

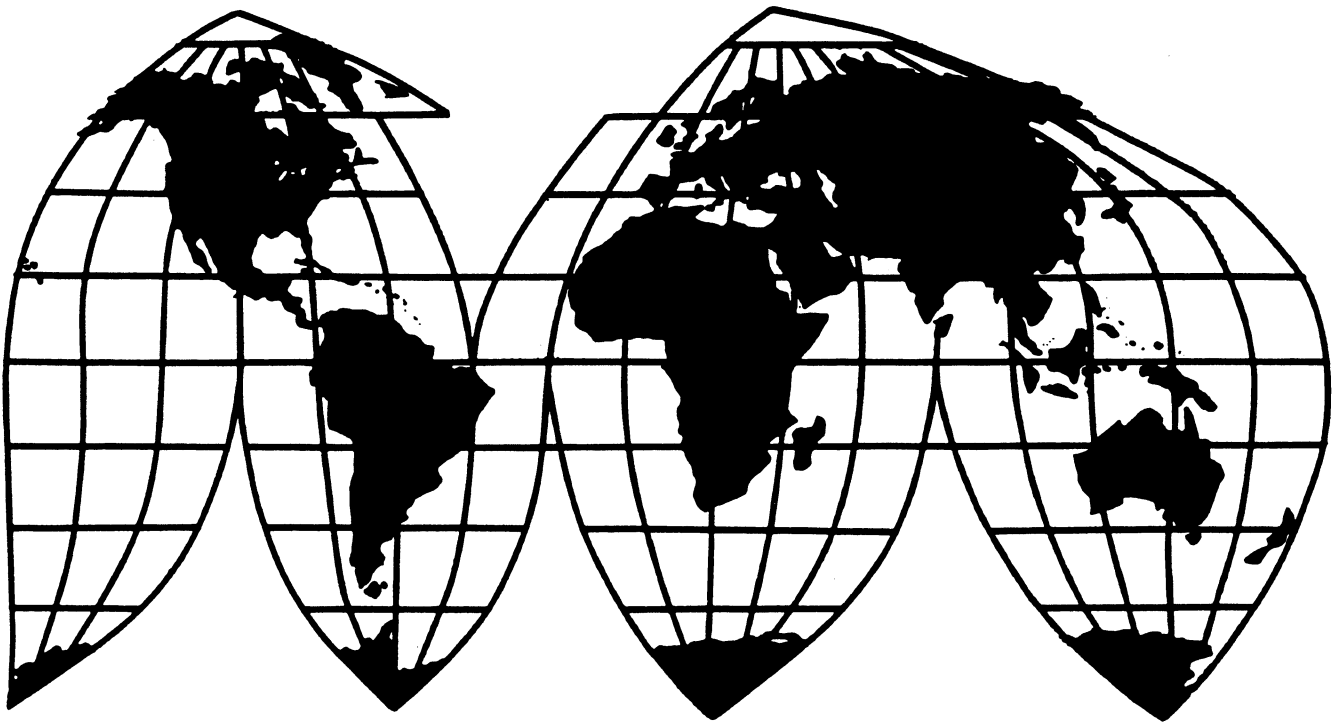
Certain Calcium Aluminate Cement and Cement Clinker From France

Investigation No. 731-TA-645 (Final)

Publication 2772

May 1994

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Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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

PART I
DETERMINATIONS AND VIEWS
OF THE COMMISSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-645 (Final)

Calcium Aluminate Cement and Cement Clinker From France

Determination

On the basis of the record¹ developed in the subject investigation, the Commission unanimously determines,² pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from France of calcium aluminate cement and cement clinker, provided for in subheadings 2523.30.00 and 2523.10.00, respectively, of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).

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

² Commissioner Lynn Bragg did not participate.

Background

The Commission instituted this investigation effective November 1, 1993, following a preliminary determination by the Department of Commerce that imports of calcium aluminate cement and cement clinker from France were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of notices in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing notices in the *Federal Register* of December 22, 1993 (58 FR 67809) and the *Federal Register* of March 9, 1994 (59 FR 11088). The hearing was held in Washington, DC, on March 31, 1994, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

Based on the record in this final investigation,¹ we determine² that an industry in the United States is neither materially injured nor threatened with material injury by reason of imports of calcium aluminate ("CA") cement and cement clinker ("CAC clinker") from France that the U.S. Department of Commerce ("Commerce") has determined are being sold in the United States at less than fair value ("LTFV").³

I. Like Product

A. In General

In determining whether an industry in the United States is materially injured or is threatened with material injury by reason of the subject imports, the Commission must first define the "like product" and the "industry." Section 771(4)(A) of the Tariff Act of 1930 ("the Act") defines the relevant industry as the "domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product"⁴ In turn, the Act defines "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"⁵

The Department of Commerce ("Commerce") has defined the scope of this investigation as:

two classes or kinds of merchandise: (1) CA [calcium aluminate] cement and cement clinker, and (2) CA flux. The products covered by these investigations include CA cement, cement clinker and flux, other than white, high purity CA cement, cement clinker and flux. These products

¹ Petitioner's request to strike the testimony of respondent's witness, Alain Bucaille, from the record in this investigation is denied. Neither the rules nor considerations of due process give a party the right to cross-examine witnesses at Commission title VII hearings. See 19 C.F.R. § 201.13(g); *Pasco Terminals, Inc. v. United States*, 477 F. Supp. 201 (Cust. Ct. 1979), *aff'd* 634 F.2d 610 (C.C.P.A. 1980).

² Commissioner Bragg did not participate in this determination.

³ 19 U.S.C. § 1673d(b). Whether the establishment of an industry in the United States is materially retarded is not an issue in this investigation.

⁴ 19 U.S.C. § 1677(4)(A).

⁵ 19 U.S.C. § 1677(10). In analyzing like product issues, the Commission generally considers a number of factors including: (1) physical characteristics and uses, (2) interchangeability, (3) channels of distribution, (4) customer and producer perceptions, (5) the use of common manufacturing facilities and production employees, and (6) where appropriate, price. *Calabrian Corp. v. United States*, 794 F. Supp. 377, 382 n.4 (Ct. Int'l Trade 1992). No single factor is dispositive, and the Commission may consider other factors relevant to a particular investigation. The Commission looks for clear dividing lines among possible like products, and disregards minor variations. See, e.g., S. Rep. No. 249, 96th Cong. 1st Sess. 90-91 (1979); *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); *Asociacion Colombiana de Exportadores de Flores v. United States*, 693 F. Supp. 1165, 1169 (Ct. Int'l Trade 1988) ("Asocoflores") ("It is up to [the Commission] to determine objectively what is a minor difference.").

contain by weight more than 32 percent but less than 65 percent alumina and more than one percent each of iron and silica.⁶

The imported product subject to investigation in this portion⁷ of the Commission's investigation is calcium aluminate (CA) cement and cement clinker (herein "ordinary CA cement and CAC clinker"), other than white, high purity CA cement and cement clinker from France. Ordinary CA cement is a specialty hydraulic, nonportland cement that has a high alumina content. Alumina imparts such beneficial qualities as resistance to extreme temperatures and chemical corrosion, and fast compressive strength and hardening characteristics.⁸ Ordinary CA cement is used primarily as a binding agent in making special concretes for refractory and specialized construction applications.⁹ Ordinary CA cement clinker serves two functions: (1) as an intermediate material (CAC clinker) for producing ordinary CA cement and (2) as a fluxing agent (CA flux) to remove undesirable sulfur from steel.¹⁰ The raw material mixture for ordinary CA cement/CAC clinker consists of various amounts of crude, uncalcined bauxite (as a source of alumina, iron, and silica oxides) and limestone (as a source of calcium oxides).¹¹ Domestically-produced and imported ordinary CA cement can be physically interchangeable, but the degree of interchangeability depends upon the application.¹²

⁶ See 59 Fed. Reg. 14136 (March 25, 1994). See Confidential Report ("CR") at A-7, Public Report ("PR") at A-6. Commerce also indicated that:

... CA flux has a chemical composition distinct from CA cement clinker. CA cement clinker contains the hydraulic mineral mono-calcium aluminate, which gives it a molar ratio of lime to alumina of approximately 1:1.

In contrast, CA clinker sold as a flux does not contain mono-calcium aluminate; it contains the complex mineral C12A7 ($12\text{CaO} \cdot 7\text{Al}_2\text{O}_3$), which gives it a molar ratio of lime to alumina of approximately 2:1. This higher lime to alumina ratio gives the CA clinker sold as a flux a lower melting point than CA cement, and also results in extra lime which can bond with sulfur and other impurities in molten steel. Although CA clinker sold as flux has some hydraulic properties, it hydrates too quickly to be used for those properties.

These products are currently classifiable under the following Harmonized Tariff Schedule of the United States (HTS) subheadings: 2523.30.0000 (for aluminous cement) and 2523.10.0000 (for cement clinker and flux). Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of these investigations remains dispositive. *Id.*

⁷ There are two portions to this investigation which are on different schedules before the Commission because Commerce made a preliminary negative determination but a final affirmative determination regarding CA flux. Pursuant to 19 U.S.C. § 1673d(b)(3), the Commission is directed to make its final determination on CA flux within 75 days after the date of Commerce's final affirmative determination, rather than the 45 days which applies to CA cement and CAC clinker. The Commission's final determination on CA flux is due on June 6, 1994.

⁸ See CR at I-6 - I-9, PR at II-4.

⁹ CR at I-6 and I-8, PR at II-4. In the refractory industry, ordinary CA cement is used to produce castables (dry mixes), which with the addition of water are molded into special shapes at the installation site, and gunning mixes, which generally are blown onto surfaces to make repairs. Refractories are used to line high-temperature furnaces and reactors that produce metals, generate power, and refine petrochemicals and oil. *Id.* The construction industry uses ordinary CA cement to make concrete mixes for fire resistant applications (coatings for fireplace hearth and structural units, and masonry for industrial stacks and chimneys), for corrosion resistant applications (floor sections and coatings to withstand chemicals in dairy plants, breweries, slaughterhouses, and sugar processing plants), for temperature resistant applications (floor sections and coatings to withstand the heat impact from dropped furnace-fired materials or molten spills), and for acid-resistant pipe linings. CR at I-8, PR at II-4.

¹⁰ CR at I-10, PR at II-5. The question of material injury by reason of imported CA flux will be addressed in the Commission determination on CA flux.

¹¹ CR at I-10, PR at II-5.

¹² CR at I-8 and I-9, PR at II-4. In contrast to gray portland cement, there are no American Society for Testing and Materials ("ASTM") standards for CA cement. CR at I-7, PR at II-4.

B. *Like Product Issues and the Commission's Preliminary Determination*

In the preliminary investigation, the Commission considered three like product issues¹³ and determined that: (1) CA clinker manufactured for use as flux is a like product separate from CAC clinker;¹⁴ (2) CAC clinker and CA cement constitute one like product;¹⁵ and (3) white, high purity CA cement and clinker are not like CA cement and clinker containing less than 65 percent alumina (ordinary CA cement and clinker).¹⁶

There are no arguments or new evidence in the final investigation that would suggest a different conclusion, and we reaffirm our preliminary findings that CA flux is a like product separate from CAC clinker and that CAC clinker and CA cement constitute one like product. The Commission expressed its intention to revisit the question of whether white, high purity CA cement and clinker are like ordinary CA cement and CAC clinker in this final investigation.

C. *Whether white, high purity CA cement and clinker should be included in the like product*

White, high purity CA cement and cement clinker are specifically excluded from the scope of investigation.¹⁷ However, the Commission may define the like product to be broader than the class or kind of imported articles identified by Commerce, if the Commission determines that there is no clear dividing line between the ordinary and white CA cements and clinkers.¹⁸

¹³ The Commission considered a fourth issue, whether domestic non-clinker flux is like imported CA flux, which is not under consideration in this portion of the investigation. *Certain Calcium Aluminate Cement and Cement Clinker from France*, Inv. No. 731-TA-645 (Preliminary), USITC Pub. 2637 at 9-11 (May 1993).

¹⁴ *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC Pub. 2637 at 8 (May 1993). The Commission based its unanimous determination on the fact that, despite the same physical appearance and production processes and facilities, these products have different chemical compositions, different end-uses with no interchangeability, different channels of distribution, and are perceived as different products by customers and, to a varying degree, by the parties themselves. *Id.*

¹⁵ *Id.* at 11. Noting that in past investigations the Commission has found cement and cement clinker to be a single like product, the Commission found no evidence in the record in the preliminary investigation of any significant difference between the production and grinding processes of CA cement and portland cement that would suggest a different conclusion. *Id.*

¹⁶ *Id.* at 12-15. The Commission determined that there was not sufficient evidence of a continuum of grades of CA cement and found that the different levels of alumina in ordinary and high purity CA cement appeared to be important in terms of different products' end-uses, interchangeability and price. The Commission also found that these products had different physical characteristics and no common manufacturing facilities. Producer and customer perceptions were the subject of dispute between the parties. The Commission indicated it would revisit this issue, particularly the interchangeability between the various CA cements, in any final investigation.

¹⁷ In the gray portland cement cases, white, nonstaining, portland cement was excluded from the scope of investigation and not considered by the Commission as a part of the like product. However, the Commission never addressed the issue of inclusion of white portland cement in those cases, apparently because inclusion never was raised as an issue.

¹⁸ See, e.g., *Certain Electric Fans from the People's Republic of China*, Inv. No. 731-TA-473 (Final), USITC Pub. 2461 at 8 (Dec. 1991) ("Even if there is a domestic product identical to the imports subject to investigation, the Commission may find the like product to be broader than that identical product." (footnote omitted)), *aff'd*, *Holmes Products Corp. v. United States*, 16 CIT , Slip Op. 92-230 (Dec. 30, 1992); see also, *Professional Electric Cutting and Sanding/Grinding Tools from Japan*, Inv. No. 731-TA-571 (Final), USITC Pub. 2658 at 51-63 (July 1993). Compare *Nepheline Syenite from Canada*, Inv. No. 731-TA-525 (Final), USITC Pub. 2502 at 10 (Apr. 1992). Cf. *Torrington v. United States*, 747 F. Supp. 744 (Ct. Int'l Trade 1990) *aff'd* 938 F.2d 1278 (Fed. Cir. 1991) (Commission's like product determination need not be coextensive with Commerce's class or kind determination.).

In our preliminary determination, we noted that ordinary CA cement and clinker and white, high purity CA cement and clinker have different physical characteristics and chemical compositions, end uses, and manufacturing facilities.¹⁹ We noted, however, that there was disagreement among the parties as to whether producers and purchasers perceived the products as different.²⁰ We also noted that there were some questions about the degree of interchangeability between the two CA cements.

In the final investigation, virtually all of the purchasers responding to the Commission's questionnaire reported that ordinary CA cement could not be used in applications typically formulated with white CA cement due to differences in chemical composition and performance.²¹ Moreover, white CA cement producer *** stated in the final investigation that ***.²² Therefore, while it is technically possible to use white CA cement for ordinary CA cement in some product formulations, questionnaire respondents generally indicated that the higher cost of white CA cement would preclude them from doing so.²³

In view of this additional evidence, and given the position of the parties in this final investigation on this particular issue, we find that domestically produced white, high purity CA cement and clinker are not like the ordinary CA cement and clinker subject to investigation.

II. Domestic Industry and Related Parties

A. Domestic Producers

In light of our like product determination, we find that there is a single domestic industry comprised of the domestic producers of ordinary CA cement and CAC clinker.

In the preliminary investigation, the Commission determined that Lafarge Fondu's U.S. subsidiary²⁴ was a domestic producer of CA cement and CAC clinker, based specifically on its substantial capital investment in

¹⁹ *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC Pub. 2637 at 12-15 (May 1993).

²⁰ In the final investigation, petitioner, Lehigh Portland Cement Company ("Lehigh") urged the Commission to follow its preliminary determinations regarding the like product. Petitioner's Prehearing Brief at 6. Respondents Lafarge Fondu International and Lafarge Calcium Aluminates, Inc. (herein "Lafarge Fondu" and "Lafarge CA") agreed that ordinary CA cement and CAC clinker are one like product, and further indicated that it accepted the Commission's preliminary determination that this like product does not include white, high purity CA cement and clinker. Tr. at 197 and 198.

²¹ CR at I-91, PR at II-21.

²² CR at I-10, PR at II-5.

²³ CR at I-91, PR at II-21. See *Aspherical Ophthalmoscopy Lenses from Japan*, Inv. No. 731-TA-518 (Preliminary), USITC Pub. 2396 at 11 (June 1991) ("We have in the past given more weight to actual, rather than merely potential, interchangeability in considering whether to expand the like product beyond those articles described as subject to investigation.").

²⁴ Lafarge Fondu's U.S. subsidiary, Lafarge CA, does not produce ordinary CAC clinker, but accounts for all of respondent's imports of CAC clinker to the United States and grinds the imported clinker to produce ordinary CA cement. Table 4, CR at I-21 and I-22, PR at II-8. Based on our determination not to include white, high purity CA cement and clinker in the like product, we do not consider Lafarge CA's U.S. production of white, high purity CA cement and clinker in determining whether it is a domestic producer of the like product.

the United States and the value added by the grinding operation.²⁵ The evidence regarding Lafarge CA's domestic ordinary CA cement operation in this final investigation does not lead to a different conclusion.

In considering whether a firm is a domestic producer, the Commission has looked to the overall nature of its production-related activities in the United States.²⁶ Lafarge CA's capital investment in its U.S. facility for ordinary CA cement continues to be substantial.²⁷ The value added in grinding CAC clinker into ordinary CA cement is significant.²⁸ While Lafarge CA's U.S. employment levels for production of CA cement have declined, this figure accounts for a *** percentage of total U.S. employment in the production of ordinary CAC clinker and CA cement.²⁹

Based on the foregoing discussion, specifically the substantial capital investment in the United States and the significant value added, we reaffirm our preliminary determination and consider respondent's U.S. subsidiary to be a domestic producer.

B. Related Parties

In the preliminary determination, the Commission concluded that respondent's U.S. subsidiary Lafarge CA was a related party and that appropriate circumstances existed to exclude it from the domestic industry producing CAC clinker and CA cement.³⁰

²⁵ *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC Pub. 2637 at 18 (May 1993). The Commission noted that, in previous investigations of cement and cement clinker imports, the Commission has considered grinding-only operations to be domestic production. See *Gray Portland Cement and Cement Clinker from Mexico*, Inv. No. 731-TA-451 (Preliminary), USITC Pub. 2235 at 17 and 18 (Nov. 1989) ("if the like product includes cement, the grinding and blending of clinker to produce cement constitutes domestic production"); *Gray Portland Cement and Cement Clinker from Japan*, Inv. No. 731-TA-461 (Final), USITC Pub. 2376 (Apr. 1991); *Gray Portland Cement and Cement Clinker from Venezuela*, Inv. No. 731-TA-519 (Preliminary), USITC Pub. 2400 at 12, n. 32 (July 1991).

²⁶ Specifically, in resolving that issue, the Commission has examined six factors: (1) the extent and source of the firm's capital investment, (2) the technical expertise involved in U.S. production activity, (3) the value added to the product in the United States, (4) employment levels, (5) the quantities and types of parts sourced in the United States, and (6) any other costs and activities in the United States leading to production of the like product, including where production decisions are made. 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. See, e.g., *Certain Cased Pencils from the People's Republic of China and Thailand*, Inv. Nos. 731-TA-669-670 (Preliminary), USITC Pub. 2713 at I-8, n. 27 (Dec. 1993); *Silicon Carbide from the People's Republic of China*, Inv. No. 731-TA-651 (Preliminary), USITC Pub. 2668 (Aug. 1993); *Gray Portland Cement and Cement Clinker from Mexico*, Inv. No. 731-TA-451 (Preliminary), USITC Pub. 2235 (Nov. 1989).

²⁷ The total assets for Lafarge's U.S. subsidiary were valued at *** dollars in 1993. Table 16, CR at I-59, PR at II-14. During the preliminary investigation, Lafarge reported that "[a]pproximately *** is attributable to the grinding and packing of Lafarge's lower alumina grades." Respondent's Postconference Brief, Appendix 2 at 9. Moreover, respondent indicated that about *** of the equipment used in its U.S. subsidiary's CA cement production operations is sourced within the United States. *Id.* at 12.

²⁸ The cost of grinding CAC clinker into ordinary CA cement is between *** of the total cost of producing the finished cement. CR at I-54, PR at II-14. Moreover, value-added by Lafarge CA to material costs as a ratio of cost of goods sold (*i.e.*, without SG&A expenses) was ***. Table 14, CR at I-55, PR at II-13.

²⁹ Lafarge CA's employment for production of CA cement were ***, or about *** of total U.S. employment in the production of ordinary CAC clinker and CA cement. Table 10, CR at I-41, PR at II-12.

³⁰ *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC Pub. 2637 at 19 and 21 (May 1993).

If a company is a related party under section 771(4)(B),³¹ the Commission determines whether "appropriate circumstances" exist for excluding the producer in question from the domestic industry.³² The rationale for excluding related parties is the concern that the overall industry data may be skewed by inclusion of related parties who are shielded from any injury that might be caused by the subject imports.³³

In this investigation, respondent's U.S. subsidiary, Lafarge CA in Chesapeake, Virginia is *** percent owned by respondent, Lafarge Fondu International. Furthermore, Lafarge CA imports virtually all of the subject imports.³⁴ Therefore, respondent's U.S. subsidiary qualifies as a related party, and we considered whether appropriate circumstances exist for excluding it from the definition of the domestic industry.

During the period of investigation, Lafarge CA accounted for *** percent by quantity of U.S. ordinary CA cement production.³⁵ All of Lafarge CA's production of ordinary CA cement was from imported CAC clinker manufactured by respondent.³⁶ Moreover, Lafarge CA's U.S. production of ordinary CA cement does not compete with any imports since its parent, Lafarge Fondu, only exports ordinary CAC clinker and not ordinary CA cement to the United States.³⁷ This fact suggests that the related party's U.S. production is shielded from competition with ordinary CA cement imports by its parent company's decision to export only clinker. In addition, Lafarge CA's production of ordinary CA cement from imported LTFV clinker

³¹ Under section 771(4)(B), producers who are related to exporters or importers, or who are themselves importers of allegedly dumped or subsidized merchandise, may be excluded from the domestic industry for the purposes of an injury determination in appropriate circumstances. 19 U.S.C. § 1677(4)(B).

³² The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude the related parties include:

- (1) the percentage of domestic production attributable to related producers;
- (2) the reason why importing producers choose to import the articles under investigation—to benefit from the unfair trade practice or to enable them to continue production and compete in the domestic market; and
- (3) the position of the related producers vis-a-vis the rest of the industry, i.e., whether inclusion or exclusion of the related party will skew the data for the rest of the industry.

See, e.g., *Torrington v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992) *aff'd without opinion* 991 F.2d 809 (Fed. Cir. 1993) (Court upheld the Commission's practice of examining these factors in determining that appropriate circumstances did not exist to exclude related party); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1353 (Ct. Int'l Trade 1987). The Commission has also considered whether each company's books are kept separately from its "relations" and whether the primary interests of the related producers lie in domestic production or in importation. See e.g., *Polyethylene Terephthalate Film, Sheet, and Strip from Japan and the Republic of Korea*, Inv. Nos. 731-TA-458 and 459 (Final), USITC Pub. 2383 at 17-18 (May 1991); *Rock Salt from Canada*, Inv. No. 731-TA-239 (Final), USITC Pub. 1798 at 12 (Jan. 1986).

³³ See *Torrington v. United States*, 790 F. Supp. at 1168; *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331 (Ct. Int'l Trade 1989) (related party appeared to benefit from dumped imports, as well as exporter appeared to direct exports so as not to compete with its related U.S. importer/producer), *aff'd without opinion*, 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. at 1353-54 (An analysis of "[b]enefits accrued from the relationship" as a major factor in deciding whether to exclude a related party held to be a "reasonable approach in light of the legislative history...."). See, e.g., S. Rep. No. 249, 96th Cong., 1st Sess. 83 (1979).

³⁴ Table 3, CR at I-20, PR at II-8; Table 5, CR at I-26, PR at II-9.

³⁵ Table 7, CR at I-31, PR at II-10. Lafarge CA's U.S. ordinary CA cement production was *** percent of total domestic production in 1990, *** percent in 1991, *** percent in 1992 and *** percent in 1993. *Id.*

³⁶ CR at I-22, PR at II-8.

³⁷ CR at I-26, PR at II-9; Tr. at 207 and 208.

benefits from the dumping. Finally, Lafarge CA is in *** and inclusion of Lafarge CA's financial information would skew the data for the rest of the domestic industry.³⁸ In view of the above, we determine that appropriate circumstances exist to exclude Lafarge CA from the domestic industry as a related party.

III. Condition of the Domestic Industry

In assessing whether the domestic industry is materially injured by reason of the LTFV imports, the Commission considers all relevant economic factors which have a bearing on the state of the industry in the United States. These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is determinative, and we consider all relevant factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."³⁹ In evaluating the condition of the domestic industry, we look at the domestic industry as a whole.⁴⁰

An important condition of competition in this industry is the presence of two largely distinct categories of end-users of ordinary CA cement: (1) manufacturers of refractory products; and (2) firms that produce a variety of specialty building products and/or use the product in applications in the construction industry.⁴¹ The two market sectors are of *** size.⁴² Users within these sectors select particular brands of cement on the basis of different performance characteristics.⁴³ The demand for ordinary CA cement is subject to change based on overall macroeconomic conditions that affect the demand for refractories and various types of specialty building products. In addition, technological changes in the refractory sector and the development of new construction-related applications for different types of CA cement have affected overall demand for these products.

Over the period of investigation, demand for CA cement in the refractories sector was adversely affected by the impact of the economic recession on the traditional users of refractory products, such as the steel

³⁸ Table 11, CR at I-45, Table 13, CR at I-52, and Table 15, CR at I-57, PR at II-13, II-13, and II-14.

³⁹ 19 U.S.C. § 1677(7)(C)(iii).

⁴⁰ See, e.g., *Welded Steel Pipe from Malaysia*, Inv. No. 731-TA-644 (Preliminary), USITC Pub. 2620 at 19-20 and n.79 (Apr. 1993) ("The Commission may take into account the departures from an industry or the unique circumstances of individual companies, but ultimately must assess the condition of the industry as a whole, and not on a company-by-company basis."), citing *Metallwerken Nederland B.V. v. United States*, 728 F. Supp. 730, 735 (Ct. Int'l Trade 1989).

⁴¹ For Chairman Newquist, the existence of "distinct categories" of end users of ordinary CA cement is not an important condition of competition. See footnote 71 *infra*.

⁴² The quantity of apparent consumption of ordinary CA cement in the refractory market sector was ***. Similarly, the apparent consumption in the non-refractory market sector was ***. CR at I-74, PR at II-18.

⁴³ For refractory products made with CA cement, which are used to line high-temperature furnaces that produce metals, such as steel, the melting point, and the level of impurities contained in the cement, are important criteria and may limit the use of certain brands of cement. In non-refractory applications, the initial and final set times, early compressive strengths, flow, and workability of the cement, are cited as important criteria in the selection process. Economic Memorandum, EC-R-044 at §, dated April 19, 1994 (herein "EC-R-044").

and aluminum industries.⁴⁴ Moreover, new product development in the refractories market has focused on products containing increasingly lower levels of ordinary CA cement.⁴⁵ Much of the recent (as well as projected) growth in the consumption of refractories has centered on these newer products.⁴⁶ These factors have contributed to the decline in U.S. consumption of ordinary CA cement in the refractory sector.

The development of a limited number of new non-refractory uses for CA cement and the recent upturn in overall construction activity have contributed to an increase in consumption in the non-refractory sector.⁴⁷ Many of these firms use relatively small quantities of CA cement for a limited range of applications, in comparison to the refractory manufacturers.⁴⁸ Nonetheless, increased consumption in this sector has at least partially offset the decline in consumption of ordinary CA cement for use in refractory applications.⁴⁹

The domestic CA cement and CAC clinker industry involves both the production of CAC clinker and the grinding of that clinker into finished CA cement. In assessing the condition of the domestic industry, it is necessary to discuss some data separately for these production stages.⁵⁰

Apparent U.S. consumption of CA cement by quantity declined from *** short tons in 1990 to *** short tons in 1991, and remained relatively constant at *** short tons in 1992, followed by a *** increase in 1993 to *** short tons.⁵¹ The overall decline was *** percent from 1990 to 1993. Consumption by value increased *** by *** percent, from 1990 to 1993. Consumption in the refractory market segment declined steadily from *** short tons in 1990 to *** short tons in 1993, or by *** percent.⁵² In contrast, apparent U.S. consumption of CA cement in the non-refractory market segment increased by *** percent from *** short tons in 1990 to *** short tons in 1993.⁵³

Domestic production of CA cement declined from 1990 to 1993, with a *** decline from 1990 to 1991 and a *** decline from 1991 to 1993.⁵⁴ Capacity to produce CA cement remained constant from 1990 to 1993. Therefore, capacity utilization rates for CA cement, which were relatively low at the start of the period, declined as production declined through the period.

⁴⁴ CR at I-8 n.11, PR at II-4 n.11 ; EC-R-044 at 41 n.51; Tr. at 28 and 65.

⁴⁵ For the most part, these newer products are not only using less CA cement overall, but also are using white CA cement rather than ordinary CA cement. CR at I-87, PR at II-21.

⁴⁶ CR at I-87, PR at II-21.

⁴⁷ CR at I-87, PR at II-21.

⁴⁸ CR at I-87 and I-88, PR at II-21.

⁴⁹ CR at I-87, PR at II-21.

⁵⁰ We discuss apparent consumption and U.S. shipments only for the finished CA cement segment since the end-use market is for finished cement. Discussing production data for both CA cement and CAC clinker would result in double counting of some data and would not reflect the interdependent nature and the different capacity constraints in the CAC clinker production and CA cement grinding processes. Accordingly, we discuss production, capacity, capacity utilization, and inventory data separately for the clinker and finished cement stages of production. Finally, other data, i.e., employment, wages, and financial performance indicators, are discussed for the domestic CA cement and CAC clinker industry as a whole.

⁵¹ Data referred to in this paragraph are summarized in Table 2, CR at I-19, PR at II-8.

⁵² Table D-1, CR at D-3, PR at D-2.

⁵³ Table D-2, CR at D-4, PR at D-2.

⁵⁴ Data referred to in this paragraph are summarized in Table 7, CR at I-31, PR at II-10. The domestic industry's production of CA cement was ***. The industry's capacity utilization rates for CA cement were ***. *Id.*

The domestic industry's U.S. shipments of CA cement by quantity declined *** from 1990 to 1992, and then increased from 1992 to 1993.⁵⁵ U.S. shipments of CA cement by value followed a similar pattern.⁵⁶ The domestic industry reported a *** decline in year-end inventories of CA cement for the 1990-1992 period, and a *** decline from 1992 to 1993.⁵⁷ Inventories as a share of U.S. shipments increased *** from 1990 to 1992, but declined *** from 1992 to 1993.⁵⁸

Domestic production of CAC clinker declined from 1990 to 1993, with a *** decline from 1990 to 1991.⁵⁹ Capacity to produce CAC clinker remained constant throughout the period of investigation. Therefore, as production declined, so did capacity utilization. The domestic industry's year-end inventories of CAC clinker fluctuated between years with a *** overall increase from 1991 to 1993.⁶⁰

Employment in the domestic CA cement and CAC clinker industry declined overall during the period of investigation, despite an increase from 1992 to 1993.⁶¹ Hours worked followed a similar trend over the period of investigation. From 1990 to 1993, total compensation fluctuated, but declined overall, while hourly total compensation increased *** from 1990 to 1992 and declined *** in 1993.

The financial performance indicators for the domestic CA cement and CAC clinker industry generally declined overall during the period of investigation. There were *** declines in most indicators in the period 1990-1992, with some indicators showing increases from 1992 to 1993. From 1990 to 1992, the domestic industry experienced declines in net sales by quantity and by value.⁶² Net sales increased by both quantity and value from 1992 to 1993. Gross profit were ***, but *** over the period of investigation. Operating income, which was ***, improved *** from 1990 to 1991, but then declined *** from 1991 to 1993. The operating *** margin (ratio of operating *** to net sales) also increased from 1990 to 1991, and then fell from 1991 to 1993.

The domestic industry's cost of goods sold declined from 1990 to 1992 but increased from 1992 to 1993.⁶³ As a share of net sales, the cost of goods sold declined from 1990 to 1991, but increased from 1991 to 1993. Unit cost of goods sold increased *** over the period of investigation. Selling, general, and administrative (SG&A) expenses for the industry fluctuated between years, but remained somewhat constant from 1990 to 1993.

⁵⁵ Table 7, CR at I-31, PR at II-10. The domestic industry's U.S. shipments of CA cement by quantity were ***. *Id.*

⁵⁶ Table 7, CR at I-31, PR at II-10.

⁵⁷ Table 9, CR at I-39, PR at II-12. The domestic industry's year-end inventories of CA cement ***. *Id.*

⁵⁸ Table C-1a, CR at C-3, PR at C-2. The domestic industry's inventories as a share of U.S. shipments of CA cement ***. *Id.*

⁵⁹ Data referred to in this paragraph are summarized in Table 8, CR at I-33, PR at II-11.

⁶⁰ Table 9, CR at I-39, PR at II-12.

⁶¹ Data referred to in this paragraph are summarized in Table 10, CR at I-41, PR at II-12. Employment in the domestic industry declined from ***. *Id.*

⁶² Data referred to in this paragraph are summarized in Table 11, CR at I-45, PR at II-13. Net sales by quantity for the domestic industry were ***. Net sales by value were ***. *Id.*

⁶³ Data referred to in this paragraph are summarized in Table 11, CR at I-45, PR at II-13. The domestic industry's cost of goods sold were ***. Cost of goods sold as a share of net sales were ***. SG&A expenses for the industry were ***. *Id.*

Finally, the domestic industry's capital expenditures declined *** from 1990 to 1992, and then increased *** in 1993.^{64 65}

IV. No Material Injury by Reason Of LTFV Imports

In determining whether a domestic industry is materially injured by reason of the imports that Commerce has determined are sold at LTFV, the statute directs the Commission to consider the volume of imports, their effect on prices for the like product, and their impact on domestic producers of the like product.⁶⁶ Although the Commission may consider causes of injury other than the LTFV imports, it is not to weigh causes.^{67 68 69} For the reasons discussed below, we find that the domestic CA cement and cement clinker industry is not materially injured by reason of LTFV imports from France.^{70 71}

⁶⁴ CR at I-56, PR at II-14. The domestic industry's capital expenditures were ***. *Id.*

⁶⁵ Based on the foregoing, Chairman Newquist and Commissioner Rohr conclude that the domestic CA cement and CAC clinker industry is experiencing material injury.

⁶⁶ 19 U.S.C. § 1677(7)(B)(i). The Commission also may consider "such other economic factors as are relevant to the determination." *Id.*

⁶⁷ See, e.g., *Citrosuco Paulista, S.A. v. United States*, 704 F. Supp. 1075, 1101 (Ct. Int'l Trade 1988). Chairman Newquist, Commissioner Rohr and Commissioner Nuzum further note that the Commission need not determine that imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249 at 57, 74. Rather, a finding that imports are a cause of material injury is sufficient. See, e.g., *Metallwerken Nederland B.V. v. United States*, 728 F. Supp. 730, 741 (Ct. Int'l Trade 1989); *Citrosuco Paulista, S.A. v. United States*, 704 F. Supp. at 1101.

⁶⁸ Vice Chairman Watson notes that the courts have interpreted the statutory requirement that the Commission consider whether there is material injury "by reason of" the subject imports in a number of different ways. Compare *United States Engineering & Forging v. United States*, 779 F. Supp. 1375, 1391 (Ct. Int'l Trade 1991) ("[I]t must determine whether unfairly traded imports are contributing to such injury to the domestic industry... Such imports, therefore, need not be the only cause of harm to the domestic industry") (citations omitted) with *Metallwerken Nederland B.V. v. United States*, 728 F. Supp. at 741 (affirming a determination by two Commissioners that "the imports were a cause of material injury") and *USX Corp. v. United States*, 682 F. Supp. 67, 69 (Ct. Int'l Trade 1988) ("any causation analysis must have at its core the issue of whether the imports at issue cause, in a non *de minimis* manner, the material injury to the industry").

Accordingly, Vice Chairman Watson has determined to adhere to the standard articulated by Congress, in the legislative history of the pertinent provisions, which states that "the Commission must satisfy itself that, in light of all the information presented, there is a sufficient causal link between the less-than-fair-value imports and the requisite injury." S. Rep. No. 249 at 275.

⁶⁹ Commissioner Crawford notes that the statute requires that the Commission determine whether a domestic industry is "materially injured by reason of" the LTFV imports. She finds that the clear meaning of the statute is to require a determination on whether the domestic industry is materially injured by reason of LTFV imports, not by reason of LTFV imports among other things. Many, if not most, domestic industries are subject to injury from more than one economic factor. Of these factors, there may be more than one that independently is causing material injury to the domestic industry. It is assumed in the legislative history that the "ITC will consider information which indicates that harm is caused by factors other than less-than-fair-value imports." S. Rep. No. 249 at 75. However, the legislative history makes it clear that the Commission is not to weigh or prioritize the factors that are independently causing material injury. *Id.* at 74; H.R. Rep. No. 317, 96th Cong., 1st Sess. 46-47 (1979). The Commission is not to determine if the LTFV imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249 at 74. Rather, it is to determine whether any injury "by reason of" the LTFV imports is material. That is, the Commission must determine if the subject imports are causing material injury to the domestic industry. "When determining the effect of imports on the domestic industry, the Commission must consider all relevant factors that can demonstrate if unfairly traded imports are materially injuring the domestic industry." S. Rep. No. 71, 100th Cong., 1st Sess. 116 (1987) (emphasis added).

⁷⁰ In making our determination, we consider the impact of the imports on the industry "as a whole." See, e.g., *United Eng'g & Forging v. United States*, 779 F. Supp. 1375, 1391 (Ct. Int'l Trade 1991). However, we are not prevented from focusing on appropriate market segments. See *Iwatsu Elec. Co. v. United States*, 758 F. Supp. 1506, 1511 n.7 (Ct. Int'l Trade 1991); *Gifford-Hill Cement Co. v. United States*, 615 F. Supp. 577, 582-84 (Ct. Int'l Trade 1985); see also *Copperweld Corp. v. United States*, 682 F. Supp. 552, 566 (Ct. Int'l Trade 1988).

⁷¹ Chairman Newquist notes that the market segment discussion below is irrelevant to his determination. In his view, the question posed by the statute is whether the subject imports are or are not

A. Volume of Imports

While there are no subject imports of CA cement, there are LTFV imports of CAC clinker, which are ground into CA cement by respondent's U.S. subsidiary, Lafarge CA.⁷² Imports of CAC clinker fluctuated considerably from year to year, but increased overall by quantity and by value from 1990 to 1993.⁷³ However, we do not view this increase in imports as significant in light of Lafarge's historically substantial market presence.⁷⁴ Another factor which reduces the significance of trends in CAC clinker imports is the fact that *** yearly production and shipments of the finished CA cement by Lafarge CA, and therefore are not a reliable indicator of the level of imports entering the market place.^{75 76} A better indicator is the market share held by, and U.S. shipments of, CA cement produced by Lafarge CA from the LTFV imports of CAC clinker.

The overall market share of ordinary CA cement produced by Lafarge CA increased from 1990 to 1992 and declined *** in 1993.⁷⁷ As discussed above, however, this market has two broad categories of end-users: the refractory sector, and the specialty building products or non-refractory sector.⁷⁸ Lafarge CA's increasing market share resulted largely from ***, which it dominates,⁷⁹ where apparent consumption in terms of quantity increased by *** from 1990 to 1993.⁸⁰ In contrast, Lehigh's decline in overall market share is a result of falling sales in ***, the refractory sector where the quantity of consumption fell by ***.⁸¹

⁷¹—Continued

a cause of material injury to the domestic industry producing the like product. The like product which the Commission has found is CA cement and cement clinker. The assessment of the causal link between imports and the industry producing the like product requires analysis of the industry as a whole, not heightened scrutiny of particular segments of the industry or market. Thus, his negative determination is made on the basis of examining aggregate trends in consumption, market share, pricing, etc. Accordingly, Chairman Newquist does not join those portions of the following discussion which rely upon such market segment analysis.

⁷² There are virtually no other imports of CAC clinker or CA cement. Table 19, CR at I-70, PR at II-29.

⁷³ Table 19, CR at I-70, PR at II-17. Lafarge CA reported that the fluctuation in amount of imports of CAC clinker to the United States was largely due to ***. CR at I-68, PR at II-16.

⁷⁴ Historically, the ordinary CA cement and CAC clinker market has had only these two suppliers, Lehigh and Lafarge. Tr. at 12, 28 and 29.

⁷⁵ Due to the small number of shipments of CAC clinker per year, imports are inventoried until needed. CR at I-69, n.82, PR at II-16, n.82.

⁷⁶ Commissioner Crawford has fully considered the available data in this investigation in making her determination. However, she does not join in this discussion regarding correlations in trends of import and other statistics as she does not rely on any such analysis of trends.

⁷⁷ Table 20, CR at I-73, PR at II-17. Lafarge CA's market share for CA cement was *** percent in 1990, *** percent in 1991, *** percent in 1992, and *** percent in 1993. Id.

⁷⁸ Commissioner Rohr notes that, in his analysis, causation relates to the domestic industry as a whole rather than to any segment or portion of the industry represented by particular market segment. Nevertheless, an analysis of market segments may have some explanatory power which assists in making findings as to the industry as a whole. He joins in his colleagues' discussion of the market segments in this industry because he believes this is a case in which a consideration of the refractory and nonrefractory segments of the market does have some explanatory power for his consideration of the industry as a whole.

⁷⁹ CR at I-75, Table D-1 and D-2, CR at D-3 and D-4; PR at II-18 and D-2. Lafarge CA's share by quantity of the non-refractories sector was *** percent in 1990, *** percent in 1991, *** percent in 1992, and *** percent in 1993. Id.

⁸⁰ CR at I-75, PR at II-18. By comparison, Lafarge CA's total U.S. shipments of ordinary CA cement increased by *** percent from 1990 to 1993. Lafarge CA's U.S. shipments in the refractory sector *** from 1990 to 1993, and in the non-refractory sector *** from 1990 to 1993. Table D-1 and D-2, CR at D-3 and D-4; PR at D-2.

⁸¹ CR at I-75, Tables D-1 and D-2, CR at D-3 and D-4; PR at II-18 and D-2. Lehigh's market share of the refractory sector was *** percent in 1990, *** percent in 1991, *** percent in 1992, and *** percent in 1993. Id.

The data for U.S. shipments for existing refractory applications are not consistent with petitioner's claim that virtually every shipment lost by Lehigh was a shipment gained by Lafarge CA.⁸² Rather, despite declining demand in the refractory sector of the market, where Lehigh is the dominant supplier, shipments of Lafarge CA's product ***.⁸³ Moreover, since purchasers reported little, if any, shifting between suppliers, it does not appear that Lafarge CA's *** were at Lehigh's expense.⁸⁴

Due to the relatively high costs associated with the development and/or reformulation of many of the products that contain ordinary CA cement, the majority of purchasers in both the refractories and the non-refractories sectors indicated that they generally are reluctant to switch from one supplier or brand to another.⁸⁵ Purchasers reported that decisions to change types or brands of CA cement generally are made by assessing the requisite research and development costs associated with their product development, testing, and qualification processes versus the expected benefits (improved quality or end-product performance and lower production costs).⁸⁶ More importantly, during the period of investigation there were very few reports of actual switching; these changes were made because of quality or technical problems as well as cost.⁸⁷

In the non-refractory market sector, where Lafarge CA historically has been the dominant supplier, consumption increased in part due to new applications for CA cement.⁸⁸ New applications were defined in the Commission's questionnaire as "product being used for the first time in a manner which is 'new' to THAT customer."⁸⁹ Both suppliers reported that their customers used a variety of products such as portland cement or refractory bricks before turning to CA cement or that CA cement was used in entirely new products.⁹⁰ The record confirms that overall the new applications have expanded demand in the non-refractory sector.⁹¹ While shipments by quantity for existing applications in the non-refractory market increased by less than *** from 1990 to 1993,⁹² shipments for new

⁸² Petitioner's Prehearing Brief at 33; Tr. at 67; Table D-4, CR at D-6, PR at D-2. For example, Lehigh's shipments for existing refractory applications ***. By comparison, ***. Similarly, for the other years, there is no correspondence between changes in Lehigh's and Lafarge CA's shipments in the sector where ***. Moreover, ***. *Id.*

⁸³ Lafarge CA's shipments in the refractory sector *** and from 1992 to 1993. Table D-1, CR at D-3, PR at D-2.

⁸⁴ CR at I-93, PR at II-23. While 60 purchasers reported no changes in supplier during the 1991-1993 period, four purchasers reported shifting some or all of their purchases from Lehigh to Lafarge CA and eight purchasers reported shifting some or all of their purchases from Lafarge CA to Lehigh. *Id.*

⁸⁵ Questionnaire responses supplied by 61 percent of the firms in the refractories sector indicated that substitution between some Lehigh and Lafarge CA brands was possible, but not without some testing and reformulation. A significantly smaller portion of the firms in the non-refractories sector reported that substitution was possible. CR at I-92, PR at II-23.

⁸⁶ CR at I-89, PR at II-21. Since purchasers tend to use particular brands of CA cement for specific product lines, changes in demand for specific product lines affect the volume purchased of particular brands of CA cement from one year to another. EC-R-044 at 38.

⁸⁷ CR at I-93, PR at II-23.

⁸⁸ Table D-4, CR at D-6, PR at D-2.

⁸⁹ CR at I-79, n.93, PR at II-19, n.93 (emphasis in original).

⁹⁰ CR at I-78, PR at II-19. New products in which CA cement was first used include ***. CR at I-79, PR at II-19.

⁹¹ Table D-4, CR at D-6, PR at D-2.

⁹² ***. ***. Similar to the refractory sector, however, there is no correspondence between changes in shipments between Lehigh and Lafarge CA. For example, from 1992 to 1993, Lehigh's shipments by quantity for existing applications in the non-refractory sector ***. Moreover, the unit value for Lafarge CA's shipments for existing applications in the non-refractory sector in 1993 was *** than that reported for Lehigh. Table D-4, CR at D-6, PR at D-2.

applications in this sector ***.⁹³ Lehigh's shipments by quantity for existing applications in the non-refractory sector *** from 1990 to 1993, but its shipments for new applications *** for the same period.⁹⁴ *** Lafarge CA's shipments by quantity for new applications in this sector increased by *** percent, while its shipments for existing applications in the non-refractory sector increased by ***.⁹⁵

The evidence of record therefore is insufficient to support the conclusion that Lehigh's decline in market share for sales to both refractory and non-refractory applications was by reason of LTFV imports. Rather, the record suggests that Lehigh's *** in market share was due to a *** in demand for Lehigh's product in refractory applications.

There is nothing inherently different between certain of the CA cement products,⁹⁶ and most of the CA cement products are used in both sectors.⁹⁷ Rather, the dominance of the suppliers in different sectors reflects differences in their marketing approaches. Lafarge CA has aggressively marketed its products to both sectors of the market and, in particular, has made a significant commitment to providing technical assistance to customers using CA cement for the first time in non-refractory applications.⁹⁸ Although Lehigh has stepped up its technical support efforts in non-refractory applications, particularly toward the end of the period of investigation, customers continue to view Lafarge CA's service and support as superior, and Lehigh has continued to rely primarily on its traditional customers in the refractory sector.^{99 100}

⁹³ Table D-4, CR at D-6, PR at D-2.

⁹⁴ Table D-4, CR at D-6, PR at D-2.

⁹⁵ Table D-4, CR at D-6, PR at D-2.

⁹⁶ Seventy-two percent of the manufacturers of refractories responded in the questionnaire that the Lehigh and Lafarge CA products could be employed in the same range of uses, and 42 percent indicated that different brands were interchangeable in a given application. However, only 38 percent of the firms in the non-refractories sector reported that the Lehigh and Lafarge CA products were employed in the same range of uses and 26 percent reported that the products were interchangeable in a given application. EC-R-044 at 34.

⁹⁷ CR at I-75, PR at II-18. For example, Lafarge CA's Secar 41 has been marketed to, and is used *** by both the refractory and non-refractory sectors; Lafarge CA's Secar 41 was used *** percent by quantity for refractory applications and *** percent by quantity for non-refractory applications in 1993. Lafarge CA's Secar 51 followed a similar pattern of use in both sectors, i.e., *** percent by quantity for refractory applications and *** percent by quantity for non-refractory applications in 1993. In contrast, Lehigh's Lumnite, which is comparable to Lafarge CA's Secar 41, was used *** percent by quantity for refractory applications and *** percent by quantity for non-refractory applications in 1993. Moreover, the ratio for Lehigh's Refcon, which is comparable to Lafarge CA's Secar 51, was *** percent for refractory applications and *** percent for non-refractory applications. CR at I-75, PR at II-18.

⁹⁸ CR at I-60 and I-61, PR at II-14. According to Respondent, "... CA cement is not easy to use. A customer needs to learn how to use it, needs to develop tailored formulas ... the core philosophy behind Lafarge's market strategy has been to get out there, to create demand, to identify opportunities, work with customers so they will use calcium aluminate cements where they otherwise would not." Tr. at 182 and 183.

⁹⁹ CR at I-94 and I-95, PR at II-23; Lafarge's Prehearing Brief at 19-20. Few differences were reported by purchasers between the two suppliers except with respect to sales service and technical assistance. However, Lafarge CA was cited by *** percent of the purchasers for having superior technical assistance and by *** percent for better sales service, while Lehigh ***. CR at I-94, PR at II-23.

¹⁰⁰ Commissioner Crawford notes that this evidence supports a relatively low elasticity of substitution between subject imports and domestic product. As noted above, the *** of purchasers considers non-price factors to be more important. The relatively high transactions costs involved in switching brands diminishes the incentive to change products in response to relative price changes. Moreover, the fact that Lafarge and Lehigh each sell a *** of their products to different segments of the market, each with different growth rates, tends to reduce the importance of relative prices. Lafarge has further differentiated its product by providing what customers report to be superior support services. This and other evidence in the record suggests a low elasticity of substitution in the range of 1.5 to 3. When there is a low elasticity of substitution, purchasers do not respond as readily to changes in relative prices.

While the volume of LTFV imports and the market share held by CA cement produced from those LTFV imports is significant, the level of imports and market share is consistent with historical levels. For the reasons discussed above, we also find that any increases in the volume of imports or market share were not significant, and that the decline in Lehigh's market share was not by reason of the subject imports.

B. Price Effects of Imports¹⁰¹

Lafarge CA and Lehigh each manufacture a range of ordinary CA cement products that differ in terms of their specific chemical characteristics, melting points, color, initial and final set times, and compressive strengths.¹⁰² Purchasers determine which type and brand of CA cement to use in a product during the process of product development and testing.¹⁰³ Firms make decisions regarding CA cement on the basis of quality and particular performance attributes that are required for the final product.¹⁰⁴ ¹⁰⁵ The cost of the ordinary CA cement may also be a factor, but the majority of purchasers indicated that it was, at most, a secondary consideration.¹⁰⁶

Moreover, transportation costs can account for a variable but significant percentage of the total cost of CA cement for purchasers.¹⁰⁷ In addition to variations due to distance, there is a significant difference in cost for shipping less-than-truckload (LTL) quantities. Therefore, some firms chose to purchase ordinary CA cement from Lafarge CA, because it offered a wider range of cement products (ordinary CA and white CA), allowing firms to combine shipments and reduce their shipping costs by achieving truckload quantities.¹⁰⁸

¹⁰¹ Given the lack of any open market pricing data for either domestic or subject imported CAC clinker, and the lack of any subject imports of "finished" CA cement (and hence any pricing data for such imports), the Commission may rely on whatever "secondary" data may reasonably offer guidance on the effects of the subject imports on prices for the domestic like product. *Cf. Iwatsu Elec. Co. v. United States*, 758 F. Supp. 1506 (Ct. Int'l Trade 1991) (ITC must assess causation even in the face of great difficulties in making price comparisons); *Alberta Pork Producers' Marketing Bd. v. United States*, 669 F. Supp. 645, 460 (Ct. Int'l Trade 1987) ("nothing in the statute or regulations prevents the Commission from using information other than questionnaire responses when the Commission determines that the responses do not provide an adequate basis for making its determination."). *See also Chung Ling Co. v. United States*, 16 CIT , 805 F. Supp. 45, 54 (1992) ("[i]t is critical to fair price comparisons that they be made at the level of actual competition in the U.S. market.") In this case, the open market pricing of Lafarge CA's U.S.-finished CA cement produced from dumped subject CA clinker provides the best data available on pricing of the subject imports, notwithstanding that the "finished" CA cement is a U.S. product by virtue of Lafarge CA's U.S. grinding of the finished cement from subject imported clinker.

¹⁰² Table 1, CR at I-7, PR at II-4.

¹⁰³ CR at I-89, PR at II-21. The testing, production, and field trials associated with product development can range from several weeks to up to one year. EC-R-044 at 8 and 9.

¹⁰⁴ The majority of purchasers identified quality as the most important factor influencing their purchasing decisions, with technical differences and performance also reported as important considerations. Some firms also reported relying on traditional suppliers of CA cement. CR at I-89, Table 22, CR at I-90, PR at II-21 and II-22.

¹⁰⁵ In Chairman Newquist's view, "quality" in this context refers to the performance attributes unique to each of the various products offered by both Petitioner and Respondent. However, since the Commission has defined one like product of ordinary CA cement and cement clinker, rather than several like products corresponding to product lines, further consideration of "quality" issues is not necessary nor appropriate.

¹⁰⁶ CR at I-89, Table 22, CR at I-90, PR at II-21 and II-22. Moreover, the cost of CA cement is insignificant relative to the overall cost of an industrial or construction project. Tr. at 29.

¹⁰⁷ Purchasers responded in the questionnaire that shipping costs ranged from approximately 2 percent to 27 percent of the total cost of the final product. CR at I-96 and I-97, PR at II-24.

¹⁰⁸ CR at I-96 and I-97, PR at II-24.

There are extensive pricing data in the record.¹⁰⁹ Two general conclusions can be drawn from these data. First, both Lehigh's and Lafarge's average unit values on all products combined *** over the period of investigation.¹¹⁰ Second, to the extent that underselling comparisons can be made between Lehigh and Lafarge CA's products, the data are mixed.¹¹¹ Moreover, the average unit values reported by purchasers varied somewhat from comparable values reported by Lehigh and Lafarge CA.¹¹² For example, the average unit values reported by producers for packaged sales were substantially different than the purchasers' responses; Lehigh's Lumnite was *** priced in producers responses than Lafarge CA's comparable Secar 41,¹¹³ whereas the average unit values reported by purchasers for packaged sales of Lehigh's Lumnite were generally *** than those reported for Lafarge CA's product, Secar 41 and, generally *** than those reported for another comparable Lafarge product, Fondu.¹¹⁴

However, this pricing information is not easily compared due to product differentiation, transportation costs,¹¹⁵ technical services, and the fact that imports enter as CAC clinker and, thus, are not at the same level of actual competition.¹¹⁶ We, therefore, found the collected pricing data to be of limited value in making our determination. In any event, the evidence in the record shows that end-users make their purchasing decisions based largely on non-price factors.¹¹⁷ ¹¹⁸ Moreover, as discussed above, the evidence indicates that purchasers rarely switch products or suppliers and that, when switching occurs, price is a secondary consideration.¹¹⁹

¹⁰⁹ CR at I-109, PR at II-26.

¹¹⁰ Table 7, CR at I-32, PR at II-10. Moreover, *** purchasers in both sectors reported the price of CA cement products changed infrequently (or not at all) during the period of investigation. EC-R-044 at 19.

¹¹¹ Commissioner Crawford does not place great weight on the underselling price comparisons in determining the impact of the subject imports on the domestic like product where these comparisons show persistent and consistent margins of overselling or underselling. In these instances, the prices being compared might well reflect quality or other nonprice differences, making these comparisons less useful in assessing price effects.

¹¹² These variations stem, to some degree, from the differences between the number of sales reported by the two CA cement suppliers and the number of purchasers that reported data in a form that was comparable sampled by the Commission. CR at I-106, PR at II-26.

¹¹³ Figure 2, CR at I-102, PR at II-25.

¹¹⁴ Figure 4, CR at I-107, PR at II-26. The data show that there are *** bulk sales of Lafarge CA's Secar 41. The bulk sales market accounts for a *** amount of Lehigh's sales of Lumnite. In addition, average unit values reported by producers for bulk sales of Lehigh's Lumnite were *** than those reported for another comparable Lafarge CA product, Fondu. Figure 3, CR at I-105, PR at II-26, Figure 5, CR at I-108, PR at II-26. Producers and purchasers reported average unit values for packaged sales of Lehigh's Refcon that were *** than those reported for Lafarge CA's comparable product, Secar 51. Figure 2, CR at I-102, PR at II-25, Figure 4, CR at I-107, PR at II-26. Nonetheless, Lehigh's Refcon accounted for *** bulk sales after 1990 relative to Lafarge CA's bulk sales of Secar 51. Table 24, CR at I-104, PR at II-26. The average unit values reported by purchasers for bulk sales of Lafarge's Secar 51 ***; *** values for Secar 51 were *** than those reported for purchases of Lehigh's comparable product, Refcon. Figure 5, CR at I-108, PR at II-26.

¹¹⁵ The average unit values are at the same level of trade, since these data are provided on a weighted-average f.o.b plant basis. However, the effect of the variations in transportation costs on the purchasing decisions of the customers is not easily comparable.

¹¹⁶ See, e.g., *Nepheline Syenite from Canada*, Inv. No. 731-TA-525 (Final), USITC Pub. 2502 at 23 (April 1992), *aff'd*, *Feldspar v. United States*, Slip Op. 93-116 (Ct. Int'l Trade, June 23, 1993).

¹¹⁷ See discussion *supra*.

¹¹⁸ Commissioner Crawford notes that the evidence supports a relatively low elasticity of demand. The elasticity of demand measures the responsiveness of the overall quantity demanded of ordinary CA cement to a change in the U.S. market price of ordinary CA cement. In this investigation, ordinary CA cement represents only a moderate share of the cost of production for the majority of users. See EC-R-044 at 41. Moreover, there is a lack of reasonable substitutes for many users of ordinary CA cement. The evidence in the record suggests a low elasticity of demand in the range of 0.5 to 1. When there is a low elasticity of demand, purchasers do not respond as readily to changes in price.

¹¹⁹ CR at I-93, PR at II-23.

The evidence in the record does not substantiate any of the allegations of either lost sales on the basis of price or lost revenues.^{120 121} In fact, a review of the information compiled to verify the lost sales and lost revenue allegations confirms that firms' rare decisions to purchase a different type or brand were made principally on the basis of non-price reasons rather than price.¹²²

The evidence of record therefore does not support the conclusion that subject imports have significantly undersold the domestic products or that the prices of the subject imports have had a significant depressing or suppressing effect on the prices of the domestic CA cement products.

C. Impact of Imports on the Domestic Industry

We also have considered the impact of imports on the domestic industry producing CA cement and CAC clinker. In this case we find that the volume of imports of CAC clinker and the market share of the shipments of CA cement processed from the imported CAC clinker have not had an adverse impact on the domestic industry. The domestic supplier, Lehigh, and the foreign supplier, Lafarge, each dominate a different sector of the market. The non-refractory sector dominated by Lafarge has shown increased consumption for CA cement during the period of investigation. In contrast, the refractories sector dominated by Lehigh has shown declining demand for CA cement due to the use of less CA cement in end-products and the effects of the economic recession on major end-users, such as the steel industry.¹²³

While the condition of the domestic industry is poor, the evidence fails to establish a causal connection between its condition and the dumped imports. We therefore determine that the U.S. industry producing CA cement and CAC clinker is not materially injured by reason of the imports of CA cement and CAC clinker from France.

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

Section 771(7)(F) of the Act directs the Commission to consider whether a U.S. industry is threatened with material injury by reason of the

¹²⁰ CR at I-110 and 111, Appendix K, PR at II-26 and II-27, Appendix K.

¹²¹ Commissioner Crawford does not rely on anecdotal evidence of lost sales and revenues showing that competition from the subject imports caused domestic producers to lose particular sales or forced them to reduce their prices on other sales in reaching her determination.

¹²² Commissioner Crawford notes that the evidence in this investigation supports a relatively high elasticity of domestic supply. In this investigation, the elasticity of domestic supply is defined as a measure of the extent to which U.S. producers are likely to have responded to a change in demand for the domestic product as a result of the dumping. The elasticity is estimated to be between 4 and 8. This reflects the domestic industry's relatively low capacity utilization, *** inventory levels, a *** of export markets and the *** nature of production facilities. See EC-R-044 at 26 to 28.

¹²³ Commissioner Crawford notes that the relatively high elasticity of supply suggests that there are no significant price effects from dumped imports. A high elasticity makes it more likely that domestic industry would increase output rather than raise prices. However, the relatively low dumping margin, the low substitutability between domestic product and the dumped products, and the concentration of growth in the market sector in which Lafarge is the majority supplier suggest there are no significant effects from dumped imports on the volume of domestic product sold. Even if imports were sold at fair prices, it is likely that there would continue to be a substantial level of imports sold in the domestic market. The low substitutability makes it unlikely that purchasers would switch to domestic products in significant quantities as a result of any relative price changes from the elimination of dumping. As such, Commissioner Crawford does not find that the domestic industry's output and revenues would have increased materially if imports were fairly priced.

subject imports "on the basis of evidence that the threat of material injury is real and that actual injury is imminent."¹²⁴ The Commission is not to make such a determination "on the basis of mere conjecture or supposition."¹²⁵

We have considered all the statutory factors¹²⁶ that are relevant to these investigations.¹²⁷ In assessing whether the domestic industry is threatened with material injury by reason of LTFV imports, it is relevant to discuss some data separately for imports of CAC clinker and CA cement.¹²⁸

We do not find that there is any increase in production capacity or unused capacity in France likely to result in a significant increase in imports of CAC clinker to the United States. Capacity utilization levels of the French producer were *** throughout the period of investigation.¹²⁹

The record does not suggest that there will be any rapid increase in United States market penetration of CAC clinker from France, nor is there a likelihood that the penetration will increase to an injurious level. Although the volume of CAC clinker imports into the United States has been relatively large and irregular,¹³⁰ there has not been a rapid increase in market penetration, measured in terms of share of CA cement consumption, over the period of investigation. Respondent acknowledged that CAC clinker exports to the United States would *** in 1994, but asserted that they would *** in 1995.¹³¹ According to Lafarge, the *** in exports of CAC clinker to the United States projected for the future is, as has been the case in the past, largely due to the shipping schedule of the product.¹³² Lafarge Fondu's exports of CAC clinker to the U.S. market account for a *** share of its total shipments of CAC clinker, ranging from *** percent to *** percent during the period of investigation.¹³³ Home market

¹²⁴ 19 U.S.C. §§ 1673d(b) and 1677(7)(F)(ii).

¹²⁵ 19 U.S.C. § 1677(7)(F)(ii). An affirmative threat determination must be based upon "positive evidence tending to show an intention to increase the levels of importation." *Metalwerken Nederland B.V. v. U.S.*, 744 F.Supp. 281, 287 (Ct. Int'l Trade 1990), citing *American Spring Wire*, 8 CITT at 28, 590 F.Supp. at 1280. See also *Calabrian Corp. v. United States*, 794 F. Supp. 377, 387 and 388 (Ct. Int'l Trade 1992) (citing, H.R. Rep. No. 1156, 98th Cong., 2d Sess. 174 (1984), Congress acknowledged that "a determination of threat will require a careful assessment of identifiable current trends and competitive conditions in the market place.") *Id.* at 24.

¹²⁶ 19 U.S.C. § 1677(7)(F)(i), as amended by 1988 Act sections 1326(b), 1329.

In addition, the Commission must consider whether dumping findings or antidumping remedies in markets of foreign countries against the same class or kind of merchandise suggest a threat of material injury to the domestic industry. See 19 U.S.C. section 1677(7)(F)(iii), as amended by 1988 Act section 1329.

¹²⁷ Several of the statutory threat factors have no relevance to this investigation and need not be discussed. Because there are no subsidy allegations, factor I is not applicable. Moreover, factor IX regarding raw and processed agriculture products also is not applicable to this case.

¹²⁸ See discussion *supra*, Section III., Condition of the Domestic Industry.

¹²⁹ Table 18, CR at I-67, PR at II-16. Lafarge *** and its capacity utilization levels for CA cement are *** than for CAC clinker. Table 17, CR at I-65, PR at II-16. Lafarge indicated that this ***. CR at I-64, PR at II-16. Additional production of CA cement is restrained by the ***. Moreover, Lafarge's exports to the United States historically have been of CAC clinker rather than CA cement due to problems with ocean shipping of cement. There is no evidence to suggest that the *** is likely to result in exports of CA cement to the United States, contrary to the historical pattern. See S. Rep. No. 249, 96th Cong., 1st Sess. 88-89 (1979); *Citrosuco Paulista v. United States*, 704 F. Supp. 1075, 1095 (Ct. Int'l Trade 1988) (Commission's determination may not be based on mere conjecture or supposition.)

¹³⁰ Table 18, CR at I-67, PR at II-16.

¹³¹ Table 18, CR at I-67 and I-68, PR at II-16. Respondent's Posthearing Brief at 12.

¹³² CR at I-68, PR at II-16. As noted above, the irregularities in the volume of CAC clinker imports has been the result of shipping schedules. According to Lafarge, due to *** is planning to ***, which will enable the firm to *** in the future. CR at I-69, n.82, PR at II-16, n.82.

¹³³ Table 18, CR at I-67, PR at II-16.

shipments account for the *** share of Lafarge Fondu's shipments of CAC clinker, with a *** share of shipments exported to third countries.^{134 135} The market share held by U.S. shipments of CA cement produced from CAC clinker increased largely as a result of Lafarge's continued dominance in the non-refractories sector where apparent consumption increased by *** percent from 1990 to 1993.¹³⁶ As discussed above, the record does not indicate that Lehigh's decline in market share was a result of LTFV imports, but was a result of the decrease in consumption within the refractories sector of the market, where Lehigh is the dominant supplier. Moreover, there is no evidence to suggest an imminent change in these trends.

The record does not support a finding that the inventories in the United States will have an injurious effect on the U.S. industry. The import inventories have fluctuated over the period of investigation.¹³⁷ Lafarge CA has projected that it will *** inventory. However, since the inventory level in 1993 was ***.¹³⁸ Moreover, Lafarge CA's ability to increase shipments of CA cement is limited by its capacity to grind CA cement from imported CAC clinker. There is no indication in the record to suggest any likely increase in Lafarge CA's grinding capacity. Its grinding capacity is currently utilized at *** levels.¹³⁹

We do not find that imports will enter the United States at prices that will have a depressing or suppressing effect on domestic prices.¹⁴⁰ As discussed above, we found comparative prices to be of limited value in our determination due to product differentiation, transportation costs and the different stages of production represented by imports and market sales. Moreover, we found that firms made purchasing decisions most often on the basis of non-price factors. There is no indication that future imports would be any more likely to affect prices adversely in the near future than they have during the period of investigation.¹⁴¹

There are no "other demonstrable adverse trends" that indicate that imports will be the cause of actual injury, nor are there "actual and potential negative effects on existing development and production efforts of the domestic industry."¹⁴² We therefore find that the domestic industry producing CA cement and CAC clinker is not threatened with material injury by reason of the LTFV imports from France.

¹³⁴ Table 18, CR at I-67, PR at II-16. Home market shipments as a share of Lafarge Fondu's total shipments of CAC clinker accounted for ***. While third country shipments as a share of Lafarge Fondu's total shipments of CAC clinker *** from *** percent in 1990 to *** percent in 1993, home market shipments ***. Lafarge Fondu has processed this CAC clinker into CA cement and exported a *** portion of the CA cement to third country markets. Table 17, CR at I-65, PR at II-16. Lafarge Fondu appears to be shifting its third country shipments to ***.

¹³⁵ Chairman Newquist notes that significant home and third market consumption often suggests that there is a considerable amount of product which may be directed to the United States. For this investigation, however, Chairman Newquist does not find such diversion to be imminent.

¹³⁶ CR at I-74, Table D-1 and D-2, CR at D-3 and D-4; PR at II-18 and D-2. By comparison, Lafarge's total U.S. shipments of ordinary CA cement increased by *** percent from 1990 to 1993. *Id.*

¹³⁷ CR at I-68, PR at II-16. U.S. end-of-period inventories of ordinary CAC clinker by Lafarge CA were ***. *Id.*

¹³⁸ CR at I-68, PR at II-16.

¹³⁹ Table 7, CR at I-31, PR at I-10. Lafarge CA's capacity utilization rate for ordinary CA cement was *** percent in 1993. This level is significantly *** than that reported by Lafarge Fondu and *** than that reported by Lehigh for CA cement.

¹⁴⁰ CR at I-100 - I-109, PR at II-25 - II-26.

¹⁴¹ See 19 U.S.C. § 1677(7)(F)(i)(IV).

¹⁴² See 19 U.S.C. §§ 1677(7)(F)(i)(VII) and (X).

Conclusion

For the reasons discussed above, we find that the domestic industry producing ordinary CA cement and clinker is neither materially injured nor threatened with material injury by reason of LTFV imports from France.

PART II

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

Following a preliminary determination by the U.S. Department of Commerce (Commerce) that imports of certain calcium aluminate cement and cement clinker from France are being, or are likely to be, sold in the United States at less than fair value (LTFV) (58 FR 58683, Nov. 3, 1993),¹ the U.S. International Trade Commission, effective November 1, 1993, instituted investigation No. 731-TA-645 (Final) under section 735(b) of the Tariff Act of 1930 (the Act) (19 U.S.C. 1673d(b)) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise. Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the *Federal Register* on December 22, 1993 (58 FR. 67809).² The hearing was held in Washington, DC, on March 31, 1994.³

Commerce notified the Commission of its final LTFV determinations with respect to (1) ordinary CA cement and ordinary CAC clinker and (2) CA flux on March 23, 1994, and published its notice of final LTFV determinations in the *Federal Register* (59 FR 14136, March 25, 1994). Commerce determined that imports from France of (1) ordinary CA cement and ordinary CAC clinker and (2) CA flux are being, or are likely to be, sold in the United States at LTFV.⁴ The applicable

¹ As defined by Commerce in its "scope of investigation" statement, the products covered by this investigation consist of calcium aluminate cement, cement clinker, and flux, other than white, high purity calcium aluminate cement, cement clinker, and flux. The covered products contain by weight more than 32 percent but less than 65 percent alumina and more than 1 percent each of iron and silica (and are referred to in this report as "ordinary" grade). In its preliminary investigation, Commerce found that the products constitute two separate classes or kinds of merchandise: (1) calcium aluminate cement (ordinary CA cement) and calcium aluminate cement clinker (ordinary CAC clinker) and (2) calcium aluminate flux (CA flux).

Ordinary CA cement is provided for in subheading 2523.30.00 of the Harmonized Tariff Schedule of the United States (HTS). Ordinary CAC clinker and CA flux are provided for in subheading 2523.10.00 of the HTS.

² Copies of cited *Federal Register* notices are presented in app. A.

³ The list of participants in the Commission's hearing is presented in app. B.

⁴ In its final determinations (59 FR. 14136, Mar. 25, 1994), Commerce clarified its definitions of CA cement/cement clinker and CA flux. Commerce stated that: "CA cement/cement clinker and CA flux have significantly different physical characteristics and end uses. CA cement is a specialty hydraulic nonportland cement used for construction purposes. CA cement clinker is the primary material used as a binding agent in the production of CA cement. CA flux is used primarily as a desulfurizer and/or cleaning agent in the steel-manufacturing process. CA clinker produced for sale

statute directs that the Commission make its final injury determination before 45 days after an affirmative final determination by Commerce on ordinary CA cement and ordinary CAC clinker.⁵

Background

This investigation results from a petition filed by Lehigh Portland Cement Co. (Lehigh) on March 31, 1993, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of certain calcium aluminate cement products (including CA flux) from France. In response to that petition the Commission instituted investigation No. 731-TA-645 (Preliminary) under section 733 of the Act (19 U.S.C. 1673b(a)) and, on May 17, 1993, determined that there was a reasonable indication of such material injury by reason of allegedly LTFV imports.

Previous Commission Investigations Concerning Cement

Although there have been earlier Commission investigations concerning cement dating back to 1960, none involved CA cement. All but one of the earlier investigations covered portland cement, other than white, nonstaining portland cement; several investigations involved cement clinker as well. Of the 14 completed investigations, all but 1 (in 1986) were determined on the basis of a regional, rather than a national, industry. The present investigation concerns a national industry.

⁴Continued

as flux cannot be used to produce CA cement, and CA clinker used to produce CA cement cannot be used as a flux in the production of steel. CA flux has a chemical composition distinct from CA cement clinker. CA cement clinker contains the hydraulic mineral mono-calcium aluminate, which gives it a molar ratio of lime to alumina of approximately 1:1. In contrast, CA clinker sold as a flux does not contain mono-calcium aluminate; it contains the complex mineral $C_{12}A_7$ ($12CaO \cdot 7Al_2O_3$), which gives it a molar ratio of lime to alumina of approximately 2:1. This higher lime to alumina ratio gives the CA clinker sold as a flux a lower melting point than CA cement, and also results in extra lime which can bond with sulfur and other impurities in molten steel. Although CA clinker sold as flux has some hydraulic properties, it hydrates too quickly to be used for those properties."

⁵ Because Commerce made a negative preliminary determination with respect to CA flux (58 FR. 58683, Nov. 3, 1993), the Commission is directed by statute to make its final determination on CA flux before 75 days after the date of Commerce's final affirmative determination. Accordingly, the Commission will make its determination with respect to CA flux by June 6, 1994. This staff report includes only that information on CA flux which is relevant to the Commission's like product analysis with respect to ordinary CAC clinker.

The Products

Description and Uses

The materials covered within the scope of this investigation are ordinary CA cement and ordinary CAC clinker.⁶ White, high-purity CA cement and clinker are specifically excluded from the scope of investigation, but are discussed so that the Commission may consider whether to include them in the like product. Where necessary, ordinary CA cement (and clinker) and white CA cement (and clinker), and CA flux are referred to in the aggregate in this report as "CA cement products."

Ordinary CA Cement

Ordinary CA cement is a specialty hydraulic, nonportland cement that, unlike portland cement,⁷ has a high alumina content (see table 1 for a comparison of the chemical composition and melting points of different CA cements and portland cement). Ordinary CA cement has a compressive strength that, after the first 24 hours, exceeds the strength of gray portland cement after 28 days. The high alumina content of CA cement (both ordinary and white) renders it resistant to extreme temperatures and to chemical corrosion. Ordinary CA cement has an effective binding strength at extreme temperatures of 2,500 degrees Fahrenheit (F) to 2,900 degrees F (3,000 degrees F under optimal lab conditions).⁸ It resists corrosion from salt or sulfate waters or from weak solutions of mineral acids. The working time⁹ for ordinary CA cement is longer than that for white high-purity CA cement, typically setting in 60-90 minutes.¹⁰ Ordinary CA cement is tan, gray, or black in color.

Table 1
Comparison of cements: Ranges of chemical composition and melting points

* * * * *

⁶ As stated earlier, CA flux is also subject to investigation, but will be specifically addressed in a subsequent report.

⁷ The U.S. Bureau of Mines estimates that portland cement alone accounts for about 95 percent of U.S. cement production; there is no public information on what portion of the remainder is accounted for by ordinary CA cement.

⁸ ***.

⁹ Working time measures the time in which a cement can be manipulated after its mixture with aggregates and water; it is a determinant for evaluating a cement's suitability for different kinds of applications.

¹⁰ Petitioner's postconference brief, p. 18. According to ***. Petitioner's prehearing brief, exhibit 1 (citing statement by ***).

Ordinary CA cement is primarily used as a binding agent in other mixtures. When blended with different kinds of aggregates and with water, ordinary CA cement imparts unique chemical and physical properties to concrete mixes used in specialized refractory¹¹ and construction applications. Producers of refractory products purchase ordinary CA cement for use in producing castables and gunning mixes, which are then sold to manufacturing facilities for use in high-heat applications. Castables are usually dry mixes that are designed (after the addition of water) to be molded into special shapes at the installation site. Gunning mixes (which are generally used for repairs) are blown onto surfaces and will adhere to them.

In the construction industry, ordinary CA cement is used to make a variety of concrete mixes for specialty applications, including fire-resistant coatings for structural units, acid-resistant pipe linings, masonry for industrial stacks and chimneys, and fireplace hearth units. Typical corrosion-resistant applications include interspersed floor sections of ordinary CA cement-bonded concretes and coatings over portland concrete floors in facilities such as dairy plants, breweries, slaughterhouses, bottling plants, tanneries, and sugar-processing plants that use chemicals. In typical temperature-resistant applications, ordinary CA cement bonded concretes are used as floor sections or coatings to withstand the heat impact from dropped furnace-fired materials or molten spills.

Both domestically-produced and imported ordinary CA cement can be physically interchangeable, but the interchangeability depends upon the application. Chemistries and product performances differ, both between U.S. sourced and imported product and among different formulations offered by individual suppliers, as shown in table 1.¹²

White CA Cement

White CA cement has a higher alumina content and a lower calcium content than ordinary CA cement. It is produced from a high-purity lime (i.e., the source of

¹¹ Refractories are materials that have the ability to maintain their physical shape and chemical identity after being subjected to temperatures above 1,000 degrees F. Usually, refractory materials are also resistant to corrosion. Refractories are used in industry to line high-temperature furnaces and reactors that produce metals, generate power, and refine petrochemicals and oil. They are made in a vast variety of shapes and forms, which include refractory brick and specialty products. Ordinary CA cement is one of the materials used in specialty refractory linings.

¹² In its questionnaire response in the Commission's final investigation, *** states "in product formulation, regardless of the application, no producer would substitute a raw material such as cement without testing and making some small adjustments. The degree of adjustment depends on the application and the formulation." *** responded in the affirmative to an item in the questionnaire which asked whether or not "the U.S. produced and imported products generally can be used interchangeably."

calcium) and from calcined or hydrated alumina.^{13 14} In contrast to ordinary CA cement, both input materials for white CA cement are obtained by a chemical and/or heat-treatment process to reduce limestone and bauxite to a more purified state of lime and alumina. White CA cement is low in iron and silica and is always white in color. It is the only CA cement that can be used in the manufacture of certain precious alloy metals and in catalyst support systems requiring a stable surface area;¹⁵ use of ordinary CA cement, with higher iron and silica impurities, would cause contamination. Primarily due to the higher alumina content, white CA cement is also the only CA cement that can be used in steelmaking operations, where refractories are required to withstand temperatures ranging from 3,200 degrees F to 3,300 degrees F.¹⁶ Ordinary CA cement fails at these ranges. Reportedly, because the amount of alumina is increased and calcium is decreased, the hydraulic strength of white CA cement is weaker than that of ordinary CA cement.¹⁷ White CA cement particles are finer in size and more diffuse than particles of ordinary CA cement; this factor contributes to the shorter working time for white CA cement.¹⁸ In its response to the Commission's questionnaire in the final investigation, *** stated that "****."

Ordinary CAC Clinker and CA Flux

Ordinary CA clinker products serve two functions: (1) as an intermediate material for producing ordinary CA cement (ordinary CAC clinker) and (2) as a fluxing agent to remove undesirable sulfur from steel (CA flux). A similar raw material mixture, consisting of crude, uncalcined bauxite (the source of alumina, iron, and silica oxides) and limestone (the source of calcium oxide), is used to produce both types. The resulting product appears as tan, gray, or black pellets, with coloration determined by the amount of oxygen in the kiln during the burning stage and by the iron content of the bauxite. Although CA flux and ordinary CAC clinker are composed of the same raw materials, they differ in the ratio of calcium to alumina, and, as a result, have different chemical and physical

characteristics.¹⁹ The following tabulation compares the two products:²⁰

CA flux	CAC clinker
Calcium oxide content over 41% by weight.	Calcium oxide content less than 41% by weight.
Molar ratio of lime to alumina approximately 2:1, which results in a dominant complex mineral of $C_{12}A_7$ and no calcium aluminate.	Molar ratio of lime to alumina approximately 1:1, which results in some $C_{12}A_7$ and a dominant complex mineral of calcium aluminate.

Specifically, it is the existence of calcium aluminate, due to the 1:1 calcium to alumina ratio, that distinguishes ordinary CAC clinker and CA cement from CA flux and from portland cement. Because of the difference in its chemical composition, ordinary CA flux cannot be used to produce ordinary CA cement²¹ and the clinker used to produce ordinary CA cement cannot be used for flux.²²

Production Process

Ordinary CAC Clinker and CA Flux

Because the difference between clinker used for CA cement and that used for CA flux is the ratio of calcium (from limestone) to alumina (from bauxite), the first step in the production process is to determine which clinker will be produced so that the necessary ratio of raw materials may be determined. That decision made, there are two standardized processes used to blend the raw materials for both CA flux and ordinary CAC clinker—sintering.²³ currently used in

¹⁹ Johnny Love, manager of Technical Assistance, Lafarge CA, conference transcript, p. 69.

²⁰ Petitioner's and respondent's postconference briefs.

²¹ CA flux has a lower melting point than ordinary CAC clinker. Its hydraulic properties are so strong (or quick) that it cannot be easily "worked." ("Hydraulic" refers to the capacity to harden under water.) Johnny Love, conference transcript, p. 69.

²² When CA flux is mixed with molten steel, its higher calcium content allows sulfur impurities from the steel to unite chemically with the flux, forming a slag which separates to the top of the steel batch and can be removed. The calcium ingredient of CA flux also serves to lower the melt temperature of a steel batch, reducing the quantity of fuel required in the steel production process. R.K. Sinha, *Industrial Minerals*, second ed., (Rotterdam: A.A. Balkema, 1986), p. 241.

²³ The sintering process is similar to that used for making gray portland cement clinker, except the preheater and kiln are smaller and specially designed for ordinary CAC clinker. For example, daily kiln production capacity for ordinary CAC clinker is about *** short tons compared with 2,000-5,000 short tons for gray portland cement clinker. The size difference in production equipment reflects lower market demand for ordinary CA cement and more rigid chemistry control requirements.

¹³ In their responses to Commission questionnaires in the final investigation, *** reported that they produced ordinary CA cement/CAC clinker from bauxite, whereas *** stated that it produced white CA cement/CAC clinker from pure alumina.

¹⁴ White CAC clinker is the intermediate. White CAC clinker has no other known uses other than the production of white CA cement.

¹⁵ Petitioner's postconference brief, p. 9.

¹⁶ Petitioner's prehearing brief, p. 10.

¹⁷ Staff visit to Lehigh's manufacturing facility, Jan. 6, 1994.

¹⁸ Petitioner's prehearing brief, exhibit 1 (citing statement by ***).

the United States (figure 1),²⁴ and fusion,²⁵ currently used to produce the imported subject products. While the primary raw materials are the same for both processes, fusion takes raw materials to the melting point and sintering stops just short of melting. The differences between the two processes for making CA flux and ordinary CAC clinker are procedural; there are no resulting differences in chemical or physical characteristics between the end products for either process. In both processes, production of the clinker takes place on a continuous basis, with allowances for maintenance downtime.

Figure 1
Lehigh's production process

* * * * *

Ordinary CA Cement

All ordinary CAC clinker is finished into ordinary CA cement by dry grinding the clinker in a ball mill to the desired consistency, usually of powder fineness. Unlike gray portland cement, where gypsum is added during the grinding process, ordinary CAC clinker is typically ground without the use of additives, which change the chemical properties and physical characteristics of the product. The grinding process reportedly accounts for a small percentage of the overall production cost for ordinary CA cement.

²³—Continued

In the sintering process, raw materials are drycrushed and blended to the desired alumina content, ***. A centralized computer system provides continuous monitoring and recording of the actual production process against established norms. This allows control of product quality at each stage of the production process by pinpointing necessary material mix and equipment adjustments on a timely basis. Staff visit to Lehigh, Jan. 6, 1994.

²⁴ ***. Staff visit to Lehigh, Jan. 6, 1994.

²⁵ The fusion process is usually conducted in an open-hearth furnace with a vertical stack in which the mixture of raw materials is charged. Pulverized coal, used to heat the furnace, produces a blast of hot air and gases that pass through the charged material, carrying off water and carbon dioxide. Fusion occurs when the charged material drops from the vertical stack onto the hearth at temperatures of about 2,600 to 2,730 degrees F. The fused, molten liquid runs out of the furnace on a continuous basis into steel pans on a conveyor belt system, where it cools and solidifies. Fusion can also be conducted in electric arc furnaces and in specially designed rotary kilns fitted with a tap hole from which molten liquid is drawn intermittently. *Encyclopedia of Chemical Technology*, 3d ed., vol. 5 (New York: John Wiley & Sons, Inc., 1979), p. 187.

White CAC Clinker and White CA Cement

White, high-purity CA cements are generally produced using the sintering process; sintering must be employed for white CA cement, which has an alumina content of 80 percent.²⁶ Respondent has reported instances of production by fusion in an electric arc furnace in Japan and Brazil, which may employ a variation of the fusion process described above.²⁷ Because of the differences in the chemical and physical characteristics of white CA cement and ordinary CA cement, it is not possible to produce both products at the same time on production systems currently in operation. Further, it is not possible to produce both products on the same system without thoroughly purging the production system to avoid contaminating the white, high-purity material.²⁸ Even then, the feasibility of producing both ordinary and white CA cement materials at the same facility and/or on the same production system is contingent on quality control and plant efficiency. The size of the kilns currently used to produce ordinary and white CAC clinker in the United States differ: Lehigh's kiln capacity to produce ordinary CAC clinker is *** short tons annually; in contrast, the capacity of the kiln used by Lafarge CA to produce white CAC clinker is ***.²⁹

Like Product Issues

During its preliminary investigation the Commission examined several like product issues, notably (1) whether CA cement clinker manufactured for sale as flux (CA flux) constitutes a separate like product from CA cement clinker manufactured for grinding into CA cement (CAC clinker); (2) whether other non-clinker flux agents are like CA flux; (3) whether CAC clinker and CA cement constitute one like product; and (4) whether white CA cement and CAC clinker are like ordinary CA cement and CAC clinker so as to be included in any CA cement like product.³⁰ The Commission found that CA cement clinker manufactured for use as flux is a like product separate from CAC clinker.³¹ It further determined not to include non-clinker flux agents in the CA flux like product.³² CAC clinker and CA cement were found to

²⁶ Petitioner's prehearing brief, exhibit 2, p. 4 (***).

²⁷ Respondent's postconference brief, exhibit 2, attachment 1.

²⁸ Petitioner's prehearing brief, exhibit 1 (citing statement by ***).

²⁹ Lehigh states in its prehearing brief (p. 15) that "the smaller kiln size used in producing white CA clinker enhances the ability to control phase chemistry development, which is important in the production of high purity CA clinker."

³⁰ See USITC, *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC publication No. 2637, May 1993, p. 6.

³¹ *Ibid.*, p. 8.

³² *Ibid.*, p. 11.

constitute one like product.³³ Last, it concluded that white CA cement and white CAC clinker were not like ordinary CA cement and CAC clinker.³⁴

Data for firms' manufacturing and importing operations of ordinary CA cement and ordinary CAC clinker (the subject products) are presented in the body of this report. To permit the numerical aggregation of ordinary CAC clinker and CA flux (which is desirable when measuring such indicators of industry performance as capacity utilization), some data on CA flux are also presented in the main section of the report. Complete data on CA flux and on white CA cement and white CAC clinker are available in summary tables in appendix C.

U.S. Tariff Treatment

U.S. imports of ordinary CA cement from countries entitled to the column 1-general (most-favored-nation) duty rate, including France, enter free of duty under subheading 2523.30.00 of the HTS.³⁵ U.S. imports of ordinary CAC clinker from countries entitled to the column 1-general duty rate enter free of duty under subheading 2523.10.00.³⁶

The Nature and Extent of Sales at LTFV

The following tabulation provides the LTFV margins as determined by Commerce for CA cement and CAC clinker from France (in percent):

Firm	Weighted-average margin
Lafarge Fondu	18.91
All others	18.91

In order to obtain the estimated dumping margins of product imported from France, Commerce compared the U.S. price (USP) of CA cement and CAC clinker³⁷ with its foreign market value (FMV)

³³ Ibid., pp. 11-12.

³⁴ The Commission noted that this finding was based on the information before it in the preliminary record and that it would seek more information on the issue of interchangeability between the various CA cements in the final investigation. Ibid., p. 15.

³⁵ This subheading includes the subject ordinary CA cement as well as other nonsubject "aluminous cement."

³⁶ This subheading covers all cement clinkers including the subject ordinary CAC clinker, CA flux, white CAC clinker, and gray and white portland cement clinker.

³⁷ Commerce found that CA cement and CAC clinker comprise two "such or similar" categories of merchandise: CA cement and CAC clinker. Had it not made that finding, Commerce would have used a difference-in-merchandise adjustment to make fair value comparisons between home market sales of CA cement and U.S. sales of clinker.

during the period of investigation (POI), October 1, 1992 through March 31, 1993.

Calculation of USP.—Since all of Lafarge's U.S. sales to the first unrelated purchaser occurred after importation in to the United States, Commerce based USP on exporter's sales prices (ESP) of cement. USP was calculated from packed or bulk, ex-U.S. warehouse or delivered prices to unrelated U.S. customers (with appropriate deductions for transportation costs and selling expenses). Commerce also adjusted inventory carrying costs to reflect the period between production of the clinker in France and shipment of the "finished" cement to the U.S. customer and deducted all value added in the United States by the grinding of the clinker, including the profit attributable to that value.

Calculation of FMV.—Because Lafarge Fondu only exported clinker (and not cement) to the United States and because there were no home market sales of clinker or sales to unrelated customers in third countries during the POI, Commerce based FMV on the constructed value (CV) of clinker. It calculated CV as the sum of Lafarge's cost of materials, fabrication, general expenses, U.S. packing costs, and profit.

In response to a request from Commission staff, Commerce provided the following information (in a letter dated April 1, 1994) for its antidumping duty investigation on ordinary CA cement/clinker:

1. The quantity and value of total U.S. sales of the merchandise from France during the POI: *** short tons, \$***;¹
2. The quantity and value of sales examined: *** short tons, \$*** (gross), \$*** (net);²
3. Of the sales examined, the quantity and value found to be at LTFV: *** short tons, and \$***;² and
4. The range of affirmative margins found: *** to ***.

¹ These figures include the quantity and value of certain unreported U.S. cement sales which Commerce included in its final analysis using best information available (BIA). The verified quantity and value relevant to these unreported sales are *** short tons and \$***.

² These figures exclude the BIA quantity and value of unreported cement sales factored into its final margin calculations.

The U.S. Market³⁸

Apparent U.S. Consumption of Ordinary CA Cement and Ordinary CAC Clinker

Table 2 presents apparent U.S. consumption of ordinary CA cement and ordinary CAC clinker.³⁹

Table 2
Ordinary CA cement and ordinary CAC clinker: U.S. shipments of domestic product, U.S. shipments of imports, by sources, and apparent U.S. consumption, by products, 1990-93

* * * * *

As stated earlier, data on CA flux and white CA cement products are presented in appendix C. The data in table 2 show that the quantity of apparent U.S. consumption of ordinary CA cement declined irregularly by *** percent between 1990 and 1993. There was a comparable decline of *** percent in the

³⁸ The data for the following section on the U.S. market (and for the other sections of this report) are based primarily on the responses of industry participants to Commission questionnaires.

Producers' questionnaires were sent to (and completed by) the two U.S. producers of ordinary CA cement and U.S. producers of white CA cement. Two other firms, which produced *** amounts of ordinary CAC clinker and/or flux, provided shipment data on their producing operations.

A total of 27 importers' questionnaires were sent to producing firms and to those firms that apparently had more than insignificant imports into the United States from all sources under the HTS classifications that include ordinary and white CA cement products (including CA flux). All firms, except three which imported nonsubject clinker products, responded to the Commission's questionnaires. Importing firms are identified in the section of this report on U.S. importers. The remaining firms indicated that they did not import CA cement products from any country during the period of investigation.

Summary data on the U.S. market are presented in tabular form in app. C.

³⁹ The March 31, 1993 petition and June 29, 1993 amendment filed by Lehigh include CA flux which contains by weight more than 32 percent but less than 65 percent alumina and more than 1 percent each of iron and silica (i.e., which meets the standard for "ordinary" product). Petitioner believed itself to be the only producer of CA flux and stated in its June 29, 1993 amendment (p. 2) that "calcium aluminate clinker produced for sale as calcium aluminate flux ... falls within these specifications for ordinary CA cement and clinker." There is, however, a second U.S. producer of CA flux which manufactured *** amounts of the product which ***. "CA flux" is not defined to be limited to ordinary grade specifications and data for all CA flux products are included in data compilations in this report.

quantity of CAC clinker consumed internally in the production of CA cement. The U.S. market is comprised of two key sectors which reflect the two major end uses of the product; namely, refractories and specialty building products (or non-refractories). Data on consumption within each of these markets are presented in table D-1 and table D-2. Market dynamics are discussed in the sections of this report entitled "Shares for the Refractory and Non-Refractory Market Segments" and "Pricing and Marketing Considerations."

U.S. Producers of CA Cement Products

Firms that produce CA cement products are identified in table 3; the quantity of their U.S. production is provided in table 4.

Table 3
CA cement products: U.S. producers, plant locations, positions on the petition, and products imported

* * * * *

Table 4
CA cement products: U.S. producers' production and share of U.S. production, by firms, 1993

* * * * *

Lehigh, the petitioner in this investigation, is the only current domestic producer of the subject clinker. Two firms—Lehigh and Lafarge CA—grind ordinary CAC clinker into ordinary CA cement. All of the clinker that is ground by Lehigh is produced at its plant in Gary, IN.⁴⁰ The clinker ground by Lafarge CA in its Chesapeake, VA, facility⁴¹ is manufactured by and imported from its parent company in France.

In the preliminary investigation, petitioner argued that Lafarge CA is not a member of the domestic industry because it performs only an allegedly minor finishing operation (grinding) in the United States and is a related party within the meaning of the law.⁴² Lafarge CA states that it is a "major producer in the United States with a substantial payroll and a total capital investment that [it] believes is many times that of the petitioner in this case."⁴³ In its preliminary determination (citing, specifically, the substantial

⁴⁰ Lehigh also produces gray portland cement and cement clinker, but in production facilities at other locations. No other products are made at the Gary facility.

⁴¹ ***. Response by Lafarge CA to importers' questionnaire. Lehigh does not manufacture a product that directly competes with Fondag.

⁴² Petition, p. 6.

⁴³ Conference transcript, p. 54.

capital investment and the value added in the United States), the Commission found that Lafarge CA is a domestic producer of the subject CA cement and cement clinker like product. However, the Commission also found that Lafarge CA was a related party and that appropriate circumstances existed to exclude it from the domestic industry producing CA cement and cement clinker.⁴⁴

Lafarge CA also produces nonsubject white CA cement and white CAC clinker at its facility in Chesapeake, VA. The firm argued in the preliminary investigation that it could produce ordinary CAC clinker using the kiln that is used to manufacture white CAC clinker. However, ***⁴⁵ it has never actually done so⁴⁶ and the grinding equipment used to produce ordinary CA cement is separate from that used for white CA cement.⁴⁷ The production and related workers (PRWs) at Lafarge CA manufacture both products. Lehigh states that it could only produce white CA cement in a facility that is separate from its current ordinary CA cement manufacturing operations. It claims that a new facility would be necessary to avoid contaminating the raw materials used to make the white CA cement⁴⁸ and would require a capital investment of ***.⁴⁹

Lehigh produces CA flux in its Gary, IN facility; Lafarge CA imports CA flux manufactured by its parent, Lafarge Fondu, in France.⁵⁰ ***.⁵¹

In addition to Lehigh and Lafarge CA, a third firm (Refractory Materials, Inc. or RMI) produced CA cement products for the U.S. market during the 1990-93 period. ***.⁵² ***.⁵³ ***.⁵⁴ ***.⁵⁵ ***.⁵⁶

⁴⁴ USITC, *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC publication No. 2637, May 1993, pp. 18-21.

⁴⁵ Response by Lafarge CA to producers' questionnaire in the final investigation.

⁴⁶ Conference transcript, p. 111. Lafarge CA contends that *** (postconference brief, exhibit 2, p. 2). Lafarge Fondu indicates that it has *** (postconference brief, exhibit 2, pp. 3-5).

⁴⁷ Conference transcript, p. 100, and Lafarge CA's response to questionnaire in the final investigation.

⁴⁸ Any contamination by extraneous substances increases the level of impurities in the finished product. White CA cement is purchased for its higher alumina content and because it contains a lesser amount of such impurities as iron. See table 1 for data on the chemical composition of ordinary CA cement and white CA cement.

⁴⁹ Response by *** to producers' questionnaire in the final investigation.

⁵⁰ ***. (Response by Lafarge CA to producers' questionnaire.) *** value is added by these operations.

⁵¹ Response by Lehigh to producers' questionnaire and by Lafarge Fondu to foreign producer questionnaire.

Lehigh states ***. Staff visit to Lehigh, Jan. 6, 1994.

⁵² Total capital expenditures (including ***, but excluding ***) were \$***.

⁵³ ***.

⁵⁴ ***.

⁵⁵ ***.

⁵⁶ Response by *** to producers' questionnaire and telephone conversation with ***.

U.S. Importers of CA Cement Products

Firms that import CA cement products are listed in table 5.

Table 5
CA cement products: U.S. Imports, by firms, 1993

* * * * *

As shown, Lafarge CA is the only importer of the subject product from France.⁵⁷ All of its subject imports are in the form of clinker; no ordinary CA cement is imported. Lafarge CA also imports CA flux and white CA cement in finished form. Small amounts of ordinary CAC clinker were imported from *** (by ***)⁵⁸ and some ordinary CA cement was also entered from *** through ***.

Channels of Distribution of CA Cement Products

CA cement products are distributed by industry sources throughout the United States. Both Lehigh and Lafarge CA sell ordinary CA cement into a national market from their respective plants and from affiliated warehouses or terminals.⁵⁹

Table 6 presents data on the channels of distribution of U.S. shipments of CA cement products. *** ordinary CA cement (and white CA cement) produced in the United States is sold directly to end users. In contrast, most CA flux is sold through distributors.⁶⁰ Lehigh grinds all of its non-flux clinker into cement; it does not sell it to other firms for grinding. Similarly, *** the ordinary CAC clinker imported from France is ground into cement by Lafarge CA.

⁵⁷ The petitioner confirms that Lafarge CA is the only importer of ordinary CA cement and/or ordinary CAC clinker from France and that France is virtually the only foreign source of such cement. Petition, pp. 1 and 4.

In response to the Commission's questionnaire, a second firm, ***, reported importing *** short tons of "ordinary CA cement" from France in 1991. The cement was produced in France by a company named ***. However, the firm provided further information that its product is a ready-to-use paste, containing aggregate, which does not meet the definition of ordinary CA cement. Staff conversation with ***.

⁵⁸ ***.

⁵⁹ During the Commission's preliminary investigation, it gathered data on the form in which the products were packaged. From 1990 to March 1993, approximately *** of ordinary CA cement was sold in packaged form; the remainder was sold in bulk form from trucks or from rail transport. Ordinary CA cement is typically packaged in bags, each filled bag weighing 94 pounds. ***.

⁶⁰ Lehigh sells *** of its CA flux to an unrelated distributor, National Recovery Systems (NRS), in East Chicago, IN. ***.

Table 6
CA cement products: Channels of distribution
of U.S. shipments, by products and by firms,
1992

* * * * *

Consideration of the Question of Material Injury to an Industry in the United States

Section 771(7)(B) of the Act (19 U.S.C. § 1677(7)(B)) provides that in making its determination in these investigations the Commission—

Shall consider (I) the volume of imports of the merchandise which is the subject of the investigation, (II) the effect of imports of that merchandise on prices in the United States for like products, and (III) the impact of imports of such merchandise on domestic producers of like products, but only in the context of production operations within the United States; and

May consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.

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

In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.

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

In examining the impact required to be considered under subparagraph (B)(iii), the Commission shall evaluate (within the

context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to, (I) actual and potential decline in output, sales, market share, profits, productivity, return on investments, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.

Since CAC clinker is an intermediate material used in the production of finished CA cement, data on consumption, production, capacity, and capacity utilization must be evaluated separately for CAC clinker and finished CA cement to avoid double counting or other aberrations. As noted earlier, data for clinker product sold as CA flux are presented separately. Data for Lehigh and Lafarge CA are presented separately in tables to permit an assessment of a U.S. industry that is defined to exclude the operations of Lafarge CA as a related party.

U.S. Producers' Capacity, Capacity Utilization, Production, and Shipments of Ordinary CA Cement Products

Tables 7 and 8 present data on the capacity to produce⁶¹ and actual production of subject products (plus CA flux). Detailed data on shipments are also provided.

Table 7
Ordinary CA cement: U.S. capacity,
production, capacity utilization, and
shipments of U.S. producers, by firms,
1990-93

* * * * *

⁶¹ Practical capacity was defined as the greatest level of output a plant can achieve within the framework of a realistic work pattern. Producers were asked to consider, among other factors, a normal product mix and an expansion of operations that could be reasonably attained in their industry and locality in setting capacity in terms of the number of shifts and hours of plant operations.

Table 8
Ordinary CAC clinker and CA flux: U.S.
capacity, production, capacity utilization, and
shipments of U.S. producers, by products and
by firms, 1990-93

* * * * *

Capacity and Capacity Utilization

Lehigh's capacity to produce subject products (plus CA flux) remained constant during the last four years. The firm has *** capacity in place to grind cement (*** short tons, as reported in table 7) than it does to produce the clinker input (*** short tons, as reported in table 8). (Capacity utilization at both production stages, however, is low and reflects the decrease in production by the firm. Lehigh's capacity utilization for grinding ordinary CA cement declined from *** percent in 1990 to *** percent in 1993 (table 7); ordinary CAC clinker capacity utilization declined from *** percent in 1990 to *** percent in 1993 (table 8).^{62 63}

In its response to the Commission's producers' questionnaire, Lafarge CA did not provide data identifying any capacity to produce ordinary CAC clinker. (As stated earlier, all of the ordinary CA cement produced by Lafarge CA is ground from imported clinker.) However, the firm currently produces white CAC clinker using a kiln in which it argues the ordinary grade could be produced. The kiln has a capacity of *** short tons. *** of its capacity is currently devoted to the production of the white, high-purity product. Utilization of Lafarge CA's capacity to grind ordinary CAC clinker was somewhat *** than that reported by Lehigh, averaging about *** percent during 1990-93 (table 7).

Production and Shipments of Ordinary CA Cement

As shown in table 7, Lehigh's production of ordinary CA cement decreased *** from 1990 to 1993, declining by *** short tons or by *** percent. The quantity of domestic shipments of ordinary CA cement by Lehigh decreased *** by *** percent from 1990 to 1993, although the trend changed for 1993 with a ***

⁶² ***.

⁶³ Lehigh produces CA flux using the same systems and kiln in which it manufactures the clinker that is ground into cement. If the production time allocated to CA flux is factored in, capacity utilization at Lehigh is still low, declining from *** percent in 1990 to *** percent in 1993 (table 8). As shown in table 8, production of CA flux declined *** in 1993, as a result of decreased shipments to ***. Domestic shipments to *** decreased *** from 1990 to 1991, decreased by *** percent from 1991 to 1992, then *** by *** percent from 1992 to 1993 (table 8). *** reported to the Commission that its purchases from Lehigh have *** due to ***.

percent annual increase. Export shipments decreased *** by *** percent during the same period.⁶⁴ In contrast, Lafarge CA shipped more cement than it ground from imported clinker to U.S. customers in 1993 than it did in 1990. However, Lafarge CA reported a net decrease in such shipments from 1992 to 1993 and reported an overall decrease in exports during the last four years. The unit value of domestic shipments by *** *** from 1990 to 1993.

Lehigh produces two brands of ordinary CA cement (Lumnite and Refcon) and Lafarge CA produces four (Secar 41, Secar 51, Fondu, and Fondu XR). Lafarge CA also produces Fondag, a premixed concrete which is a blend consisting of ***. Shipments of ordinary CA cement, by brand, are presented in table D-3 in appendix D of this report. Petitioner reports that Lumnite (with an average unit value of \$*** per short ton in 1993) competes most directly for sale with Fondu (with a 1993 average unit value of \$***), Fondu XR (with a 1993 average unit value of \$***), and Secar 41 (with a 1993 average unit value of \$***).^{65 66} Refcon (with an average unit value of \$*** per short ton in 1993) competes most directly with Secar 51 (with a 1993 average unit value of \$***).⁶⁷ Fondag does not compete directly with any CA cement products offered by sale by Lehigh.⁶⁸

As shown in table D-3, the overall decline in sales by Lehigh is primarily due to ***. ***.

Production and Shipments of Ordinary CAC Clinker

Trends for the production and use of ordinary CAC clinker by Lehigh mirrored those for the finished product. (Lehigh does not sell CAC clinker to other firms, but uses all of the product in its internal production of ordinary CA cement.) Production declined by *** percent during the 1990-93 period; U.S. shipments declined by *** percent during the period. ***.^{69 *** 70}

⁶⁴ The combination of a decrease in 1993 production and a (***) increase in total shipments is paired with a decline in 1993 yearend inventories. Data on inventories are presented in the section of this report entitled "U.S. Producers' Inventories of Ordinary CA Cement Products."

⁶⁵ However, petitioner further comments that "the two closest product matches in terms of chemical composition, physical characteristics, and end use are (1) Lafarge's Secar 41 vs. Lehigh's Lumnite and (2) Lafarge's Secar 51 vs. Lehigh's Refcon." Hearing transcript, p. 54, and petitioner's posthearing brief, p. 5.

⁶⁶ In its questionnaire response, Lafarge CA discusses product competition separately by market. ***.

⁶⁷ Respondent agrees that the two generally compete, but adds that Secar 51 (BTF) has an advantage where its shorter setting time and earlier compressive strength is important.

⁶⁸ However, petitioner states that ***.

⁶⁹ Telephone conversation with counsel for Lehigh, Feb. 16, 1994.

⁷⁰ Petitioner argues that "the most telling evidence of underselling 'at the level of actual competition' is a direct comparison of Lehigh's production cost for ordinary CA clinker in the United States and Lafarge CA's acquisition

U.S. Producers' Inventories of Ordinary CA Cement Products

U.S. producers' inventories of ordinary CA cement products are presented in table 9.

Table 9
Ordinary CA cement, ordinary CAC clinker, and CA flux: End-of-period inventories of U.S. producers, by products and by firms, 1990-93

* * * * *

The quantity of end-of-period inventories of ordinary CA cement held by Lehigh was somewhat lower at yearend 1993 compared to the quantity held during previous years.⁷¹ However, the firm maintained approximately the same amount of inventories if examined as a share of total production. Lehigh's inventories ***.

U.S. Producers' Employment for Ordinary CA Cement Products

The number of production and related workers (PRWs) and hours worked by such workers at Lehigh producing ordinary CA cement and CAC clinker decreased by *** percent and *** percent, respectively, from 1990 to 1993 (table 10). ***.⁷²

⁷⁰—Continued
cost of dumped ordinary CA clinker from France." Prehearing brief, p. 47. However, Lafarge Fondu uses a fusion, rather than a sintering, process to manufacture clinker in France. There the input raw materials are melted and do not go through a pelletizing phase. As a result, ***.

There is no precise data on the record as to how differing production methods affect the overall cost of production. Based upon its general knowledge of the two production processes, Lehigh "believes that fuel consumption is greater for the melt or fusion process than for the sintering process, because the melt process requires higher temperatures to melt the raw materials in the furnace. On the other hand, the raw materials and the preparation of the raw materials for introduction into the kiln in a sintering process are believed to be more expensive than the raw materials and the preparation of the raw materials for introduction into the furnace in a melt process. Petitioner's posthearing brief, exhibit A, p. 15.

⁷¹ ***.

⁷² ***.

Table 10

Average number of production and related workers producing ordinary CA cement, ordinary CAC clinker, and CA flux, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit labor costs, by products and by firms, 1990-93

* * * * *

Financial Experience of U.S. Producers

Two firms—Lehigh and Lafarge CA—accounting for virtually all U.S. production of ordinary CA cement and ordinary CAC clinker, supplied income-and-loss data on their operations on these products. Lehigh, the only domestic producer of CA flux, also provided income-and-loss data on its operations on CA flux. Lafarge and Alcoa, accounting for *** U.S. production of white CA cement and white CAC clinker, supplied income-and-loss data on their operations on these products. Lehigh produced ordinary CAC clinker for internal use in the production of ordinary CA cement, whereas Lafarge CA imported ordinary CAC clinker from France and ground it to make ordinary CA cement during the period for which data were collected in the investigation.

Data for Lehigh and Lafarge CA on their operations on ordinary CA cement and ordinary CAC clinker are presented separately as well as combined in this section of the report. Aggregate data on operations on (1) CA flux, (2) white CA cement and white CAC clinker, (3) combined data on ordinary CA cement and ordinary CAC clinker plus CA flux, and (4) combined data on ordinary CA cement and ordinary CAC clinker plus white CA cement and white CAC clinker are presented in appendix E.

Operations on Ordinary CA Cement and Ordinary CAC Clinker

Lehigh Portland Cement Co.

Income-and-loss data for Lehigh are shown in table 11. Lehigh had no trade sales of ordinary CAC clinker and no company transfers of either ordinary CA cement or ordinary CAC clinker. Ordinary CA cement net sales accounted for an average of *** percent of the total net sales of Lehigh's overall establishment operations during 1990-92, and *** percent in 1993. Lehigh earned ***.⁷³

⁷³ Telephone conversation with Joseph W. Dorn, counsel for Lehigh, Apr. 23, 1993.

Table 11
Income-and-loss experience of Lehigh on its operations producing ordinary CA cement and CAC clinker, calendar years 1990-93

* * * * *

Lehigh's net sales of ordinary CA cement declined by *** percent from \$*** in 1990 to \$*** in 1992, and then rose by *** percent in 1993. Total net sales in short tons showed a similar trend, dropping by *** percent from 1990 to 1992 and then increasing by *** percent in 1993.

Lehigh earned a gross profit of \$***, or *** percent of net sales, in 1991 compared with \$***, or *** percent of net sales, in 1990 as ***. The gross profit *** to \$***, or *** percent of net sales, in 1992 and to \$***, or *** percent of net sales, in 1993. Lehigh reported ***. ***.

Data of Lehigh's Buffington Station plant were verified by the Commission. There were *** in data reported. Key data were reconciled with the audited financial statements of Lehigh for all the periods covered under ***, net sales of the Buffington Station establishment operations accounted for *** percent of the company's total net sales.

* * * * *

Income-and-loss data on a per-short-ton basis are also shown in table 11. Lehigh sells only two brands, Lumnite and Refcon, in the domestic market. ***.

The average per-short-ton sales value of ordinary CA cement *** by about *** percent from 1990 to 1991, *** at about \$*** in 1992, and then *** to \$*** in 1993. The average cost of goods sold *** than the average net sales value, ***, by *** percent from 1990 to 1993. This resulted in a *** in gross profit per short ton of *** percent from 1990 to 1993. Average selling, general, and administrative expenses per short ton *** during 1990-93. During the same period, ***.

Lehigh utilizes the same equipment and machinery to manufacture both ordinary CAC clinker and CA flux. The grinding facilities are used only to produce ordinary CA cement from ordinary CAC clinker. Another product produced in the same establishment is ***. Hence, key total establishment income-and-loss data are presented in the following tabulation:

* * * * *

The value added, with and without SG&A expenses, to material cost is presented in table 12. ***.

Table 12
Ordinary CA cement and ordinary CAC clinker: Value added by Lehigh to material costs, with and without selling, general, and administrative expenses, calendar years 1990-93

* * * * *

The Commission requested variable and fixed costs per ton of ordinary CA cement and ordinary CAC clinker, and also production or purchasing costs of ordinary CAC clinker and the costs of grinding ordinary CAC clinker into ordinary CA cement. These data for Lehigh are presented in the following tabulation (per ton):

* * * * *

Lafarge CA

Income-and-loss data for Lafarge CA are shown in table 13.

Table 13
Income-and-loss experience of Lafarge CA on operations producing ordinary CA cement and CAC clinker, calendar years 1990-93

* * * * *

There were no trade sales or company transfers of ordinary CAC clinker during the periods examined. Net sales of ordinary CA cement accounted for an average of *** percent of total net sales of Lafarge CA's overall U.S. establishment operations during the period covered by the investigation. ***.

* * * * *

Income-and-loss data on a per-short-ton basis are also shown in table 13. Lafarge CA sells five major brands of ordinary CA cement—Fondu, Fondu XR, Secar 51, Secar 41, and Fondag—in the domestic market. ***.

* * * * *

The value added, with and without SG&A expenses, to material costs are presented in table 14. ***.

Table 14
Ordinary CA cement and ordinary CAC clinker: Value added by Lafarge CA to material costs, with and without selling, general, and administrative expenses, calendar years 1990-93

* * * * *

The presented major components of cost of goods sold for Lehigh and Lafarge CA are not comparable

because Lehigh is an integrated producer of ordinary CA cement whereas Lafarge CA is a grinder of ordinary CAC clinker. Hence, such data of both firms combined are not shown in the section below entitled "Lehigh and Lafarge CA combined."

The Commission requested variable and fixed costs per ton of ordinary CA cement and ordinary CAC clinker, and also production or purchasing costs of ordinary CAC clinker and costs of grinding ordinary CAC clinker into ordinary CA cement. Lafarge CA did not produce but imported ordinary CAC clinker. These data of Lafarge CA are presented in the following tabulation (per ton):

* * * * *

Lehigh and Lafarge CA combined

Income-and-loss data for both firms combined are shown in table 15.

Table 15
Income-and-loss experience of Lehigh and Lafarge CA combined on their operations producing ordinary CA cement, calendar years 1990-93

* * * * *

There were no trade sales or company transfer of ordinary CAC clinker during the period for which data were collected in the investigation. Net sales value of ordinary CA cement *** by *** percent from \$*** in 1990 to \$*** in 1991, but then *** by *** percent to \$*** in 1993. Total net sales in short tons *** by *** percent from 1990 to 1991 and then *** by *** percent in 1993.

* * * * *

Investment in Productive Facilities

Investment in property, plant, and equipment and return on investment, by firm, are shown in table 16. The operating return and net return on assets followed the same trend as did the ratio of operating and net income to net sales for each firm and combined during the reporting periods.

Table 16
Ordinary CA cement and ordinary CAC clinker: Value of assets and return on assets, by firms, calendar years 1990-93

* * * * *

Capital Expenditures

The capital expenditures for ordinary CA cement and ordinary CAC clinker incurred by each firm are shown in the following tabulation (in thousands of dollars):

* * * * *

Research and Development Expenses for Market Development and Technical Assistance

Lafarge CA reported expenses incurred in its "Technical Assistance Department" as the research and development expenses. The major categories of these expenses are presented in the following tabulation (in thousands of dollars):

* * * * *

The company stated that about *** percent of these expenses were incurred for assisting in the use of its products in the various end products of its customers and about *** percent have been to develop new downstream products.

In the original questionnaire response, Lehigh reported that its accounting records do not capture research and development expenditures, if any, for its establishment during 1990-92 and estimated that its "Lehigh Research Center," which was started in 1993, incurred \$*** in research and development expenses relating to ordinary CA cement in 1993. However, after the Commission's hearing, Lehigh provided marketing and technical support expenses incurred in its establishment and stated that *** were related to ordinary CA cement and ordinary CAC clinker. Such expenses are shown in the following tabulation (in thousands of dollars):

* * * * *

Lehigh stated that ***.

During the 1990-93 period, Lafarge CA allocated \$*** for market development and technical assistance and Lehigh reported \$*** in such expenses.

Capital and Investment

The Commission requested U.S. producers to describe any actual or potential negative effects of imports of ordinary CA cement, ordinary CAC clinker, and/or CA flux from France on their firm's growth, investment, ability to raise capital, or existing development and production efforts (including efforts to develop a derivative or more advanced version of these products). The producers' responses are presented in appendix F.

Consideration of the Question of Threat of Material Injury

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

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the merchandise, the Commission shall consider, among other relevant economic factors⁷⁴—

- (I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),
- (II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,
- (III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,
- (IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,
- (V) any substantial increase in inventories of the merchandise in the United States,
- (VI) the presence of underutilized capacity for producing the merchandise in the exporting country,
- (VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury,

⁷⁴ Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that “Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition.”

(VIII) the potential for product-shifting if production facilities owned or controlled by the foreign manufacturers, which can be used to produce products subject to investigation(s) under section 701 or 731 or to final orders under section 706 or 736, are also used to produce the merchandise under investigation,

- (IX) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both), and
- (X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.⁷⁵

Subsidies (item (I)) and agricultural products (item (IX)) are not issues in this investigation; information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV) above) is presented in the section entitled “Consideration of the Causal Relationship between Imports of the Subject Merchandise and the Alleged Material Injury;” and information on the effects of imports of the subject merchandise on U.S. producers’ existing development and production efforts (item (X)) is presented in the section entitled “Consideration of the Question of Material Injury to an Industry in the United States.” Available information on U.S. inventories of the subject products (item (V)); foreign producers’ operations, including the potential for “product-shifting” (items (II), (VI), and (VIII) above); any other threat indicators, if applicable (item (VII) above); and any dumping in third-country markets, follows.

⁷⁵ Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, “. . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry.”

Ability of Foreign Producers to Generate Exports of Subject Products and the Availability of Export Markets Other Than the United States

The Industry in France

According to petitioner and counsel for Lafarge CA and Lafarge Fondu, Lafarge Fondu is the only producer of ordinary CA cement and ordinary CAC clinker in France.⁷⁶ Lafarge Fondu manufactures the subject product at its Dunkerque and Fos plants. (***.) Counsel for Lafarge Fondu submitted data on its client's manufacturing operations in France.⁷⁷

Ordinary CA cement manufacturing operations

The data provided show that Lafarge Fondu's utilization of its capacity to produce ordinary CA cement *** (table 17). ***. (As shown by a comparison of tables 17 and 18, until ***, ***) ***.

Table 17
Ordinary CA cement: French capacity, production, inventories, capacity utilization, and shipments, 1990-93 and projected 1994-95

* * * * *

The majority of Lafarge Fondu's total shipments of ordinary CA cement were ***. ***. No finished ordinary CA cement is exported to the United States.

Ordinary CAC clinker manufacturing operations

Data on the manufacture of ordinary CAC clinker by Lafarge Fondu are presented in table 18. Because of the greater capital investment required for clinker operations, Lafarge Fondu's reported capacity to produce cement in clinker form may be a better measure of overall production capability than its capacity to grind the product. Capacity to produce

⁷⁶ This information was confirmed by the U.S. Embassy in Paris (U.S. Department of State, telegram No. 10166, Apr. 1993).

⁷⁷ Sales of CA cement products (including CA flux) represented *** percent of Lafarge Fondu's total sales in its most recent fiscal year.

clinker products (including CA flux) ***, ***.⁷⁸
***.⁷⁹

Table 18
Ordinary CAC clinker: French capacity, production, inventories, capacity utilization, and shipments, 1990-93 and projected 1994-95

* * * * *

*** of the clinker produced by Lafarge Fondu is used by that firm to produce finished cement; approximately *** of its production is exported in clinker form *** to Lafarge CA in the United States. Exports of ordinary CAC clinker to the United States are expected to *** by *** percent in 1994, then *** by *** percent in 1995. Lafarge CA reports that *** in the amounts of exports are largely due to ***, ***.⁸⁰ ⁸¹ ***. As shown in the following tabulation, exports of ordinary CAC clinker by Lafarge Fondu to the United States *** yearly production of the finished cement by Lafarge CA. The following data are presented in short tons:

* * * * *

As shown, annual production and domestic shipments of the finished product by Lafarge CA in the United States are *** than exports of the clinker input and end-of-period inventories of clinker, which show *** and whose trends are, thus, ***. Lafarge CA estimates that it will produce *** short tons of ordinary CA cement in 1994 and *** short tons in 1995.⁸²

⁷⁸ Petitioner states that ***. Petitioner's prehearing brief, exhibit 1. By way of comparison, capacity utilization of U.S. producers of portland cement and cement clinker in the State of California varied from a low of 85.9 percent to a high of 101.4 percent during the 1986-90 period. See USITC, *Gray Portland Cement and Cement Clinker from Japan*, USITC publication 2376, Apr. 1991, p. A-24.

⁷⁹ Respondent states that "Lafarge's capacity utilization ***." Posthearing brief, p. 13.

⁸⁰ ***. Petitioner argues that "in assessing import trends, the Commission should consider the January 1994 entry to have been entered in late 1993." Posthearing brief, p. 3. Respondent comments that clinker shipped in 1994 has no effect on the amount of 1993 shipments of finished cement. Posthearing brief, p. 8, n. 8.

⁸¹ Lafarge CA listed the quantity and value of each shipload of ordinary CA clinker arriving in the United States from 1990 to date in exhibit E of the its posthearing brief.

⁸² The 1994 and 1995 projections total to *** short tons, an amount of finished cement which is *** than the *** short tons of clinker that Lafarge CA projects it will ship into the United States during that period. (Normally Lafarge CA produces *** than one short ton of cement for every short ton of input clinker; the difference is due to ***) Although it is difficult to meaningfully discuss averages over a period of time as short as 2 years, Lafarge CA indicates that there will be an *** in imports of ordinary CAC clinker in 1994 and 1995 compared with 1993. Due to *** it is planning to ***, which may enable the firm to *** in the future. Staff conversations with counsel for Lafarge CA, Feb. 15, 1994, and Mar. 10, 1994.

The World Market

*** and *** report no new world markets for CA cement products; in contrast, *** indicates that there is growing demand. (Table 17 shows ***) There are apparently few new producers of the product. China has begun producing ordinary CA cement, as did a South African company in 1990.

CA cement from France was the subject of a 1988 Korean antidumping investigation. ***⁸³

U.S. Importers' Inventories of Ordinary CA Cement

As stated above, Lafarge CA was the only importer of CA cement clinker from France during the period of investigation. The following tabulation presents data on Lafarge CA's end-of-period inventories of product imported from France:

* * * * *

Consideration of the Causal Relationship Between Imports of the Subject Merchandise and the Alleged Material Injury

U.S. Imports of Ordinary CA Cement Products

Data on U.S. imports are shown in table 19.

Table 19
Ordinary CA cement and ordinary CAC clinker: U.S. imports, by products and by sources, 1990-93

* * * * *

Almost no ordinary CA cement product enters the United States in finished form.⁸⁴ Instead, the product is imported as clinker *** by Lafarge CA, which grinds it into the finished product. As shown in table 19, the quantity of Lafarge CA's imports of subject clinker have declined *** during the last 2 years.

⁸³ June 23, 1993 letter submitted with petitioner's questionnaire response and staff conversation with counsel for respondent, Mar. 4, 1994.

⁸⁴ The imported ordinary CA cement shown in table 19 was imported from *** by ***. A representative of *** stated that the firm is "not really in the market since it is too price competitive." Telephone conversation with ***.

decreasing by *** percent from 1991 to 1993.⁸⁵ However, this decline followed a ***-percent increase in 1991 and 1993 imports were at a level higher (by *** percent, in terms of quantity) than that reported for 1990. The imports shown from other sources were imported by *** from ***. (Information on these imports was presented in the section of this report entitled "U.S. Importers of CA Cement Products.")

U.S. Market Shares of Ordinary CA Cement Products

Shares for the Overall U.S. Market

Data on penetration by imports of the U.S. markets for ordinary CA cement products are shown in table 20. Trends for finished cement company-specific market shares are *** as the trends of imported ordinary CAC clinker entering the United States. Specifically, Lafarge's share of the U.S. market increased by *** percentage points from 1990 to 1992, then declined by *** percentage points in 1993. However, as with imports of the input clinker, Lafarge CA commands a larger share of the U.S. market for ordinary CA cement in 1993 (*** percent) than it did in 1990 (*** percent).

Table 20
Ordinary CA cement and ordinary CAC clinker: Market shares of U.S. shipments of domestic product and U.S. shipments of imports, by products and by sources, 1990-93

* * * * *

Shares for the Refractory and Non-Refractory Market Segments

The respondent contends that the Commission should examine market penetration separately by market segment. Specifically, Lafarge CA testified at the conference held during the Commission's preliminary investigation that the U.S. cement industry should be grouped into two broad categories: (1) the traditional refractories market and, (2) the other markets for specialty building products, which include new markets where ordinary CA cement is used as a chemical ingredient in combination with other materials to produce material for the construction industry.⁸⁶

⁸⁵ Because there are *** made by only one importer, it is difficult to evaluate trends for the imports of the subject product in clinker form for relatively short time periods. The problems with doing so were addressed earlier when discussing Lafarge Fondu's exports to the United States.

⁸⁶ Conference transcript, p. 83, and respondent's postconference brief, pp. 32-36. The Commission stated in its opinion for the preliminary investigation that it would seek consumption information which provides a breakdown by enduse. USITC, *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC publication No. 2637, May 1993, p. 22.

The following tabulation (which is drawn from data presented in tables D-1 and D-2 in appendix D) presents the quantity of apparent consumption in both the refractory and the non-refractory market segments (in short tons):⁸⁷

* * * * *

As shown, total consumption in the refractory market declined from 1990 to 1993 (by *** percent), while consumption increased (by *** percent) for non-refractory applications. Lafarge CA characterizes the refractory market as a relatively mature one which has been experiencing a decrease in demand due to the recession in the steel industry. Purchasers (in telephone conversation with staff) state that the refractories industry is now emerging from the recession. The market for non-refractory applications is tied into the emerging specialty building products industry. It is in this market that "new" applications for CA cement are found; this phenomenon is discussed in greater detail below. *** of Lehigh's shipments are into the refractory market (table D-1); *** of shipments by Lafarge CA are to the non-refractory segment (table D-2). However, while the two firms dominate different market segments, one of which (refractory applications) shows decreasing consumption while the other (non-refractory applications) shows increasing demand, the market penetration trends of Lehigh and Lafarge ***. That is, the trend of the share of the quantity of U.S. consumption accounted for by each market participant is ***. As shown in table D-1, Lafarge CA's share of the refractory market ***. Lehigh's shipments were necessarily a converse to those of Lafarge CA, ***. *** (table D-2).

The following tabulation shows the share of U.S. shipments of each brand that is sold into the two market segments (in percent of quantity):

* * * * *

Although the relative portions differ somewhat (especially for ***), all types of cement (with the exception of ***) have been sold into both market segments. (As shown in table D-3, *** comprise a relatively small share of total shipments.) Comments by Lehigh and Lafarge CA regarding competition among brands were included in the section of this report entitled "Production and Shipments of Ordinary CA Cement."

Shares for the "Existing" and "New" Applications

Data reported for "existing" and "new" applications

Table D-4 presents a further analysis of shipment data by market segment; in that table, data are

⁸⁷ ***.

presented separately for "existing" and "new" applications within the refractory and non-refractory markets.⁸⁸ As shown, suppliers of ordinary CA cement indicate that there are *** "new" applications for refractories. *** "new" applications are for building products (labeled here as "non-refractory" applications). Both Lehigh and Lafarge CA report such shipments, ***: *** percent of all U.S. shipments by Lehigh during the 4-year period examined were for "new" applications, as were *** percent of all U.S. shipments by Lafarge CA. Shipments were categorized as "new" applications according to a definition developed by Commission staff. (This definition is further discussed below.) The definition was constructed so that data reported, in theory, can be examined for trends.⁸⁹ However, many of the customers purchasing ordinary CA cement for "new" applications are doing so on a one-time basis (e.g., to repair floors) and do not continue to purchase the product annually.⁹⁰

The data presented in table D-4 in this final staff report differ from those included in the prehearing staff report and, consequently, from those discussed in briefs submitted by the parties and at the Commission's hearing. Lehigh first provided data as part of its March 25, 1994 posthearing brief for the portion of its shipments that meets the staff definition of "new" applications.⁹¹ Lafarge CA submitted several revisions to the data included in its original questionnaire response. As shown by a comparison of table D-4 in this report and the corresponding table in the prehearing report (table C-4), Lafarge CA's revisions

⁸⁸ During the Commission's preliminary investigation, respondent alleged that its increase in market share was largely due to new markets which it created for CA cement rather than to competition with petitioner in petitioner's markets. The Commission stated in its determination that there was insufficient evidence on the record in its preliminary investigation to support this allegation and that it would gather additional data on the question in any final investigation. USITC, *Certain Calcium Aluminate Cement and Cement Clinker from France*, USITC publication No. 2637, May 1993, p. 28. Respondent reported that its growth in sales was due to its technical innovations and other support provided to customers. Respondent's postconference brief, p. 36.

⁸⁹ Specifically, respondents were instructed to continue to list U.S. shipments made after the moment in which the new application was first reported in the "new" category.

⁹⁰ As shown in table D-4, the trends of "new" application shipments are irregular for both U.S. suppliers. Lehigh reported the largest amount (*** short tons) of shipments for "new" applications in ***. In contrast, the amount of product shipped by Lafarge CA in 1993 (*** short tons) represents a decrease of *** percent from that shipped in 1992.

⁹¹ Lehigh stated at the Commission's hearing that "While we take issue with the definition of new applications in the questionnaire, we have revised our response to comply with that definition." Transcript, p. 32.

somewhat *** the amount of shipments it labelled as "new," especially in 1993. Notwithstanding the above qualification that trends for "new" applications may not be meaningful, it should be pointed out that the revised data show a *** increase in such shipments by Lafarge CA over the 4-year period examined. As shown in table D-4, Lafarge CA's "new" applications shipments increased by *** short tons or by *** percent from 1990 to 1993, an increase of *** than the *** increase shown in table C-4 of the prehearing report. In addition to the increase in its shipments for "new" applications, Lafarge CA also reported shipping *** more short tons of ordinary CA cement for existing non-refractory applications in 1993 than in 1990 (a rise of *** percent). By way of comparison, Lafarge CA's U.S. shipments to all market segments increased by *** short tons (table 7). Lafarge CA's growth within the non-refractory or construction market segment was ***.

As shown in table D-4, the unit value of ordinary CA cement shipped by Lafarge CA for use in "new" applications is *** than the unit value of product shipped for use in "existing" applications (including those within the non-refractory market). ***.

Description of "new" applications

Lehigh and Lafarge CA reported that their customers used a variety of products before turning to ordinary CA cement. Most of the ordinary CA cement used in "new" applications replaced portland cement or refractory brick or was used in entirely new products. Customers switched to the subject product from refractory brick in order to, among other items, ***. For portland cement, floor repair was the application most frequently cited.⁹² (However, the single largest switch (from portland cement to Lafarge CA's ordinary CA cement) was by *** for its ***). New products in which ordinary CA cement was first used included ***. Other products replaced by ordinary CA cement included ***. As discussed earlier in this report, Lehigh does not offer a product that directly competes for sale with Fondag.

⁹² The use of ordinary CA cement to repair floors (often portland cement floors in industrial settings) is a major "new" application cited by Lafarge CA. Prior to using ordinary CA cement, floors could have been repaired with portland cement or refractory brick or, in some instances, with an epoxy. In some instances for which Lafarge CA provided data, the floor was being repaired for the first time or was a totally new floor. Lafarge CA presents the issue of whether or not to use portland or CA cement in the context of choice. A company representative stated that while there are significant differences in the price of, for example, portland cement and ordinary CA cement, a firm might choose to use the subject product because of its much faster setting time and the consequently shorter time needed to shutdown production. Staff conversation with ***, Lafarge CA, Apr. 6, 1994.

Methodology used to classify applications as "new"

A definition of "new" applications was developed by Commission staff as part of the questionnaires the Commission issued; such definition formed the parameter for whether shipments could be classified as "new."⁹³ In its questionnaire response, Lehigh states that "the distinction between 'existing' and 'new' applications, as 'new' applications are broadly defined in the questionnaire, has no relevance in assessing whether imports have adversely affected Lehigh's market share, output, and price." Lehigh also addressed this issue extensively in its briefs and at the Commission's hearing, arguing that only applications new to the marketplace would increase overall demand for ordinary CA cement.⁹⁴ Staff did not attempt to use a definition following Lehigh's concept. Rather it followed a line of reasoning with which, based upon their testimony during the Commission's hearing, respondents appear to concur.⁹⁵ It is difficult to discuss this product and this market using broad

⁹³ The instructions in the questionnaire were as follows: "New applications" are defined as product being used for the first time in a manner which is "new" to THAT customer. To be classified as "new," shipments to the customer for that application must have begun on or after January 1, 1990. (Continue to list U.S. shipments made after the time period in which the new application was first reported in the "new" category.) To categorize U.S. shipments as "new," it is NOT necessary that the customer receiving them be a "new" customer—in other words, the customer may be an existing one who has been previously purchasing product for use in traditional applications. Also, to categorize the U.S. shipment as "new," it is NOT necessary that no other firm ever purchased the product for that particular application (either BEFORE or after 1990). It is only necessary that the application be "new" since January 1, 1990 to THAT customer. The only exception to the above instructions are end-users who were not in business prior to 1990 who purchase product for otherwise traditional uses. Although they are technically using the product for an application which is "new" to them, their purchases should be reported in the "existing" application category. "Existing" applications are shipments for all uses other than "new" applications.

⁹⁴ Prehearing brief, p. 38. The staff prehearing report (pp. 75-76) stated that while many of Lehigh's points are, in theory, valid, they are not necessarily relevant to this industry. Staff conducted further discussions with Lehigh on this issue (Apr. 4, 1994) and does not herein revise the assessment presented in its prehearing report as a result of these discussions. Further, although the definition was not specifically structured to do so, staff assessment is that employing it would, in most instances, measure situations actually resulting in an overall increase in sales of ordinary CA cement in the U.S. market.

⁹⁵ Specifically, Mr. Finlayson, counsel for Lafarge, stated that "Lehigh's comments on this issue, it seems to me that they miss a basic point, and that is that CA cement is not easy to use. A customer needs to learn how to use it, needs to develop tailored formulas. So the fact that some other customer somewhere else in the country may have used CA cement for a similar purpose does not help that new customer figure out how to do so itself." Hearing transcript, p. 182.

concepts of demand. What appears to be clear from the record is that there are not new ordinary CA cement products which, once introduced, stimulate and expand overall demand.⁹⁶ Rather there are a series of new applications where each specific use is somewhat idiosyncratic, the product of sometimes intensive development effort on the part of the user and technical assistance on the part of the supplier. The staff definition was designed to measure a shift by a user to ordinary CA cement from a substitute non-ordinary CA cement product (or, alternatively, the development of a completely new end-use product).⁹⁷

Verification of data submitted on "new" applications

In order to verify the accuracy of their responses, all firms responding to Commission questionnaires were requested to provide the following information for each shipment recorded as a "new" application in 1992:

customer name, contact person, and telephone number; quantity of U.S. shipments to customer for the "new application" in 1992;

description of the new application; and product which was used before ordinary CA cement.

Table 21 presents information obtained from a selected number of customers alleged to have purchased ordinary CA cement for use in "new" applications by Lafarge CA.⁹⁸ As shown, staff determined in some instances that the application cited by Lafarge CA either did not fulfill the staff definition or, perhaps, the intent of that definition. However, such discrepancies do not appear to be because of any misreporting or misrepresentation by Lafarge CA. In some cases (e.g., ***), the application was new to the customer, but not new to the end user, or "new" only because it had never before been necessary to do the application (i.e., repair the floor as in the case of ***).⁹⁹ In other instances (e.g., ***, ***), the

⁹⁶ Fondag may be somewhat of an exception to this statement. *** of the sales of Fondag are claimed by respondent as for "new" applications.

⁹⁷ Staff notes, however, that the sporadic nature of some of the "new" applications (e.g., floor repairs) may make the concept of "shifts," like trends, somewhat problematic. A cement floor may last for decades before needing to be repaired or replaced.

⁹⁸ Staff made no attempt to verify data for Lehigh since the issue was one raised by Lafarge CA.

⁹⁹ Lehigh raised the point of not considering "previously-done-new- applications" referring to any previous use within the *entire* marketplace. Staff believed the point germane if the frame of reference was not to the marketplace, but rather to a *specific* end user (*** in the example of ***). However, what is more problematic are instances where the application is "new" primarily because a repair (for example) had never before needed to be done (see the example for ***).

application may have only been done once and staff was not confident that the firm was not simply forgetting they purchased and used it.¹⁰⁰ In other examples (e.g., ***, ***, ***), staff did not label the application as "new" because the application was apparently developed by that firm before 1990.¹⁰¹ A review of the footnotes in table 21 provides an indication of the complexity of this issue. In general, firms with which Commission staff spoke often cited Lafarge CA's technical support (e.g., ***, ***, ***, ***, ***). This statement should, however, be placed in the context that the review was of Lafarge CA's customers, not of firms that are presumably satisfied with and buy from Lehigh.¹⁰² More complete information on the extent to which suppliers provided technical support (and its importance relative to price) was derived from a survey of a larger number of purchasers and is discussed in the section of this report entitled "Pricing and Marketing Considerations."

Table 21
Survey of U.S. shipments to customers for
"new" applications claimed by Lafarge CA

* * * * *

Pricing and Marketing Considerations

As discussed earlier, the market for CA cement consists primarily of two largely distinct sectors: manufacturers of products for the construction industry and manufacturers of refractories. Firms within both of these industry groups use ordinary CA cement. White CA cement is used more often by manufacturers of refractories than by firms in the non-refractories sector. CA flux, by itself or in a blended form, is used almost entirely by the steel industry.

Factors affecting the demand for the various types of CA cement and CA flux include macroeconomic conditions and specific changes in the demand for the various types of end products that contain CA cement and CA flux. In addition, technological changes in the

¹⁰⁰ Staff requested the names of the persons Lafarge CA actually dealt with and made every effort to contact those persons. However, this was not always possible due to their unavailability due to travel or retirement. Also, as emphasized above, many of these purchases do not represent an on-going commitment by the firm to use ordinary CA cement. They are, rather, a one-time use of the product by a firm which is not otherwise familiar with the product.

¹⁰¹ ***. Although it did not specifically do so, Lafarge CA might make the same request, namely, that the Commission consider the impact of applications developed prior to 1990 on 1990-93 shipment data.

¹⁰² A representative of one firm, ***, commented that both Lehigh and Lafarge CA attend industry meetings held by the International Packaged Concrete Manufacturers Association where they present papers on and otherwise encourage the development of new products using ordinary CA cement. (***)

refractory sector and, in limited instances, the development of new non-refractories applications for different types of CA cement have affected overall demand for these products.

In the refractories sector, industry officials reported that recent research has focused on the development of products containing increasingly lower levels of CA cement. Much of the recent (as well as projected) growth in the refractories market has centered on these newer products. For the most part, these products require white rather than ordinary CA cement. This shift to low and ultra-low CA cement products has contributed, to some extent, to the decline in U.S. consumption of white CA cement and ordinary CA cement in the refractories sector, as shown in tables C-5b and D-1.

The development of some new uses for CA cement by firms manufacturing products other than refractories and, more importantly, the recent upturn in overall construction activity have at least partially offset the decline in consumption of ordinary CA cement for refractories. However, many of these firms use relatively small quantities of the various types and brands of the product for a limited range of applications. Their patterns of use and technical requirements differ somewhat from those of refractories manufacturers. These differences are discussed below.

The Commission sent questionnaires to 158 purchasers of CA cement and CA flux. Purchasers of CA cement that were surveyed include manufacturers of refractory products, construction firms,¹⁰³ manufacturers of products such as gas fireplace logs and fireproof safes, and construction supply distributors. Purchasers of CA flux include companies that distribute some of the product directly and further process some of the product by grinding, sizing, and/or blending it with synthetic slags and other materials. These firms then sell the flux or flux products to steel manufacturers for use as a desulfurizing agent in the steel production process.¹⁰⁴

The Commission received 108 questionnaire responses.¹⁰⁵ In quantity terms, the purchases of these firms accounted for approximately 70, 61, and 93 percent of the U.S. market for ordinary CA cement, white CA cement, and CA flux, respectively, in 1993. Information presented in the following sections is derived, in part, from the review of these responses. These sections discuss pricing and marketing trends in terms of overall U.S. demand for CA cement and CA flux, as well as by end-use groups, as appropriate.

¹⁰³ Within the construction (building chemistry) market, firms use CA cement for its heat-resistant qualities (flooring in certain types of production facilities) and its quick-setting and waterproofing attributes (flooring, grout, water sealants, airport runways, etc.).

¹⁰⁴ In addition, a limited number of steel manufacturers purchase the product ***.

¹⁰⁵ An additional 15 firms reported no purchases of the subject products during the period for which data were requested in the investigation.

Purchase Considerations

In interviews with staff and in response to the Commission's questionnaire, the majority of purchasers identified quality as the most important factor influencing their purchasing decisions. Purchasers also reported that technical differences and performance were important considerations. Some firms reported relying on traditional suppliers of CA cement. The price or overall cost of the products was cited as the second or third most important consideration by most purchasers. Other factors frequently cited include availability and consistency.¹⁰⁶ Table 22 lists the factors influencing purchasing decisions identified by respondents to the purchaser questionnaire.

For the most part, purchasers indicated that their firms determine which type and brand of CA cement to use in a product during the process of product development and testing. Once the product is developed, changes in CA cement (either with respect to types or brands) require additional testing and frequently require some reformulation of the end product. Purchaser responses indicate that the time and cost associated with this process varies across industry sectors and the firms within these sectors. Purchasers reported that decisions to change types or brands of CA cement are generally made by assessing the requisite research and development costs associated with their product development, testing, and qualification processes versus the expected benefits (improved quality or end-product performance and lower production costs).

Purchasers were asked to discuss the extent to which ordinary CA cement and white CA cement could be substituted in their products. Virtually all of the firms that responded to this question reported that ordinary CA cement could not be used in applications typically formulated with white CA cement because of differences in composition and performance between the two types of CA cement. Although it is technically possible to substitute white CA cement for ordinary CA cement in some product formulations, questionnaire respondents generally indicated that the higher cost of white CA cement would preclude them from doing so.

The Commission asked purchasers various questions regarding the extent to which the various brands of Lehigh- and Lafarge CA-produced ordinary CA cement were interchangeable, based on their actual use of the product. Purchasers were asked whether or not these products could be used in the same range of uses and whether the various brands were interchangeable with each other in a given application. The firms were also asked whether there was a significant difference between the products purchased

¹⁰⁶ In addition, purchasers cited factors such as range of product line and color.

Table 22
Factors affecting purchases of CA cement and CA flux, by types of purchaser, levels of importance, and frequency of responses

(In percent, except as noted)

Factor	Refractory	Construction
	<i>Most important</i>	
Quality	69	54
Technical differences/performance	17	10
Traditional supplier	6	17
Cost/price ¹	6	8
Other	3	10
Total	100	100
No. of responses	36	48
	<i>Second-most important</i>	
Cost/price ¹	39	34
Quality	17	17
Availability	14	12
Consistency	14	0
Technical assistance/service	6	17
Other	11	20
Total	100	100
No. of responses	36	41
	<i>Third-most important</i>	
Availability	40	35
Cost/price ¹	37	46
Technical assistance/service	9	8
Other	14	11
Total	100	100
No. of responses	35	37

¹ Includes factors such as credit terms.

Note.—Because of rounding, totals may not equal 100.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

from the various suppliers of ordinary CA cement. Finally, the Commission requested purchasers to describe the costs and processes associated with changing from one type or brand of ordinary CA cement to another.

Approximately 38 percent of the firms in the non-refractories sector reported that the Lehigh and Lafarge CA products were employed in the same range of uses; however, only 26 percent reported that the products were interchangeable in a given application.¹⁰⁷ Approximately 40 percent of the firms

¹⁰⁷ Fourteen percent of the firms in the non-refractories sector indicated that the various products were not employed in the same range of uses. In addition, 24 percent of the non-refractories firms reported that the products were not interchangeable. The remaining firms in this sector indicated that this information was unknown or did not respond to the questions.

indicated that they only had experience with one manufacturer and therefore could not determine whether there were significant differences in the products of the various CA cement suppliers; 26 percent reported that there were significant differences; and 34 percent reported no significant differences. When asked about the costs and processes associated with product substitution, approximately 78 percent of these purchasers indicated that either the products were not substitutable or that their firms have no experience with alternative brands of ordinary CA cement. Twenty-two percent reported that it is possible to substitute products, although a number of these firms qualified their responses to varying degrees.

In contrast, 72 percent of the manufacturers of refractories that responded to the Commission's questionnaire reported that the Lehigh and Lafarge ordinary CA cement products could be employed in the

same range of uses, and 42 percent indicated that different brands were interchangeable in a given application.¹⁰⁸ Approximately 50 percent of the firms in the refractories sector reported that there were significant differences in the products supplied by different CA cement suppliers; 33 percent reported no significant differences; and only 17 percent were unable to address this question.

When asked to describe the process of brand substitution, roughly 61 percent of the refractory manufacturers reported, to varying degrees, that some Lafarge and Lehigh brands were substitutable in some of their products, but generally not without testing and some reformulation.¹⁰⁹ The requisite evaluation and changeover periods reported varied from 2 weeks to 1-to-2 years. These firms indicated that factors such as product consistency, the performance of their final products, requirements of their customers, and the overall delivered cost (including inventory management costs) determined whether such a substitution would be made.¹¹⁰

The majority of both types of purchasers reported actually switching from one supplier to another infrequently, if at all. Overall, the firms reported four instances of shifting some or all of their purchases from Lehigh to Lafarge and eight instances of shifting some or all of their purchases from Lafarge to Lehigh. Two purchasers reported switching from Lehigh to Lafarge and then back to Lehigh. Purchasers generally indicated that these changes had been made because of quality or technical problems and cost.^{111 112}

Comparison of Suppliers

The majority of the firms in the non-refractories sector that responded to the Commission's questionnaire reported no difference between the French and U.S. producers' marketing efforts or did not provide a response.¹¹³ A larger percentage of the refractory producers were able to compare the marketing efforts of the cement manufacturers.

¹⁰⁸ Six percent reported that the products could not be employed in the same range of uses and 36 percent reported that the products were not interchangeable. Twenty-two percent were unable to respond to these questions.

¹⁰⁹ Some of the firms indicated that substitution of ordinary cements was limited to specific brands (e.g., Secar 41 for Lumnite, and Secar 51 for Refcon). In addition, 28 percent of the refractories manufacturers indicated that substitution was not possible.

¹¹⁰ The responses from refractories manufacturers differed considerably. For example, ***.

¹¹¹ For example, *** began buying some of its ordinary CA cement from Lafarge in order to avoid paying higher shipping costs for shipments of "less-than-truckload" quantities of Secar 71.

¹¹² Sixty purchasers reported no changes in suppliers during the 1991-93 period.

¹¹³ The majority of these firms were not able to make comparisons because they had dealt with only one company.

Overall, Lehigh and Lafarge were ranked equally by 43 percent of purchasers with respect to terms of sale; 37 percent with respect to return provisions; 31 percent for sales service; and 30 percent for technical assistance. Lafarge was cited by *** percent of the purchasers for having superior technical assistance; *** percent for better sales service; *** percent for terms of sale; and *** percent for return provisions. Lehigh was identified by *** percent of purchasers for having better terms of sale. ***.

Purchasers also were asked to rate how closely domestic and French ordinary CA cement compare on the basis of factors such as availability, reliability of supply, quality and price. The combined responses (in terms of preferences) of all purchasers are reported in the tabulation at the top of the next page (in percent).¹¹⁴

Pricing Strategies and Other Considerations

Both ordinary and white CA cement are priced, to some extent, on the basis of the alumina content contained in the cement.¹¹⁵ Ordinary CA cement is sold directly from the plant and from regional warehouses on a spot and contract basis. *** reported selling CA cement on a *** provided for volume sales.¹¹⁶ *** publishes price lists for its products. The standard minimum shipment for *** and payment terms are ***.¹¹⁷ In contrast, ***'s standard minimum shipment is ***. *** percent of ***'s sales are covered by contracts and *** percent are quoted on a delivered plant basis.

The Commission also requested purchasers to describe the types of contractual and pricing agreements common to this industry as well as any differences between the suppliers. Most purchasers reported that their firms did not discuss the bids of competing suppliers in order to induce a particular supplier to lower its prices. However, approximately 44 percent of the refractories manufacturers and 29 percent of the firms in the non-refractories sector

¹¹⁴ Based on responses of 27 refractory manufacturers and 23 non-refractories firms. Nine refractory manufacturers and 27 non-refractories firms were unable to (or chose not to) respond to this question.

¹¹⁵ According to data submitted by Lafarge CA and Lehigh, bauxite, the source of alumina in ordinary CA cement, generally accounts for greater than *** percent of the cost of raw materials used to make the various brands of ordinary CA clinker. In terms of overall production costs, the portion accounted for by the bauxite varies somewhat depending on the brand and the manufacturer. For example, in 1993, bauxite accounted for ***, ***, and *** percent of the total cost of Fondu, Secar 41, and Secar 51, respectively. Bauxite accounted for *** and *** percent of the total cost of production for Lumnite and Refcon, respectively. However, although bauxite is a *** component in these products, there are many other factors that can affect the pricing of these products.

¹¹⁶ ***.

¹¹⁷ Purchasers indicated some degree of variation in the payment terms offered by these companies.

	U.S.	France	Equal	No response	Total
Availability	4	6	84	6	100
Reliability of supply	4	12	78	6	100
Delivery time	8	8	76	6	100
Delivery terms	6	16	70	8	100
Lowest price	24	20	44	12	100
Quality	6	22	66	6	100
Service	2	46	48	4	100

reported that purchasing terms were at least somewhat negotiable. Although the majority of refractories manufacturers reported that the price of the CA cement products changed infrequently (or not at all during the period of investigation), approximately *** percent of the firms in the non-refractories sector reported annual (or biannual) price changes. Firms in the non-refractories sector also generally reported *** discounts from ***. Refractories manufacturers reported a greater range in payment terms from these suppliers.¹¹⁸

Transportation costs can account for a variable but significant percentage of the total cost of CA cement. In addition to varying in terms of distance, there is a significant difference in the cost to ship less-than-truckload quantities. As a result, some purchasers indicated that their firms purchased CA cement from either Lafarge or Alcoa because the companies offered a wider range of products. This allowed them to combine shipments to achieve truckload quantities and thereby reduce their overall shipping costs. The percentage of the total cost of the final product accounted for by shipping costs reported by purchasers responding to the Commission's questionnaire varied significantly, ranging from estimates of less than 2 percent to 27 percent.

¹¹⁸ Some firms reported receiving ***.

Producer and Importer Value and Quantity Trends for CA Cement

The Commission requested quarterly value and quantity data from U.S. suppliers for their sales of ordinary and white CA cement to selected market areas during 1990-93. The market areas included—

- Bureau of Mines' Eastern Pennsylvania district;
- Bureau of Mines' Southern California district;
- Bureau of Mines' Northern Texas district;
- the State of Missouri; and
- the State of Ohio.

The firms were requested to further disaggregate their quarterly sales on the basis of whether the transactions were (1) for products sold in bulk or bagged form; (2) shipped directly from the plant or from regional warehouses; and (3) made on a delivered or f.o.b. basis. This level of disaggregation was required in order to take into account pricing differences associated with shipping and storage costs.

The Commission requested value and quantity data for the following brands of CA cement:

Brand	Type	Manufacturer
Lumnite	Ordinary	Lehigh
Refcon	Ordinary	Lehigh
Secar 41	Ordinary	Lafarge
Fondu	Ordinary	Lafarge
Fondu XR	Ordinary	Lafarge
Secar 51	Ordinary	Lafarge
Secar 71	White	Lafarge
CA 14	White	Alcoa

The Commission asked the firms to separate their data by brand because each of the brands differs in terms of chemical composition and other attributes that potentially affect the products' cost and price.

Lehigh, Alcoa, and Lafarge CA submitted usable value and quantity data.¹¹⁹ The reported quantity data from Lehigh and Lafarge CA for the brands listed above accounted for approximately *** and *** percent of their domestic shipments of ordinary CA cement, respectively; the quantity data reported by Alcoa accounted for *** percent of its domestic shipments of white CA cement in 1993.¹²⁰ A discussion of trends in average unit values and quantities for white CA cement is included in appendix G.

The following sections discuss trends in average unit values and quantities for ordinary CA cement. The data represent weighted-average f.o.b. plant values for sales made on a delivered and f.o.b. basis for products shipped from the plant and the warehouse.¹²¹

The data are grouped by the brands that compete most directly with each other on the basis of alumina content and other properties. In general, both Lehigh and Lafarge reported that Lumnite (Lehigh) competes most directly with Secar 41, Fondu, and Fondu XR (Lafarge).¹²² As shown in table 1, ***. Refcon (Lehigh) competes most directly with Secar 51 (Lafarge). These products also differ with respect to chemical composition (including alumina) and melting points.¹²³

The following section discusses trends for sales reported for the five regional market areas combined. At the regional level, prices offered by Lafarge and Lehigh exhibit a greater variance than when the sales data are aggregated as below. To some extent, such variances are a function of factors such as warehousing arrangements, shipping costs, and credit terms, as well as the other factors discussed above. Appendix H contains a more detailed review of regional market trends.

¹¹⁹ The other U.S. producer (***) provided quarterly sales data for its shipments of *** during the period. The data provided are for *** and are not in a form that corresponds to the breakouts requested by the Commission.

¹²⁰ Lafarge reported *** to these market areas.

¹²¹ The firms reported shipping costs associated with their sales made on a delivered basis as well as the shipping costs (from the plant to the warehouse) associated with their sales made on an f.o.b. warehouse basis. This allowed Commission staff to calculate the weighted-average f.o.b. plant values reported herein.

¹²² ***.

¹²³ There is *** in chemical composition between the white CA cement produced by Alcoa (CA 14) and the comparable product manufactured by Lafarge (Secar 71).

Average unit value trends for packaged sales of ordinary CA cement

Table 23 shows average unit value and quantity trends for packaged ordinary CA cement sold in all five market areas during 1990-93. These unit value trends are also shown in figure 2; the data are grouped according to brands that are the most comparable in terms of their respective chemical composition. The average unit values reported for Lumnite (Lehigh) were *** than those reported for Secar 41 (Lafarge) and *** than those reported for Fondu (Lafarge) and Fondu XR (Lafarge). The average unit values reported for Refcon (Lehigh) were *** than those reported for Secar 51 (Lafarge). Comparing the first quarter 1990 average unit values to those reported in the fourth quarter of 1993, reported average unit values *** for *** except ***, which *** by *** percent.¹²⁴ The average unit value differentials that are reflected in figure 2 are presented in appendix I.

Table 23
Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to eastern Pennsylvania, Southern California, Northern Texas, Missouri, and Ohio, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure 2
Average unit values of packaged ordinary CA cement, 1990-93

* * * * *

In terms of quantity, reported sales of both of Lehigh's products *** (on an annual basis). Sales of ***. ***. Comparing total reported sales for 1990 versus those for 1993, ***. ***.¹²⁵

Average unit value trends for bulk sales of ordinary CA cement

Table 24 shows average unit value and quantity trends for bulk ordinary CA cement sold in all five market areas during 1990-93. These unit value trends are also shown in figure 3. Overall trends in bulk sales of ordinary CA cement *** those reported for packaged sales. Lafarge reported *** bulk sales of *** during ***. Comparing the first quarter of 1990 to the fourth quarter of 1993, the reported average unit

¹²⁴ ***.

¹²⁵ In 1990, ***'s total sales of ordinary CA cement accounted for *** percent of the total share of these market areas. In 1993, the firm's sales accounted for *** percent.

value for ***, and that for ***. The average unit value differentials that are reflected in figure 3 are reported in appendix I.

Table 24
Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of bulk sales to Eastern Pennsylvania, Southern California, Northern Texas, Missouri, and Ohio, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure 3
Average unit values of bulk ordinary CA cement, 1990-93

* * * * *

In terms of quantity, ***, ***. In 1990, Lafarge's sales accounted for *** percent of bulk sales. By 1993, the firm's share of the five market areas had *** to *** percent.

Purchaser Price Trends

The Commission requested purchasers of ordinary and white CA cement to provide quarterly value and quantity data in essentially the same form that was requested for U.S. suppliers of the products during 1991-93. In addition to the five designated market areas, the firms were requested to provide quarterly data for their U.S. purchases that occurred outside of these regions. Purchasers were asked to report quarterly data on the basis of brand, packaging, and whether the shipments originated from the plant or a regional warehouse. In addition, purchasers were requested to report values on a delivered and f.o.b. basis, if possible.

The following discussion focuses on trends in quantities and average unit values for bulk and packaged purchases of ordinary CA cement that were shipped directly from the plant and reported on an f.o.b. basis. As with the producer and importer sales data reported above, the data were aggregated across geographic regions.

As shown in figures 4 and 5, the average unit values reported by purchasers varied somewhat from comparable values reported by Lehigh and Lafarge.¹²⁶ To some extent, it is likely that these differences stem from the difference between the number of sales reported by the two ordinary CA cement suppliers and

¹²⁶ App. J contains the average unit value and quantity data reported by purchasers. In addition, the appendix contains tables showing the total quantities of all purchases of ordinary CA cement disaggregated by the types of purchasers.

the number of purchasers sampled by the Commission. In addition, any regional differences in pricing not accounted for by shipping costs would be reflected in the purchaser data.

Figure 4
Average unit values of packaged purchases of ordinary CA cement, 1991-93

* * * * *

Figure 5
Average unit values of bulk purchases of ordinary CA cement, 1991-93

* * * * *

With respect to packaged sales, average unit values reported for Lumnite were generally *** those reported for Fondu. However, ***, purchasers reported values for Lumnite that were generally *** than those reported for Secar 41 and *** than those reported for Fondu XR. The values for Refcon and Secar 51 were *** with sales data reported by Lafarge and Lehigh.

The data for bulk purchases also differed from the sales data reported by the two suppliers. Average unit values reported for Lumnite generally were *** than those reported for Secar 41 and *** than those reported for Fondu. The average unit values reported for Secar 51 ***; ***, values for Secar 51 were *** than those reported for purchases of Refcon.

Lost Sales and Lost Revenues

The Commission received allegations of lost sales and revenues ***. In its questionnaire response, Lehigh reported *** that amounted to approximately *** allegedly purchased from the French supplier during 1990-93. The company also reported *** amounting to approximately *** during 1989. In addition, Lehigh noted that it had *** of CA flux ***.

*** reported that in 1991 and 1992 it could *** that was similar to *** because the price of *** was so low. The company did not provide any value or quantity information or documentation to support this allegation.

Lehigh also reported *** lost revenue allegations that amounted to *** of ordinary CA cement. The allegations generally encompass *** the period of investigation. Lehigh also alleged that it had lost revenues associated with its sales of CA flux. However, the company *** related to this allegation. Instead, ***, *** also reported *** lost revenue allegation that took place during the period of investigation. However, it is not clear from the information reported whether a sales transaction actually occurred.

The Commission contacted all of the firms cited in ***'s lost sales and lost revenues allegations regarding

ordinary CA cement. All but one of the firms received and responded to the Commission's purchaser questionnaire.¹²⁷

In general it was difficult to verify Lehigh's allegations because the allegations covered periods as early as 1986 and with a few exceptions spanned a multiyear period that began prior to 1991. Data requested from purchasers were limited to 1991-93. The quantities cited in most of the allegations represent the total quantity Lehigh estimated that the firms purchased during the entire period cited. Because most of these firms' sales were adversely affected by the recession in the early 1990s and because many of the firms have shifted some of their purchases to white CA cement, the alleged quantities of lost sales do not necessarily represent what the firms' purchases would have been had they purchased 100 percent of their ordinary CA cement from Lehigh. However, it is important to note that the data contained in the Commission's purchaser questionnaires may understate the quantities of specific brands purchased by some of these firms. Purchasers with multi-plant operations were only asked to provide quarterly purchasing data for the manufacturing facility that purchased the largest quantity of a particular brand of cement.

¹²⁷ The information provided below and in app. K was drawn from the questionnaire responses of all of the firms listed except ***.

The individuals who were contacted by the Commission generally had a difficult time verifying (or refuting) the allegations because of the time periods involved.¹²⁸ Company records were difficult to obtain and, in some instances, the individuals who were involved with purchasing no longer were employed by the companies. In addition, ***.

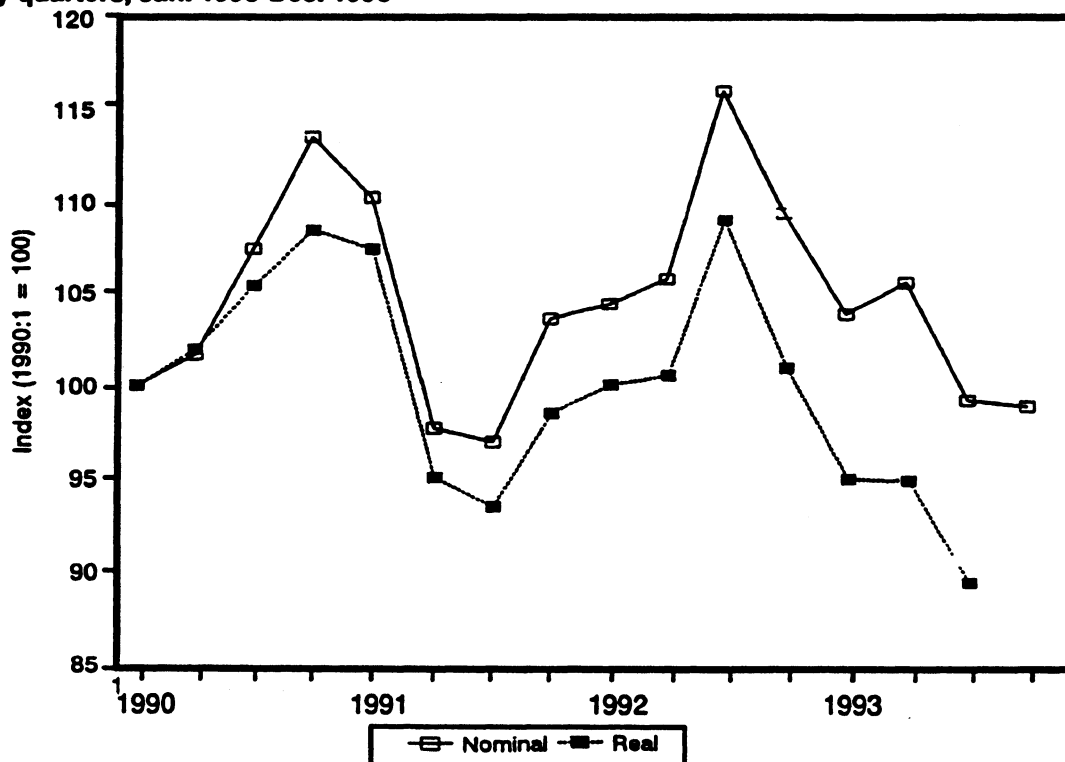
In general, the allegations are, at best, only partially substantiated. Appendix K provides a company-by-company review of all of ***'s lost sales and lost revenues allegations.

Exchange Rates

Quarterly data reported by the International Monetary Fund indicate that during January-March 1990 through October-December 1993 the nominal value of the French franc fluctuated, depreciating only 1.7 percent overall relative to the U.S. dollar (figure 6). Adjusted for movements in producer price indices in the United States and France, the real value of the French currency showed an overall depreciation of 11.1 percent for the period January-March 1990 through July-September 1993, the most recent period for which official price data are available.

¹²⁸ ***.

Figure 6
Indexes of nominal and real exchange rates of the French franc relative to the U.S. dollar, by quarters, Jan. 1990-Dec. 1993



Source: International Monetary Fund, *International Financial Statistics*, Feb. 1994.

Appendix A

***Federal Register* Notices**

application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

Effective Date: November 1, 1994.

FOR FURTHER INFORMATION CONTACT: Debra Baker (202-205-5180), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in getting access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION:

Background

This investigation is being instituted as a result of an affirmative preliminary determination by the Department of Commerce that imports of certain calcium aluminate cement and cement clinker from France are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19 U.S.C. 1673b). The Department of Commerce also made a negative preliminary determination regarding imports of calcium aluminate flux from France. The Commission, therefore, is not instituting a final investigation regarding calcium aluminate flux. Pursuant to 19 U.S.C. 1673b(3), if the Department of Commerce's final determination regarding imports of calcium aluminate flux is affirmative, the Commission will institute a final investigation at that time. The investigation was requested in a petition filed on March 31, 1993, by Lehigh Portland Cement Company, Allentown, PA.

Participation in the Investigation and Public Service List

Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, not later than twenty-one (21) days after publication of this notice in the Federal Register. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

United Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this final investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff Report

The prehearing staff report in this investigation will be placed in the nonpublic record on March 11, 1994, and a public version will be issued thereafter, pursuant to section 207.21 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with this investigation beginning at 9:30 a.m. on March 24, 1994, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before March 21, 1994. A party who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 8:30 a.m. on March 22, 1994, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigation as possible any requests to present a portion of their hearing testimony in camera.

Written Submissions

Each party is encouraged to submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for filing is March 18, 1994. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.23(f) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for

INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-646 (Final)

Certain Calcium Aluminate Cement and Cement Clinker From France

AGENCY: United States International Trade Commission.

ACTION: Institution and scheduling of a final antidumping investigation.

SUMMARY: The Commission hereby gives notice of the institution of final antidumping investigation No. 731-TA-645 (Final) under section 733(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from France of certain calcium aluminate cement and cement clinker, provided for in subheadings 2523.30.00 and 2523.10.00, respectively, of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of this investigation, hearing procedures, and rules of general

filing posthearing briefs is April 1, 1994; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before April 1, 1994. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of §§ 201.8, 207.3, and 207.7 of the Commission's rules.

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

Authority: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules.

By order of the Commission.

Issued: December 17, 1993.

Dennis R. Kachukian,

Secretary.

[FR Doc. 93-31232 Filed 12-21-93; 8:45 am]

BILLING CODE 7530-02-P

**INTERNATIONAL TRADE
COMMISSION**

[Investigation No. 731-TA-645 Final]

**Certain Calcium Aluminate Cement
and Cement Clinker From France;
Revised Schedule for the Subject
Investigation**

AGENCY: United States International
Trade Commission.

ACTION: Revised schedule for the subject
investigation.

EFFECTIVE DATE: February 24, 1994.

FOR FURTHER INFORMATION CONTACT:
Debra Baker (202-205-3180), Office of
Investigations, U.S. International Trade
Commission, 500 E Street SW.,
Washington, DC 20436. Hearing-
impaired persons can obtain
information on this matter by contacting
the Commission's TDD terminal on 202-
205-1810. Persons with mobility
impairments who will need special
assistance in gaining access to the
Commission should contact the Office
of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION: Effective
November 1, 1993, the Commission

instituted the subject investigation and established a schedule for its conduct (58 FR 67609, December 22, 1993). Subsequently, the Commission received a letter, dated January 26, 1994, from counsel for Lehigh Portland Cement Company, the petitioner in this investigation, requesting that the Commission reschedule its hearing from March 24, 1994 to March 31, 1994. The Commission is revising its schedule in the investigation in response to petitioner's request.

The Commission's new schedule for the investigation is as follows: the prehearing staff report will be placed in the nonpublic record on March 16, 1994; requests to appear at the hearing must be filed with the Secretary to the Commission not later than March 22, 1994; the prehearing conference will be held at the U.S. International Trade Commission Building at 9:30 a.m. on March 24, 1994; the deadline for filing prehearing briefs is March 25, 1994; the hearing will be held at the U.S. International Trade Commission Building at 9:30 a.m. on March 31, 1994; and the deadline for filing posthearing briefs is April 7, 1994.

For further information concerning this investigation see the Commission's notice of investigation cited above and the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

Authority: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules.

Issued: March 3, 1994.

By order of the Commission.

Deanna R. Keehanke,

Secretary.

[FR Doc. 94-5439 Filed 3-9-94; 845 am]

BILLING CODE 7530-00-9

International Trade Administration
IA-457-6123

Final Determinations of Sales at Less Than Fair Value: Calcium Aluminate Cement, Cement Clinker and Flux From France

AGENCY: Import Administration, International Trade Administration, Commerce.

EFFECTIVE DATE: March 25, 1994.

FOR FURTHER INFORMATION CONTACT: V. Irene Dazanta or Katherine Johnson, Office of Antidumping Investigations, Import Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone (202) 482-6320 or 482-4928, respectively.

Final Determinations

We determine that calcium aluminate (CA) cement, cement clinker and flux from France are being, or are likely to be, sold in the United States at less than fair value, as provided in section 735 of the Tariff Act of 1930, as amended (the Act). The estimated margins are shown in the "Suspension of Liquidation" section of this notice.

Scope of Investigations

The products subject to these investigations constitute two classes or kinds of merchandise: (1) CA cement and cement clinker; and (2) CA flux. The products covered by these investigations include CA cement, cement clinker and flux, other than white, high purity CA cement, cement

clinker and flux. These products contain by weight more than 32 percent but less than 65 percent alumina and more than one percent each of iron and silica.

CA cement/cement clinker and CA flux have significantly different physical characteristics and end uses. CA cement is a specialty hydraulic non-Portland cement used for construction purposes. CA cement clinker is the primary material used as a binding agent in the production of CA cement. CA flux is used primarily as a desulfurizer and/or cleaning agent in the steel manufacturing process. CA clinker produced for sale as flux cannot be used to produce CA cement, and CA clinker used to produce CA cement cannot be used as a flux in the production of steel.

CA flux has a chemical composition distinct from CA cement clinker. CA cement clinker contains the hydraulic mineral mono-calcium aluminate, which gives it a molar ratio of lime to alumina of approximately 1:1. In contrast, CA clinker sold as a flux does not contain mono-calcium aluminate; it contains the complex mineral $C_{12}A_7$ ($12CaO \cdot 7Al_2O_3$), which gives it a molar ratio of lime to alumina of approximately 2:1. This higher lime to alumina ratio gives the CA clinker sold as a flux a lower melting point than CA cement, and also results in extra lime which can bond with sulfur and other impurities in molten steel. Although CA clinker sold as flux has some hydraulic properties, it hydrates too quickly to be used for those properties.

These products are currently classifiable under the following

Harmonized Tariff Schedule of the United States (HTSUS) subheadings: 2523.30.0000 (for aluminous cement) and 2523.10.0000 (for cement clinker and flux). Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of these investigations remains dispositive.

Period of Investigations

The period of investigation (POI) is: October 1, 1992, through March 31, 1993.

Case History

Since the publication of the notice of preliminary determinations on November 3, 1993 (58 FR 58663), the following events have occurred.

On October 29, 1993, the respondent, Lafarge Foudou International (LFI) and Lafarge Calcium Aluminate, Inc. (LCA) (collectively Lafarge), and the petitioner, Lehigh Portland Cement Company (Lehigh), both requested that the Department postpone the final determinations in these investigations. Pursuant to these requests, the Department postponed the final determinations until March 16, 1994 (58 FR 60643, November 16, 1993).

On November 8, 1993, Lafarge submitted supplemental responses to the Department's questionnaire for CA flux sales.

On November 15, 1993, petitioner requested that the Department collect data on respondent's home market sales of CA flux, objecting to respondent's use of constructed value (CV) based on difference-in-merchandise (dimer) adjustments calculated inclusive of home market bagging costs. (See Comment 11 in the "Interested Party Comments" section of this notice.) Subsequently, on November 24, 1993, the Department requested that respondent provide such data.

On November 15 and 24, 1993, respectively, Lafarge and Lehigh requested a public hearing. On December 14, 1993, the Department issued a second set of supplemental questionnaires for sales of both classes or kinds of merchandise. Respondent submitted home market sales data for flux and responses to the Department's second set of supplemental questionnaires on December 23 and 29, 1993, respectively. On January 3, 1994, respondent submitted certain corrections to the cost and sales data reported in its previous questionnaire responses.

The Department conducted verification of the cost and sales responses of LFI and LCA from January

10 through January 20, 1994, in Paris, France and Chesapeake, Virginia.

Petitioner and respondent filed case and rebuttal briefs on February 14 and 18, 1994, respectively. On February 16, 1994, the parties withdrew their requests for a public hearing which was scheduled to take place on February 18, 1994.

Such or Similar Comparisons

Regarding the CA cement and cement clinker class or kind of merchandise, we have determined that the products covered by this investigation constitute two "such or similar" categories of merchandise: CA cement and CA cement clinker. We made fair value comparisons on this basis. Since this investigation was initiated during a period in which certain simplification procedures were in effect (see the preliminary determination), we conducted the home market viability test based on the class or kind of merchandise, rather than on the such or similar category. In order to determine whether there was a sufficient volume of sales in the home market to serve as a viable basis for calculating foreign market value (FMV), we compared the volume of home market sales of CA cement and cement clinker to the volume of third country sales of CA cement and cement clinker. In accordance with section 773(a)(1)(B) of the Act, and determined that the home market was viable for the CA cement and cement clinker class or kind. During the POI, CA cement clinker was the only product within the cement class or kind which was imported into the United States from France. Because there were no sales of such or similar merchandise (i.e., clinker) in the home market during the POI to compare to U.S. sales, we made comparisons on the basis of CV (see the "Fair Value Comparisons" section of this notice), in accordance with section 773(a)(2) of the Act.

Regarding the CA flux class or kind of merchandise, we determined that the products covered by this investigation comprise a single "such or similar" category of merchandise and that the home market was viable. Where there were no sales of identical merchandise in the home market during the POI to compare to U.S. sales, we made similar merchandise comparisons on the basis of size (i.e., degree of crushing/screening), in accordance with section 773(a)(1) of the Act (see the "Fair Value Comparisons" section of this notice). We made adjustments for differences in the physical characteristics of the merchandise, in accordance with section 773(a)(4)(C) of the Act.

Fair Value Comparisons

To determine whether sales of CA cement and cement clinker, and CA flux from France were made at less than fair value, we compared United States Price (USP) to the FMV, as specified in the "United States Price" and "Foreign Market Value" sections of this notice. We made revisions to respondent's reported data, where appropriate, based on verification findings. For those unreported U.S. cement sales which respondent claimed were made pursuant to certain graduated requirements contracts effective prior to the POI, but for which respondent could not provide documentary evidence substantiating its claim, we based our analysis on best information available (BIA), in accordance with 19 CFR 353.37. As BIA, we used the highest, non-operational margin calculated for any of respondent's reported U.S. sales of cement. (See Comment 1 in the "Interested Party Comments" section of this notice.)

United States Price

All of Lafarge's U.S. sales to the first unrelated purchaser took place after importation into the United States. Therefore, we based USP on exporter's sales prices (ESP), in accordance with section 772(c) of the Act.

For ESP sales of cement, we included in our final analysis certain reported sales allegedly made under an exclusive supply contract, using the reported, verified date of purchase order as the date of sale. (See Comment 2 in the "Interested Party Comments" section of this notice.) For ESP sales of flux, we included in our final analysis certain reported sales made under a contract which expired but which respondent claimed had been subsequently renewed prior to the POI, but for which respondent could not provide documentary evidence substantiating that claim. For these sales, we used the verified date of purchase order (or date of invoice where the purchase order date was unavailable) as the date of sale. (See Comment 9 in the "Interested Party Comments" section of this notice.) Furthermore, we excluded certain reported flux shipments made in October 1992 pursuant to a contract effective prior to the POI, the price terms of which were modified in November 1992. (See Comment 10 in the "Interested Party Comments" section of this notice.)

We calculated USP based on packed or bulk, ex-U.S. warehouse or delivered prices to unrelated customers in the United States. For sales of both classes or kinds of merchandise, we made

deductions, where appropriate, for foreign inland freight, foreign brokerage and handling, ocean freight, marine insurance, U.S. brokerage and handling (including harbor maintenance and customs processing fees), unloading costs, and U.S. inland freight charges (including loading, freight to processors' warehouses/transfer freight to warehouses, demurrage and freight to customer charges, where applicable). For sales of CA flux, we recalculated foreign inland freight, foreign brokerage and handling, ocean freight and U.S. inland freight expenses to correct minor clerical errors found at verification.

For sales of both classes or kinds of merchandise, we also deducted direct selling expenses including credit and product liability premiums. We recalculated credit expenses to account for discounts, where applicable, and to correct minor clerical errors found at verification with respect to the reported weighted-average short-term interest rate and the reported payment or shipment dates for certain transactions. We also recalculated credit for those sales that had missing payment dates. For those missing payment dates, we used, as BIA, the date of the final determination as the date of payment. In addition, we reclassified premiums for product liability insurance as direct selling expenses, and deducted them from USP accordingly. (See Comment 15 in the "Interested Party Comments" section of this notice.)

For sales of both classes or kinds of merchandise, we also deducted indirect selling expenses (including pre-sale warehousing costs incurred in the United States and selling expenses incurred in France on the merchandise exported to the United States for further manufacturing). U.S. indirect selling expenses were recalculated to exclude certain administrative expenses which were determined to be more appropriately classified as general and administrative (G&A) expenses. (See Comment 18 in the "Interested Party Comments" section of this notice.) We also deducted imputed inventory carrying costs for the period between production of the clinker/flux in France and shipment of the finished cement/processed flux to the customer in the United States. For sales of CA cement, we recalculated inventory carrying costs for the period between production of the clinker in France and the start of production of the finished cement in the United States, using the verified weighted-average short-term interest rate in France for the POL. (See Comment 4 in the "Interested Party Comments" section of this notice.)

For sales of CA cement, we also deducted rebates, discounts and warranty expenses, where applicable. For sales of CA flux, we also deducted commissions, where appropriate.

In addition, for both classes or kinds of merchandise, we made deductions, where appropriate, for all value added in the United States pursuant to section 772(a)(3) of the Act. The value added consists of the costs associated with further manufacturing the imported products, including a proportional amount of any profit related to further manufacturing. We calculated profit attributable to further manufacturing in the United States by deducting from the sales price all applicable costs incurred in producing the further manufactured product. We then allocated the total profit proportionally to all components of cost. We deducted only the profit attributable to the value added in the United States. In determining the costs incurred to produce the further manufactured products, we included:

- (1) The costs of manufacture (COMA); (2) movement and packing expenses; (3) selling, general and administrative (SG&A) expenses; and (4) interest expenses.

For both classes or kinds of merchandise, we relied on the submitted further manufacturing costs except in certain instances where the costs were not appropriately quantified or valued. We reclassified certain administrative expenses which were reported as indirect selling expenses as G&A expenses. We also recalculated financial adjustments to exclude the claimed adjustment for short-term interest income. (See Comments 18 and 19, respectively, in the "Interested Party Comments" section of this notice.)

For CA flux sales, we made an adjustment to U.S. price for the value-added tax (VAT) paid on the comparison sale in France. In *Federal-Mogul Corporation and The Torrington Company v. United States*, Slip Op. 93-194 (CIT October 7, 1993), the Court of International Trade (CIT) rejected our revised implementation of the Act's instructions on taxes and prohibited us from applying a purely tax neutral margin calculation methodology.

Accordingly, we have again changed our practice, as instructed by the CIT, and adjusted USP for tax by multiplying the home market tax rate by the U.S. price at the point in the chain of commerce of the U.S. merchandise that is analogous to the point in the home market chain of commerce at which the foreign government applies the home market consumption tax.

In this investigation, the tax levied on the subject merchandise in the home

market is 18.6 percent. We calculated the appropriate tax adjustment to be 18.6 percent of USP net of adjustments reflected on the invoice at the time of sale (which, in this case, is the point in the chain of commerce of the U.S. merchandise that is analogous to the point in the home market chain of commerce at which the foreign government applies the home market consumption tax), and added this amount to the USP. We also calculated the amount of the tax adjustment that was due solely to the inclusion of price deductions in the original tax base (i.e., 18.6 percent of the sum of any adjustments, expenses and charges that were deducted from the tax base). We deducted this amount from the net USP after all other additions and deductions had been made. By making this additional tax adjustment, we avoid a distortion that would cause the creation of a dumping margin even when pre-tax dumping is zero.

Foreign Market Value

For CA cement and cement clinker, we based FAV on the CV data submitted for cement clinker because cement clinker was the only such or similar product within the cement and clinker class or kind which was imported into the United States during the POL, and there were no sales of this product in the home market or to unrelated customers in third countries during the POL. (See the "Such or Similar Comparisons" section of this notice.) For CA flux, we based FAV on home market sales prices because we found the home market to be viable for flux sales during the POL, and because the difference-in-merchandise adjustments between the flux products sold to the United States and those sold in the home market do not exceed 20 percent. (See Comment 12 in the "Interested Party Comment" sections of this notice.)

CV-40-Price Comparisons

We calculated CV for cement clinker based on the sum of Lafarge's cost of materials, fabrication, general expenses, U.S. packing costs and profit. We relied on the submitted CV information, except in the following instances where the costs were not appropriately quantified or valued:

(1) We adjusted material costs for minor errors presented at verification. We also increased material costs for foreign exchange losses incurred when reporting raw materials. (See Comment 21 in the "Interested Party Comments" section of this notice.)

(2) We adjusted variable overhead to correct minor errors found at verification.

(3) We did not allow the annualization of fixed costs as we had done in the preliminary determination because respondent incorrectly reported labor costs as part of annualized fixed costs, rather than as

variable costs for the POI in accordance with the Department's instructions; and because respondent failed to provide an illustration of fixed and variable costs that would allow us to appropriately reclassify labor costs from annualized fixed costs to POI variable costs. As BIA, we used the fixed costs, including the labor costs, incurred during the POI. (See Comment 22 in the "Interested Party Comments" section of this notice.)

(4) We revised the COM reported to include an amount for depreciation on research and development (R&D) assets which was not originally reported. (See Comment 20 in the "Interested Party Comments" section of this notice.)

(5) We recalculated financial expenses to exclude the claimed adjustment for short-term interest income. (See Comment 19 in the "Interested Party Comments" section of this notice.)

(6) We also recalculated home market selling expenses on a clean or third basis. (See Comment 6 in the "Interested Party Comments" section of this notice.) In accordance with section 774(e)(1)(B) (i) and (ii) of the Act we included in CV the recalculated general expenses since these expenses were greater than the statutory minimum of ten percent of the COM. We revised respondent's reported profit calculation to reflect verification findings. (See Comment 8 in the "Interested Party Comments" section of this notice.) Since this amount was greater than the statutory minimum of eight percent of the sum of the COM and general expenses, we used the recalculated profit for CV purposes.

We deducted from CV home market direct selling expenses. We also deducted home market indirect selling expenses capped by the amount of U.S. indirect selling expenses attributable to the cement cluster imported into the United States and further manufactured into finished cement, in accordance with 19 CFR 353.56(b)(2).

Price-to-Price Comparisons

For sales of flux, we calculated FMTV based on packed, ex-factory or delivered prices to unrelated home market customers. We excluded from our analysis those sales made to home market customers on a test basis because they were in unusually small quantities, rather than in the usual commercial quantities, in accordance with 19 CFR 353.46(a)(1). We also excluded from our analysis those sales to a home market customer which were destined for a third country market. (See Comment 16 in the "Interested Party Comments" section of this notice.) We made

deductions, where appropriate, for rebates. We also deducted home market packing costs which were recalculated to exclude the costs of bagging and C&A expenses. (See Comments 11 and 12 in

the "Interested Party Comments" section of this notice.)

Pursuant to section 774(e)(4)(B) and 19 CFR 353.56(a)(2), we also deducted direct selling expenses including bagging costs, credit, technical services expenses and product liability premiums. (See Comments 11, 13 and 15 in the "Interested Party Comments" section of this notice.) We recalculated credit expenses to exclude VAT from the gross unit prices and to correct minor clerical errors found at verification with respect to the credit periods reported for certain transactions. (See Comment 14 in the "Interested Party Comments" section of this notice.) We revised respondent's reported technical services expenses calculation, treating the verified travel expense portion of the calculation as a direct expense and the verified salary portion as an indirect selling expense. (See Comment 13 in the "Interested Party Comments" section of this notice.)

In accordance with the decision in *Ad Hoc Committee of AZ-NM-TX-FL Producers of Gamy Portland Cement v. United States*, Slip Op. 93-1239 (Fed. Cir., January 5, 1994), we made a circumstance-of-sale adjustment for post-sale home market movement expenses, namely inland freight and loading charges. We also deducted from FMTV home market indirect selling expenses, including inventory carrying costs. The deduction for home market indirect selling expenses was capped by the sum of U.S. indirect selling expenses and U.S. commissions attributable to the flux imported into the United States and further manufactured, in accordance with 19 CFR 353.56(b) (1) and (2). Where there was no U.S. commission applicable to a particular U.S. flux sale, we offset the indirect selling expenses in the United States with a corresponding deduction for indirect selling expenses in the home market, capped by the total indirect selling expenses incurred on the U.S. sale in the manner described above.

We included in FMTV the amount of the VAT collected in the home market. We also calculated the amount of the tax that was due solely to the inclusion of price deductions in the original tax base (i.e., 18.8 percent of the sum of any adjustments, expenses, charges and offsets that were deducted from the tax base). We deducted this amount after all other additions and deductions had been made. By making this additional tax adjustment, we avoid a distortion that would cause the creation of a dumping margin even when pre-tax dumping is zero.

We also made an adjustment for physical differences in the merchandise,

in accordance with 19 CFR 353.57. We revised the reported off-inn amount to reflect only the verified variable COM, excluding the reported costs of bagging associated with the home market products, and associated C&A expenses and profit. (See Comments 11 and 12 in the "Interested Party Comments" section of this notice.)

Verification

As provided in section 776(f) of the Act, we conducted verification of the information provided by Lafarge by using standard verification procedures, including the examination of relevant sales, cost and financial records, and selection of original source documentation.

Currency Conversions

We made currency conversions based on the official exchange rates in effect on the dates of the U.S. sales as certified by the Federal Reserve Bank of New York.

Interested Party Comments

Comment 1

Petitioner argues that certain unreported U.S. CA cement sales alleged by Lafarge to have been made under graduated requirements contracts effective prior to the POI should be included in the Department's final analysis. Petitioner notes that at verification respondent could not provide the Department with any contemporaneous documentation regarding the acceptance of the essential terms of sale by the customers associated with these contracts. Petitioner contends that, despite the fact that respondent believes that these shipments were based on contracts entered into before the POI, the Department could not verify the existence or terms of these alleged contracts. Petitioner also maintains that respondent refused to provide the relevant data requested by the Department with regard to this issue.

Petitioner further argues that respondent never demonstrated that the alleged contracts governing these CA cement shipments were made prior to the POI. According to petitioner, the alleged contracts cover time periods much earlier than the POI and in fact constitute unilateral sales proposals made by Lafarge which are not evidence of a binding commitment between the parties as to quantity and price. According to petitioner, Lafarge also has not demonstrated that these shipments were not in excess of the quantity requirements stipulated in the alleged contracts.

Petitioner believes that, as BIA, the Department should apply a rate of 198.10 percent, the highest margin alleged in the petition, to account for these sales.

Respondent maintains that for these CA cement sales the Department should use the date of the customers' acceptance of the graduated requirements pricing proposals as the date of sale and exclude these sales from its final analysis. Respondent believes its pricing proposals were accepted by the customers when the customers placed initial purchase orders at the prices specified in the proposals. At the time these orders were placed, respondent claims the parties had already orally reached an agreement with LCA regarding the percentage of their requirements they were committed to purchase from LCA in order to qualify for each price level specified in the proposals; the orders provided confirmation of each customer's prior acceptance of LCA's pricing proposal. Because these initial orders were dated prior to the POI, respondent argues that the date of sale for the shipments made during the POI pursuant to these proposals also fall outside the POI and, therefore, these shipments were properly not reported to the Department.

Respondent notes, however, that, should the Department disagree with its reasoning and determine that the shipments pursuant to graduated requirements contracts should be included in its analysis, there is no basis for the Department to make adverse inferences or use "punitive" BIA. Respondent asserts that it fully disclosed the nature of its graduated requirements contracts to the Department from the start of this case, and it had no reason to believe that it should provide further information about those shipments in the form of a sales listing. Respondent further notes that it provided a summary of the quantity and value of the shipments made during the POI under the graduated requirements contracts in its December 29, 1993, supplemental questionnaire response, and that, at verification, Department verifiers retained as an exhibit a listing of all the POI invoices generated under these contracts with related pricing and other sales data. Respondent argues that, if the Department decides to include these sales in the final determination, the sales data examined at verification should be used to allow proper analysis of these sales.

DOC Position

We agree with petitioner in part. Despite several requests for information in our questionnaires, Lafarge did not provide documentation regarding customers' acceptance of the graduated requirements pricing proposals. For example, Lafarge did not provide any of the "initial" orders allegedly placed pursuant to these graduated requirements pricing proposals. In addition, respondent did not offer any indication of the date on which these "initial" orders were placed for purposes of establishing date of sale for these sales. Furthermore, respondent could not provide at verification any contemporaneous documentation or other sufficient evidence regarding acceptance of the terms of sale by customers associated with the subject graduated requirements contracts or indicating a "meeting of the minds" between the parties with respect to price and quantity, despite the Department's repeated requests for such evidence. The POI invoice that we examined at verification that were allegedly generated pursuant to the pricing proposals and "initial" orders gave no indication of association with the pricing proposals or "initial" orders, and respondent provided no other documentation that would establish such a connection.

Lafarge submitted in its December 29, 1993, response sample pricing proposals associated with the graduated requirements customers in question. At verification, we were able to examine in detail only one of those pricing proposals. This proposal, dated January 9, 1991, was specifically for 1991 (all the prices and discounts mentioned referenced 1991 only) and was silent on the effective period of the terms it quoted. We also reviewed a letter that was dated January 20, 1994, the last day of verification, and was faxed to the respondent on that day by the customer in question. This letter attempted to show that the January 9, 1991, pricing proposal constituted the date of the agreement regarding the essential terms of sale for all sales made to that customer after that date. This letter also discussed removal of the pricing arrangement. However, not only was this letter unclear as to exactly what kind of agreement the parties had reached pursuant to the proposal, but it also did not indicate when removal was discussed. In accordance with the Department's practice, the date of any such removal would constitute a new date of sale. Also in accordance with our practice, we required some form of documentation attesting to the date of

removal, yet no documentation apart from the faxed letter was provided. Lafarge was also unable to provide any such documentation for the other customers in question.

Without some documentary evidence of a removal prior to the POI, we cannot assume that the terms of the January 1991 pricing proposal were in effect during the POI. See Final Determination of Sales at Less Than Fair Value: Certain Forged Steel Crankshafts from the Federal Republic of Germany, 52 FR 28170, 28172 (July 28, 1987) (Crankshafts from the FRG); and Final Determination of Sales at Less Than Fair Value: Gray Portland Cement and Clincher from Mexico, 55 FR 29244, 29248 (July 18, 1990) (Gray Portland Cement from Mexico). Because we have no such evidence, we have determined that the dates of sale for the shipments at issue are within the POI. Accordingly, we have included them in our final dumping analysis. We do not think, however, that the pricing information contained in the invoice listing referred to by respondent is appropriate for use in our dumping analysis. This data was only submitted at verification to support the reconciliation of Lafarge's reported POI sales with its financial statements (information previously submitted in its responses). For purposes of making CV-to-price comparisons in our dumping analysis, this listing constitutes new information under 19 CFR 353.31(e)(1), and was therefore not timely submitted. It is not the Department's practice to accept new information at verification, because it leaves no opportunity for petitioners to analyze the sales reporting and provide deficiency questions, and no opportunity for petitioners to analyze and comment on these sales. In addressing this issue previously, we have stated:

The untimely submission of key information . . . precluded the Department from conducting a reasonable and thorough analysis of this information prior to the verification, just as petitioners were unable to comment on the new [information] . . . The purpose of verification is to establish the accuracy of a response rather than to reconstruct the information to fit the requirements of the Department.

Final Result of Sales at Less Than Fair Value: Light-Walled Welded Rectangular Carbon Steel Tubing from Argentina, 54 FR 13913 (April 6, 1989); Final Determinations of Sales at Less Than Fair Value: Certain Hot-Rolled Carbon Steel Flat Products and Cold-Rolled Carbon Steel Flat Products from the Netherlands, 56 FR 37199, 37203 (July 9, 1993).

Even if this listing had been submitted seven days prior to

verification, in accordance with 19 CFR 353.31(a)(4), it did not contain sufficient data for purposes of dumping analysis. Therefore, because we did not have complete sales information on the record to properly analyze these sales, we used BIA.

However, we do not think that use of the petition rate as BIA for these sales, as suggested by petitioner, is warranted. In this case, we are using partial BIA because Lafarge has provided responses to our questionnaires. When we resort to partial BIA, it is our practice to use the highest non-exceptional margin based on respondent's reported sales. This is an adverse figure, yet is based on the respondent's calculated margins. Therefore, we have used as BIA for these sales the highest, non-exceptional margin calculated for any of respondent's reported U.S. sales of cement.

Comment 2

Petitioner contends that certain reported U.S. cement sales alleged to have been made under an exclusive supply contract dated outside the POI should be included in the Department's analysis. Petitioner argues that the Department was unable to verify that these sales were in fact made pursuant to a Master Agreement that Lafarge claims was an exclusive supply contract. Accordingly, petitioner maintains that respondent failed verification with respect to these sales. Furthermore, petitioner contends that, even if the Department had been able to verify these sales, respondent never had an exclusive supply contract with this particular customer. Petitioner asserts that the Master Agreement is neither "exclusive" nor a "contract." Therefore, petitioner argues that the Department should determine that the appropriate date of sale for these particular sales is the date of invoice, which is within the POI, and the Department should include these sales in its dumping calculation.

Respondent maintains that the Department should consider the date of the Master Agreement as the date of sale for the subject sales. Respondent argues that the blanket purchase orders issued by the customer prior to the POI indicates the customer's commitment to purchase its requirements from the respondent for specific products at the specific prices set by the Master Agreement.

DOC Position

We agree with petitioner. In our deficiency questionnaire of December 14, 1993, the Department specifically asked the respondent to support its assertion regarding the "exclusivity" of

the Master Agreement. Respondent, in its December 29, 1993, response, could neither demonstrate that the Master Agreement was "exclusive," nor what quantity of the subject merchandise the respondent was agreeing to sell. Rather, Lafarge merely stated that the customer purchased all its requirements for certain cement products from it and that the "volume commitment" mentioned in the Master Agreement had been agreed to beforehand. Since we have no documentation demonstrating that a "meeting of the minds" regarding both quantity and price occurred before the POI, we cannot assume, based on respondent's word, that the Master Agreement is a requirements contract for purposes of establishing date of sale. (See Crankshafts from the FRG and Grey Portland Cement from Mexico.) Accordingly, we have determined the appropriate date of sale for these particular sales to be the date of purchase order, and we have included them in our final dumping calculations.

Comment 3

Petitioner argues that the Department should reverse its preliminary determination that CA cement and CA cement clinker constitute two such or similar categories. According to petitioner, the Department's determination was based on the incorrect premises that: (1) CA cement is not like CA cement clinker in the purposes for which used, and (2) in all past cases involving intermediate and finished products the Department has determined that there should be two such or similar categories. Petitioner contends that there is no question that CA cement and CA cement clinker constitute only one such or similar category pursuant to section 1677(16)(C) of the antidumping statute. According to petitioner, CA cement clinker is like the CA cement it is used to produce, and the difference-in-merchandise adjustment that would be required to make fair value comparisons between home market sales of CA cement and U.S. sales of clinker would be well below the Department's 20 percent difmer guideline. Petitioner further argues that because there is no data on the record for home market sales of CA cement to calculate FMV, the Department should use BIA to determine a margin for Lafarge's sales of both CA cement and CA cement clinker. Petitioner believes that, as BIA, the Department should use 41.23 percent, which is the lowest margin alleged in the petition.

Respondent does not believe that there is any reason for the Department to revisit its decision that CA cement

and CA cement clinker are different such or similar categories at this late stage in the investigation. Respondent argues that it would be unfair for the Department to penalize it for failing to report information that the Department decided not to request. Furthermore, respondent contends that the statute does not allow the Department to use BIA when the information at issue was never requested.

DOC Position

We agree with respondent. It was decided early on in these investigations that CA cement and cement clinker constituted two such or similar categories of merchandise in accordance with the definition of similar merchandise under section 771(16)(B)(ii) and (C)(ii) of the Act, which states that the component materials and uses of the products must be "like." (See June 15, 1993, Memorandum from Richard W. Moreland to Barbara R. Stafford Re Such or Similar Categories and attached Memorandum from Stafford to Moreland). In this case, while cement and clinker may be made of similar materials, they are not used for the same purposes. Clinker is used to make cement, and cement is used to bind things together or to create some structure or form. Clinker requires further processing to be like cement in the purposes for which it is used. For these reasons we have held cement and clinker to constitute different such or similar merchandise categories in this and past cement cases. Moreover, contrary to petitioner's assertion, the component materials and uses of products within the class or kind of merchandise subject to investigation are the determinants in establishing categories of such or similar merchandise. The 20 percent difmer rule is not considered by the Department in establishing such or similar categories.

Comment 4

Respondent maintains that in the preliminary determination the Department incorrectly deducted from the USP as an indirect selling expense, inventory carrying costs (ICC) based on an inventory period including the time between clinker production in France and production of the finished cement in the United States. Respondent claims that it did not sell clinker to an unrelated party in the United States, but rather to its U.S. subsidiary for further processing into cement. Therefore, the clinker in this case is work-in-process inventory, and the period between the production of the intermediate clinker

product and the completion of the finished cement product is part of the production period. Respondent maintains that the Department ordinarily imputes an ICC for finished goods inventory and almost never imputes ICC on work-in-process inventory, except for large, made-to-order goods that are produced as discrete projects. To support its arguments, respondent cites among other cases the Final Determination of Sales at Less Than Fair Value: Dynamic Random Access Memory Semiconductors of One Megabit and Above from the Republic of Korea (56 FR 15467, March 23, 1993) (DRAMs from Korea) and Color Television Receivers from the Republic of Korea: Final Results of Antidumping Duty Administrative Review (55 FR 26,255, June 27, 1990) (CTVs from Korea). Furthermore, citing Final Determination of Sales at Less Than Fair Value: Offshore Platform Jacks and Piles from Japan (51 FR 11788, April 7, 1986) (OPJs from Japan) and the Final Determination of Sales at Less Than Fair Value: Mechanical Transfer Presses from Japan (55 FR 335, January 4, 1990) (MTPs from Japan), respondent maintains that in the rare instances in which the Department has imputed ICC on work-in-process inventory, it classifies those costs as part of the COM, not as selling expenses.

Petitioner contends that ICC must be calculated to include the time CA cement clinker is produced in France until the time it is further manufactured into cement in the United States. Petitioner argues that both CA clinker and cement will be subject to the scope of any order that may be issued in this case and, therefore, CA clinker cannot be considered work-in-process, as respondent suggests.

DOC Position

We agree with petitioner. The Department's general practice in all further manufacturing cases has been to begin the inventory carrying period from the time that the product comes off of the production line. (See e.g., Final Determination of Sales at Less Than Fair Value: Stainless Steel Wire Rods from France (56 FR 69695, December 29, 1993) (Wire Rods From France). In this case, we are calculating ICC for the imported product, which is the clinker that is further manufactured into finished cement. We distinguish this case from that of CTVs from Korea, where the product imported into the United States was the finished merchandise, and OPJs from Japan and MTPs from Japan, where the products were large and made-to-order, unlike

the subject merchandise in the instant investigation; and from DRAMs from Korea, where we made no adjustment regarding the imported merchandise only where it merely constituted parts of larger and considerably more complicated modules. Therefore, we have imputed ICC in this case inclusive of the period between production of the clinker in France and shipment to the first unrelated customer in the United States, and have adjusted USP accordingly. Moreover, for the portion of the ICC costs which reflect the period between production of the clinker in France and the start of production of the finished cement in the United States, we recalculated the reported ICC using the short-term interest rate prevailing in France during the POI.

Comment 5

Respondent argues that the Department should use the U.S. warehousing costs included in the reported U.S. indirect selling expenses for CA cement sales. Contrary to what is suggested in the sales verification report, Lafarge maintains that the reported pre-sale warehousing costs for one warehouse are consistent with the prices shown in the warehousing contract examined at verification, and the pre-sale warehousing costs included in the reported indirect selling expenses were based on the actual costs incurred and paid by Lafarge, not on the per ton cost stated in the contract.

DOC Position

We agree. Upon further examination of the documentation reviewed at verification, we noted that the verified per unit U.S. indirect selling expenses, reported inclusive of pre-sale warehousing costs, were based on actual costs incurred. Thus, we have deducted from USP the reported pre-sale warehousing costs as indirect selling expenses.

Comment 6

Petitioner maintains that indirect selling expenses included in the CV of CA clinker should be recalculated to include indirect selling expenses allocated to CA cement as shown in Exhibit 6 of petitioner's case brief because clinker is of the same class or kind of merchandise as cement.

Respondent argues against such a recalculation because the channels of distribution and sales process for CA clinker differ substantially from those of CA cement. Because the CV of clinker is intended to provide a surrogate for a home market sales price for clinker based on the costs and expenses that would be incurred in producing and

selling clinker in the home market, Lafarge appropriately included in CV only the selling expenses that would be incurred in selling clinker.

DOC Position

We disagree with respondent. Section 773(e)(1)(B) of the Act provides that CV should include, among other things, "an amount for general expenses . . . equal to that usually reflected in sales of merchandise of the same general class or kind as the merchandise under consideration." We have recalculated indirect selling expenses to include home market indirect selling expenses for cement using verified information on the record. We consider cement indirect selling expenses to be representative of selling expenses of the general class or kind of merchandise, i.e., all CA products sold within the home market country.

Comment 7

Petitioner asserts that the Department should make an adjustment to the G&A expense reported in the CV for clinker to include the amortization of patents and trademarks which respondent had not included in the reported G&A amount.

Respondent argues that the amortization of patents and trademarks was included in the reported G&A expense.

DOC Position

We agree with respondent. Upon review of the verification exhibits we found that the reported depreciation costs included the amortization of patents and trademarks. (See Exhibit 14 and Cost Verification Report at 12).

Comment 8

Petitioner argues that, for purposes of calculating the CV for clinker in the final determination, the Department should use the BIA profit ratio that the Department calculated for the preliminary determination. Petitioner does not believe the Department should use the reported profit ratio because this calculation includes data on sales of non-subject merchandise. Petitioner argues that this profit ratio expands beyond the CA cement and cement clinker class or kind and, therefore, should not be used. Petitioner further maintains that in past cases the Department has consistently rejected the use of profit based on merchandise other than of the class or kind subject to investigation.

Respondent contends that the antidumping statute does not require the Department to use the profit on the "class or kind" of merchandise in its CV

calculations. Rather, respondent states that the statute directs the Department to use the profit rate on the "general class or kind," indicating an intent that the Department have flexibility in choosing the appropriate profit rate, and not be limited solely to the profit on the merchandise comprising the "class or kind."

DOC Position

We agree with respondent. In accordance with section 773(e)(1)(B), we have used the verified profit rate for all CA products, including the subject merchandise, sold in France because it represents the profit experience on sales of the general class or kind of merchandise in the home market.

Comment 9

Petitioner contends that certain reported U.S. flux sales made under an expired master order allegedly renewed prior to the POI should be included in the Department's analysis as sales made during the POI. Petitioner argues that the master order expired prior to the POI and was not renewed prior to the POI as respondent claims. Despite respondent's claim that prior to the POI the parties "evidenced a clear intent to continue the contract under the terms specified in the expired master order" but failed to renew the contract due to internal delays, there is no evidence on the record to support respondent's position. Petitioner argues that implicit renewal of the contract is not legally binding (i.e., there was no binding agreement between the parties as to any essential terms of sale at the time shipments of CA flux were made to this customer during the POI). According to petitioner, any shipments made to this customer during the POI were individual spot sales with dates of sale established by the date of the invoices issued for particular shipments.

Respondent argues that the Department should use the date of the master order as the date of sale for sales made pursuant to this contract (which it claims was renewed prior to the POI), and exclude them from the dumping analysis in the final determination. Although the original contract expired prior to the POI, Lafarge claims that the customer continued to purchase from LCA after that date in accordance with the sales terms set in the original contract. Moreover, respondent maintains that the orders placed by the customer during the POI continued to reference the purchase order numbers from the expired master order. According to respondent, the customer indicated its intent to re-issue the master order, but had not yet done so

because of internal delays. Based on these facts, respondent maintains that the shipments to this customer during the POI continued to be governed by the terms of the original master order even if there was no formal written agreement to that effect.

DOC Position

We agree with petitioner. The effective date of the subject master order was prior to the POI. At verification, LCA could not provide any documentation indicating renewal of the subject master order prior to the POI. Without some documentary evidence of a renewal of the master order prior to the POI, we cannot assume, based on respondent's word, that the essential terms enumerated in the original master order (which expired three months prior to the POI) governed the subject flux shipments made during the POI. (See *Cramfranks* from the FTC and *Gray Portland Cement* from Mexico.) Therefore, we have included these sales in the final determination, using the verified date of purchase order (or date of invoice where the date of purchase order was unavailable) as the date of sale.

Comment 10

Respondent argues that certain reported flux shipments made in October 1992 pursuant to a contract claimed to be effective prior to the POI, but the prices terms of which were modified in November 1992, should not be included in our final dumping analysis. Respondent claims that the date of the November 1992 price modification notices should be used as the date of sale for subsequent sales made to this customer during the POI. Therefore, respondent asserts that all shipments made after the November price modification should be included in the Department's final dumping calculations, while those POI shipments made prior to the November price modification should be excluded from the final determination.

DOC Position

We agree. Respondent reported all sales/shipments of flux to the customer in question pursuant to purchase orders issued during the POI, because (1) it was unable to locate the original master order for that customer allegedly dated prior to the POI and (2) the original price terms changed in November 1992. At verification, although we were unable to locate the original master agreement or blanket purchase order for the subject customer, we did find a "change order" dated November 2, 1992, which stipulated a change in price

terms effective on that date. We also examined invoices issued to this customer shortly before and after the November 2 change order date. Based on our examination of these invoices, we found that the invoices confirmed LCA's acceptance of the November 2 change order, because the price per ton LCA charged the customer changed after that date. In accordance with these verification findings, we have included in our final dumping analysis only those shipments made after the November 1992 price modification, using the November 2, 1992, change order date as the date of sale for these shipments.

Comment 11

Respondent argues that CV should be the basis for F&V because including home market begging costs in variable COM would cause the dinner adjustment to exceed 20 percent. Respondent states that the bags used in the home market are not merely packing for shipment, but rather consumer required packaging; therefore, their costs must be treated as part of COM. Respondent argues that it would be contrary to the Department's past practice to classify these bags as packing "incidental" to the shipment of the merchandise. To support its arguments, respondent cites the *F&V Calculations* performed pursuant to the 1992

Suspension Agreement in the antidumping duty investigation on gray portland cement and clinker from Venezuela; *Final Determination of Sales At Less Than Fair Value: Porcelain-on-Steel Cooking Ware from Taiwan* (51 FR 36425, October 10, 1986) (*Porcelain-on-Steel Cooking Ware* from Taiwan); *Final Determination of Sales At Less Than Fair Value: Certain Stainless Steel Cooking Ware from the Republic of Korea* (51 FR 42673, November 26, 1986) (*Stainless Steel Cooking Ware* from Korea); and *Washington Red Raspberry Commission v. United States* (859 F.2nd, 898, 905 (Fed. Cir. 1988)).

Furthermore, respondent argues that the bags used for home market packing have a number of special features unrelated to shipment: (1) they have built-in handles that facilitate use of a crane to lift the bag into the ladle or furnace of a steel mill; (2) they are constructed of non-permeable polymer material that protects the flux from contaminants in the steel mill environment and can vaporize in the steel melt without toxic emissions or undesirable residues; and (3) they come in varying sizes which allows the customer to control the amount of flux introduced into the steel melt. Respondent claims that its home market customers specifically order the begged

product, and they willingly pay more for it because they perceive that it provides additional value.

In addition, respondent maintains that, because the bags are part of the merchandise purchased by home market customers and their costs are significant relative to the overall manufacturing costs of the product, it must set prices taking into account the SC&A and profit attributable to the bagging which are also significant. However, because the Department does not normally include SC&A and profit in packing or difmer adjustments, respondent contends that the Department's comparison of prices for bagged flux sold in the home market and bulk flux exported to the United States will not account for these factors and will therefore be distortive.

Therefore, respondent argues that CV should be used instead of home market prices for purposes of calculating F&TV for flux sales.

Petitioner argues that bagging costs associated with home market flux sales should not be included in the calculation of the difmer adjustment because they represent packing costs related to shipment of the merchandise to the home market customer, rather than variable COM. Petitioner contends that such an inclusion is contrary to Department policy which states that the difmer adjustment is limited only to costs directly attributable to differences in the physical characteristics of the merchandise and that in this case all physical differences in the CA flux occur before the bagging/packing stage. Petitioner further claims that, contrary to respondent's assertion, the bagging/packing at issue is not consumer promotional and educational function at the point of sale to the retail end-user. Rather, using bags is another way of handling and shipping flux in bulk quantities. To buttress its argument, petitioner cites Final Determination of Sales at Less Than Fair Value: Pads for Woodwind Instrument Keys from Italy (56 FR 42293, August 9, 1993) (Pads from Italy), Final Determination of Sales at Less Than Fair Value: Industrial Phosphoric Acid from Israel (52 FR 25440, July 7, 1987) (Phosphoric Acid from Israel); and Preliminary Determination of Sales at Less Than Fair Value: Gray Portland Cement and Clinker from Venezuela (56 FR 56390, November 4, 1991) (Gray Portland Cement and Clinker from Venezuela). Petitioner claims that both respondent's CA flux marketing expert in France and petitioner's CA flux marketing expert in the United States agree that when a customer does not have a dedicated bulk storage silo system, the CA flux

must be shipped to that customer in bags. Petitioner also contends that respondent's claims that the design of its bags adds value to the customer are not relevant to the determination of whether the bagging costs can be deducted as a packing expense.

Petitioner further argues that respondent's cite to the suspension agreement concerning Gray Portland Cement and Clinker from Venezuela where the Department treated bagging costs as part of COM for purposes of calculating an F&TV at or over which a Venezuelan cement producer/exporter would have to sell in the United States is not relevant because calculation of a difmer adjustment was not at issue in that investigation. Petitioner points out that in the Venezuelan cement investigation, the Department made fair value comparisons of bulk cement sold in the United States with cement sold in Venezuela in 50 to 100 pound sacks, but did not make a difmer adjustment for packing/bagging. Instead, it adjusted for home market bagging costs by deducting them from F&TV and adding the U.S. packing costs to F&TV pursuant to its normal practice.

In addition, petitioner notes that the normal packing adjustment in this case would include all fixed costs as well as variable costs of bagging/packing and thus would not distort fair value comparisons as would the inclusion of only variable bagging/packing costs in the difmer adjustment, as respondent suggests. According to petitioner, any claimed price distortions attributable to SC&A and profit associated with bagging/packing will be minimal because Lafarge subcontracts these services (i.e., the fees it pays to subcontractors would cover fixed costs such as CA&A expenses, and any selling costs would be included in normal circumstance-of-sale adjustments). Petitioner concludes that, even if packing costs are included in the difmer adjustment, the Department should still use the home market sales data submitted by Lafarge after the preliminary determination rather than CV for fair value comparisons because the U.S. and home market flux products sold during the POI are comparable and the 20 percent difmer guideline is not an inflexible rule.

DOC Position

We agree with petitioner in part. At verification, respondent explained that flux is placed in special bags pursuant to customer orders because home market customers do not have the appropriate facilities for handling and measuring flux for use in their steel production process. Bagged flux is not

sold from inventory. Flux can be sold in bulk form without the specialty bags, and is sold as such to the United States and the majority of third country markets. The fact that customers (in the home market or otherwise) have the choice to buy the flux without the special bagging strongly suggests that the bagging is not an integral part of the product covered by the scope of the investigation and, therefore, should not be considered part of variable COM and included in the difmer adjustment. This is in contrast to the situation in *Washington Red Raspberry Commission v. United States*, where the subject merchandise (raspberries) would be unrecognizable and completely unusable without the containers in which it was sold.

Characterizing the bagging costs as variable COM as suggested by respondent is not justifiable in this case. Respondent has not been able to explain to our satisfaction how bagging costs contribute to differences in the physical characteristics of the merchandise, as directed by 19 CFR 353.57. (See also the Department's July 29, 1992 Policy Bulletin (No. 92-2), which states that any difmer adjustment must be tied to such differences.)

The 1996 law then fair value determinations cited by respondent are inapposite. Stainless Steel Cooking Ware from Korea reflected our prior practice regarding the inclusion of differences in consumer packing in making difmer adjustments, which was changed in the 1992 Policy Bulletin cited above. Likewise, in *Porcelain-on-Steel Cookware from Taiwan*, we merely said that consumer packaging was not a cost incidental to shipment. We did not say that it constituted an integral physical part of the merchandise under investigation.

As noted above, in difmer analysis, we focus only on the differences in physical characteristics of the merchandise. The merchandise in this instance is CA flux. Bagging does not change the physical characteristics of flux and, therefore, it was not included in the difmer calculation. In the F&TV Calculations performed pursuant to the Suspension Agreement in Venezuelan cement, we were not examining the differences in the physical characteristics per se of the subject merchandise. Therefore, respondent's reliance on Venezuelan cement is inapposite.

We also do not consider bagging costs as representative of normal packing costs. Rather, it appears to us that Lafarge could not sell the flux to the home market customers without incurring these special bagging costs.

While we agree with petitioner that Pads from Italy is applicable here (in that dimer adjustments are based on the variable cost of manufacture only), petitioner's reliance on Phosphoric Acid from Israel is misplaced, because the begging for flux is clearly distinguishable from the drums used for packing (and accounted for in packing costs) in Phosphoric Acid from Israel. Therefore, we do not consider begging in this case to be a pre-shipment expense, but rather a condition of sale.

For these reasons, we have treated these begging costs as direct selling expenses, rather than as part of variable CDM or packing for purposes of the final determination. (See March 9, 1994, Memorandum from V. Irene Darzanta to Richard W. Moreland Re. Treatment of Begging Costs Associated with Home Market Sales of Flux.) Because the dimer that resulted from exclusion of these costs from variable CDM was less than 20 percent, we used the reported, verified home market flux sales as the basis for FMTV and deducted begging costs as direct selling expenses from FMTV accordingly.

Comment 12

Petitioner states that the dimer adjustment is also incorrect because respondent included fixed costs (i.e., C&A) and profit in its calculation. Petitioner asserts that if the Department includes begging in the dimer adjustment, it should recalculate the amount of the dimer to include only variable costs. Finally, petitioner maintains that the reported packing expenses, inclusive of begging costs, should be adjusted to avoid double-counting C&A expenses.

DOC Position

For the reasons stated in the DOC Position to Comment 11 above and in accordance with the Department's normal methodology, we have recalculated the dimer adjustment to exclude begging costs and include only variable CDM. However, upon further review of the documentation examined at verification, we note that the C&A expenses included in the reported packing expenses were not double-counted. Notwithstanding this fact, we have also excluded from the packing adjustment the reported C&A expenses.

Comment 13

Petitioner believes that the claimed adjustment for home market technical service expenses should be denied or reduced. Petitioner maintains that the Department should deny the claimed direct adjustment for home market technical service expenses, because

these expenses cannot be directly tied to specific sales made during the POI. According to petitioner, services such as those provided by respondent for purposes of determining new uses for a product in future production aimed at increasing future sales levels constitute goodwill or sales promotion, and as such are not directly related to the sales under consideration. Petitioner also argues that technical service expenses attributable to test sales made during 1992 that are considered to be outside of the ordinary course of trade should be excluded from the adjustment; however, because the Department did not verify data that would permit their exclusion, the Department should deny the adjustment in toto. Nonetheless, if the Department determines that an adjustment is warranted, petitioner urges that it should only deduct the reported travel expenses and not the reported salary expenses comprising respondent's technical service expenses calculation because salaries are considered fixed costs which are incurred whether or not the services are provided.

Respondent contends that technical service expenses should be treated as direct selling expenses in accordance with past Department and court decisions. Respondent notes that the technical services performed by LFT in France consist of visits to customers to review and help analyze the customers' test data and to work with the customer to make more efficient use of flux in its steel operations. Lafarge emphasizes that the customer needs to know from the time he makes his purchase that LFT's technical staff will be available to provide this analysis for him on an on-going basis. According to respondent, these types of services are not provided by LCA in the United States because LCA's U.S. flux customers perform this technical service using their own personnel. Respondent argues further that an adjustment for technical service salaries is appropriate where the technical services personnel provide functions that the customer would otherwise have to perform himself.

DOC Position

We agree with respondent in part. Lafarge provides the technical support to its home market customers because they have not yet developed the systems required to perform these services themselves. Without Lafarge's technical support, the customers cannot analyze and make appropriate adjustments in their steel production processes to optimize performance of CA flux in their operations. Given the nature of the steelmaking industry, it is reasonable to

believe that, while these technical service expenses could not be directly tied to specific sales of flux, they would not otherwise have been incurred but for the sale of flux.

It is the Department's practice to allow, as a direct selling expense, claims for services rendered in assisting the customer in solving problems with products purchased during the POI to the extent that the variable costs can be segregated from the fixed costs. In general, variable technical service costs include travel expense, while fixed technical service costs include salaries. (See e.g., Final Determination of Sales at Less Than Fair Value: Brass Sheet and Strip from Italy, 52 FR 816, January 9, 1987, and Final Determination of Sales at Less Than Fair Value: Antifriction Bearings (Other Than Tapered Roller Bearings) and Parts Thereof from the Federal Republic of Germany, 54 FR 18932, May 3, 1989.) Therefore, in accordance with our practice, we have treated travel expenses associated with technical services as direct selling expenses, and we have treated salary expenses as indirect selling expenses and deducted them from FMTV accordingly. We made no adjustment to these amounts for expenses related to test sales that may have been made in 1992, because we did not have sufficient information on the record to allow us to do so accurately.

Comment 14

Petitioner claims that the adjustment for home market credit expenses should be denied or reduced. Petitioner believes that an adjustment for this expense should not be permitted because, of the sales verified, over one-quarter had incorrect shipment/payment dates. If the Department allows this expense, petitioner argues that it should be recalculated exclusive of VAT because Lafarge did not incur any credit expense for payment of the VAT.

Respondent maintains that the Department should not deny or reduce home market credit expenses. It argues that the errors found at verification with respect to shipment/payment dates were minor and clerical in nature, and do not have a significant effect on the Department's analysis. According to respondent, by extending credit, Lafarge agrees to forego immediate payment of the total invoice amount which includes the price for the goods and applicable VAT taxes. It, therefore, loses the interest that could have been earned on the total invoice amount. Respondent asserts that the foregone interest represents the opportunity cost of extending credit. Respondent further asserts that, because this opportunity

cost includes foregone interest on VAT, the foregone interest on VAT must be included in the credit adjustment.

DOC Position

We disagree in part with both petitioner and respondent. We have determined that a credit adjustment in general is warranted in this case. The errors found at verification with respect to the credit period reported for two home market transactions were clerical and minor in nature and related to sales made either out of the ordinary course of trade or in a third country which we have excluded from our analysis. (See the "Foreign Market Value" section of this notice.) However, we have also determined that there is no statutory or regulatory basis for including VAT in the credit adjustment. While there may be an opportunity cost associated with extending credit on the payment of invoice value inclusive of VAT, that fact alone is not a sufficient basis for the Department to make an adjustment. We note that virtually every expense associated with less than fair value comparisons is paid for at some point after the cost is incurred. Accordingly, for each post-service payment, there is also an opportunity cost. Thus, to allow the type of adjustment suggested by respondent would imply that in the future the Department would be faced with the impossible task of trying to determine the opportunity cost of every freight charge, rebate, and selling expense for each sale reported in respondent's database. This exercise would make our calculations inordinately complicated, placing an unreasonable and onerous burden on both respondents and the Department. (See e.g., Final Determination of Sales at Less Than Fair Value: Sulfur Dyes, Including Sulfur Vat Dyes, from the United Kingdom, 58 FR 3253, January 8, 1993.) Consequently, we have recalculated home market credit expenses to exclude the VAT included in the gross unit prices used in the original calculation.

Comment 15

Petitioner argues that home market product liability costs are indirect rather than direct selling expenses because they are not directly related to sales made during the POL. Respondent disagrees, stating that these premiums are directly related to sales because the premium is assessed on sales value. According to respondent, each additional sale results in an additional product liability premium expense.

DOC Position

Because these premiums are assessed based on sales value, we have determined that these expenses are characteristic of direct expenses. We note that the U.S. product liability premium rates reported for U.S. sales of flux and cement were also based on sales value. Therefore, we have treated both home market and U.S. product liability expenses as direct selling expenses for purposes of the final determination, and have adjusted PMV and USP accordingly.

Comment 16

Petitioner claims that these sales made to a home market customer that were destined for export should not be included as home market sales in the Department's analysis. Petitioner states that the Department verified that Lafarge knew that certain sales of CA flux were to be exported to a third country at the time of sale to the home market customer. Accordingly, petitioner argues that these sales should not be included in the Department's PMV calculation.

DOC Position

We agree and have excluded these sales from our analysis.

Comment 17

Petitioner believes that for purposes of calculating profit related to the value added in the United States, U.S. brokerage and handling (including merchandise processing and harbor maintenance), U.S. unloading, U.S. loading and U.S. freight to processors costs, where applicable, should be attributed to the COM of CA clinker and flux in the United States because these expenses are incurred only after the product has arrived in the United States. Petitioner further believes that certain U.S. selling expenses (e.g., credit, warranty, indirect selling expenses, inventory carrying costs and product liability expenses) should also be included as part of U.S. further manufacturing costs.

Respondent does not believe that the Department should consider these charges and expenses to be part of U.S. further manufacturing costs, as petitioner requests. Lafarge contends that petitioner's argument is inconsistent with the antidumping statute and was put forth by petitioner solely to increase the profit allocated to further manufacturing and, as a result, the adjustment to USP.

DOC Position

We disagree with petitioner. Because U.S. brokerage and handling, and U.S.

unloading and loading costs, are incurred on the imported merchandise prior to the commencement of further manufacturing in the United States, we find that they do not form part of the value added in the United States. Regarding the costs of freight to processors' warehouses associated with flux sales, we find that they do form part of the costs of further manufacturing the imported flux in the United States because these costs are incurred to transport the imported flux to and among the processors' warehouses for further manufacture. For U.S. cement sales, however, such transfer freight costs represent costs incurred to transport the already further manufactured clinker (i.e., the finished cement) to the warehouses from which the finished product is ultimately sold to U.S. customers. No freight to processors costs are incurred on U.S. cement sales because the further processing occurs at Lafarge's plant which is located at the U.S. port of importation. Regarding U.S. selling expenses, these expenses are incurred to sell both the imported and further manufactured products. Therefore, adding these expenses to U.S. further manufacturing costs, as petitioner suggests, would disproportionately increase the U.S. value added for purposes of calculating profit. (See e.g., Wire Rods from France.) Of the expenses at issue, we have only included costs of freight to processors associated with U.S. flux sales as part of U.S. value added in our final profit calculation.

Comment 18

Petitioner claims that the Department should recalculate respondent's U.S. indirect selling and G&A expenses for both cement and flux sales. Petitioner argues that, based on the Department's instructions, LCA's administrative costs should have been reported as G&A (rather than indirect selling expenses), allocated based on cost of sales and included in the U.S. COM. According to petitioner, the Department should reduce the reported indirect selling expenses and the corresponding ESP cap.

Respondent maintains that LCA's calculation correctly assigned its administrative expenses to its operations. According to Lafarge, because LCA's administrative staff supports LCA's sales operations as well as factory operations, a portion of LCA's administrative expenses should be considered sales administration and treated as an indirect selling expense. Respondent notes, however, that it would not object if the Department

reduce the amount of administrative expenses assigned to the products under investigation under petitioner's proposal. Respondent contends that if the Department accepts petitioner's argument that U.S. indirect selling expenses and CAI should be recalculated, it should revise petitioner's calculations to use the correct, verified figures.

DOC Position

We agree with petitioner on the need to reclassify LCA's administrative expenses. Because these expenses are more appropriately characteristic of CAI expenses, we have reclassified them from indirect selling to CAI expenses based on verified data on the record.

Comment 19

Petitioner argues that no offset to financial expenses should be allowed for the short-term interest income claimed by Lafarge for purposes of calculating clincher CV and clincher and flux further manufacturing costs. Petitioner contends that the Department was unable to verify that the interest income reported was short-term in nature. Nor could the Department verify whether the reported interest income was related to the manufacture of the subject merchandise, according to petitioner.

Respondent asserts that the Lafarge corporate policy is not to invest in assets which produce other than short-term interest income. Accordingly, respondent maintains that all interest income earned by respondent's parent company Lafarge Coppée was short-term in nature, and an offset to interest expense should be allowed for the entire reported short-term interest income amount.

DOC Position

We agree with petitioner. The Department normally allows an offset to financial expenses for interest income earned on short-term investments of working capital related to the production of the subject merchandise. The Department does not offset interest expense with interest income earned on long-term investments related to activities unrelated to the manufacturing process. Because we were unable to verify the nature of the interest income reported, we have disallowed the financial expense offset claimed by Lafarge.

Comment 20

Petitioner notes that the Department discovered at verification that the depreciation of R&D assets was not

included in the R&D expenses reported for purposes of calculating clincher CV. Petitioner states that the Department should include this depreciation in the reported R&D expenses.

DOC Position

We agree and have adjusted the R&D expenses reported for purposes of calculating clincher CV to reflect the inclusion of depreciation for R&D assets. We note that this adjustment also affected the total reported COM of the imported clincher and flux used in the calculation of U.S. value added profit.

Comment 21

Petitioner asserts that exchange rate gains and losses should be added to raw material costs for purposes of calculating clincher CV. According to petitioner, during verification the Department discovered that Lafarge had not reported the foreign exchange gains and losses related to the importation of raw materials used to produce the subject merchandise.

DOC Position

We agree, based on our findings at verification, that Lafarge did not report these foreign exchange gains and losses. Accordingly, we have added these gains and losses to the reported raw material costs for purposes of calculating clincher CV for the final determination. We note that this adjustment also affected the total reported COM of the imported clincher and flux used in the calculation of U.S. value added profit.

Comment 22

Petitioner argues that, because LFT repeatedly refused to separately report its labor costs and classify them according to Department practices as variable costs for purposes of calculating clincher CV and total flux and clincher COM used in the calculation of U.S. value added profit, the Department must resort to BIA to determine these costs. As BIA, petitioner asserts that the Department should not annualize any fixed costs but rather use only the fixed costs reported for the POL. Petitioner argues that this is a reasonable BIA methodology given the Department's inability to break out the labor costs from fixed costs and properly treat the labor costs as variable costs.

Respondent contends that LFT's labor costs have the characteristics of fixed costs since the number of workers working at LFT's plants is generally constant and the total pool of labor costs tends not to vary with production levels. LFT also asserts that labor costs are distorted by fluctuations in monthly production volumes as a result of plant

shut-downs for maintenance. According to respondent, the use of fixed costs for the POL would distort the Department's CV and further manufacturing cost calculations. LFT states that, under the logic of the preliminary determination, fixed labor costs should be based on the reported annual period.

DOC Position

We agree with petitioner. Lafarge normally records labor costs for clincher and flux as a fixed cost. Respondent followed its normal accounting system for the response and reported labor as a fixed cost for the year 1992. This methodology differs from the Department's normal practice where labor is considered a variable cost and as such would be reported on a weighted-average basis for the POL.

In the preliminary determination the Department accepted the annualization of fixed costs because LFT claimed that periodic shut-down expenses incurred for maintaining its furnaces created significant aberrations in monthly production costs. In order to eliminate the effect of these distortions, we allowed LFT to report fixed costs on an annual weighted-average basis.

However, it was not until verification that the Department first discovered that labor costs were included in the reported annualized fixed costs. The Department's Section D and E questionnaires for clincher and flux identified direct and indirect labor as costs that should be reported as variable costs for response purposes. The questionnaires also specifically requested that LFT itemize the expenses included in fixed and variable costs. LFT did not itemize its variable or fixed costs or otherwise identify how it treated its labor costs in response to the Department's requests. Because LFT was not responsive to the Department's requests for information and incorrectly classified labor costs as fixed costs, and since there was no information on the record to permit the accurate reclassification of labor costs, we have disallowed the annualization of fixed costs and have used only the reported fixed costs for the POL as BIA for purposes of the final determination.

Suspension of Liquidation

In accordance with section 734(k)(1) of the Act, we are directing the Customs Service to continue to suspend liquidation of all entries of CA cement and cement clincher from France and to begin the suspension of liquidation of all entries of CA flux from France that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in

the Federal Register. The Customs Service shall require a cash deposit or posting of a bond equal to the estimated margin amount by which the FMV of the subject merchandise exceeds the USP, as shown below. The less than fair value margins for CA cement and cement clinker are as follows:

Producer/manufacturer/exporter	Weighted-average margin percentage
Large _____	18.91
All Others _____	18.91

The less than fair value margins for CA flux are as follows:

Producer/manufacturer/exporter	Weighted-average margin percentage
Large _____	31.08
All Others _____	31.08

ITC Notification

In accordance with section 735(d) of the Act, we have notified the International Trade Commission (ITC) of our determinations. As our final determinations are affirmative, the ITC will determine whether these imports are materially injuring, or threaten material injury to, the U.S. industry within 45 days.

If the ITC determines that material injury or threat of material injury does not exist, the proceedings will be terminated and all securities posted as a result of the suspension of liquidation will be refunded or cancelled. However, if the ITC determines that such injury does exist, we will issue an antidumping duty order directing Customs officers to assess an antidumping duty on CA cement, cement clinker and flux from France entered or withdrawn from warehouse, for consumption on or after the date of suspension of liquidation.

Notification to Interested Parties

This notice serves as the only reminder to parties subject to administrative protective order (APO) in these investigations of their responsibility covering the return or destruction of proprietary information disclosed under APO in accordance with 19 CFR 353.34(d). Failure to comply is a violation of the APO.

These determinations are published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)) and 19 CFR 353.20(a)(4).

Dated: March 18, 1994.

Paul L. Jaffe,

Acting Assistant Secretary for Import Administration.

[FR Doc. 94-7122 Filed 3-24-94; 8:45 am]

221220 CODE 3010-00-0

Appendix B
List of Witnesses Appearing
at the Commission's Hearing

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

Subject : CERTAIN CALCIUM ALUMINATE
CEMENT, CEMENT CLINKER, AND
FLUX FROM FRANCE

Inv. No. : 731-TA-645 (Final)

Date and Time : March 31, 1994 - 9:30 a.m.

Sessions were held in connection with the investigation in the Main Hearing Room 101 of the United States International Trade Commission, 500 E St., SW, Washington, DC.

**In Support of the Imposition of
Antidumping Duties:**

King & Spalding
Washington, DC
On behalf of

Lehigh Portland Cement Company, Allentown, PA

Roy J. Bottjer, National Marketing Manager, Calcium Aluminate
Cements & Special Cement Products

Adam G. Holterhoff, Jr., Manager, Technical Services, Calcium
Aluminate Cements

Paul A. Pachapa, Plant Manager

Bruce P. Malashevich, President, Economic Consulting
Services, Inc., Washington, DC

Jerrie Mirga, Senior Economist, Economic Consulting Services,
Inc., Washington, DC

James J. Kelly, Vice President, National Recovery Systems,
E. Chicago, IN

Joseph W. Dorn —OF COUNSEL
Gregory C. Dorris

**In Opposition to the Imposition of
Antidumping Duties:**

Shearman & Sterling
Washington, DC
On behalf of

Lafarge Fondu International (LFI)
Lafarge Calcium Aluminates, Inc. (LCA)

Alain Bucaille, General Director, LFI

Gary Gauthier, President, LCA

Thomas W. Green, National Sales Manager, LCA

William J. West, Vice President/General Manager,
West Minerals

Grant E. Finlayson —OF COUNSEL
Wendy E. Ackerman

Appendix C
Summary Data Concerning the
U.S. Market for Ordinary CA Cement
Products and for White CA Cement

Table C-1a
Ordinary CA cement: Summary data concerning the U.S. market (where Lafarge CA is not included as a U.S. producer)

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Table C-1b
Ordinary CA cement: Summary data concerning the U.S. market (where Lafarge CA is included as a U.S. producer), 1990-93

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Table C-2
Ordinary CAC clinker: Summary data concerning the U.S. market, 1990-93

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Table C-3
CA flux: Summary data concerning the U.S. market, 1990-93

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Table C-4
Ordinary CAC clinker and CA flux: Summary data concerning the U.S. market, 1990-93

* * * * *

Table C-5a
White CA cement: Summary data concerning the U.S. market (where Lafarge CA is not included as a U.S. producer), 1990-93

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Table C-5b
White CA cement: Summary data concerning the U.S. market (where Lafarge CA is included as a U.S. producer), 1990-93

* * * * *

Table C-6a
Ordinary and white CA cement: Summary data concerning the U.S. market (where Lafarge CA is not included as a U.S. producer of ordinary or white CA cement), 1990-93

* * * * *

Table C-6b
Ordinary and white CA cement: Summary data concerning the U.S. market (where Lafarge CA is included as a U.S. producer of both ordinary and white CA cement), 1990-93

* * * * *

Table C-7
Ordinary and white CAC clinker and CA flux: Summary data concerning the U.S. market, 1990-93

* * * * *

Appendix D
Additional Data on U.S. Shipments of
Ordinary CA Cement By Brands of
Cement and by End-Use Applications

Table D-1

Ordinary CA cement for refractory applications: U.S. shipments of domestic product, U.S. shipments of imports, by firms, and apparent U.S. consumption, 1990-93

* * * * *

Table D-2

Ordinary CA cement for non-refractory applications: U.S. shipments of domestic product, U.S. shipments of imports, by firms, and apparent U.S. consumption, 1990-93

* * * * *

Table D-3

Ordinary CA cement: U.S. shipments of U.S. producers, by brands of cement, 1990-93

* * * * *

Table D-4

Ordinary CA cement: U.S. producers' U.S. shipments, by applications and by firms, 1990-93

* * * * *

Appendix E
Additional Data on Financial Operations
of CA Cement Products

Table E-1
Income-and-loss experience of Lehigh on its operations producing CA flux, calendar years 1990-93

* * * * *

Table E-2
Income-and-loss experience of U.S. producers on their operations producing white CA cement and CAC clinker, calendar years 1990-93

* * * * *

Table E-3
Income-and-loss experience of U.S. producers on their operations producing ordinary CA cement and CA flux, calendar years 1990-93

* * * * *

Table E-4
Income-and-loss experience of U.S. producers on their operations producing ordinary and white CA cement and CAC clinker, calendar years 1990-93

* * * * *

Table E-5
Value of assets and return on assets of U.S. producers' operations producing ordinary and white CA cement and CAC clinker and CA flux, fiscal years 1990-93

* * * * *

Table E-6
Capital expenditures by U.S. producers of ordinary and white CA cement and CAC clinker and CA flux, by products, fiscal years 1990-93

* * * * *

Table E-7
Research and development expenses of U.S. producers of ordinary and white CA cement and CAC clinker and CA flux, by products, fiscal years 1990-93

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Appendix F
Effects of Imports on Producers'
Existing Development and
Production Efforts, Growth,
Investment, and Ability to
Raise Capital

Effects of Imports on Producers' Existing Development and Production Efforts, Growth, Investment, and Ability to Raise Capital

The Commission requested U.S. producers to describe any actual or anticipated negative effects of imports of ordinary CA cement, ordinary CAC clinker, and CA flux from France on their growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product. The Commission also asked U.S. producers to report the influence of such imports on their scale of capital investments undertaken. The responses are as follows:

* * * * *

Appendix G
Average Unit Value Trends for
White CA Cement

Average Unit Value Trends for White CA Cement

Neither Lafarge nor Alcoa reported *** of white CA cement to firms ***. Consequently, the following discussion is limited to these firms' sales of the ***. Lafarge reported sales in *** (tables G-1-G-4). Alcoa *** sales to ***. Both firms' reported sales were *** during the four years and reported average unit values fluctuated significantly. For the most part, the average unit values reported by Alcoa for CA 14 were *** than those reported by Lafarge for its sales of Secar 71. Lafarge reported *** of Secar 71 during *** and reported *** sales of this product during ***.

Table G-1

White CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to eastern Pennsylvania, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Table G-2

White CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to northern Texas, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Table G-3

White CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to Missouri, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Table G-4

White CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to Ohio, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Appendix H

Regional Analysis of Average Unit Value Trends for Ordinary CA Cement

Eastern Pennsylvania

* * * * *

Table H-1

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to eastern Pennsylvania, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-1

Average unit values of packaged ordinary CA cement, Eastern Pennsylvania, 1990-93

* * * * *

Table H-2

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of bulk sales to Eastern Pennsylvania, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-2

Average unit values of bulk ordinary CA cement, Eastern Pennsylvania, 1990-93

* * * * *

Southern California

* * * * *

Table H-3

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to southern California, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-3

Average unit values of packaged ordinary CA cement, Southern California, 1990-93

* * * * *

Table H-4

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of bulk sales to Southern California, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-4

Average unit values of bulk ordinary CA cement, Southern California, 1990-93

* * * * *

Northern Texas

* * * * *

Table H-5

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to northern Texas, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-5

Average unit values of packaged ordinary CA cement, Northern Texas, 1990-93

* * * * *

Missouri

* * * * *

Table H-6

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to Missouri, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-6

Average unit values of packaged ordinary CA cement, Missouri, 1990-93

* * * * *

Table H-7

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of bulk sales to Missouri, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-7

Average unit values of bulk ordinary CA cement, Missouri, 1990-93

* * * * *

Ohio

* * * * *

Table H-8

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of packaged sales to Ohio, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Figure H-8

Average unit values of packaged ordinary CA cement, Ohio, 1990-93

* * * * *

Table H-9

Ordinary CA cement: U.S. producer's and importer's average unit values (f.o.b. plant) and quantities of bulk sales to Ohio, by brands and by quarters, Jan. 1990-Dec. 1993

* * * * *

Appendix I
Average Unit Value Differentials
for Ordinary CA Cement

Table I-1

Ordinary CA cement: Average unit value differentials for packaged sales, by quarters, 1990-93

* * * * *

Table I-2

Ordinary CA cement: Average unit value differentials for bulk sales, by quarters, 1990-93

* * * * *

Appendix J
Purchaser Average Unit Value
and Quantity Data for Ordinary
CA Cement

Table J-1

Ordinary CA cement: Average unit values and quantities of packaged purchases from the plant (f.o.b.), by brands and by quarters, Jan. 1991-Dec. 1993

* * * * *

Table J-2

Ordinary CA cement: Average unit values and quantities of bulk purchases from the plant (f.o.b.), by brands and by quarters, Jan. 1991-Dec. 1993

* * * * *

Table J-3

Ordinary CA cement: Total quantities of purchases by refractories manufacturers, by brands and by quarters, Jan. 1991-Dec. 1993

* * * * *

Table J-4

Ordinary CA cement: Total quantities of purchases by non-refractories manufacturers, by brands and by quarters, Jan. 1991-Dec. 1993

* * * * *

Appendix K

Summary of Lost Sales and Lost Revenues Information

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