based on *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, pp. I-5 – I-6.

³⁰ Tableted chlorinated isos are granular chlorinated isos (believed to be mostly trichlor) that have been compacted or pressed into forms for convenience of the user. Tableted trichlor requires an additional process of taking granular trichlor, sorting it, then tableting it into shapes, typically into 1-inch or 3-inch diameters. *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. I-9.

salt. This product can be further dried at higher temperatures to produce the anhydrous forms. Most dichlor is sold and used in granular form and is packaged in sacks or drums. For the most part, production is continuous, and the equipment and production workers used in production of chlorinated isos are specific to that purpose.

A number of byproducts result from the production process, including ammonia gas, nitrogen, and chlorine-containing compounds, but virtually all are waste products subject to regulations requiring further treatment prior to disposal or are used as a source of energy in the production process. The exception is a small quantity of excess cyanuric acid, which is either sold or traded.³¹

DOMESTIC LIKE PRODUCT ISSUES

In its original investigations, the Commission defined the domestic like product as all chlorinated isocyanurates, coextensive with Commerce's scope.³² Petitioners argued for a single domestic like product definition consisting of all chlorinated isos, coextensive with the scope of investigation. Chinese respondents, however, argued that trichlor and dichlor were separate domestic like products. Another party argued that "blended tablets" were a separate domestic like product from other chlorinated isos. Moreover, at the hearing, a non-party raised the issue of whether powdered chlorinated isos was a separate domestic like product. Thus, in the final phase of the original investigations,³³ the Commission addressed three separate issues pertaining to the definition of the domestic like product: (1) whether trichlor and dichlor are separate domestic like products; (2) whether blended tablets and all other chlorinated isos are separate domestic like products; and (3) whether powdered chlorinated isos and all other chlorinated isos are separate domestic like products.

³¹ *Chlorinated Isocyanurates from China and Japan: Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, p. I-8.

³² *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. 10.

³³ In the preliminary phase of the original investigations, a party raised the issue of whether granular and tableted chlorinated isos should be deemed separate domestic like products. The Commission did not find a clear dividing line between granular and tableted trichlor. *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Preliminary)*, USITC Publication 3705, July 2004, p. 10. None of the parties raised this issue in the final phase and the Commission declined to address the issue further. *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. 5 fn. 20.

Trichlor vs. dichlor³⁴

Using its traditional six-factor like product analysis,³⁵ the Commission determined that trichlor and dichlor were not separate domestic like products and reasoned:

{W}e do not find that there is a “clear dividing line” between trichlor and dichlor, and find that there are more similarities than differences. Trichlor and dichlor have similar chemical compositions and similar uses, but only moderate interchangeability, due to the fact that consumers generally prefer one over the other in any given application. They are sold in the same channels of distribution, and produced in common manufacturing facilities, by common production employees, using similar production processes. We acknowledge that granular dichlor is higher-priced than granular trichlor. In light of the record as a whole, we do not find that trichlor and dichlor are separate domestic like products.³⁶

Blended tablets vs. all other chlorinated isos

Again, using its traditional six-factor like product analysis, the Commission determined that blended tablets and all other chlorinated isos were not separate domestic like products and stated:

We do not find a clear dividing line between blended tablets and other chlorinated isos. . . . Blended tablets are very similar to regular trichlor tablets. They differ physically only in the fact that blended tablets have relatively small amounts of additives that may provide some enhanced features. They differ in production process only to the extent that these specific additives are mixed in with the chlorine before the tableting stage. The record reflects that these blended tablets compete directly against regular trichlor tablets. Both types of tablets sanitize pools, and all chlorinated isos kill algae and clarify water to some degree. Even if the blended tablets are of slightly higher functionality with a higher price, this is not sufficient to find them to be a separate domestic like

³⁴ In the related investigations on chlorinated isos in 2014, the Commission again addressed this issue of whether trichlor and dichlor are separate domestic like products. It again found no “clear dividing line” and defined the domestic like product as all chlorinated isos, coextensive with Commerce’s scope definition. The scope of the 2014 investigations mirrored that of these reviews. *Chlorinated Isocyanurates from China and Japan, Investigation Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, p. 7.

³⁵ In its traditional six factor like product analysis, the Commission generally considers the following factors: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price.

³⁶ *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. 7.

*product. In sum, we do not find that blended tablets are a separate domestic like product from other chlorinated isos.*³⁷

Powdered chlorinated isos vs. all other chlorinated isos

Using a semifinished product analysis,³⁸ the Commission determined that powdered chlorinated isos and all other chlorinated isos were not separate domestic like products and stated:

*Applying the semifinished like product analysis, BioLab produces powdered chlorinated isos almost exclusively as an intermediate product in the production of granular trichlor. Powdered chlorinated isos have no independent uses or separate markets . . . Powdered chlorinated isos have the same chemistry as granular chlorinated isos. We do not have information on the record to address value added or the extent of the process used to transform the powdered chlorinated isos into the downstream product, tablets. In conclusion, we do not find that powdered chlorinated isos are a separate domestic like product from other chlorinated isos.*³⁹

Therefore, after addressing the three above issues with regard to the definition of the domestic like product, the Commission defined the domestic like product as all chlorinated isos, coextensive with Commerce's scope.⁴⁰

In the Commission's first expedited review, the Commission defined the domestic like product as all chlorinated isocyanurates, coextensive with Commerce's scope stating that the record provided no basis to revisit the Commission's previous definition of the domestic like product.⁴¹

In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate domestic like product definition.⁴² Domestic interested parties commented on the Commission's definition of the domestic like product and indicated that they agree with the Commission's definition as set forth in the

³⁷ *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. 9.

³⁸ In a semifinished product analysis, the Commission examines: (1) whether the upstream article is dedicated to the production of the downstream article or has independent uses; (2) whether there are perceived to be separate markets for the upstream and downstream articles; (3) differences in the physical characteristics and functions of the upstream and downstream articles; (4) differences in the costs or value of the vertically differentiated articles; and (5) significance and extent of the processes used to transform the upstream into the downstream articles.

³⁹ *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, pp. 8-9.

⁴⁰ *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, p. 10.

⁴¹ *Chlorinated Isocyanurates from China and Spain, Investigation Nos. 731-TA-1082 and 1083 (Review)*, USITC Publication 4184, September 2010, p. 4.

⁴² *Chlorinated Isocyanurates from China and Spain; Institution of Five-Year Reviews*, 80 FR 52789, September 1, 2015.

original investigations and first five-year reviews, which was all chlorinated isos, coextensive with Commerce's scope.⁴³ No party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires.⁴⁴

DOMESTIC INDUSTRY ISSUES

Whether tableters engage in sufficient production related activities⁴⁵

In its original determinations, the Commission defined the domestic industry to include both domestic granular producers of chlorinated isos and those firms who engaged solely in domestic tableting operations. The U.S granular producers, sometimes referred to as the "integrated producers" produce granular and/or powdered chlorinated isos from raw materials of cyanuric acid, caustic soda, and chlorine gas, and also convert the granular chlorinated isos into tablets.⁴⁶ Whereas, the firms referred to as "U.S. tableters" are firms that solely convert purchased or imported granulated chlorinated isos into tablets.⁴⁷

In the original investigations, the Commission was divided as to whether the U.S. tableters engaged in sufficient production related activities to be considered part of the U.S. industry. Three Commissioners found that the tableters did engage in sufficient production related activities and included these firms as part of the domestic industry.⁴⁸ Three

⁴³ *Domestic Interested Parties' Response to the Notice of Institution*, October 1, 2015, p. 20.

⁴⁴ Comments on draft questionnaires were received from domestic interested parties. No respondent interested party responded to the Commission's notice of institution or participated in the questionnaire comment period.

⁴⁵ In deciding whether a firm's production related activities are sufficient for it to be considered part of the domestic industry, the Commission generally has analyzed the overall nature of a firm's production-related activities in the United States. The Commission generally considers six factors: (1) source and extent of the firm's capital investment; (2) technical expertise involved in U.S. production activities; (3) value added to the product in the United States; (4) employment levels; (5) quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. No single factor is determinative and the Commission may consider any other factors it deems relevant in light of the specific facts of any investigation. *Chlorinated Isocyanurates from China and Spain: Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, pp. 10.

⁴⁶ Although BioLab, Clearon, and Oxy are referred to as "integrated producers," Oxy does not engage in tableting operations itself, but has its granular product tableted through various toll agreements with U.S. tableters.

⁴⁷ BioLab and Clearon also conduct tableting operations but are not included in this group because they produce granular product.

⁴⁸ Although these Commissioners, Chairman Koplan and Commissioners Miller and Hillman, recognized that the record was mixed, they emphasized that in general, the capital investment necessary was significant and that the value-added was generally reported to be in the range of 15 to 35 percent. They noted that there is a moderate level of technical expertise necessary to perform tableting operations due to heavy machinery and hazardous materials involved. They also noted that tableters employ a significant number of personnel both in tableting operations and in support personnel, and although some rely heavily on subject merchandise for their raw materials, others rely on domestic

(continued...)

Commissioners found that tableters did not engage in sufficient production related activity and did not include U.S. tableters in the U.S. industry.⁴⁹

In its expedited first five-year review determinations, no independent U.S. tableter responded to the Commission's notice of institution and no new evidence was placed on the record with respect to whether U.S. tableters should be included in the definition of the domestic industry. Based on the record of the expedited first five-year reviews, the Commission found that tableters do not engage in sufficient production-related activity to qualify as domestic producers^{50 51} and therefore defined the domestic industry as all of the domestic integrated producers of chlorinated isos, namely BioLab, Clearon, and Oxy.⁵²

In its notice of institution for these reviews, the Commission solicited comments from interested parties regarding the appropriate definition of the domestic industry. Domestic

(...continued)

materials or a mix of subject, nonsubject, and domestic raw materials. *Chlorinated Isocyanurates from China and Spain: Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, pp. 10-12.

⁴⁹ These Commissioners, Vice Chairman Okun and Commissioners Lane and Pearson, noted the variability in the reported capital necessary for tableting and value-added by tableting. They did not find that the capital investment necessary for tableting to be significant in comparison to the capital investment necessary to establish an integrated chlorinated isos operation, nor did they believe the value-added was highly significant (most producers reported values in the range of *** percent to *** percent concerning the value-added). Despite the moderate level of expertise necessary for tableting, such expertise, they found, did not compare with that necessary in the upstream processes. They also noted that the wage differential between production workers that produce granular chlorinated isos versus tableting packaging workers is approximately *** and producers of chlorinated isos employ *** times as many workers as tableters. These Commissioners also acknowledged that some tableters rely heavily on subject merchandise for their raw materials, others rely on domestic materials or a mix of subject, nonsubject, and domestic raw materials and that tableters employ additional personnel and incur additional costs. *Chlorinated Isocyanurates from China and Spain: Investigation Nos. 731-TA-1082 and 1083 (Final)*, USITC Publication 3782, June 2005, pp. 12-14 and *Investigation Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Spain--Confidential Views of the Commission*, pp. 20-26.

⁵⁰ Commissioner Aranoff noted that the issue was close in the original determinations and that no new factual information is available in the expedited reviews. Given that the only two participating parties in the first five-year expedited reviews opposed the inclusion of tableters in the domestic industry, Commissioner Aranoff excluded the tableters for purposes of the expedited first five-year reviews. *Chlorinated Isocyanurates from China and Spain: Investigation Nos. 731-TA-1082 and 1083 (Review)*, USITC Publication 4184, September 2010, p. 6.

⁵¹ Commissioners Williamson and Pinkert found that tableters qualified as domestic producers. Their analysis was based on information from the original investigations, as no new information regarding tableters was on the record in the first five-year expedited reviews. They found that, although there was variability in the reported capital investment necessary for tableting, the capital investment necessary for tableting generally is significant. They found that the value added by tableting is significant, that a moderate level of technical expertise is required for tableting due to the heavy machinery and hazardous materials involved, and that tableters employ a significant number of personnel in their tableting operations. Commissioners Williamson and Pinkert therefore concluded that tableters engaged in sufficient production-related activity to be included in the domestic industry. *Ibid.*

⁵² *Chlorinated Isocyanurates from China and Spain: Investigation Nos. 731-TA-1082 and 1083 (Review)*, USITC Publication 4184, September 2010, pp. 5-7.

interested parties stated that they agreed with the Commission's definition of the domestic industry in the original investigations and the expedited first five-year reviews, but reserved the right to comment on this issue in any further proceedings.⁵³ At the hearing, domestic interested parties argued that U.S. tableters should not be included in the U.S. industry stating they believed that the value added by U.S. tableters is low,⁵⁴ that the wage rate paid by tableters is low compared to those paid in granular manufacturing, and that the skill and sophistication required to produce tablets is low compared to the production of granular chlorinated isos.⁵⁵ U.S. tableters stated that with regard to the requisite technical expertise to produce tableted chlorinated isos nothing had materially changed since the Commission examined this issue in the related 2014 investigation on chlorinated isos from China and Japan during which the Commission stated that:

Tableting production is a less complicated process than production of the granulated product and entails less extensive employee training. However, because chlorinated isos are hazardous chemicals, tableting operations require specialized equipment and maintenance, specific measures to prevent the release of caustic gas (which may result in respiratory and other health-related issues), and appropriately trained staff.⁵⁶

The role of tolling agreements in the U.S. industry

During the period of review, a number of U.S. producers operated under toll agreements. Under these agreements, a "tollee" is a firm that contracts out for the tableting production of chlorinated isos and retains ownership or title to the granular product. A "toller" is a firm that produces tableted chlorinated isos under a service contract for other firms and does not possess ownership or title to the granular or tableted product. As presented in table I-7, ***.

⁵³ *Domestic Interested Parties' Response to the Notice of Institution*, October 1, 2015, p. 20. In their response, domestic interested parties did not make clear whether they advocated for or against inclusion of tableters in the domestic industry. However, in the recent investigations involving the same product, the petitioners (the same three firms that are the domestic interested parties in these reviews) argued that domestic firms that solely tableted chlorinated isos did not engage in sufficient production-related activity to qualify as domestic producers. *Chlorinated Isocyanurates from China and Japan, Inv. Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Pub. 4494, November 2014, p. 8. However, the Commission found that the record in those investigations indicated that tableters engaged in sufficient production related activities to be considered producers of the domestic like product and accordingly defined the domestic industry to include the three integrated producers of chlorinated isos and all tableters. *Ibid.*, pp. 9, 12. Commissioner Johanson did not find that tableters were part of the domestic industry. *Ibid.*, p. 12.

⁵⁴ See, Part III, *Value-added and tolling operations*.

⁵⁵ Hearing transcript, p. 31 (Cannon).

⁵⁶ *Chlorinated Isocyanurates from China and Japan, Inv. Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Pub. 4494, November 2014, p. 8; Email responses from U.S. tableters, September 27, 2016.

Table I-7
Chlorinated isos: Toll agreements and production activities in the U.S industry, by firm

* * * * *

U.S. MARKET PARTICIPANTS

U.S. producers

The Commission issued questionnaires to three firms that produce granular chlorinated isos from cyanuric acid and chlorine gas (referred to herein as “integrated” or “granular” producers), and 11 firms that produce chlorinated isos in tablet form (referred to herein as “U.S. tableters”).⁵⁷ Data presented for U.S. granular producers are compiled from the questionnaire responses of three firms, BioLab, Clearon, and Oxy, which accounted for all production of chlorinated isos (in granular form) in the United States during the period of review.⁵⁸ In addition, data are presented for six U.S. tableters. Two of the six tableters, BioLab and Clearon, are also granular producers and produce tablets from their own production of granular chlorinated isos. The remaining four U.S. tableters do not produce granular chlorinated isos, but obtain the product from either foreign or domestic sources and produce tablets either for their own commercial shipment or pursuant to toll agreements.⁵⁹

Presented in table I-8 is a list of current domestic producers (both granular producers and U.S. tableters), each company’s position on continuation of the orders, production locations, and share of reported production of chlorinated isos in 2015.

⁵⁷ Five U.S. tableters, ***, did not provide the Commission with U.S. producers’ questionnaire responses.

⁵⁸ BioLab, Clearon, and Oxy produced all the granular chlorinated isos in the United States during both the original investigations and the first five-year reviews.

⁵⁹ Unless otherwise noted, U.S. producers that produce granular chlorinated isos (BioLab, Clearon, and Oxy) are referred to as “integrated producers” or “granular producers.” U.S. firms that solely engage in tableting operations are referred to as “U.S. tableters.”

Table I-8
Chlorinated isos: U.S. producers, positions on orders, U.S. production locations, and shares of 2015 reported U.S. production

Firm	Position on petition	Production location(s)	Share of production (percent)
U.S. granular producers			
BioLab	Support	Conyers, GA Westlake, LA Ontario, CA	***
Clearon	Support	South Charleston, WV	***
Oxy	Support	Sauget, IL Luling, LA	***
Total			***
U.S. tableters			
BioLab	Support	Conyers, GA Westlake, LA Ontario, CA	***
Clearon	Support	South Charleston, WV	***
LPM	***	Phoenix, AZ	***
N. Jonas	***	Bensalem, PA	***
Oreq	***	Temecula, CA	***
Stellar	***	Sauget, IL	***
Total			***

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

U.S. producers of granular chlorinated isos

BioLab

Established in 1955 as a producer of disinfectants for poultry hatcheries, BioLab currently produces pool and spa care products as well as household cleaning products. In 2013, KIK Custom Products, Inc. of Toronto, Canada, a contract manufacturer of consumer packaged goods and a producer of pool and spa care products, purchased BioLab and placed it in its KIK Classic Division.⁶⁰ BioLab produces chlorinated isos at three manufacturing facilities, (1) the Conyers plant in Conyers, Georgia, (2) the Lake Charles plant in Lake Charles, Louisiana, and (3) the OnCal plant in Ontario, California. Prior to the KIK Custom Products purchase of BioLab, the KIK Classic Division owned and operated the OnCal plant. In January 2015, the OnCal plant became a BioLab manufacturing facility.⁶¹

At these three facilities, BioLab manufactured and tableted granular chlorinated isos produced internally. It shipped both tableted and granular chlorinated isos commercially during the period of review. It also reported that it ***.⁶²

⁶⁰ http://www.biolabinc.com/Our_Story accessed July 28, 2016. ***. U.S. producer questionnaire of BioLab, question I-7.

⁶¹ U.S. producer questionnaire of BioLab, question II-2.

⁶² U.S. producer questionnaire of BioLab, question II-14(a).

Clearon

During the last five year review, Clearon was a wholly owned subsidiary of the ICL Group, Inc. of Tel Aviv, Israel, a global manufacturer of fertilizers and specialty chemicals. On March 2, 2016, ICL announced that it sold Clearon to Hui Yu Xin American Corp., a subsidiary of Dalian Hui Yu Xin Technology Development Co., Ltd., a specialty chemicals firm located in China.⁶³ A petitioner in the original investigations, Clearon produced granular and tableted chlorinated isos at its facility in South Charleston, WV. It shipped both tableted and granular chlorinated isos commercially during the period of review. It also reported that ***.⁶⁴

Oxy

Oxy is a large North American manufacturer of specialty chemicals including chlorinated isos and a wholly owned subsidiary of Occidental Petroleum Corp. of Houston, Texas. A petitioner in the original investigations, Oxy produced granular chlorinated isos at its facilities in Sauget, Illinois and Luling, Louisiana. Oxy ***. It reported that during the period of review, it also shipped granular chlorinated isos commercially to other retailers and distributors.

U.S. tableters

LPM

LPM is a wholly owned subsidiary of Leslie's Poolmart, Inc. of Phoenix, Arizona, a large retailer of swimming pool supplies with over 850 retail stores in 35 U.S. states. LPM obtains granular chlorinated isos through ***.

N. Jonas

N. Jonas, a producer of pool and spa chemicals since 1948, is a tableter of granulated chlorinated isos, which it ships commercially to distributors and retailers across the United States. It ***.⁶⁵

Oreq

Oreq is a manufacturer of pool and spa supplies located in Temecula, California. It is a tableter of granular chlorinated isos which it obtained ***. Its source of chlorinated isos in ***.⁶⁶ During the period of review, it reported that ***.⁶⁷

⁶³ <http://www.icl-group.com/newsevents-pressreleases/Article/605c04bb-d4ac-4623-b41b-cbd99411262f.aspx> accessed on August 1, 2016.

⁶⁴ U.S. producer questionnaire of Clearon, question II-2.

⁶⁵ U.S. producer questionnaire of N. Jonas, question II-14(a).

⁶⁶ Oreq reported that it ***.

⁶⁷ U.S. producer questionnaire of Oreq, question II-2.

Stellar

Stellar is a contract manufacturer which provides granulation, briquetting, blending, tableting, filling, and packaging services to the water treatment, chemical, agrochemical, consumer product, minerals and pool and spa industries.⁶⁸ It is a tableter of granular chlorinated isos at its facility in Sauget, IL. ***.⁶⁹

U.S. importers

In the final phase of the original investigations, the Commission received questionnaires from 12 importers of chlorinated isos, representing a majority of U.S. imports from China and Spain in 2004. In the Commission's expedited first five-year reviews, domestic interested parties listed 13 companies that they believed to be importers of subject merchandise from China and Spain.⁷⁰

In their response to the Commission's notice of institution in these current five-year reviews, domestic producers provided a list of over 80 U.S. importers that they believed may have imported chlorinated isos from China and 10 U.S. importers believed to have imported from Spain.⁷¹

In the current reviews, the Commission issued U.S. importers' questionnaires to 17 firms believed to be importers of chlorinated isos, as well as to all U.S. producers. Questionnaire responses were received from eight firms, accounting for *** of the U.S. imports from China, *** percent of the U.S. imports from Spain, and *** percent of total U.S. imports in 2015.⁷² Data for U.S. imports from China, Spain, and all other sources have been supplemented using proprietary U.S. import data obtained from U.S. Customs and Border Patrol ("U.S. Customs"). Table I-9 lists all responding U.S. importers of chlorinated isos from China, Spain, and all other sources, their locations, and their shares of U.S. imports in 2015.

⁶⁸ <http://stellarmfg.com/overview/> accessed August 1, 2016.

⁶⁹ U.S. producer questionnaire of Stellar, questions II-6 and II-10.

⁷⁰ *Domestic Interested Parties' Response to the Notice of Institution*, June 2, 2010, p. 21.

⁷¹ *Domestic Interested Parties' Response to the Notice of Institution*, October 1, 2015, exh. 9.

⁷² The computation of the coverage of U.S. import data obtained in Commission questionnaires is based on the share of U.S. imports obtained from official import statistics under HTS 2933.69.6015. HTS 2933.69.6015 may include products outside the scope of these reviews. Also, small quantities of chlorinated isos may enter the United States under other HTS subheadings.

Table I-9
Chlorinated isos: U.S. importers, sources of U.S. imports, U.S. headquarters, and shares of reported U.S. imports in 2015

Firm	Headquarters	Share of imports by source (percent)			
		China	Spain	All other sources	Total
3V Sigma ¹	Georgetown, SC	***	***	***	***
American KK ²	Bear, DE	***	***	***	***
Arch ³	Alpharetta, GA	***	***	***	***
Haviland ⁴	Grand Rapids, MI	***	***	***	***
Oreq ⁵	Lake Elsinore, CA	***	***	***	***
Shikoku ⁶	Orange, CA	***	***	***	***
Toyota Tsusho ⁷	Georgetown, KY	***	***	***	***
Wego ⁸	Great Neck, NY	***	***	***	***
All other firms ⁹		***	***	***	***
Total		***	***	***	***

¹ 3V Sigma USA, Inc. (“3V”) is a wholly owned subsidiary of 3V Sigma SpA of Bergamo, Italy. It reported ***.

² American KK Corp. (“American KK”) is a wholly owned subsidiary of Taiwan KK Corp. of Taipei, Taiwan. It reported ***.

³ Arch Chemicals, Inc. (“Arch”) is a wholly owned subsidiary of the Lonza Group Ltd. of Bern, Switzerland, a producer of pharmaceutical and specialty Ingredients and is affiliated with Lonza Suzhou, Ltd. of Suzhou, China, an exporter of chlorinated isos from China. During the period of review, ***.

⁴ Haviland Consumer Products, Inc. (“Haviland”) ***.

⁵ Oreq Corp. (“Oreq”) is affiliated with Shikoku International Corp. of Orange, California and Shikoku Chemicals Corp of Kagawa, Japan, a producer of chlorinated isos in Japan. It reported ***.

⁶ Shikoku International Corp. (“Shikoku”) is a wholly owned subsidiary of Shikoku Chemicals Corp of Kagawa, Japan, a producer of chlorinated isos in Japan. It reported ***.

⁷ Toyota Tsusho America, Inc. (“Toyota Tsusho”) is a wholly owned subsidiary of Toyota Tsusho Corp. of Nagoya, Japan. It reported ***.

⁸ Wego Chemical & Mineral, Inc. (“Wego”) is a wholly owned subsidiary of Wego Chemical Group, Inc. of Great Neck, New York. It reported ***.

⁹ Compiled from proprietary data obtained from U.S. Customs under HTS 2933.69.6015 and includes, *inter alia*, U.S. imports from: (1) *** HTS 2933.69.6015 may include products outside the scope of these reviews. Also, small quantities of chlorinated isos may enter the United States under other HTS subheadings.

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

U.S. purchasers

The Commission received 27 usable questionnaire responses from firms that bought chlorinated isos during 2010-15.^{73 74} Thirteen responding purchasers are distributors, seven are tableters, six are retailers, one is an industrial market user, and five identified themselves as other. Purchasers were asked to identify the major end uses of chlorinated isos; 25 responded that chlorinated isos are used in swimming pools, five reported use in water treatment

⁷³ Of the 27 responding purchasers, 25 purchased the domestic chlorinated isos, 8 purchased imports of the subject merchandise from China, 2 purchased imports of chlorinated isos from Spain, and 9 purchased chlorinated isos from other sources.

⁷⁴ *** provided a response to the purchaser questionnaire. However, it indicated that as a mass market retailer, it purchased from domestic entities only finished products which contained chlorinated isos as a component part and it does not have knowledge of the information requested. Staff has not included *** in any descriptions in Part I or any part of this report.

applications, three reported use in machine washing detergents, three reported tablet production, one reported use in toilet bowl cleaners, and one reported use in bleaches or scouring powders. Responding U.S. purchasers were located across the contiguous United States. The largest purchasers of chlorinated isos are ***,⁷⁵

APPARENT U.S. CONSUMPTION

Data on apparent U.S. consumption of granular and tableted chlorinated isos are presented in table I-10. From 2013 to 2015, the quantity of apparent U.S. consumption of chlorinated isos decreased by *** percent. The value of apparent U.S. consumption, however, increased by *** percent from 2013 to 2015.

Table I-10
Chlorinated isos: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2013-15

* * * * *

U.S. MARKET SHARES

Data on U.S. market shares for granular and tableted chlorinated isos are presented in table I-11. From 2013 to 2015, U.S. producers' U.S. market share based on quantity increased by *** percentage points. From 2013 to 2015, U.S. producers' U.S. market share based on value increased by *** percentage points. U.S. imports from China decreased as a share of apparent U.S. consumption by *** percentage points from 2013 to 2015 based on quantity and *** percent based on value. U.S. imports from Spain increased as a share of apparent U.S. consumption from *** in 2013 to *** percentage points in 2015 based on quantity and *** percentage points based on value. U.S. imports from nonsubject countries decreased as a share of apparent U.S. consumption by *** percentage points from 2013 to 2015 based on quantity and *** percentage points based on value.

Table I-11
Chlorinated isos: U.S. consumption and market shares, 2013-15

* * * * *

⁷⁵ *** exited the business in 2014.

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

U.S. MARKET CHARACTERISTICS

Chlorinated isos are used primarily by the swimming pool and spa market to maintain chlorine levels in swimming pools and spas. There is also demand for chlorinated isos from makers of detergents and cleansers for industrial and institutional use and water treatment at commercial plants.¹ Chlorinated isos are commonly sold in two forms: trichlor and dichlor. The pool and spa market uses both dichlor and trichlor. Although there is some use of trichlor for toilet bowl cleansers, the cleansers and sanitizers market generally uses dichlor, while the industrial water treatment segment generally uses trichlor.²

Trichlor dissolves more slowly in water than dichlor and is generally sold in the residential pool market as a tablet or stick. Trichlor tablets are generally used to maintain chlorine levels in a pool. Dichlor, which is primarily sold in granular form,³ dissolves more quickly and is used in the residential pool market to “shock” a pool by raising the level of chlorine quickly to kill off algae and other organisms. However, these forms may be used in the other’s main application. In addition, some firms sell a “blended” tablet that mixes trichlor with other chemicals (e.g., anti-algae and water clarifying chemicals such as aluminum sulfate and copper sulfate). These blended tablets are proprietary and patented products sold by producers Arch and BioLab.⁴

Apparent U.S. consumption of chlorinated isos fluctuated during 2013-15. Overall, apparent U.S. consumption in 2015 was *** percent lower than in 2013. U.S. producers’ shipments of chlorinated isos represented *** percent, shipments of imports from China represented *** percent, shipments of imports from Spain represented *** percent, and nonsubject imports represented *** percent of apparent consumption, by quantity, in 2015.

CHANNELS OF DISTRIBUTION

During the period of review, U.S. producers⁵ sold granular chlorinated isos mainly to retailers while subject importers sold to both distributors and retailers (table II-1). Importers of granular chlorinated isos from China sold primarily to distributors, with the remaining product

¹ *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, USITC Publication 3782, June 2005, p. II-1.

² *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, USITC Publication 3782, June 2005, p. II-1.

³ Dichlor would dissolve too quickly as a tablet, although it can be tableted for some uses. *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, USITC Publication 3782, June 2005, p. II-1.

⁴ *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, USITC Publication 3782, June 2005, p. II-1.

⁵ In Part II, references to U.S. producers includes responses from both integrated producers and tableters.

going to retailers. Importers of the same product from Spain sold ***. Nonsubject imports of granular chlorinated isos from all other countries were sold primarily to tableters and the industrial market.

Table II-1
Chlorinated isos: U.S. producers' and importers' share of reported U.S. commercial shipments of granular (percent), by sources and channels of distribution, January 2013-December 2015

* * * * *

U.S. producers sold chlorinated isos tablets mainly to retailers, and a sizeable share to distributors, while importers of subject product sold to distributors and retailers as shown in table II-2.

Table II-2
Chlorinated isos: U.S. producers' and importers' share of reported U.S. commercial shipments of tablets (percent), by sources and channels of distribution, January 2013-December 2015

* * * * *

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling chlorinated isos to all regions in the contiguous United States (table II-3). For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. For importers of product from Spain, *** percent of sales were within 100 miles of their U.S. point of shipment, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers of product from China did not report shipping distances.

Table II-3
Chlorinated isos: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	U.S. importers		
		China	Spain	Subject
Northeast	5	***	***	***
Midwest	5	***	***	***
Southeast	5	***	***	***
Central Southwest	5	***	***	***
Mountains	4	***	***	***
Pacific Coast	4	***	***	***
Other ¹	3	***	***	***
Present in all continental regions	4	***	***	***

¹ All other U.S. markets, including AK, HI, PR, and VI.

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

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of chlorinated isos have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced chlorinated isos to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and moderate levels of inventories.

Industry capacity

Domestic capacity utilization for producers of granular chlorinated isos increased from *** percent in 2013 to *** percent in 2015. Domestic capacity utilization for tablets increased from *** percent in 2013 to *** percent in 2015. Production of the granular form and of tablets increased faster than capacity from 2013-15. This relatively low-to-moderate level of capacity utilization suggests that U.S. producers may have moderate-to-substantial ability to increase production of chlorinated isos in response to an increase in prices.

Alternative markets

U.S. producers' exports of granular chlorinated isos, as a percentage of total shipments, increased irregularly from *** percent to *** percent from 2013-15, while exports of tablets decreased from *** percent to *** percent during the same period. These levels indicate that U.S. producers may have limited ability to shift shipments between the U.S. market and other markets in response to price changes. *** stated that it exports granular chlorinated isos to *** and tablets to ***; *** reported that it exports granular chlorinated isos and tablets to *** and granular chlorinated isos to ***. All four responding U.S. producers reported that they have not experienced barriers to trade in other countries.

Inventory levels

U.S. producers' inventories of granular chlorinated isos declined from *** percent to *** percent while inventories of tablets increased from *** percent to *** percent, relative to total shipments, from 2013 to 2015. These inventory levels suggest that U.S. producers may have some ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

All responding U.S. producers stated that they could not switch production from chlorinated isos to other products.

Supply constraints

Most producers (6 of 7) and importers (5 of 7)⁶ reported no problems in supplying chlorinated isos. One producer, ***, reported that a delay in raw material imports ***, and that it was unable to fulfill new business. Some purchasers (9 of 25) reported that they were refused or declined supply of chlorinated isos. Two purchasers⁷ reported that Clearon refused to supply chlorinated isos either because it did not have product available, or would not offer it at market price. Other purchasers reported that Haviland, Lonza, BioLab, and Oxy (each reported by one purchaser) refused or were unable to sell chlorinated isos. Purchaser *** reported that it needed to negotiate to obtain sufficient supplies of dichlor. U.S. producers argue that while many of the alleged supply constraints appear to be complaints about price, claims that they did not have chlorinated isos available likely reflect a temporary shortage in 2015 caused by three events: (1) a fire at a port in China that disrupted exports of cyanuric acid, (2) ***, and (3) a longshoreman strike that slowed down deliveries of cyanuric acid for as much as seven months in 2015. Domestic interested parties state that no domestic producer failed to deliver the full quantities contracted in 2015.⁸

Subject imports from China⁹

There were no questionnaire responses from Chinese producers. However, based on available information, producers of chlorinated isos from China have the ability to respond to changes in demand with large changes in the quantity of shipments of chlorinated isos to the U.S. market. The main contributing factors to this degree of responsiveness of supply are large Chinese production capacity and the ability to shift shipments between markets.¹⁰

⁶ Importer *** reported that it *** and *** reported that Clearon would not sell chlorinated isos at market price.

⁷ Including ***.

⁸ U.S. domestic interested parties posthearing brief, Exhibit 1, pp. 17-19.

⁹ No Chinese producers responded to questionnaires during these reviews. The following information is based on one Chinese producer's questionnaire response during the final phase of these investigations.

¹⁰ During the 2013 preliminary investigations, *** indicated that Chinese capacity for product of acceptable quality in the United States and Europe was about *** metric tons per year. Additionally, *** indicated that "almost all" Chinese producers were export-oriented. The sole responding Chinese producer during the 2014 final investigations reported inventory levels of about *** percent in 2013, and reported that it was unable to produce other products on the same equipment used to produce

(continued...)

Subject imports from Spain¹¹

There were no questionnaire responses from Spanish producers. However, based on available information, producers of chlorinated isos from Spain have the ability to respond to changes in demand with moderate changes in the quantity of shipments of chlorinated isos to the U.S. market in 2004. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments between markets.

Nonsubject imports

Firms' reported imports from nonsubject sources decreased from 2013-15 and represented nearly two-thirds of total imports in 2015. Japan was the largest source of nonsubject imports during 2013-15 and accounted for nearly half of nonsubject imports in 2015.¹²

New suppliers

Four of 25 purchasers reported that there were new suppliers of chlorinated isos since January 1, 2013, and seven purchasers expect new entrants. Some purchasers cited Hong Kong Celain Co. (China), Spectrum Biotech (U.S.), and Tijamin Trading Company¹³ as new suppliers, and several purchasers reported that there are additional suppliers from China and one purchaser reported that it had heard "rumors" of a new producer in India.

U.S. demand

Based on available information, the overall demand for chlorinated isos is likely to experience moderate changes in response to changes in price. The main contributing factors are the somewhat limited range of substitute products and the large cost share of chlorinated isos in most of its end-use products. Demand for chlorinated isos for primary end uses is also seasonal. Clearon stated that current demand for trichlor is flat to slowly declining while there has been some growth in demand for dichlor.¹⁴

(...continued)

chlorinated isos. *Chlorinated Isocyanurates from China and Japan, Inv. Nos. 701-TA-501 and 731-TA-1226 (Final), Staff Report*, September 2014, pp. II-14-15.

¹¹ No Spanish producers responded to questionnaires during these reviews. The following information is based on one Spanish producer's questionnaire response during the final phase of these investigations. *Inv. Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Spain*, USITC Publication 3782, June 2005, p. II-11.

¹² Based on official U.S. import statistics for HTS 2933.69.6015.

¹³ U.S. purchaser *** reported that this company "keeps changing its name to avoid duties," but did not identify the country.

¹⁴ Hearing transcript, p. 8 (Helmstetter).

End uses

U.S. demand for chlorinated isos depends on the demand for U.S.-produced downstream products. Reported end uses include chlorine sticks, chlorine tablets, repackaged dichlor, blended and unblended trichlor, sanitizers, detergent, and bleaching agents for water treatment. Most responding U.S. producers (5 of 6), importers (3 of 3), and purchasers (7 of 9) reported no changes in end uses and most reported that they do not anticipate changes. Purchasers' responses were mixed regarding changes in demand for end-use products: four of ten reported that there has been no change in end-use demand since 2013, three reported that end-use demand decreased, two reported that it fluctuated and one reported that it increased. Two purchasers, ***, stated that these changes in demand affected their demand for chlorinated isos. U.S. producer and purchaser *** reported that end-use demand for chlorinated isos has decreased since 2011 due to both declining consumer demand for chlorine-based swimming pool sanitizers because of weather and to the shift to salt water generators (as a substitute for chlorinated isos). It also anticipates changes in demand for end-use products based on salt generator pricing and market trends.

Cost share

Chlorinated isos accounts for a moderate-to-large share of the cost of the end-use products in which it is used. Reported cost shares for some end uses were as follows:

- chlorine sticks (75 percent)
- chlorine tablets (75-100 percent)
- repackaged dichlor (75 percent)
- blended trichlor (55-63 percent)
- sanitizers and water treatment (57-100 percent)
- detergent and bleaching agents (100 percent)

Business cycles

Six of seven U.S. producers, five of six importers, and 18 of 25 purchasers indicated that the market was subject to business cycles or other distinct conditions of competition. Specifically, demand for chlorinated isos is seasonal based on weather and swimming pool use, and is typically strongest in the spring and summer months. BioLab stated that demand for chlorinated isos is largely driven by the aftermarket, that there is a large base of {installed} residential swimming pools in the United States, and that the large majority of these pools (80 percent) use chlorinated isos.¹⁵ U.S. producer and purchaser *** stated that alternatives for pool sanitizers affect competition and purchaser *** stated that the market competition is dominated by a handful of very large players who dictate selling prices.

¹⁵ Hearing transcript, p. 19 (Viner).

Demand trends

U.S. producers reported that U.S. demand for chlorinated isos decreased or fluctuated since January 1, 2013 while most responding importers reported no change in demand (table II-4). Purchasers reported a mix of demand trends. “Increased” demand was the least reported demand trend by all responding groups.

Table II-4
Chlorinated isos: Firms’ responses regarding U.S. demand

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	0	0	5	2
Importers	0	4	2	1
Purchasers	3	6	7	6
Foreign producers	***	***	***	***
Anticipated future demand				
U.S. producers	0	0	4	2
Importers	0	5	2	0
Purchasers	3	6	9	4
Foreign producers	***	***	***	***
Demand for purchasers’ final products since 2013				
Purchasers	1	4	3	2

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

Substitute products

Most U.S. producers (4 of 6), all importers (3 of 3), and most of purchasers (17 of 26) reported that there are substitutes for chlorinated isos, and most firms did not anticipate any future changes in substitutes. Substitutes include calcium hypochlorite, sodium hypochlorite, salt systems, liquid chlorine, and bromine. BioLab estimates that salt chlorinators represent about 17 to 20 percent of the domestic residential pool industry while the remaining 80 percent use chlorinated isos.¹⁶ When asked if the price of substitutes affects the price of chlorinated isos, firms reported that chlorinated isos are the price driver in the market, and that changes in chlorinated isos prices cause calcium hypochlorite prices to change. Salt, however, is a cheaper alternative and a decline in salt prices may lead to lower prices for chlorinated isos.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported chlorinated isos depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes that there is a moderate degree of substitutability between domestically produced chlorinated

¹⁶ Hearing transcript, p. 40 (Viner).

isos and chlorinated isos imported from China, and a higher degree of substitutability between domestically produced chlorinated isos and chlorinated isos imported from Spain.

Lead times

Chlorinated isos are primarily sold from inventory. U.S. producers reported that *** percent of their 2015 commercial shipments were from inventory, with lead times ranging from 1 to 5 days. The remaining *** percent of their commercial shipments were produced-to-order, with lead times ranging from 1 to 14 days. ***, an importer of chlorinated isos from Spain, reported that *** percent of its 2015 commercial shipments were from inventory, with lead time of 20 days. The remaining *** percent of its commercial shipments were produced-to-order, with a lead time of 1 day. No lead time information was reported for imports of product from China.

Knowledge of country sources

Twenty-five purchasers indicated they had marketing/pricing knowledge of domestic product, 14 of Chinese product, 4 of Spanish product, and 9 of nonsubject countries. These nonsubject countries included India, Italy, Japan, and Mexico.

As shown in table II-5, at least half of responding purchasers “always” or “usually” make purchasing decisions based on the producer or country-of-origin while their customers “sometimes” or “never” do. Of the seven purchasers that reported that they “always” make decisions based on the manufacturer, three firms cited quality; other reasons cited include consistency of the product and meeting specifications.

Table II-5

Chlorinated isos: Purchasing decisions based on producer and country of origin

Purchaser/Customer Decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	7	6	5	6
Purchaser’s customers make decision based on producer	1	3	5	9
Purchaser makes decision based on country	4	8	4	9
Purchaser’s customers make decision based on country	1	1	8	8

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

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for chlorinated isos were price (25 firms), quality (18 firms), and availability (13 firms) as shown in table II-6. Price and quality were the most frequently cited first-most important factors (cited by 8 firms each), followed by availability (3 firms); price was the most frequently reported second- and third-most important factor (8 firms and 9 firms, respectively).

Table II-6
Chlorinated isos: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price	8	8	9	25
Quality	8	7	3	18
Availability	3	5	5	13
Other ¹	5	4	6	15

¹ Other factors include product line, sales terms, service, lead times, and traditional suppliers.

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

More than half of purchasers (14 of 25) reported that they only sometimes purchase the lowest-priced product for their purchases, followed by nine purchasers that usually do.

When asked if they purchased chlorinated isos from one source although a comparable product was available at a lower price from another source, 21 purchasers reported reasons including quality, lead times, packaging, confidence in supply, availability, product range, customer requirements, brand loyalty, customer service, low odor, and preference for U.S.-made product. Twelve of 25 purchasers reported that they prefer one country of supply over other sources of supply; these purchasers prefer domestic- (8 firms) or Japanese-produced (4 firms) chlorinated isos.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table II-7). The factors rated as “very important” by more than half of responding purchasers were price (26), product consistency (25), availability (24), reliability of supply (24), delivery time (23), quality meets industry standards (22), delivery terms (17), and discounts offered (15).

Table II-7
Chlorinated isos: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	24	2	0
Delivery terms	17	7	2
Delivery time	23	3	0
Discounts offered	15	7	4
Extension of credit	8	11	7
Minimum quantity requirements	2	11	12
Packaging	12	11	3
Price	26	0	0
Product consistency	25	1	0
Product range	6	12	8
Quality exceeds industry standards	12	11	3
Quality meets industry standards	22	4	0
Reliability of supply	24	1	1
Technical support/service	7	11	8
U.S. transportation costs	10	10	6

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

Supplier certification

Thirteen of 25 responding purchasers require their suppliers to become certified or qualified to sell chlorinated isos to their firm. Purchasers reported that the time to qualify a new supplier generally ranges from 30 to 90 days. Procedures to become certified include product certification to standards, EPA registration, quality assurance, and acceptable lead times. Four purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify product, or had lost its approved status since January 1, 2013. *** stated that many suppliers do not have either U.S. EPA registrations for drinking water uses or NSF/ANSI Standard 60 Certification. *** reported that 3V (Italy), Aqua Clor (Mexico), and Hebei (China) did not pass their certification process due to inconsistent granular material quality.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2013 (table II-8). Reasons reported for changes in sourcing include lowered prices from domestic manufacturers, availability, natural growth in sales, low odor formula, lower delivered cost, product mix, and lead times. Eight of 25 responding purchasers reported that they had changed suppliers since January 1, 2013. Specifically, firms dropped or reduced purchases from Lonza/Arch Chemical (China) and Wego (Japan) due to supply issues; Oreq (U.S.) due to price and commitment; JHK (unknown) because of its prohibitive delivery times; Watertech (U.S.) went out of business; and Hebei (China) due to antidumping and countervailing duty orders. Firms added or increased purchases from Spectrum Biotech (U.S.), Hong Kong Celain (China), 3V Sigma (China, Spain, Italy), Sagax (unknown), Clearon (U.S.), Taijin Pool and Spa Corp (China), and BioLab (U.S.) because of product availability.

Table II-8

Chlorinated isos: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	0	2	12	9	3
China	12	5	2	3	2
Spain	18	1	2	0	0
Other	9	5	2	2	4

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

Importance of purchasing domestic product

Most purchasers (17 of 19) reported that purchasing U.S.-produced product was not an important factor in their purchasing decisions. None reported that domestic product was required by law, three reported it was required by their customers, and three reported other preferences for domestic product, including availability, contracts, and lead time.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing chlorinated isos produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 15 factors (table II-9) for which they were asked to rate the importance. U.S.- and Spanish-produced chlorinated isos were rated comparable on all 15 factors, while U.S.- and Chinese-produced chlorinated isos were comparable on 10 factors, and the U.S. price was rated as inferior compared to the Chinese price.

Most purchasers reported that U.S. and nonsubject product were comparable on all 15 factors. Most of the seven purchasers comparing chlorinated isos from China with that from Spain reported that chlorinated isos from both countries are generally comparable.

Table II-9

Chlorinated isos: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. Spain			China vs. Spain		
	S	C	I	S	C	I	S	C	I
Availability	11	8	1	3	4	0	1	5	1
Delivery terms	12	8	0	3	5	0	0	7	1
Delivery time	14	5	1	3	4	0	0	6	1
Discounts offered	2	13	2	0	6	2	0	6	1
Extension of credit	8	9	1	2	4	1	0	6	1
Minimum quantity requirements	6	12	0	1	6	1	0	6	1
Packaging	7	13	0	1	7	0	1	5	1
Price ¹	1	8	11	1	4	2	2	4	1
Product consistency	7	13	0	0	7	0	0	5	2
Product range	6	12	2	0	8	0	1	5	1
Quality exceeds industry standards	10	10	0	0	7	0	0	6	1
Quality meets industry standards	6	14	0	0	7	0	0	6	1
Reliability of supply	7	12	1	1	6	0	1	5	1
Technical support/service	10	8	1	2	6	0	0	5	2
U.S. transportation costs ¹	7	7	3	1	6	1	0	6	1
Factor	U.S. vs. nonsubject			China vs. nonsubject			Spain vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	2	8	1	2	4	4	0	2	2
Delivery terms	5	5	0	0	7	3	0	3	1
Delivery time	5	6	0	2	5	4	0	3	1
Discounts offered	1	7	1	2	5	1	0	3	1
Extension of credit	3	5	1	1	5	2	0	3	1
Minimum quantity requirements	3	6	0	0	6	1	0	3	1
Packaging	2	9	0	1	7	2	0	3	1
Price ¹	1	8	2	4	5	0	1	3	0
Product consistency	4	7	0	2	2	6	0	3	1
Product range	1	10	0	1	7	2	0	3	1
Quality exceeds industry standards	4	7	0	0	4	5	0	3	1
Quality meets industry standards	2	9	0	0	7	3	0	3	1
Reliability of supply	3	8	0	2	3	5	0	3	1
Technical support/service	3	8	0	1	4	5	0	3	1
U.S. transportation costs ¹	2	5	2	0	6	1	0	3	1

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

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

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

Comparison of U.S.-produced and imported chlorinated isos

In order to determine whether U.S.-produced chlorinated isos can generally be used in the same applications as imports from China and Spain, U.S. producers, importers, and purchasers were asked whether the products can “always,” “frequently,” “sometimes,” or “never” be used interchangeably. As shown in table II-10, most U.S. producers, importers, and purchasers reported that U.S.-produced chlorinated isos and chlorinated isos imported from China, Spain, and nonsubject countries are “always” or “frequently” interchangeable.

Table II-10

Chlorinated isos: Interchangeability between chlorinated isos produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting				
	A	F	S	N	A	F	S	N	A	F	S	N	
U.S. vs. subject countries:													
U.S. vs. China	4	1	2	0	2	1	1	1	11	4	5	2	
U.S. vs. Spain	3	0	0	0	2	1	1	0	8	1	2	1	
Subject countries comparisons:													
China vs. Spain	3	0	0	0	2	1	1	0	7	1	1	0	
Nonsubject countries comparisons:													
U.S. vs. nonsubject	4	2	0	0	2	3	1	0	9	4	3	0	
China vs. nonsubject	5	0	1	0	2	2	1	1	9	1	4	1	
Spain vs. nonsubject	4	0	0	0	2	2	1	1	7	0	2	1	

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

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

Importer and purchaser *** stated that its chlorinated isos are of higher quality than subject imports and therefore its product does not participate in the U.S. market in the same manner as Chinese-made isos, which are often of lower quality. It continued that the U.S.-produced isos that it resells under the co-producer arrangement with *** are also of higher quality than Chinese-made product. Lastly, it stated that it only imports granular isos for resale to tableters, while Chinese imports are often in tableted form. Producer and purchaser *** stated that Chinese material often has variable particle size distribution which requires changes in tableting equipment settings. Producer *** also stated that any material can be used, but tableting machines need a simple adjustment, as the product is not always of the same quality. Purchaser *** stated that chlorinated isos must meet EPA specifications so they are always interchangeable, but performance may not be the same. Purchaser *** stated that China and other countries do not meet its quality specifications, lack technical support, and are “logistics heavy.” Purchaser *** stated that chlorinated isos from other countries might not have the available chlorine level as those made in the United States.

As can be seen from table II-11, 21 responding purchasers reported that domestically produced product “always” met minimum quality specifications. Most responding purchasers

reported that the chlorinated isos imported from China and Spain “always” or “usually” met minimum quality specifications.

Table II-11

Chlorinated isos: Ability to meet minimum quality specifications, by source¹

Source	Always	Usually	Sometimes	Rarely or never
United States	21	4	0	0
China	5	6	3	1
Spain	4	3	1	1
Other	5	4	2	0

¹ Purchasers were asked how often domestically produced or imported chlorinated isos meets minimum quality specifications for their own or their customers’ uses.

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

Purchasers were asked how often they mix granular chlorinated isos from different countries in one tablet in their tableting operations. Most responding purchasers (9 of 10) reported they never mix granular chlorinated isos from multiple sources.

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of chlorinated isos from the United States, subject, or nonsubject countries. As seen in table II-12, most U.S. producers reported that there are “sometimes” or “never” significant differences other than price, most importers reported that there are “sometimes” significant differences other than price, but purchasers reported that there are “always” or “frequently” significant differences other than price between U.S.-produced chlorinated isos and imported chlorinated isos from China and Spain.

Table II-12

Chlorinated isos: Significance of differences other than price between chlorinated isos produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting				
	A	F	S	N	A	F	S	N	A	F	S	N	
U.S. vs. subject countries:													
U.S. vs. China	1	0	1	3	2	0	3	0	12	3	5	2	
U.S. vs. Spain	1	0	0	2	2	0	3	0	6	2	3	1	
Subject countries comparisons:													
China vs. Spain	0	0	0	3	0	0	3	0	3	2	3	2	
Nonsubject countries comparisons:													
U.S. vs. nonsubject	0	0	0	5	1	0	5	0	4	2	6	3	
China vs. nonsubject	1	0	1	2	1	0	4	0	3	1	5	3	
Spain vs. nonsubject	1	0	0	2	1	0	4	0	4	1	3	2	

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

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

Purchaser *** stated that its suppliers must have U.S. EPA registration for drinking water uses and NSF/ANSI Standard 60 certification. It also stated that availability and technical support are extremely important. Purchasers *** noted lead times as a factor. Purchaser *** stated that terms, packaging, split delivery, and rebates are important to its purchasing decisions. Purchasers *** noted quality as an important factor. Producer and purchaser *** stated that Japanese (Shikoku) material and domestic material are similar, but added that Shikoku's material is better. It continued that chlorinated isos made in China or by Japanese manufacturers other than Shikoku are not as good because they have additives that can gum up pools and have a stronger odor. Lastly, it stated that Spanish material was better than the Chinese product at the time it last purchased, but was subsequently not available. Producer and purchaser *** stated that some of its customers prefer higher-cost Japanese TICA-LS (low odor granular) to regular TICA that it tabletizes in the United States because they cannot get this low odor from any other supplier. Importer and purchaser *** stated that its products and imports are of higher quality than subject imports, and therefore often command a price premium.

ELASTICITY ESTIMATES

This section discusses elasticity estimates; parties were encouraged to comment on these estimates. Domestic producers did not provide comments.

U.S. supply elasticity

The domestic supply elasticity¹⁷ for chlorinated isos measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of chlorinated isos. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced chlorinated isos. Analysis of these factors earlier indicates that the U.S. industry is likely to be able to moderately increase or decrease shipments to the U.S. market; an estimate in the range of 2 to 4 is suggested.¹⁸

U.S. demand elasticity

The U.S. demand elasticity for chlorinated isos measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of chlorinated isos. This estimate depends on factors discussed earlier such as the existence, availability, and commercial viability of substitute products, as well as the component share of the chlorinated isos in the production

¹⁷ A supply function is not defined in the case of a non-competitive market.

¹⁸ In the original investigations, staff reported that the U.S. industry is likely to moderately increase or decrease shipments to the U.S. market and suggested a supply elasticity estimate range of 3 to 5. *Inv. Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Spain*, USITC Publication 3782, June 2005, p. II-16.

of any downstream products. Based on the available information, the aggregate demand for chlorinated isos is likely to be inelastic; a range of -0.5 to -0.75 is suggested.¹⁹

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.²⁰ Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/ discounts/ promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced chlorinated isos and imported chlorinated isos is likely to be in the range of 2 to 4 for chlorinated isos imported from China and 3 to 5 for chlorinated isos imported from Spain.^{21 22}

¹⁹ In the original investigations, staff suggested a demand elasticity estimate range of -0.3 to -0.5. *Inv. Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Spain*, USITC Publication 3782, June 2005, p. II-16.

²⁰ The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

²¹ In the original investigations, staff reported a moderate degree of substitution between U.S.-produced and imported chlorinated isos from China, and a higher degree of substitutability between U.S.-produced and imported chlorinated isos from Spain and other import sources. Staff identified a substitution elasticity of 2 to 4 for products from China and 3 to 5 for products from Spain. *Inv. Nos. 731-TA-1082 and 1083 (Final): Chlorinated Isocyanurates from China and Spain*, USITC Publication 3782, June 2005, p. II-16.

²² In the 2014 investigations, staff reported a moderate-to-high degree of substitutability and identified a substitution elasticity range of 3 to 5. *Inv. Nos. 701-TA-501 and 731-TA-1226 (Final): Chlorinated Isocyanurates from China and Japan*, USITC Publication 4494, November 2014, pp. II-26.

PART III: CONDITION OF THE U.S. INDUSTRY

OVERVIEW

The Commission received questionnaire responses from three firms that produce granular chlorinated isos and six firms that produce chlorinated isos in tablet form. Data presented for U.S. granular producers are compiled from the questionnaire responses of three firms, BioLab, Clearon, and Oxy, which accounted for all production of chlorinated isos in granular form in the United States during the period of review. Two of the six tableters, BioLab and Clearon, are also granular producers and produce tablets from their own production of granular chlorinated isos. The remaining four tableters obtain granular chlorinated isos from either foreign or domestic sources and produce chlorinated isos in tablet form either for their own commercial shipment or pursuant to toll agreements.¹

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-1 presents U.S. producers' production, capacity, and capacity utilization. Total U.S. capacity of granular chlorinated isos increased by *** percent from 2013 to 2015. Total U.S. production of granular chlorinated isos increased from 2013 to 2015 by *** percent as ***. U.S. capacity utilization rates for granular chlorinated isos production increased from *** percent in 2013 to *** percent in 2015. Total U.S. capacity of tableted chlorinated isos increased by *** percent from 2013 to 2015. Total U.S. production of tableted chlorinated isos increased from 2013 to 2015 by *** percent. U.S. capacity utilization rates for tableted chlorinated isos production increased from *** percent in 2013 to *** percent in 2015.

Table III-1

Chlorinated isos: U.S. producers' production, capacity, and capacity utilization, 2013-15

* * * * *

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

Granular chlorinated isos

As presented in table III-2, the quantity of U.S. shipments of granular chlorinated isos increased by *** percent from 2013 to 2015 while the value of U.S. shipments increased by *** percent during the same period. The quantity of export shipments of granular chlorinated isos increased by *** percent from 2013 to 2015 while the value of export shipments increased by

¹ For more information regarding the production activities of each U.S. producer, see *Part I, U.S. producers*.

*** percent during this period.² The share of export shipments ranged from *** percent to *** percent of total shipments of granular chlorinated isos during the period of review. U.S. producers of granular chlorinated isos reported that their principal export markets were *** during 2013-15. Commercial U.S. shipments are those to distributors, retailers, or independent tableters. Internally consumed U.S. shipments are those reported by integrated U.S. producers used in their tableting operations. U.S. shipments for toll conversion are those shipments to unrelated U.S. tableters under a toll agreement.

Table III-2
Chlorinated isos: U.S. producers' U.S. shipments, exports shipments, and total shipments of granular chlorinated isos, 2013-15

* * * * *

Tableted chlorinated isos

As presented in table III-3, the quantity of U.S. shipments of tableted chlorinated isos increased by *** percent from 2013 to 2015 while the value of U.S. shipments increased by *** percent during the same period. The quantity of export shipments of tableted chlorinated isos decreased by *** percent from 2013 to 2015 while the value of export shipments decreased by *** percent during this period.³ The share of export shipments ranged from *** percent to *** percent of total shipments of tableted chlorinated isos during the period of review. U.S. producers of tableted chlorinated isos reported that their principal export market was *** during 2013-15.

Table III-3
Chlorinated isos: U.S. producers' U.S. shipments, exports shipments, and total shipments of tableted chlorinated isos, 2013-15

* * * * *

U.S. shipments of the domestic like product

Because a number of U.S. tableters use U.S. imports of granular chlorinated isos as a raw material in their production of tablets, and because both granular and tableted product are included in the scope of these reviews, it is necessary to separate the U.S. shipments of tablets made with imported granular product so as to avoid the double counting of a shipment as both a U.S. import and a U.S. producer's U.S. shipment. It is also necessary to capture the value added to those U.S. imports by U.S. tableters in the computation of U.S. shipments. Therefore, as presented in table III-4, U.S. producers' U.S. shipments of tablets made from imported

² ***.

³ ***.

granular chlorinated isos are not included in the computation of U.S. producers' U.S. shipments. These shipments are deemed U.S. imports. However, the value added to the imported granular chlorinated isos by the U.S. tableters is added to the computation of the value of U.S. producers' U.S. shipments.

Table III-4
Chlorinated isos: U.S. producers' U.S. shipments, exports shipments, and total shipments of the domestic like product, 2013-15

* * * * *

U.S. PRODUCERS' INVENTORIES

Table III-5 presents U.S. producers' end-of-period inventories of granular and tableted chlorinated isos and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments.

Table III-5
Chlorinated isos: U.S. producers' inventories, 2013-15

* * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

Table III-6 presents data on individual U.S. producers' reported U.S. imports and purchases of U.S. imports of chlorinated isos from all sources. ***.

Table III-6
Chlorinated isos: U.S. producers' U.S. production, imports, purchasers of U.S. imports, and import and purchase ratios to U.S. production, 2013-15

* * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-7 shows U.S. producers' employment-related data for granular and tableted chlorinated isos during the period of review.

Table III-7
Chlorinated isos: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2013-15

* * * * *

FINANCIAL EXPERIENCE OF U.S. PRODUCERS

Background

Three U.S. producers, Bio-Lab, Clearon, and Oxy, provided useable financial data on their integrated operations producing granular and tableted forms of chlorinated isos.⁴ N. Jonas provided data on its standalone tableting operations (tableting with no tolling), while Stellar provided financial data on its tolling operations on behalf of ***. Each of the reporting firms has a fiscal year that ends on December 31. Two other firms that responded to the trade section of the Commission's questionnaire, LPM and OREQ, failed to provide usable financial information.

Operations on Chlorinated Isos

Table III-8 presents aggregated data on U.S. producers' operations in relation to all chlorinated isos; these data represent the sales and costs of integrated firms and the standalone tableter. In this table, *** sales and costs include chlorinated isos that was toll-produced on its behalf. Table III-9 presents income-and-loss data only for the three integrated firms' operations on chlorinated isos in granular form, while table III-10 presents the results of four firms' operations on chlorinated isos in tablet form. Data on granular and tableted forms of chlorinated isos are shown in appendix E on a firm-by-firm basis.

Table III-8

Chlorinated isos: Results of operations of BioLab, Clearon, N. Jonas, and Oxy on all chlorinated isos, fiscal years 2013-15

* * * * *

Table III-9

Chlorinated isos: Results of operations of BioLab, Clearon, and Oxy on granular forms, fiscal years 2013-15

* * * * *

Table III-10

Chlorinated isos: Results of operations of BioLab, Clearon, N. Jonas, and Oxy on tableted forms, fiscal years 2013-15

* * * * *

⁴ The integrated firms are Bio-Lab, Clearon, and Oxy. Each produces granular and tableted forms of chlorinated isos. Oxy also listed *** as toll-producing tableted chlor isos on its behalf.

Net sales

Based on the data in table III-8, total net sales by quantity and value increased from 2013 to 2015. The average unit value of total net sales (dollars per short ton) fell between the full yearly periods, ***. Total net sales of granular and tablets by integrated firms (tables III-9 and III-10) followed a similar pattern although the average net sales value of granular increased between 2014 and 2015.

Costs and expenses

Based on the data in table III-8, total COGS rose from 2013 to 2015 (most of the increase occurred during 2013-14), reflecting the increase in sales quantities to an extent. The ratio of COGS to total net sales declined over the three yearly periods (most of the decline occurred during 2013-14). Also seen in the data in table III-8, the average unit values of COGS fell more than did sales values.

Raw material costs are the single largest component of total COGS. They increased in value from 2013 to 2015 but declined over that period when measured as a ratio to total net sales and on a per-unit basis.⁵ Other factory costs increased *** in value from 2013 to 2015 but declined over that period when measured as a ratio to total net sales and on a per-unit basis. The increase in value may be attributed to the increase in sales quantity and increased cost absorption (allocation of costs shared with other products to chlorinated isos).

Profitability

Based on the data in table III-8, gross profits of the four reporting firms together increased ***. Operating income rose from a loss in 2013 (***) to a profit in 2014 and 2015 (***). These changes were driven by the data of ***. Net income before taxes and cash flow followed a similar pattern to operating income, negative in 2013 and increasing to positive numbers in 2014 and 2015.

Value-added and tolling operations

As noted earlier, the results of N. Jonas on its standalone tableting operations are included in table III-8. The Commission has examined converting/finishing operations and the value added to the raw materials purchased or provided by the firm using such services (a tollee to toller relationship, for example). The value-added analysis uses two ratios: (1) the ratio of conversion costs, which are direct labor and other factory costs (factory overhead) to total COGS; and (2) the ratio of the sum of conversion costs plus SG&A expenses to the sum of total

⁵ See description of the manufacturing process in Part I of this report and price graphs of the major inputs in Part V of this report. Also see hearing transcript, pp. 57-58 (Morgan) for a description of major influences on prices of the components of raw material inputs to produce chlorinated isos. The components and price trends for urea are discussed in petitioners' posthearing brief, exh. 2 , pp. 2-20 and 2-21.

COGS plus SG&A expenses. The analysis relies on the separation of costs of the input raw material from costs related to that raw material’s conversion to finished product. In these investigations, N. Jonas’ cost structure reflects its purchases of granular chlorinated isos and its tableting operations only. Table III-11 depicts value-added calculations for N. Jonas.

Table III-11
Chlorinated isos: Value-added analysis of N. Jonas on its stand-alone tableting operations, fiscal years 2013-15

* * * * *

In a tolling operation, one firm (the toller) performs a conversion or manufacturing process on behalf of another firm (the tollee) for a fee. The tollee typically supplies the raw material input to be processed, retaining title to it and to the final product. The toller may or may not arrange packaging and shipment to the final customer. In this investigation, Stellar toll-produced tableted chlorinated isos on behalf of ***. The results of Stellar’s operations on behalf of ***. Because the Commission did not obtain data from the other firms, toller data is therefore understated. Table III-12 presents value-added calculations for the tolling operations of Stellar.

Table III-12
Chlorinated isos: Value-added analysis of Stellar on its tolling operations, fiscal years 2013-15

* * * * *

Variance analysis

A variance analysis for the operations of U.S. producers of chlorinated isos is presented in table III-13.⁶ A variance analysis is a method to assess the changes in profitability from period to period by measuring the impact of changes in the relationships between price, cost, and

⁶ The Commission’s variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

volume. A calculation is made of the impact of each factor by varying only that factor while holding all other factors constant. The components of net sales variances are either favorable (positive), resulting in an increase in net sales and profitability or unfavorable (negative) resulting in the opposite.

Table III-13
Chlorinated isos: Variance analysis on the operations of U.S. producers on all chlorinated isos, between fiscal years 2013-15

* * * * *

The analysis in table III-13 indicates that the industry’s operating income increased from 2013 to 2015 because an unfavorable price variance (unit prices fell) was less than the favorable variance on net cost/expense.

Table III-14 presents a variance analysis for the granular and tableting operations of integrated firms side-by-side. These analyses are similar and consistent with the calculations presented in table III-13.

Table III-14
Chlorinated isos: Variance analysis on the granular and tablet operations of U.S. producers, between fiscal years 2013-15

* * * * *

Capital expenditures and research and development (R&D) expenses

Capital expenditures are included in a firm’s statement of cash flows within the section titled “cash flows from investing activities.” In accounting terms, capital expenditures increase the value of specific plant and equipment and total assets, while charges for depreciation and amortization (in the case of intangible assets), impairments, and divestitures (or retirement or abandonment of property) decrease the value of assets. Capital expenditures are made and R&D expenses are incurred to achieve improvements in equipment and the quality of products, or to reduce operating costs. Total capital expenditures increased irregularly from 2013 to 2015. R&D expenses decreased irregularly over the same period. Only toller Stellar responded to the question of the nature of its capital expenditures and R&D expenses, stating that it ***.⁷ Stellar also stated that its ***.⁸ Table III-15 presents capital expenditures and R&D expenses by firm.

⁷ Questionnaire response of Stellar, section III-14a.

⁸ Questionnaire response of Stellar, section III-14b.

Table III-15
Chlorinated isos: Capital expenditures and R&D expenses of U.S. producers, fiscal years 2013-15

* * * * *

Assets and return on investment

Table III-16 presents data on the U.S. producers' total assets and the ratio of operating income or (loss) to total assets.

Table III-16
Chlorinated isos: U.S. producers' total assets and the ratio of operating income or (loss) to total assets, fiscal years 2013-15

* * * * *

PART IV: U.S. IMPORTS AND THE FOREIGN INDUSTRIES

U.S. IMPORTS

Table IV-1 presents data for U.S. imports of granular and tableted chlorinated isos from China, Spain, and nonsubject countries. The U.S. import data are compiled using data submitted in response to the Commission's U.S. importer questionnaire¹ and supplemented by proprietary U.S. import data obtained from U.S. Customs. As shown, the volume of U.S. imports of chlorinated isos from China decreased by *** percent from 2013 to 2015 while the value decreased by *** percent during the same period. There were no U.S. imports from Spain in 2013. However, once U.S. imports from Spain entered the U.S. market in 2014, they increased by *** percent from 2014 to 2015 while the value increased by *** percent during the same period. The volume of U.S. imports from nonsubject countries of chlorinated isos decreased by *** percent from 2013 to 2015 while the value decreased by *** percent during the same period. The largest sources of U.S. imports from nonsubject countries in 2015, in descending order, were: (1) Japan, (2) Italy, and (3) Mexico.²

Table IV-1
Chlorinated isos: U.S. imports by source, 2013-15

* * * * *

U.S. IMPORTERS' IMPORTS SUBSEQUENT TO DECEMBER 31, 2015

The Commission requested U.S. importers to indicate whether they had imported or arranged for the importation of chlorinated isos from China or Spain for delivery after December 31, 2015. *** reported that they did arrange for U.S. imports of chlorinated isos from a subject country subsequent to December 31, 2015. Table IV-2 lists the importing firms and the quantity of the subject product arranged for U.S. importation.

Table IV-2
Chlorinated isos: U.S. imports arranged for importation subsequent to December 31, 2015, by source and quantity

* * * * *

¹ For more information regarding responding U.S. importers, see *Part I, U.S. importers*.

² Based on official import statistics compiled using HTS 2933.69.6015 (2016).

U.S. IMPORTERS' INVENTORIES

Granular chlorinated isos

Table IV-3 presents data for inventories of U.S. imports of granular chlorinated isos from China, Spain, and all other sources held in the United States.

Table IV-3

Chlorinated isos: U.S. importers' end-of-period inventories of imports of granular chlorinated isos, by source, 2013-15

* * * * *

Tableted chlorinated isos

Table IV-4 presents data for inventories of U.S. imports of tableted chlorinated isos from China, Spain, and all other sources held in the United States.

Table IV-4

Chlorinated isos: U.S. importers' end-of-period inventories of imports of tableted chlorinated isos, by source, 2013-15

* * * * *

CUMULATION CONSIDERATIONS

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Additional information concerning geographical markets and simultaneous presence in the market is presented below.

Based on official import statistics, U.S. imports of chlorinated isos from China were present in the United States from January 2013 to December 2015, entering in 33 out of 36 months. U.S. imports of chlorinated isos from Spain were not present in the United States until May 2014, and were present 18 out of 36 months during the period of review. In 2015, 93.4 percent of all U.S. imports from China entered through the Customs Entry Districts of Los Angeles, New York, Miami, Dallas, and Houston, while all U.S. imports from Spain entered through the Customs Entry District of New York.³

³ Official U.S. import statistics under HTS subheading 2933.69.6015 (2016).

SUBJECT COUNTRY PRODUCERS

THE INDUSTRY IN CHINA

In the adequacy phase of these second five-year reviews, the Commission did not receive any responses to the notice of institution from producers or exporters in China. In the current proceedings, the Commission issued questionnaires to 17 producers of chlorinated isos in China, none of which provided the Commission with a response.^{4 5} Domestic interested parties claimed in their response to the notice of institution that China has increased its production of chlorinated isos during the period of review. They stated that in 2010, capacity to produce chlorinated isos in China was 141,500 short tons per year, but the recent completion of two additional manufacturing facilities has added a combined capacity of 100,000 short tons per year. In addition, the domestic interested parties reported that cyanuric acid, the raw material required for chlorinated isos, has experienced “tremendous growth” in China, with an average annual growth rate of 27.5 percent.⁶

Table IV-5 presents data obtained from the Global Trade Atlas regarding export shipments of chlorinated isos from China.⁷

⁴ The Commission did receive a foreign producer questionnaire from Lonza Suzhou, Ltd. (“Lonza”). Lonza is affiliated with the Lonza Group of Bern, Switzerland and Arch Chemical, a U.S. importer. Lonza is not a producer of chlorinated isos, but rather reported ***.

⁵ During the original investigations, four firms, (1) Changzhou Clean Chemical Co., Ltd.; (2) Hebei Jiheng Chemical Co., Ltd.; (3) Nanning Chemical Industry Co., Ltd.; and (4) Sinochem Hebei Import and Export Corp., provided responses to the Commission’s questionnaires and were believed to have accounted for most of the exports of chlorinated isos to the United States during 2004.

In the expedited first five-year reviews, the Commission did not receive a response to its notice of institution from any Chinese producer/exporter of chlorinated isos. However, the domestic producers identified six producers in China that may have exported chlorinated isos to the United States after the antidumping duty order was imposed. Domestic producers also supplied information published by *** that stated there were at least 22 producers of chlorinated isos in China. *Investigation Nos. 731-TA-1082 and 1083 (Review): Chlorinated Isocyanurates from China and Spain--Staff Report*, INV-HH-087, September 2, 2010, p. I-42.

In the adequacy phase of the current reviews, the domestic interested parties provided a list of 46 firms that they believed may produce chlorinated isos in China. *Domestic Interested Parties’ Response to the Notice of Institution*, October 1, 2015, exh. 9.

⁶ *Domestic Interested Parties’ Response to the Notice of Institution*, October 1, 2015, p. 17.

⁷ Export data is compiled using HTS subheading 2933.69 (“Heterocyclic compounds with nitrogen hetero-atom(s) only; Compounds containing an unfused pyrazole ring (whether or not hydrogenated) in the structure; Other”). This HTS subheading is a basket category and contains product outside the scope of these investigations.

Table IV-5**Chlorinated isos: Exports from China of chlorinated isos, by destination market, 2013-15**

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
China's exports to the United States	17,743	10,983	7,257
China's exports to other major destination markets.--			
Spain	5,101	10,927	11,102
Mexico	9,496	12,460	10,379
Indonesia	5,680	7,844	7,929
Thailand	5,845	6,776	6,494
Brazil	5,589	6,714	6,262
Argentina	2,966	3,814	4,125
South Africa	4,018	4,035	3,809
Germany	2,870	3,359	3,733
All other destination markets	52,384	54,706	50,359
Total Chinese exports	111,691	121,619	111,449
	Value (1,000 dollars)		
China's exports to the United States	26,966	18,449	12,348
China's exports to other major destination markets.--			
Spain	6,627	13,681	13,553
Mexico	12,197	15,912	13,295
Indonesia	7,482	10,146	10,259
Thailand	7,380	8,696	8,234
Brazil	7,052	8,862	8,325
Argentina	4,029	5,354	5,888
South Africa	5,178	5,258	4,909
Germany	4,264	4,833	5,429
All other destination markets	72,114	76,357	70,139
Total Chinese exports	153,289	167,548	152,380

Table Continued.

Table IV-5--Continued**Chlorinated isos: Exports from China of chlorinated isos, by destination market, 2013-15**

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
China's exports to the United States	1,520	1,680	1,702
China's exports to other major destination markets.--			
Spain	1,299	1,252	1,221
Mexico	1,284	1,277	1,281
Indonesia	1,317	1,293	1,294
Thailand	1,263	1,283	1,268
Brazil	1,262	1,320	1,329
Argentina	1,358	1,404	1,427
South Africa	1,289	1,303	1,289
Germany	1,486	1,439	1,454
All other destination markets	1,377	1,396	1,393
Total Chinese exports	1,372	1,378	1,367
	Share of quantity (percent)		
China's exports to the United States	15.9	9.0	6.5
China's exports to other major destination markets.--			
Spain	4.6	9.0	10.0
Mexico	8.5	10.2	9.3
Indonesia	5.1	6.4	7.1
Thailand	5.2	5.6	5.8
Brazil	5.0	5.5	5.6
Argentina	2.7	3.1	3.7
South Africa	3.6	3.3	3.4
Germany	2.6	2.8	3.3
All other destination markets	46.9	45.0	45.2
Total Chinese exports	100.0	100.0	100.0

Source: Official Chinese exports statistics under HTS subheading 2933.69.22 (a China-specific 8-digit code for Tri-chlor, the second relevant eight digit code for Di-chlor 2933.69.21 contained no data in the 2013-15 period) as reported by China in the GTIS/GTA database, accessed September 16, 2016.

THE INDUSTRY IN SPAIN

In the adequacy phase of these second five-year reviews, the Commission did not receive any responses to the notice of institution from producers or exporters in Spain. In the current proceedings, the Commission issued questionnaires to two producers of chlorinated isos in Spain, Ercros Industrial S.A. ("Ercros") and Inquide Flix S.A.,⁸ neither of which provided

⁸ During the original investigations, Inquide Flix reported an annual capacity to produce chlorinated isos of 7,700 short tons. However, it reported no exports to the United States during the period of investigation. Inquide Flix ceased operations in 2009. Domestic Interested Parties' Posthearing brief, exh. 2-8.

the Commission with a response. At the time of the Commission's original investigations, all production of chlorinated isos in Spain was produced by two firms: Aragonesas Delsa S.A. and Inquide Flix S.A., with Aragonesas Delsa accounting for all exports of the subject merchandise to the United States during the original investigations. In the expedited first five-year reviews, the Commission did not receive a response to its notice of institution from any producer or exporter of chlorinated isos in Spain. However, the domestic interested parties indicated that the industry in Spain still consisted of two producers of chlorinated isos: Aragonesas Delsa, which had been acquired by Ercros Industrial S.A. ("Ercros") in 2005, and Inquide Flix.⁹

In these second five-year reviews, the Commission did not receive any responses to the notice of institution from producers or exporters in Spain. The domestic interested parties again identified both Ercros and Inquide Flix as the only producers of chlorinated isos in Spain.¹⁰

Ercros is a large global chemical manufacturing company with four primary business divisions: (1) basic chemicals, which includes its chlorinated isos related businesses group, (2) plastics, (3) intermediate chemicals, and (4) pharmaceuticals. It produces chlorinated isos, caustic soda, sodium hypochlorite, sodium chlorate, molding compounds, and polyvinyl chloride ("PVC").¹¹ Ercros produces chlorinated isos at its facility in Sabiñánigo, Spain, which has an annual capacity of 21,000 metric tons (23,149 short tons).¹² In March 2016, Ercros announced that it would commence an expansion of the Sabiñánigo facility and increase capacity to produce chlorinated isos to 28,000 metric tons (30,865 short tons).¹³

Table IV-6 presents data obtained from the Global Trade Atlas regarding export shipments of chlorinated isos from Spain.

⁹ *Investigation Nos. 731-TA-1082 and 1083 (Review): Chlorinated Isocyanurates from China and Spain--Staff Report*, INV-HH-087, September 2, 2010, p. I-46.

¹⁰ *Domestic Interested Parties' Response to the Notice of Institution*, October 1, 2015, exh. 9.

Domestic interested parties stated that another firm in Spain, Electroquímica de Hernani, S.A., is ***. They argue that production of chlorinated isos by this new firm is within the statutory definition of a "reasonably foreseeable time" because ***. Domestic interested parties argue that this is evidence that ***. Projected annual capacity of the new firm is not known. Domestic Interested Parties' Posthearing brief, exh. 2-9.

¹¹ http://www.ercros.es/index.php?option=com_content&view=article&id=682&Itemid=698&lang=en accessed August 4, 2016.

¹² http://www.ercros.es/index.php?option=com_content&view=article&id=729&Itemid=729&lang=en accessed August 4, 2016.

¹³ *Ercros plans to invest 28 million euros in the factory in Sabiñánigo*, company press release, March 16, 2016.

Table IV-6**Chlorinated isos: Exports from Spain of chlorinated isos, by destination market, 2013-15**

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Spain's exports to the United States	91	3,579	2,993
Spain's exports to other major destination markets.--			
France	6,447	6,786	9,087
Czech Republic	2,126	2,250	2,213
Germany	775	651	1,088
Portugal	689	683	950
Slovakia	516	578	688
Italy	1,240	510	529
Morocco	331	460	427
Bulgaria	88	42	218
All other destination markets	1,922	1,963	1,702
Total Spanish exports	14,225	17,502	19,895
	Value (1,000 dollars)		
Spain's exports to the United States	236	6,877	5,780
Spain's exports to other major destination markets.--			
France	13,342	14,265	15,335
Czech Republic	3,289	3,527	2,887
Germany	2,040	1,715	2,410
Portugal	1,645	1,736	1,892
Slovakia	789	896	884
Italy	3,297	1,207	1,079
Morocco	733	1,005	757
Bulgaria	208	102	403
All other destination markets	5,236	5,177	4,094
Total Spanish exports	30,814	36,508	35,520
<i>Table Continued.</i>			

Table IV-6--Continued**Chlorinated isos: Exports from Spain of chlorinated isos, by destination market, 2013-15**

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
Spain's exports to the United States	2,590	1,921	1,931
Spain's exports to other major destination markets.--			
France	2,069	2,102	1,688
Czech Republic	1,547	1,567	1,304
Germany	2,634	2,635	2,216
Portugal	2,388	2,541	1,992
Slovakia	1,530	1,552	1,285
Italy	2,658	2,368	2,039
Morocco	2,214	2,183	1,773
Bulgaria	2,349	2,399	1,851
All other destination markets	2,725	2,638	2,406
Total Spanish exports	2,166	2,086	1,785
	Share of quantity (percent)		
Spain's exports to the United States	0.6	20.4	15.0
Spain's exports to other major destination markets.--			
France	45.3	38.8	45.7
Czech Republic	14.9	12.9	11.1
Germany	5.4	3.7	5.5
Portugal	4.8	3.9	4.8
Slovakia	3.6	3.3	3.5
Italy	8.7	2.9	2.7
Morocco	2.3	2.6	2.1
Bulgaria	0.6	0.2	1.1
All other destination markets	13.5	11.2	8.6
Total Spanish exports	100.0	100.0	100.0

Source: Official Spanish exports statistics under HTS subheading 2933.69.80 (an EU/Spain specific eight digit code) as reported by Spain in the GTIS/GTA database, accessed September 16, 2016.

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

The European Union ("EU") imposed antidumping duties ranging from 7.3 percent to 42.6 percent on imports of trichloroisocyanuric acid originating in China in July 2005. A December 2011 review resulted in continuation of the duties.¹⁴ On April 2, 2016, the EU

¹⁴ *Chlorinated Isocyanurates from China and Japan, Inv. Nos. 701-TA-501 and 731-TA-1226 (Final)*, USITC Publication 4494, November 2014, pp. VII-5-6; *Council Implementing Regulation (EU) No. 1389/2011 of 19 December 2011*, Official Journal, L 346, 30.12.2011, p. 6.

Commission announced the commencement of its second expiry review.¹⁵ No results of this expiry review have yet been published by the EU Commission.

GLOBAL MARKET

Global demand

Most firms reported no change in demand outside the United States for chlorinated isos since January 1, 2013 (table IV-7). Most firms expect no change in demand over the next two years. In anticipating changes in the chlorinated isos market outside of the United States, U.S. producer *** reported that there has been a significant reduction in new pool construction and that there has been a movement towards salt water generators. *** reported that the Chinese government is establishing new standards for the water treatment market.

Table IV-7
Chlorinated isos: Firms' responses regarding demand outside the United States for chlorinated isos

Item	Increase	No change	Decrease	Fluctuate
Demand outside the United States				
U.S. producers	0	0	2	0
Importers	0	5	0	0
Purchasers	0	4	1	0
Foreign producers (home market)	0	1	0	0
Foreign producers (other markets)	0	1	0	0
Anticipated future demand outside the United States				
U.S. producers	0	0	2	0
Importers	0	5	0	0
Purchasers	0	3	2	0
Foreign producers (home market)	1	0	0	0
Foreign producers (other markets)	0	1	0	0

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

Price

Most firms had no knowledge of prices in non-U.S. markets. However, producer *** reported that U.S. pricing has declined significantly over the past two years. Importer *** reported that U.S. market prices continue to be higher when compared with any other market in the world. *** reported that U.S. prices are the highest in the world and Chinese prices are lowest in the world.

¹⁵ *Notice of the Impending Expiry of Certain Anti-Dumping Measures*, Official Journal, (2016/C 117/05), April 2, 2016.

Global supply

Global chlorinated isos trade is tracked under HS 2933.69, a basket category including other products with a similar chemical structure. During 2013-15, China was the largest global exporter of this category, accounting for 67.1 percent of total exports in quantity (Table IV-8). Spain accounted for 3.0 percent of exports during this period. The United States accounted for 4.9 percent of total exports while Japan, the largest non-subject global exporter, accounted for 4.2 percent.

Table IV-8
Chlorinated Isos: Global exports by major sources, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
United States	35,809	25,201	24,280
China	364,837	398,450	402,683
Spain	14,374	17,770	20,114
All other major exporting countries.-- Russia	19,899	24,887	26,963
United Kingdom	17,826	21,583	21,565
Japan	34,109	19,436	19,865
Italy	15,559	13,012	12,395
Netherlands	9,411	7,704	9,223
Switzerland	10,499	8,785	8,604
France	7,244	7,071	6,803
Belgium	5,883	7,251	5,981
South Korea	6,569	5,378	5,513
Mexico	3,229	3,330	3,082
All other exporting countries.	29,225	18,158	17,371
Total global exports	574,473	578,015	584,441
	Value (\$1,000)		
United States	210,152	159,402	164,931
China	857,462	811,284	735,260
Spain	31,548	37,054	35,958
All other major exporting countries.-- Russia	19,581	22,029	21,739
United Kingdom	27,554	34,412	27,487
Japan	112,387	89,386	77,613
Italy	83,724	65,830	52,985
Netherlands	38,065	32,929	26,547
Switzerland	42,611	36,571	61,366
France	37,754	33,837	26,304
Belgium	44,458	54,618	49,424
South Korea	28,024	24,486	26,435
Mexico	7,162	6,886	6,498
All other exporting countries.	198,321	183,018	154,779
Total global exports	1,738,804	1,591,740	1,467,325

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

Source: Global Trade Information Services Inc. Global Trade Atlas, HS 2933.69. Retrieved August 1, 2016.

China had the highest estimated production capacity of chlorinated isos in 2011, and Japan had the most capacity of any non-subject country (Table IV-9).¹⁶ Global capacity was approximately *** short tons, with China accounting for *** short tons (**% percent of global capacity) and Western Europe, including Spain, *** short tons (**% percent). The aforementioned estimate for China includes capacity for **. Estimated Chinese capacity for *** was *** short tons (**% percent of global *** capacity). Global production was approximately *** short tons in 2011, of which China produced *** short tons (**% percent) and Western Europe, as a whole, produced *** short tons (**% percent).

Table IV-9
Chlorinated Isos: Estimated global capacity, production, and consumption, 2011

* * * * *

¹⁶ ***.

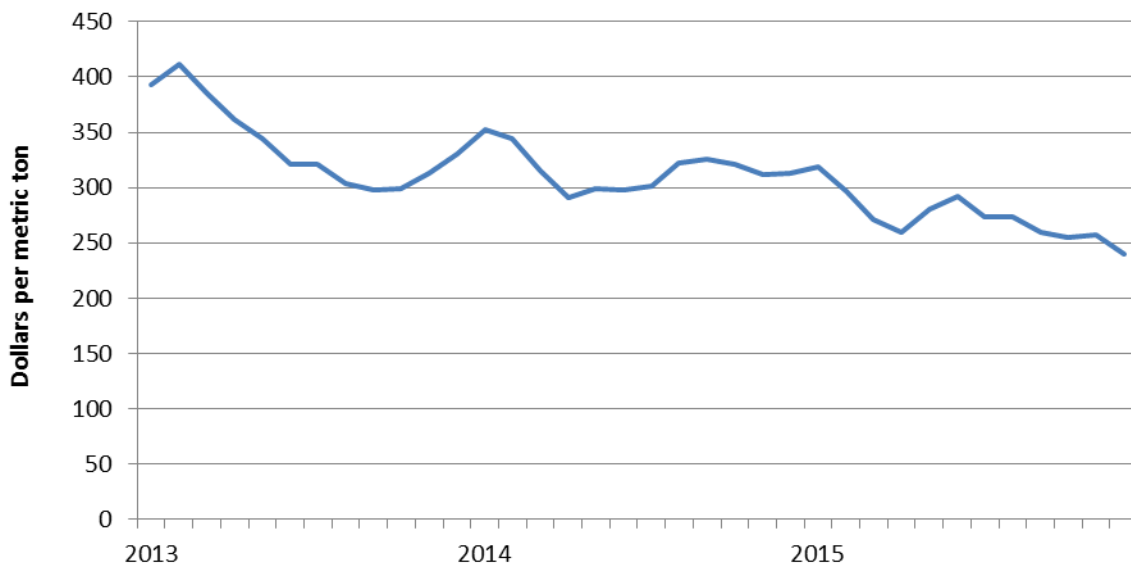
PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary inputs used to produce granular chlorinated isos are chlorine, caustic soda, and urea. Urea and natural gas are both inputs into cyanuric acid, which, with further processing, yield chlorinated isos.¹ The price of urea is strictly tied to the price of Chinese exports and is driven by production of urea in China and agriculture demand in the United States. Caustic soda is a byproduct of chlorine and availability of caustic soda is directly tied to how much chlorine can be produced and consumed.² U.S. producers' total raw material costs accounted for *** percent to *** percent of the cost of goods sold during 2013-15. Prices for urea and natural gas are presented in figures V-1 and V-2. Urea prices declined nearly 40 percent and natural gas prices declined more than 25 percent from 2013 to 2015.

Figure V-1
Chlorinated isos: Prices of urea, by month, January 2013-December 2015



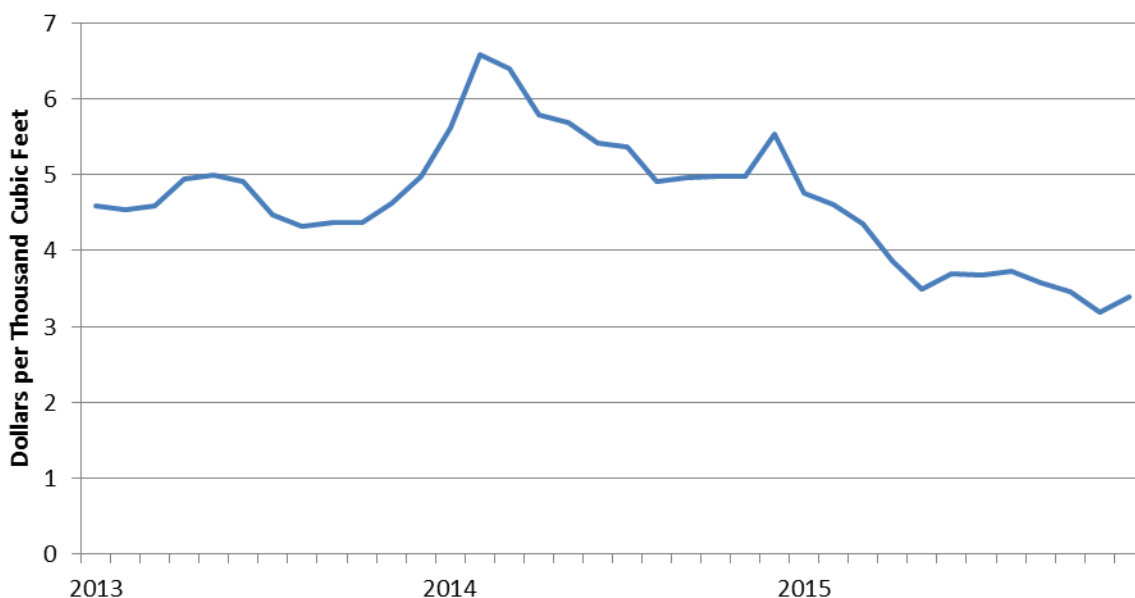
Source: World Bank Commodity Price Data (The Pink Sheet), <http://www.worldbank.org/en/research/commodity-markets>, retrieved on July 8, 2016.

¹ There is no public source for pricing data on other inputs, including caustic soda and chlorine. *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, USITC Publication 3782, June 2005, p. V-1.

² Hearing transcript, p. 57 (Morgan).

Figure V-2

Chlorinated isos: Prices of natural gas, by month, January 2013-December 2015



Source: U.S. Energy Information Administration, <http://www.eia.gov>, retrieved on July 13, 2016.

Two producers³ reported that raw materials prices fluctuated while two producers and three importers reported that raw materials prices decreased. Two producers and four importers anticipate no change in raw materials prices while two producers expect prices to fluctuate. Producer *** stated that the key raw materials for chlorinated isos production are commodity chemicals, which are subject to price fluctuations. It added that it is often difficult, if not impossible, to raise prices when key raw materials costs increase due to pressure from Chinese imports. Producer *** stated that unless the Chinese are “hit” with duties that force them to compete at similar prices as U.S. suppliers and tableters, prices will continue to be volatile. Importer *** stated that the decline in prices has outpaced the decline in cost.

Transportation costs to the U.S. market

Transportation costs for chlorinated isos shipped from China and Spain to the United States averaged 14.4 percent of total customs value for China and 10.2 percent for Spain in 2015. These estimates were derived from official import data and represent the transportation and other charges on imports.⁴

³ In Part V, references to U.S. producers includes responses from both integrated producers and tableters.

⁴ The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2015 and then dividing by the customs value based on the HTS subheading 2933.69.6015.

All six responding importers and the one responding foreign exporter reported that the exporter typically arranges international transportation. No costs of shipping chlorinated isos to the United States were reported.

U.S. inland transportation costs

Five responding U.S. producers and three responding importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from 3 to 7 percent while importers reported costs of 6 to 8 percent. Purchasers reported that U.S. inland transportation costs from U.S. producers ranged from 3 to 13 percent and from 1 to 13 percent from importers.

PRICING PRACTICES

Pricing methods

As presented in table V-1, U.S. producers sell using transaction-by-transaction negotiations, contracts, price lists, and other methods. Importers sell primarily on a transaction-by-transaction basis, though a few reported also using contracts and price lists.

Table V-1

Chlorinated isos: U.S. producers and importers reported price setting methods, by number of responding firms¹

Method	U.S. producers	Importers
Transaction-by-transaction	3	7
Contract	3	2
Set price list	3	2
Other	1	0

¹ The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

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

U.S. producers reported selling most of their chlorinated isos under annual and short-term contracts (table V-2). There were *** commercial shipments of imported chlorinated isos from China in 2015. U.S. producers generally include price renegotiation, and fixed prices and quantities, but do not include meet-or-release provisions in their short-term, annual, or long-term contracts.

Table V-2

Chlorinated isos: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2015

* * * * *

Most purchasers (18 of 25) purchase chlorinated isos weekly or monthly (9 each), five purchasers reported that they purchase daily, four purchase quarterly, and one purchases annually. Most responding purchasers (22 of 24) reported that they did not expect their purchasing patterns to change in the next two years. Most (23 of 25) purchasers contact one to five suppliers before making a purchase.

Sales terms and discounts

U.S. producers and importers typically quote prices on a delivered basis. Three U.S. producers, ***, offer quantity and total volume discounts while two producers offer no discounts. *** also offers discounts based on meeting minimum purchase quantities. Four U.S. producers reported sales terms of net 30 days, two reported net 60 days, and one reported 2/10 net 30 days. Two importers offer quantity discounts, three importers offer total volume discounts, and three importers offer no discounts. *** offers early payment (“early buy”) discounts to customers that purchase off season and *** offers a discount for pre-orders. Three importers reported sales terms of net 30 days and two importers reported net 60 days.

Tolling and tablet sales

Purchasers were asked if they engage with processors to repackage chlorinated isos into retail packages or to convert bulk chlorinated isos into tablets repackaged for retail; 5 of 26 purchasers stated that they do. Purchaser *** reported that the average cost for repackaging only ranges between \$0.09 and \$0.14. No purchasers provided cost data for tableting and repackaging.

Purchasers were also asked if they purchased tablets directly from a manufacturer or importer and if their supplier repackages or tablets chlorinated isos; 16 of 19 purchasers reported that they purchase tableted chlorinated isos directly from a manufacturer or importer. Fifteen of these purchasers reported that the supplier repackages or tablets chlorinated isos, though the markup charged was either unknown, included in the total price, or minimal.

Price leadership

Most purchasers reported that BioLab/Kik (reported by 6 purchasers), Clearon (6), Arch/Lonza (5), and Oxy (4) were price leaders. Other purchasers also identified Hebei, Kangtai, Leslie’s, Pool Water Products, Shikoku, and SCP as price leaders. *** stated that if Arch raises prices, others seem to follow, but when it does not, no one else can raise their prices. *** also stated that this year, Clearon decided to lower pricing “dramatically” to “fight” the Chinese tablets that came into the country, leading some of its customers purchased from Clearon instead. *** stated that BioLab lowered prices in the marketplace. *** stated that BioLab and Lonza have majority share of the U.S. market. *** stated that as one of the largest producers of chlorinated isos, Hebei is recognized as a leader by leveraging strategic pricing within the industry. *** stated that pricing in the market depends on what KIK, Lonza, and Clearon do, as they manufacture and/or import chlorinated isos and also sell to mass merchants and club stores. *** stated that producer Oxy is a price leader and that importers KIK, Arch/Lonza, and

Leslie's are price leaders primarily from a retail price standpoint. It reported that without increases in consumer selling prices by these large organizations, or increases at the manufacturer level, other resellers of chlorinated isos have little ability to affect prices. *** stated that Oxy raises prices when it is sold out or in short supply and its competitors follow with price increases shortly thereafter.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following products shipped to unrelated U.S. customers during 2013-15.

Product 1.-- Granular trichloroisocyanuric acid with approximately 90 percent available chlorine content (similar to ACL[®]90 or CDB[®]), sold in bulk packages equal to or greater than 1,000 pounds and less than or equal to 2,205 pounds.

Product 2.-- Granular sodium dichloroisocyanuric (dihydrate) with approximately 56 percent available chlorine content (similar to ACL[®]56 or CDB[®]56), sold in bulk packages equal to or greater than 1,000 pounds and less than or equal to 2,205 pounds, sold for repackaging for pool treatment use.

Product 3.-- 3-inch or comparable trichlor tablets, with tablet volume of 6 to 8 ounces, in 35-55 pound containers.

Product 4.-- Blended 3-inch or comparable tablets, with tablet volume of 6 to 8 ounces, with approximately 85 to 90 percent available chlorine content, in 24-26 pound containers.

Five U.S. producers and two importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.⁵ No importers reported pricing data for product 2, the granular dichlor product. Pricing data reported by these firms accounted for *** percent of U.S. producers' shipments of chlorinated isos, *** percent of U.S. shipments of subject imports from China, and *** percent of U.S. shipments of subject imports from Spain in 2013-15.⁶

⁵ Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

⁶ Two importers, ***, reported price data for China and Spain. *** reported data for products 3 and 4. *** reported data for product 1.

Price data for products 1-4 are presented in tables V-3 to V-6 and figures V-3 to V-6.

Table V-3

Chlorinated isos: Weighted-average f.o.b. prices and quantities of domestic and imported product 1¹ and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * *

Table V-4

Chlorinated isos: Weighted-average f.o.b. prices and quantities of domestic and imported product 2¹ and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * *

Table V-5

Chlorinated isos: Weighted-average f.o.b. prices and quantities of domestic and imported product 3¹ and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * *

Table V-6

Chlorinated isos: Weighted-average f.o.b. prices and quantities of domestic and imported product 4¹ and margins of underselling/(overselling), by quarters, January 2013-December 2015

* * * * *

Figure V-3

Chlorinated isos: Weighted-average prices and quantities of domestic and imported product 1¹, by quarters, January 2013-December 2015

* * * * *

Figure V-4

Chlorinated isos: Weighted-average prices and quantities of domestic and imported product 2¹, by quarters, January 2013-December 2015

* * * * *

Figure V-5

Chlorinated isos: Weighted-average prices and quantities of domestic and imported product 3¹, by quarters, January 2013-December 2015

* * * * *

Figure V-6

Chlorinated isos: Weighted-average prices and quantities of domestic and imported product 4¹, by quarters, January 2013-December 2015

* * * * *

Direct import purchase costs⁷

In response to the additional questions regarding direct imports, *** stated that logistical or supply chain costs represent *** percent of the landed, duty-paid value and include ***. *** stated that it compares costs from both importers and U.S. producers when determining its additional transaction costs to directly import. *** reported that the benefit of purchasing chlorinated isos directly from China ***. It estimates that it saves *** percent of the landed, duty-paid value by directly importing from China and Spain and any variation in this savings margin would be caused by fluctuations in the duties.

BioLab stated that big box retailers may require delivery of sixty SKUs, frequent delivery, and marketing and merchandising support, putting a lot of barriers to entry from a direct import from China. It continued that there are some warehouses and club stores would see more of an opportunity for direct import programs because they have fewer (one to five) SKUs.⁸

Price trends

Prices fluctuated during 2013-15. Table V-7 summarizes the price trends, by product and by country. As shown in the table, domestic prices ranged from a *** decrease to a *** percent increase during 2013-15. While there were too few data points for comparable trends for imports from China and Spain, prices generally fluctuated in a range comparable to U.S. prices.⁹

Table V-7

Chlorinated isos: Summary of weighted-average f.o.b. prices for products 1-4 from the United States, China, and Spain

* * * * *

Price comparisons

As shown in table V-8, prices for chlorinated isos imported from China were below those for U.S.-produced chlorinated isos in 13 of 16 instances; margins of underselling ranged from zero to 20.0 percent. In the remaining three instances, prices for chlorinated isos from China were between 2.2 and 12.4 percent above prices for the domestic product. Prices for chlorinated isos imported from Spain were below those for U.S.-produced chlorinated isos in 9

⁷ One importer, ***, provided purchase cost data for chlorinated isos that it imported directly from China and Spain. For its imports from China, it reported data for *** quarters of 2013 for product 1 at *** in each quarter, *** quarters of 2013 for product 2 at *** in each quarter, and *** quarters of 2013-14 for product 3 at *** in each quarter. For its imports from Spain, it reported *** quarters of 2014-15 for product 1 at *** in each quarter.

⁸ Hearing transcript, pp. 80-81 (Viner).

⁹ From available information, import prices from China ranged from a *** percent decrease to a *** percent increase and import price increases ranged from *** percent to *** percent from Spain.

of 13 instances; margins of underselling ranged from 2.3 to 15.5 percent. In the remaining four instances, prices for chlorinated isos from Spain were between 0.7 and 18.8 percent above prices for the domestic product.

Table V-8

Chlorinated isos: Instances of underselling/overselling and the range and average of margins, by country, January 2013-December 2015

Source	Underselling				
	Number of quarters	Quantity ¹ (units)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	13	***	***	***	***
Spain	9	***	***	***	***
Total	22	***	10.5	0.0	20.0
Source	(Overselling)				
	Number of quarters	Quantity ¹ (units)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	3	***	***	***	***
Spain	4	***	***	***	***
Total	7	***	(6.7)	(0.7)	(18.8)

¹ In the original investigations, subject imports from China and Spain were priced lower than domestic product in 34 of 39 comparisons; *Chlorinated Isocyanurates from China and Spain, Inv. Nos. 731-TA-1082-1083 (Final)*, Views of the Commission, p. 40.

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

Purchasers' perceptions of relative price trends

Purchasers were asked how the prices of chlorinated isos from the United States had changed relative to the prices of product from China and Spain since 2013. Five purchasers reported no change in relative prices and six purchasers reported that relative prices changed by the same amount. Twelve purchasers reported that the price of U.S.-produced chlorinated isos changed relative to the price of chlorinated isos from China, eleven of which reported that the U.S. price was relatively higher than the Chinese price. Six purchasers reported that the price of U.S.-produced chlorinated isos changed relative to the price of chlorinated isos from Spain, four of which reported that the U.S. price was relatively higher than the Spanish price.

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
80 FR 52789 September 1, 2015	<i>Chlorinated Isocyanurates From China and Spain; Institution of Five-Year Reviews</i>	http://www.gpo.gov/fdsys/pkg/FR-2015-09-01/pdf/2015-21218.pdf
80 FR 52743 September 1, 2015	<i>Initiation of Five-Year ("Sunset") Review</i>	http://www.gpo.gov/fdsys/pkg/FR-2015-09-01/pdf/2015-21633.pdf
80 FR 79358 December 21, 2015	<i>Chlorinated Isocyanurates From China and Spain; Notice of Commission Determinations To Conduct Full Five-Year Reviews</i>	https://federalregister.gov/a/2015-31979
81 FR 461 January 6, 2016	<i>Chlorinated Isocyanurates From Spain and the People's Republic of China: Final Results of the Expedited Sunset Reviews of the Antidumping Duty Orders</i>	https://federalregister.gov/a/2015-33290
81 FR 23328, April 20, 2016	<i>Chlorinated Isocyanurates From China and Spain; Scheduling of Full Five-Year Reviews</i>	https://www.federalregister.gov/articles/2016/04/20/2016-09080/chlorinated-isocyanurates-from-china-and-spain-scheduling-of-full-five-year-reviews

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

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

Subject: Chlorinated Isocyanurates from China and Spain
Inv. Nos.: 731-TA-1082 and 1083 (Second Review)
Date and Time: September 13, 2016 - 9:30 a.m.

A sessions was held in connection with these investigations in the Main Hearing Room (room 101), 500 E Street, SW, Washington, DC.

OPENING REMARKS:

In Support of Continuation of Orders (**James R. Cannon, Jr.**, Cassidy Levy Kent (USA) LLP)

In Support of the Continuation of Antidumping Duty Orders:

Cassidy Levy Kent (USA) LLP
Washington, DC
on behalf of

Bio-Lab, Inc.
Clearon Corporation
Occidental Chemical Corporation

Jonathan Viner, President, Bio-Lab, Inc.

David Helmstetter, General Manager, Clearon Corporation

Matthew White, Chief Financial Officer, Clearon Corporation

Michael Morgan, Business Manager ACL & Chlorite, Occidental Chemical Corporation

Deirdre Maloney, Senior Trade Advisor, Cassidy Levy Kent (USA) LLP

James R. Cannon, Jr.) – OF COUNSEL

CLOSING REMARKS:

In Support of Continuation of Orders (**James R. Cannon, Jr.**, Cassidy Levy Kent (USA) LLP)

APPENDIX C
SUMMARY DATA

Table C-1
Chlorinated isos: Summary data concerning the U.S. market, 2013-15

* * * * *

APPENDIX D

**RESPONSES BY U.S. PRODUCERS, U.S. IMPORTERS, AND PURCHASERS
TO QUESTIONS CONCERNING THE SIGNIFICANCE OF THE EXISTING
ANTIDUMPING AND COUNTERVAILING DUTY ORDERS AND THE LIKELY EFFECTS
OF THEIR REVOCATION**

Table D-1

Chlorinated isos: U.S. producers' reported effects of the antidumping duty orders

* * * * *

Table D-2

Chlorinated isos: U.S. producers' reported effects of revocation of the antidumping duty orders

* * * * *

Table D-3

Chlorinated isos: U.S. Importers' reported effects of the antidumping duty orders

* * * * *

Table D-4

Chlorinated isos: U.S. Importers' reported effects of revocation of the antidumping duty orders

* * * * *

Table D-5

Chlorinated isos: U.S. purchasers' reported effects of revocation of the order on own operations

* * * * *

Table D-6

Chlorinated isos: U.S. purchasers' reported effects of revocation of the order on U.S. market

* * * * *

APPENDIX E
FINANCIAL DATA OF REPORTING FIRMS

This appendix presents the financial data reported by U.S. producers on their operations producing powder and tableted forms of chlorinated isos. The data in table E-1 are consistent with those in table III-9 (granular) and III-10 (tablets).

Table E-1
Chlorinated isos: Selected results of operations of BioLab, Clearon, N. Jonas, and Oxy on granular and tableted forms of chlorinated isos, fiscal years 2013-15

* * * * *

