

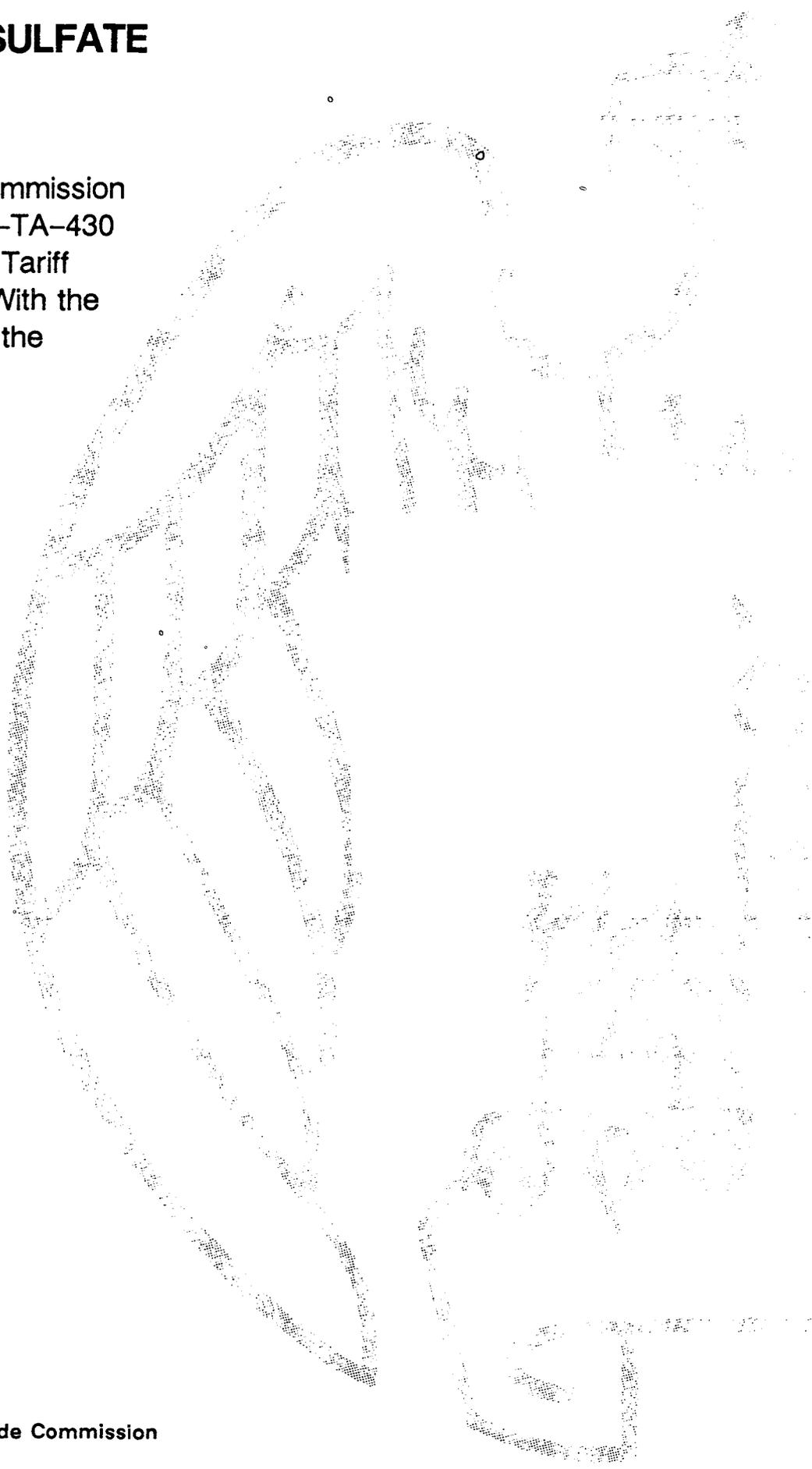
DRY ALUMINUM SULFATE FROM SWEDEN

etermination of the Commission
Investigation No. 731-TA-430
(Preliminary) Under the Tariff
Act of 1930, Together With the
Information Obtained in the
Investigation

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**United States International Trade Commission
Washington, DC 20436**



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Note.--Information that would reveal business proprietary operations of individual concerns may not be published and therefore has been deleted from this report.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

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

Investigation No. 731-TA-430 (Preliminary)

DRY ALUMINUM SULFATE FROM SWEDEN

Determination

On the basis of the record 1/ developed in the subject investigation, the Commission determines, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)), that there is no reasonable indication that 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 Sweden of dry aluminum sulfate, provided for in subheading 2833.22.00 of the Harmonized Tariff Schedule of the United States (formerly provided for in item 417.16 of the Tariff Schedules of the United States), that are alleged to be sold in the United States at less than fair value (LTFV).

Background

On February 13, 1989, a petition was filed with the Commission and the Department of Commerce by Delta Chemical Corp., Baltimore, MD, alleging that an industry in the United States is materially injured by reason of LTFV imports of dry aluminum sulfate from Sweden. Accordingly, effective February 13, 1989, the Commission instituted preliminary antidumping investigation No. 731-TA-430 (Preliminary).

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal

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

Register of February 22, 1989 (54 F.R. 7609). The conference was held in Washington, DC, on March 6, 1988, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

Based on the information obtained in this preliminary investigation, we unanimously determine that there is no reasonable indication that an industry in the United States is materially injured or is threatened with material injury by reason of imports from Sweden of dry aluminum sulfate which is alleged to be sold at LTFV. 1/ 2/ 3/

1/ Material retardation of the establishment of an industry is not an issue in this investigation and will not be discussed further.

2/ The legal standard in preliminary antidumping and countervailing duty investigations is set forth in sections 703(a) and 733(a) of the Tariff Act of 1930, 19 U.S.C. §§ 1671b(a) and 1673b(a), which require the Commission to determine whether, based on the best information available at the time of the preliminary determination, there is a reasonable indication of material injury to a domestic industry, or threat thereof, or material retardation of establishment of such an industry, by reason of imports of dry aluminum sulfate. *Maverick Tube Corp. v. United States*, 12 CIT ___, 687 F. Supp. 1569, 1573 (1988). In preliminary investigations, an affirmative determination is based on a "reasonable indication" of material injury, as opposed to the actual finding of material injury or threat required in a final determination. Compare 19 U.S.C. §§ 1671b(a) and 1673b(a) with 19 U.S.C. §§ 1671d(b)(1) and 1673d(b)(1).

In *American Lamb v. United States*, 785 F.2d 994 (Fed. Cir. 1986), the Federal Circuit stated that (i) the purpose of preliminary determinations is to avoid the cost and disruption to trade caused by unnecessary investigations, (ii) the "reasonable indication" standard requires more than a finding that there is a possibility of such injury, and (iii) the Commission may weigh the evidence before it to determine whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of material injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation." *Id.* at 1001-04. See *Shock Absorbers and Parts, Components, and Subassemblies Thereof from Brazil*, Inv. No. 731-TA-421 (Preliminary), USITC Pub. 2128 (September 1988) (hereinafter *Shock Absorbers*); *New Steel Rails from Canada*, Invs. Nos 701-TA-297 and 731-TA-422 (Preliminary), USITC Pub. 2135 (November 1988) (hereinafter *New Steel Rails*). See also Additional Views of Commissioner Eckes in *Shock Absorbers* and *New Steel Rails* for his views on the preliminary standard.

3/ Vice-Chairman Cass generally joins the Commission's opinion except as separately noted. In addition, he addresses several concerns in his Additional Views.

Like Product and Domestic Industry.

To determine whether there exists a "reasonable indication of material injury or threat of material injury" the Commission must first determine the domestic "like product" corresponding to the imported merchandise under investigation. Like product is defined in section 771(10) of the Tariff Act of 1930 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...." 4/

The Commission's decision regarding like product is essentially a factual determination, made on a case-by-case basis. 5/ The Commission usually considers a number of factors when determining what product is "like" the product subject to investigation, including: (1) physical characteristics and uses, (2) interchangeability, (3) channels of distribution, (4) common manufacturing facilities and production employees, (5) customer or producer perceptions, and (6) price. 6/ No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a given investigation. The Commission looks for clear

4/ 19 U.S.C. § 1677(10).

5/ *Asociacion Colombiana de Exportadores de Flores v. United States*, 12 CIT ___, 693 F. Supp. 1165, 1169 (1988) (hereinafter "ASCOLFLORES").

6/ See, e.g., *Certain All-Terrain Vehicles from Japan*, Inv. No. 731-TA-388 (Preliminary), USITC Pub. 2071 (March 1988) at 6; ASCOLFLORES, 693 F. Supp. at 1170 n.8.

dividing lines between like products 7/ because minor distinctions are an insufficient basis for finding separate like products. 8/

In this preliminary investigation, we considered two questions relating to the definition of the like product: 1) whether liquid aluminum sulfate and dry aluminum sulfate are the same like product and 2) whether all three grades of aluminum sulfate should be included in the like product.

Petitioner argued that the like product in this investigation should be limited to the scope of the Department of Commerce's investigation, 9/ dry aluminum sulfate. The Department of Commerce has defined the imported product subject to this investigation as:

dry aluminum sulfate from Sweden, a dry white granular material used in water purification, waste water treatment, and for industrial uses. Petitioner has specifically excluded liquid aluminum sulfate from the scope of the investigation. The dry aluminum sulfate covered by this investigation has a minimum of 17 percent aluminum oxide content, a maximum of 0.2 percent iron, a maximum of 0.5 percent water insolubles, and a range of from 6 to 200 mesh in particle size. 10/

7/ See, e.g., Operators for Jalousie and Awning Windows from El Salvador, Invs. Nos. 701-TA-272 and 731-TA-319 (Final), USITC Pub. 1934 (Jan. 1987) at 4, n.4.

8/ ASCOLFLORES, 693 F. Supp. at 1168-69. S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

9/ In making its like product determination, the Commission may define the domestic like product and industry more broadly than the scope of Commerce's investigation. See ASCOLFLORES, 693 F. Supp. at 1168 n.4; Citrosuco Paulista, S.A. v. United States, 12 CIT ___, Slip op. 88-176 at 28 (December 30, 1988). Shock Absorbers and Parts, Components, and Subassemblies Thereof from Brazil, Inv. 731-TA-421 (Preliminary), USITC Pub. 2128 (Sept. 1988) at 7. See also Industrial Belts from Israel, Italy, Japan, Singapore, South Korea, Taiwan, The United Kingdom, and West Germany, Invs. Nos. 701-TA-293-295 and 731-TA-412-419, (Preliminary), USITC Pub. 2113 (Aug. 1988) at 6-8 (like product not limited to scope of investigation).

10/ 54 Fed. Reg. 10390, 10391 (March 13, 1989).

Respondent contended that the like product should include both liquid and dry aluminum sulfate. 11/ We define the like product to be aluminum sulfate, whether in the liquid form or the dry form, and in all grades, i.e., standard, low-iron, and iron-free.

1. Liquid and dry aluminum sulfate are the same like product.

While the liquid and dry forms of aluminum sulfate have varying physical properties with respect to their freezing point and corrosivity, 12/ they share the same chemical formula 13/ and generally may be used to perform the same functions. Both the liquid and dry forms may be used as a precipitant in wastewater treatment, as a coagulant in drinking water treatment, to precipitate rosin size on pulp fibers during the paper making process, as a retention aid for fiber fragments and fillers, to produce aluminum salts, to tan certain white leathers, as an astringent in drugs and cosmetic preparations, as a mordant to fix dyes on textiles and paper fibers, to produce aluminum soaps and greases, and to manufacture synthetic catalysts. 14/ It is only in the pigment industry that dry aluminum sulfate must be used exclusively, 15/ and this is a minor use of the product.

Liquid and dry aluminum sulfate are sold through the same channels of distribution. Most aluminum sulfate sold in the United States is sold

11/ Respondent's post conference statement at 6-15.

12/ Petitioner's post conference statement at 5.

13/ Respondent's post conference statement at 7.

14/ Respondent's post conference statement at 8.

15/ Petitioner's post conference statement at 5.

directly to end-users or to chemical distributors. 16/ Both respondent and petitioner use the same sales force to sell the dry and the liquid forms of their aluminum sulfate product. 17/

Liquid and dry aluminum sulfate have common production facilities and similar methods of production. Four of the five domestic producers of dry aluminum sulfate, accounting for approximately 75 percent of domestic production of dry aluminum sulfate, use a common production line to produce liquid aluminum sulfate sold in the liquid form and the liquid aluminum sulfate subjected to further processing to produce the dry form. 18/ Aluminum ore is mixed with sulfuric acid and water to yield liquid aluminum sulfate. To produce dry aluminum sulfate, the liquid undergoes some further processing. The water is removed by evaporation and the resulting product is crushed, ground, and screened. 19/ Petitioner, unlike the other producers, operates two separate lines of production for the liquid and dry forms. However, the "dedicated" dry aluminum sulfate production line is merely a liquid aluminum sulfate line with additional drying equipment, and could be used to produce liquid aluminum sulfate by diverting the product stream prior to the drying process. In addition, both lines of production are housed in the same facility. 20/ Generally, the same employees are used

16/ See Report of the Commission (Report) at A-5. Most of the end-user sales are made on the basis of competitive bids for annual contracts to municipalities. See id.

17/ Respondent's post conference statement at 11; Statement of Mr. Robert Farmer, President, Delta Chemical Corp., Transcript at 12 (hereinafter Tr.).

18/ See Report at A-2-3 and n.1.

19/ See Id. at A-2-A-3.

20/ Statement of Mr. Farmer, Tr. at 11.

to produce both forms of aluminum sulfate, although petitioner has some direct operators who produce one form exclusively. 21/

In the past, the Commission has found that articles which are not completely interchangeable to be like products based on other considerations present in the investigation. 22/ Significantly, in this investigation, the barriers to interchangeability among end-users in this investigation are not total barriers; they may be overcome by further investment on the part of the end-user. 23/ Once an aluminum sulfate end-user has decided to use one form of aluminum sulfate over the other, he continues to use that form until he decides to invest in a converted feeding system that can deliver the other form. The estimates on cost of this type of conversion depend on the size of the operation and range from \$10,000 to over a million dollars. 24/ However, the feeding system is only a small percentage of the total investment in plants that use aluminum sulfate. When new plants are being planned and built, liquid and dry aluminum sulfate are considered nearly perfect substitutes for each other.

In light of the nearly identical uses of both forms, common channels of distribution, and the common methods of production, production facilities, and employees among domestic producers who produce both forms,

21/ See Report at A-9-A-10.

22/ See, e.g., Certain Forged Steel Crankshafts from the Federal Republic of Germany and the United Kingdom, Inv. Nos. 731-TA-351 and 353 (Final), USITC Pub. 2014 (September 1987); Tapered Roller Bearings and Parts Thereof, and Certain Housings Incorporating Tapered Rollers from Italy and Yugoslavia, Invs. Nos. 731-TA-342 and 346 (Final), USITC Pub. 1999 (August 1987).

23/ See Report at A-2; Tr. at 17-18, 81-82.

24/ See id. at A-2.

we find one like product which includes both the liquid and dry forms of aluminum sulfate. 25/

2. Grades of aluminum sulfate

Both the liquid and dry forms of aluminum sulfate are produced in three grades: standard, low-iron, and iron-free. 26/ Grade is determined by the amount of aluminum, iron, and insoluble materials contained in the final product. The higher the grade, the lower the content of these substances. Higher grades are manufactured from high purity alumina hydrates and sulfuric acids. Lower grades are produced from bauxite and bauxite clays. However, there is no industry-wide definition for each grade. Individual producers set their own standards. All grades of liquid and dry aluminum sulfate share the same manufacturing process and have the same chemical formula. It appears that most end-users do not prefer one grade over another and will take delivery of the available grade, so long as it is at least standard grade. 27/ Although the grades of aluminum sulfate are not similarly priced, 28/ we do not believe that price outweighs the other like product factors which the three grades of aluminum sulfate have in common.

25/ While price sometimes is a factor in the Commission's like product definitions, ASCOLFLORES, 693 F. Supp. at 1170 n.8, and there appears to be a substantial difference between the price of the dry and the liquid forms of aluminum sulfate, this is only one factor in the like product analysis. The dry form of aluminum sulfate is sold at a higher price than the liquid form because it must undergo the further processing necessary to remove the water and then crush, grind, and screen the product.

26/ Statement of Mr. Farmer, Tr. at 56-57.

27/ See Report at A-2-A-3. Some buyers, however, demand the high grade, i.e., iron-free, product. Id. at A-3.

28/ Iron-free aluminum sulfate is significantly more expensive than the standard grade. During the week of February 3, 1989, standard grade sold for \$217 per ton and iron-free for \$335 per ton. Chemical Marketing Reporter at 30 (Feb. 6, 1989).

Accordingly, we find that all three grades of aluminum sulfate, whether liquid or dry, constitute a single like product. 29/ Further, we define the domestic industry 30/ to be U.S. producers of aluminum sulfate. 31/

Related Parties

Under section 771(4)(B) of the Tariff Act of 1930, when a producer is related to an exporter or importer of the product under investigation, or is itself an importer of that product, the Commission may exclude such producers from the domestic industry in appropriate circumstances. 32/

29/ See, e.g., Electrolytic Manganese Dioxide from Greece, Ireland, and Japan, Inv. Nos. 731-TA-406 through 408 (Preliminary), USITC Pub. 2097 (July 1988) at 4-7 (one like product encompassing two grades of electrolytic manganese dioxide where both were produced at the same plants using the same facilities, were supplied through similar channels of distribution, and were similarly priced); Potassium Permanganate from the People's Republic of China, Inv. No. 731-TA-125 (Final), USITC Pub. 1480 (January 1984) at 5-7 (one like product where all three grades of the chemical had the same formula, the major part of the manufacturing process was identical for all three grades, many of the uses were interchangeable, and the grades were similarly priced).

30/ The domestic industry is defined in section 771(4)(A) of the Tariff Act of 1930 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.

19 U.S.C. § 1677(4)(A).

31/ In light of this industry definition, Chairman Brunsdale notes that the petition lacks the support of firms accounting for a significant share of domestic production. Of the five aluminum sulfate producers who sell both the liquid and dry forms of the product, only Delta supports the petition. Delta accounts for less than one third of domestic production of dry aluminum sulfate. Of the twenty-one firms producing only liquid aluminum sulfate who were contacted by the Commission in connection with this investigation, only one small producer indicated support for the petition. The two firms that support the petition, account for less than five percent of domestic production of the like product as defined by the Commission. See Report at A-7 and questionnaire responses.

32/ 19 U.S.C. § 1677(4)(B).

Application of the related parties provision is within the Commission's discretion based upon the facts presented in each case. 33/

The Commission generally applies a two-step analysis in determining whether to exclude a domestic producer from the domestic industry under the related parties provision. The Commission considers first whether the company qualifies as a related party under section 771(4)(B), and second whether in view of the producer's related status there are "appropriate circumstances" for excluding the company in question from the definition of the domestic industry. 34/ The related parties provision may be employed to avoid any distortion in the aggregate data bearing on the condition of the domestic industry that might result from including related parties whose operations are shielded from the effects of the subject imports. 35/

In this investigation, General Chemical is both a producer and an importer of dry aluminum sulfate and, thus, is a related party under section 771(4)(B).

However, we do not find it appropriate to exclude General Chemical from the domestic industry. General Chemical's financial condition does not show that it has been shielded from the effect of LTFV imports. 36/ Industry data indicate that the nature of competition in the aluminum sulfate market, and General Chemical's status as an importer, do not seem to be causing

33/ Empire Plow Co. v. United States, 11 CIT ___, 675 F. Supp. 1348, 1352 (1987).

34/ See, e.g., Digital Readout Systems and Subassemblies Thereof from Japan, Inv. No. 731-TA-390 (Final), USITC Pub. 2150 (January 1989) at 15.

35/ Granular Polytetrafluoroethylene Resin from Italy and Japan, Inv. Nos. 731-TA-385 and 386 (Preliminary), USITC Pub. 2043 (December 1987) at 9.

36/ See Report at A-13, Table 8. See also Certain All-Terrain Vehicles from Japan, Inv. No. 731-TA-388 (Preliminary), USITC Pub. 2071 (March 1988).

General Chemical to conduct business differently from the other U.S. producer of aluminum sulfate from whom the Commission has received complete information. 37/ It appears that General Chemical's primary interest lies in domestic production. 38/ Further, exclusion of General Chemical would distort the data as to the condition of the domestic industry as General Chemical's share of the total domestic production of both dry and liquid aluminum sulfate represents a significant portion of U.S. production of the like product. 39/ For these reasons we have not excluded General Chemical as a related party.

Regional Industry

Section 771(4)(C) 40/ establishes three requirements for a regional

37/ See Report at A-23-A-28. See also Internal Combustion Engine Forklift Trucks from Japan, Inv. No. 731-TA-377 (Final), USITC Pub. 2082 (May 1988).

38/ See Report at A-4 (General Chemical operate 2 plants producing dry aluminum sulfate) and questionnaire data (General Chemical operates 21 plants producing liquid aluminum sulfate).

39/ See Report at A-6 and data submitted to the investigator.

40/ This section states in pertinent part:

(C) **Regional industries.**--In appropriate circumstances, the United States, for a particular product market, may be divided into 2 or more markets and the producers within each market may be treated as if they were a separate industry if --

(i) the producers within such market sell all or almost all of their production of the like product in question in that market, and

(ii) the demand in that market is not supplied, to any substantial degree, by producers of the product in question located elsewhere in the United States.

In such appropriate circumstances, material injury, [or] threat of material injury...may be found to exist with respect to an industry even if the domestic industry as a whole...is not injured, if there is a concentration of subsidized or dumped imports into such an isolated market and if the
(continued...)

industry analysis: (1) producers within the region must sell "all or almost all" of their production within the region; (2) demand within the region must not be supplied to any substantial degree by producers located elsewhere in the United States; and (3) there must be a concentration of dumped or subsidized imports into the region.

The only region proffered by any of the parties in this investigation is the "mid-Atlantic states" region suggested by petitioner. 41/ Even if we were to assume that ill-defined mid-Atlantic states make up the correct region to be analyzed in this investigation, such a region would fail to meet the third regional industry statutory criterion that there must be a concentration of dumped imports into the region. 42/ The LTFV imports are not concentrated in this region because they have entered the United States in substantial quantities at no fewer than two points since 1986: Claymont, Delaware and East St. Louis, Illinois. 43/ The Claymont imports are generally distributed throughout the mid-Atlantic states while the East St.

40/ (...continued)

producers of all, or almost all, of the production within that market are being materially injured or threatened by material injury...by reason of the subsidized or dumped imports. 19 U.S.C. § 1677(4)(C).

41/ Statement of Mr. Farmer, Tr. at 45. Petitioner stated that it defines "mid-Atlantic" as it suits their purposes. Staff telephone conversation with Mr. Farmer, March 17, 1989.

42/ See Portland Hydraulic Cement from Australia and Japan, Inv. Nos. 731-TA-108 and 109 (Final), USITC Pub. 1440 (October 1983). Lack of a clearly defined region makes it unnecessary to consider the first two statutory factors.

43/ See Report at A-5. Staff telephone conversation with Mr. Philip Reilly, Manager Chemicals Group, General Chemical Corp., March 17, 1989.

Louis imports are generally distributed in Iowa, Kansas, Kentucky, and Ohio. 44/
For this reason, we find based on the record before us that a regional industry analysis is not appropriate in this investigation.

Condition of the Domestic Industry

In determining the condition of the domestic industry, the Commission considers, among other factors, the domestic consumption of the product, U.S. production, capacity, and capacity utilization, shipments, inventories, employment, financial performance, and existing development and production efforts within the context of the business cycle and conditions of competition that are distinctive to the domestic industry. 45/ The period of the Commission's investigation covers the years 1986 through 1988.

Apparent consumption of aluminum sulfate in the United States increased by 10.3 percent from 1986 to 1988. 46/ U.S. capacity increased 8.2 percent from 1987-1988. 47/ U.S. production of aluminum sulfate increased 9.8 percent during the period of this investigation. 48/ Shipments of aluminum

44/ Statement of Mr. Farmer, Tr. at 45; Staff telephone conversation with Mr. Philip Reilly, Manager of the Chemicals Group, General Chemical Corp., March 17, 1989. The Swedish aluminum sulfate is fairly evenly divided between the entry points in Delaware and Illinois.

45/ 19 U.S.C. § 1677(7)(C)(iii), as amended by section 1328 of the Omnibus Trade and Competitiveness Act of 1988 (hereinafter "1988 Act"), Pub. L. 100-418, 102 Stat. 1107, 1205.

46/ See Report at A-20, Table 12. The Commission compiled questionnaire data and official statistics representing approximately 100 percent of the domestic industry with respect to apparent consumption, U.S. production, and U.S. shipments.

47/ Compiled from questionnaire data representing 43 percent of domestic industry.

48/ See Report at A-7.

sulfate increased by 6.3 percent from 1986 to 1987. 49/ The number of production and related workers producing aluminum sulfate declined from 1986 to 1987, 50/ as did the hours worked by production and related employees, 51/ and compensation paid to production and related workers. 52/ The output of aluminum sulfate per worker increased over the same period. 53/ Aggregate operating income for producers of aluminum sulfate decreased slightly from 1986 to 1988. 54/ Operating income as a percentage of net sales remained relatively stable during the period of investigation. 55/ Research and development expenses for aluminum sulfate increased slightly from 1986 to 1988. 56/

49/ See id. at A-7.

50/ See Report at A-15 and A-16, Table 4. The Commission compiled questionnaire data representing approximately 40 percent of the domestic industry with respect to production workers, hours worked, compensation, output per worker, aggregate operating income, operating income as a percentage of sales, and research and development expenditures. This low coverage results from the lack of interest in providing questionnaire responses on the part of members of the domestic industry. See id. at A-8. Limitations on the marketing of aluminum sulfate diminish the importance of this investigation to other members of the aluminum sulfate industry and accordingly also diminish the significance of the absence of more complete data. See discussion below at text accompanying notes 62-71. The data obtained, however, constitute the best information available. See Hannibal Industries, Inc. v. United States, 13 CIT ___, Slip op. 89-32 at 13 (March 17, 1989).

51/ See Report at A-10, Table 4.

52/ See id. at A-11, Table 5.

53/ See id. at A-10, Table 4.

54/ See id. at A-12, Table 6.

55/ See id.

56/ See id. at A-14.

While the indicators are mixed, and the questionnaire response rate relatively low in some areas, we do not see any indication of problems in the performance of the overall industry. In particular, much of the data available to the Commission comes from those firms whose data ought to reveal the poorest condition, namely the petitioner and the importer. 57/ However, their data indicate only slight declines in some areas and they provide no reasonable indication of material injury. Further, regardless of the existence of material injury we do not find a reasonable indication of a causal nexus between the Swedish imports and the condition of the industry. 5

No Reasonable Indication of Material Injury by Reason of Imports

In making a preliminary determination in an antidumping investigation, the Commission is to determine whether there is a reasonable indication of material injury to the domestic industry "by reason of" the imports under investigation. 59/ In determining whether the domestic industry is materially injured "by reason of" LTFV imports from Sweden, the Commission considers, among other factors, the volume of imports, the effect of imports on prices in the United States for the like product, and the impact of such

57/ In this investigation, the importer of dry aluminum sulfate from Sweden, General Chemical, is also a domestic producer of aluminum sulfate. General Chemical idled its dry aluminum sulfate facilities in East St. Louis when it began to import the Swedish product. Therefore, several economic indicators for General Chemical's data declined.

58/ Chairman Brunsdale and Vice-Chairman Cass do not reach a separate legal conclusion based on the condition of the domestic industry. They believe that the discussion of the domestic industry is accurate and relevant to their decision regarding the existence of a reasonable indication of material injury or threat of material injury by reason of the allegedly LTFV imports.

59/ 19 U.S.C. § 1673b(a).

imports on the relevant domestic industry. 60/ The Commission may take into account information concerning other causes of harm to the domestic injury, but it is not to weigh causes. 61/ The imports need only be a cause of material injury. 62/

We determine that there is no reasonable indication that dry aluminum sulfate imports are a cause of material injury to the domestic industry. The volume of U.S. imports of dry aluminum sulfate from Sweden decreased over 7 percent during the period of investigation. 63/ The volume of imports, measured in terms of value, fell by about 7 percent over this same period. 64/

The share of the U.S. aluminum sulfate market held by dry aluminum sulfate imports from Sweden is small and declining. 65/ In light of this

60/ 19 U.S.C. § 1677(7)(B), as amended by Section 1328 of the 1988 Act, Pub. L. 100-418, 102 Stat. 1107, 1205.

61/ "Current law does not...contemplate that the effects from the subsidized [or LTFV] imports be weighed against the effects associated with other factors (e.g., the volume and prices of nonsubsidized [LTFV] imports, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology, and the export performance and productivity of the domestic industry) which may be contributing to overall injury to an industry." S. Rep. No. 249, 96th Cong. 1st Sess. 57, 74 (1979).

62/ *Citrosuco Paulista, S.A. v. United States*, 12 CIT ___, Slip op. 88-176 at 64 (December 30, 1988); *Hercules, Inc. v. United States*, 11 CIT ___, 673 F. Supp. 454, 479-80 (1987).

63/ See Report at A-18, Table 10.

64/ See id.

65/ See id. at A-20, Table 12.

small and declining market share, the volume of imports of dry aluminum sulfate from Sweden is not significant. 66/

We also find that the subject imports have had no significant effect on prices for the like product. 67/ The effect of Swedish dry aluminum sulfate imports on prices of aluminum sulfate in the United States is minimized by the limited range of distribution of aluminum sulfate from its point of production or importation. The high cost of transportation relative to the value of aluminum sulfate limits the sales territories of each producer. 68/ The Swedish imports enter the United States at two locations: Claymont, Delaware and East St. Louis, Illinois. 69/ The impact of the Swedish imports, therefore, is confined to the areas served by these two points of distribution. For this reason, much of the domestic market and industry appears to be beyond the practical reach of the imports. The two members of the industry most likely to be significantly affected are petitioner and respondent who compete in the area served primarily by the Claymont, Delaware imports. As we noted in our discussion of material injury, the performance data on these two producers reflects only minor declines for some indicators. Imports have been present in the market for three years and we see no pattern in bids to supply aluminum sulfate to municipalities which indicate underselling. 70/ Underselling margins in spot sales of dry

66/ See 19 U.S.C. § 1677(7)(C)(i).

67/ 19 U.S.C. § 1677(7)(C)(ii)(II), as amended by Section 1328 of the 1988 Act, Pub. L. 100-418, 102 Stat. 1107, 1205.

68/ See Report at A-4.

69/ See id. at A-5.

70/ See id. at A-23-A-24, Table 13.

aluminum sulfate are extremely small. 71/ This fact, in concert with a declining import volume and low import penetration of the U.S. aluminum sulfate market, leads us to conclude that there is no reasonable indication of material injury to the aluminum sulfate industry by reason of the Swedish imports. Further, the limited range of distribution of aluminum sulfate from its point of importation or production, combined with the lack of interest on the part of the domestic industry in this investigation, leads us to conclude that there is no likelihood that contrary evidence would arise in a final investigation.

No Reasonable Indication of Threat of Material Injury.

Section 771(7)(F) of the Tariff Act of 1930 directs the Commission to determine whether a U.S. industry is threatened with material injury by reason of imports "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." 72/ The ten factors the Commission must consider are:

(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,

71/ See id. at A-27, Table 15.

72/ 19 U.S.C. § 1677(7)(F)(ii).

(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,

(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 1671 or 1673 of this title or to final orders under section 1671e or 1673e of this title, 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. 73/

In addition, we must consider whether dumping findings or antidumping remedies in markets of foreign countries against the same class of merchandise suggest a reasonable indication of threat of material injury to the domestic industry. 74/ We consider these factors in turn. 75/

73/ 19 U.S.C. § 1677(7)(F)(i), as amended by Sections 1326(b) and 1329 of the 1988 Act, Pub. L. 100-418, 102 Stat. 1107, 1204 and 1206.

74/ See 19 U.S.C. § 1677(7)(F)(iii), as amended by Section 1329 of the 1988 Act, Pub. L. 100-418, 102 Stat. 1107, 1206.

75/ There is no subsidy alleged in this antidumping investigation.

The Swedish exporter's capacity to produce dry aluminum sulfate remained stable during the period of investigation, neither increasing nor decreasing. 76/ This unchanging production capacity indicates that there is little potential for imports of dry aluminum sulfate to the United States to increase significantly.

Market penetration of the Swedish imports is small and declining. 77/ It appears unlikely that market penetration will increase. 78/ Currently, virtually all the Swedish exports to the United States are imported by General Chemical under the terms of two fixed-dollar-denominated contracts negotiated in 1984 and 1985. 79/ From January 1986 to November 1988, the real value of the Swedish kroner appreciated 22.7 percent relative to the U.S. dollar. 80/ Consequently, it appears likely that the price of the Swedish imports will be too high relative to the costs of domestic production for the imports to increase to any significant degree.

Imports of Swedish dry aluminum sulfate appear to have had little effect on the domestic aluminum sulfate industry because of the limited distribution of aluminum sulfate from its point of importation (or production). 81/ The inconclusive bidding patterns and the minimal margins of underselling found in this investigation combined with a declining import

76/ See Report at A-17, Table 9.

77/ See Report at A-20, Table 12.

78/ See respondent's post conference statement at 26.

79/ See Report at A-22; respondent's post conference statement at 2-3; Statement of Mr. John Greenwald, Counsel to General Chemical Corp., Tr. at 76.

80/ See Report at A-29 and Table 16.

81/ See discussion above at text accompanying notes 67-71.

volume leads us to conclude that there is no reasonable indication that the Swedish imports will have a depressing or suppressing effect on the domestic price of aluminum sulfate.

There has not been an increase in inventories of Swedish dry aluminum sulfate in the United States during the period of investigation. 82/ Further, capacity utilization for producing aluminum sulfate in Sweden is high. 83/ When requested in late 1987, the Swedish exporter was unable to supply a U.S. producer desiring iron-free aluminum sulfate with a Swedish product because it was operating at full capacity and did not have the material available. 84/

We find no other demonstrable adverse trends that indicate the probability that importation of the merchandise will be the cause of actual injury.

There is no evidence of product shifting in this investigation, because there are no known antidumping or countervailing duty investigations or orders that apply to Swedish production facilities that may be used to produce dry aluminum sulfate.

We find no meaningful evidence of any actual or potential negative effects on efforts to develop a derivative or more advanced version of the like product.

Finally, there do not appear to be any dumping findings or antidumping

82/ See Report at A-16.

83/ See id. at A-17.

84/ See id.

orders in effect in third countries with respect to dry aluminum sulfate imports from Sweden. 85/

Based upon the threat factors discussed above, we find no reasonable indication of threat of real and imminent material injury to the domestic industry producing aluminum sulfate by reason of the importation of dry aluminum sulfate from Sweden: the Swedish exporter is not increasing its Swedish capacity, the Swedish exporter's capacity utilization is high, and it appears likely that the price of the Swedish product will soon be too high for the importation of aluminum sulfate to continue to be economically viable.

Conclusion

For all the reasons set forth above, we determine that there is no reasonable indication that a domestic industry in the United States is materially injured, is threatened with material injury, or that the establishment of an industry in the United States is materially retarded by reason of imports from Sweden of dry aluminum sulfate.

85/ See Tr. at 48 and 89.

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ADDITIONAL VIEWS OF VICE-CHAIRMAN RONALD A. CASS

Dry Aluminum Sulfate from Sweden
Inv. No. 731-TA-430 (Preliminary)

I join my colleagues in determining that there is not a reasonable indication that an industry in the United States has been materially injured by reason of unfairly traded imports of dry aluminum sulfate from Sweden. I also join their determination as to like product in this investigation. I write separately, however, to address several issues which are of concern in this investigation.

I. LEGAL STANDARD GOVERNING DISPOSITION OF
PRELIMINARY INVESTIGATIONS

As I have often noted,^{1/} the quantum of proof required to sustain an affirmative determination is clearly lower than that required in order to reach an affirmative determination in a final investigation. That is because, as our reviewing courts have noted, Congress intended to "weight the scales in favor of affirmative and against negative determinations."^{2/} Put another way, the preponderance of the evidence need not be in favor of a

^{1/} See, e.g., New Steel Rails from Canada, Inv. No. 701-TA-297, USITC Pub. 2135 (November 1988) (Additional Views of Commissioner Cass).

^{2/} American Lamb v. United States, 785 F.2d 994, 1001 (Fed. Cir. 1986); see also Yuasa-General Battery Corp. v. United States, slip op. 88-89 (Ct. Int'l. Trade, July 12, 1988), at 5.

petitioner in a preliminary investigation before an affirmative determination may be made.

By the same token, however, it is just as plain that the "reasonable indication" standard was not intended to preclude any possibility of negative determinations in preliminary investigations. As the Court of Appeals made clear in its decision in American Lamb, in articulating this standard, Congress sought to balance two competing concerns. Congress did not want meritorious petitions rejected, and hence provided that investigations should continue past the preliminary stage even when the evidence of record was not sufficient to support an affirmative final determination. The very reason for providing the intermediate step of a preliminary investigation, however, was Congress' belief that the costly process of final investigations both by this Commission and the Department of Commerce, with the attendant disruptive effect upon trade, should not be endured unless there were sufficient injury to a domestic industry at stake to justify the cost.

It is for that reason that Congress clearly intended that, even in preliminary investigations, there must be an affirmative demonstration of material injury from the imports under investigation, albeit with less evidentiary support necessary to that demonstration.^{3/} This is not exactly the same as placing a legal burden on the petitioner, as the Commission in all instances is obligated to conduct its own investigation. Together, however, the evidence adduced by the petitioner and the Commission must

^{3/} See S. Rep. No. 96-249, 96th Cong., 1st Sess. 49, 66 (1979).

satisfy us that there is "at least a colorable basis" for an affirmative final determination.^{4/}

There are at least two ways in which the evidence might fail to meet that standard. First, in the course of the preliminary investigation, there may simply be insufficient evidence before the Commission that the required quantum of material injury exists to warrant an affirmative determination in a subsequent final investigation. Despite some confusing judicial dicta, the Commission need not in such circumstances have clear and convincing evidence of the absence of material injury before it may reach a negative determination, as I have argued in the past^{5/} and as the Federal Circuit has indicated in approving past Commission practice.^{6/} Nonetheless, where the record evidence is "thin," the Commission must be careful not to reach a negative determination solely on the basis of evidentiary gaps. Rather, the Commission must assess the perhaps ambiguous information before it and evaluate the likelihood that additional information supporting the petitioner might be adduced in a later, more extensive investigation, and that such information would suffice for an affirmative determination. Any information in such cases can be used to draw inferences adverse to the petitioner only if that evidence clearly and convincingly favors the respondent.

^{4/} Electrolytic Manganese Dioxide from Japan, Ireland and Greece, Inv. Nos. 731-TA-406-408 (Preliminary), USITC Pub. 2097 (July 1988) (Additional Views of Vice Chairman Brunsdale and Commissioners Liebeler and Cass) at 23-24.

^{5/} New Steel Rails, supra n. 1, at 30. I have also reached affirmative preliminary determinations when there was little information before the Commission, but the possibility of obtaining information which would support an affirmative determination in a final investigation was sufficient to warrant proceeding. See Sewn Cloth Headwear from the People's Republic of China, Inv. No. 731-TA-405 (Preliminary), USITC Pub. 2096 (July 1988) (Additional Views of Commissioner Cass).

^{6/} American Lamb Co. v. United States, 785 F. 2d 994 (1986).

There is a second kind of case, however, in which such ambiguous evidence is of less relevance. Those are cases in which there exists sufficient evidence to satisfy the Commission that a negative determination would be reached in any final investigation, no matter how the evidence that remains in dispute at the time of the preliminary determination is ultimately evaluated. In short, when there exists clear and convincing evidence in a preliminary investigation that the petitioner has not suffered material injury by reason of less than fair value imports, the Commission is justified in reaching a negative preliminary investigation to avoid uselessly incurring burdensome investigative costs. Although the Commission need not in all investigations have clear and convincing evidence of the absence of material injury before reaching a negative preliminary determination, the Commission's task is considerably easier when such evidence exists.

I believe that in the present investigation sufficient evidence of a lack of material injury exists to justify the Commission in reaching a negative determination. Much additional evidence could be gathered in a final investigation, and many ambiguities in the evidence so far presented might upon further investigation be resolved in favor of Petitioner. Nevertheless, there is here sufficient evidence already on the record to make it clear that a negative determination would in all likelihood be reached if this investigation were to proceed to the final stages.

II. Like Product

I concur with my colleagues that dry aluminum sulfate and liquid aluminum sulfate constitute a single like product within the meaning of Title

VII of the Tariff Act,^{7/} and that the three grades of aluminum sulfate should for our purposes similarly be considered a single like product. Under that statute, the Commission must assess the effects of LTFV imports on the industry in the United States comprised of "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."^{8/} The term "like product," in turn, is defined 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."^{9/}

Traditionally, the Commission's general approach to defining the like product has entailed the examination of five factors: (1) product characteristics and uses, (2) interchangeability, (3) channels of distribution, (4) customer or producer perceptions of the relevant articles, and (5) common manufacturing equipment, facilities, and production employees.^{10/} In addition, although the Commission has not expressly incorporated comparison of prices as one of the factors examined in its like-product determination, it has often considered the similarity (or disparity) of prices for imports and potential like domestic products.^{11/}

^{7/} Tariff Act of 1930, ch. 497, Title VII, § 735, as added by the Trade Agreements Act of 1979, Pub. L. No. 96-39, Title I, § 101, 93 Stat. 150, 169 (codified as amended at 19 U.S.C. § 1673d(b)).

^{8/} 19 U.S.C. § 1677(4).

^{9/} 19 U.S.C. § 1677(10).

^{10/} See, e.g., Fabric and Expanded Neoprene Laminate from Taiwan, USITC Pub. 2032, Inv. No. 731-TA-371 (Final) at 4 and n. 5 (Nov. 1987).

^{11/} See, e.g., *Asociacion Colombiana de Exportadores de Flores v. United States*, 12 Ct. Int'l Trade ___, 693 F. Supp. 1165, 1170 n. 8 (citing use of comparative pricing data as a suitable factor in analyzing like product issues).

As I have argued in the past,^{12/} these factors on which the Commission has traditionally relied serve to provide the Commission with information about the nature of the markets for closely competing domestic products and the markets for the factors of production of those products. Information about the market for products is obtained by analyzing the physical characteristics and uses of products, their interchangeability, their channels of distribution, and customer perceptions of their similarity or dissimilarity. It is likely that products compete closely if they are interchangeable, or if they evidence high degrees of similarity in characteristics and uses and in channels of distribution. The extent to which they compete should be reflected in customer perceptions of their similarity, which in turn should be reflected in similar prices for products of comparable quality. Furthermore, the existence of common production facilities and employees indicates competitiveness between the products in hiring factors of production. However, the competition between products may be limited if, as in this case, users cannot substitute easily between the products once they have invested in capital equipment appropriate to one or the other. Necessarily, the decision to regard two products as "like" or unlike may involve judgments as to when substitutability is sufficiently imperfect or incomplete to justify treating the products as distinct for the Commission's purposes.

I believe that, in light of the Commission's traditional criteria, dry and liquid aluminum sulfate are most appropriately considered to be a single like product. The Commission's opinion, with which I generally concur,

^{12/} Digital Readout Systems and Subassemblies Thereof from Japan, Inv. No. 731-TA-390 (Final), at 64 (March 1989) (Concurring and Dissenting Views of Commissioner Cass).

explains this conclusion in some detail, and I believe it is unnecessary to replicate that explanation. However, it is clear that the ability of consumers to substitute between products is an issue which underlies the determination as to whether to include those products within a single like product grouping. In another recent investigation,^{13/} I have drawn distinctions among products on the basis of limits on the ability of users to effect ready substitution. In this investigation, in contrast, I have determined that, though obstacles and costs face consumers which wish to substitute liquid for dry aluminum sulfate, or vice versa, those costs are not sufficient to lead me to distinguish dry and liquid aluminum sulfate as separate like products. To avoid the possibility of confusion on this issue, I feel it is appropriate to explain why I have reached a different conclusion in this investigation.

In 3.5" Microdisks, the Commission was confronted with two competing products, double density and high density microdisks. Although these products served similar functions and consumers in principle could substitute one for the other, the evidence of record in that investigation indicated that such substitution would be sufficiently costly to discourage virtually all such substitution in response to changes in the relative prices of the two products. In the instant investigation, as in Microdisks, dry and liquid aluminum sulfate serve essentially identical functions and consumers can also in principle substitute between them. Also as in Microdisks, such substitution obviously is costly. As Petitioner points out, users regard dry and liquid aluminum sulfates as not readily interchangeable; in order to

^{13/} 3.5" Microdisks and Media Therefor from Japan, Inv. No. 731-TA-389 (Preliminary) ("Microdisks"), USITC Pub. 2076 (April 1988) (Additional Views of Commissioner Cass) at 44-48.

substitute between the products, a user would need to change the handling system for the unloading, storage, transfer, and feeding of the alum, a conversion which Petitioner suggests would cost at least \$25,000 and involve substantial time periods even for small users.^{14/} The necessity of substantial capital investment facing any user to effect a substitution between dry and liquid aluminum sulfate clearly limits the degree to which substitution between the two will occur in response to relatively minor changes in prices.

However, I believe that, in terms of the same factors which I found to be determinative in distinguishing between high density microdisks and double density microdisks, it would not be appropriate to distinguish at this time between dry and liquid aluminum sulfate. First, I noted that high density microdisks "cannot, as a practical matter, be used reliably or efficiently in double density drives"^{15/} without causing errors in data transmission. Such obstacles do not exist in substitution between dry and liquid aluminum sulfates. As Respondent argues, the two forms of alum are almost entirely interchangeable in use, a consequence of the two forms being exactly the same compound and of the fact that users of dry alum must simply dissolve it in water before using it; and indeed, end users regard the two as serving exactly the same performance characteristics.^{16/}

Second, I noted that "[i]t is most unlikely that any significant number of consumers would purchase a high density microdisk and format it for a

^{14/} Petitioner's Post Conference Br. at 4.

^{15/} Microdisks at 45.

^{16/} Respondent's Post-Hearing Br. at 11-12.

double density drive."^{17/} In this investigation, substitution is considerably more plausible. Whereas microdisks are used by individual consumers, who are likely to find the need for additional capital investments a significant deterrent to substitution, alum users are either municipal water departments or industrial producers of paper, textiles, or other materials which require the settling of particulate matter in water. For such cost-sensitive users, substitution is not only likely, but in fact is a significant trend in the industry.^{18/} Where, as here, the end users of the product in question are not individual consumers, but are instead large enterprises such as municipal water departments, the need for such capital investments clearly is less effective in separating the markets for related products; such enterprises are in general willing to undertake the necessary capital investments in response to sufficient price incentives, price incentives which are clearly present in the alum market.^{19/}

Third, I noted in distinguishing high density microdisks from double density microdisks that "[t]he nature of the products in question virtually precludes the possibility that consumers' decisions concerning the purchase of a particular type of microdisk would be significantly affected by changes in the relative prices of the two types of disks."^{20/} Users here are clearly sensitive to price. Indeed, it is the lower price of liquid alum which apparently is the source of the growing substitution from dry to liquid

^{17/} Microdisks at 45.

^{18/} Report at A-16.

^{19/} Petitioner notes that liquid alum currently is available at about \$145 per ton, while dry alum costs about \$220 per ton in bulk. Petitioner's Post-Conference Br. at 7.

^{20/} Microdisks at 45.

alum.^{21/} Ultimately, this direct evidence of substitution is persuasive that these products are indeed so competitive as to constitute a single like product.

I note that the issue here is not one as to which the evidence is thin or ambiguous, although it does require judgement. The degree to which consumers will substitute one product for another is just that, a matter of degree; there is not an either-or test, but instead evaluation along a continuum. The appropriate like product definition will depend on where the facts of an investigation fall along that continuum. For the reasons I have given above, I believe that regarding dry and liquid aluminum sulfates as part of a single like product category is the most persuasive resolution of this matter.

III. Causation

In order to determine whether there is a reasonable indication that the domestic industry has suffered material injury by reason of the subject imports, I have carried out the three-part inquiry suggested by the statute that governs Title VII investigations.^{22/} Under this approach, the possible existence of material injury is analyzed by comparing the conditions experienced by the domestic industry to the conditions that would have existed had there been no unfairly traded imports. Three questions must be examined in order to perform this analysis. First, it is necessary to draw inferences respecting the extent to which prices and sales of the subject

^{21/} Report at A-21.

^{22/} See, e.g., Microdisks at 70-74.

imports were affected by the alleged unfair trade practices. Second, the effect of these apparent changes in the market for the subject imports on prices and sales of the domestic like product must be assessed. Finally, the impact of these changes in prices and sales of the domestic like product on employment and investment in the domestic industry must be considered. The Commission must evaluate whether these effects are "material" within the meaning of the statute. Furthermore, the recently-enacted Omnibus Trade and Competitiveness Act of 1988 has directed that the Commission explicitly consider and state its conclusions on the factors that form the basis for each of these inquiries.

A. Volumes and Prices of LTFV Imports

Over the period covered by our investigation, the volume of imports of dry aluminum sulfate from Sweden has declined in both quantity and value terms. In 1986, nearly [* *] pounds of dry aluminum sulfate were imported from Sweden; by 1988 that figure had fallen to just under [* *] pounds, a decrease of approximately seven percent.^{23/} In value terms, imports of dry alum from Sweden also fell substantially, from \$[* *] to \$[* *], also a decrease of approximately seven percent. We have no evidence that liquid alum was imported from Sweden within the period of investigation.^{24/}

The volumes of the LTFV imports are closely related to the prices at which those imports are sold.^{25/} The record evidence in this investigation indicates that dumping resulted in significant decrease in the prices of the

^{23/} Report at A-18.

^{24/} Id.

^{25/} Digital Readout Systems and Subassemblies Thereof from Japan, USITC pub. 2150, Inv. No. 731-TA-390 (Final), at 25-26 (Jan. 1989) (Concurring and Dissenting Views of Commissioner Cass).

subject imports. The margin alleged by Petitioner in this investigation are based on constructed value for production by the Swedish maker of the imported product, Boliden Kemi AG. The margin alleged is 60.8%.^{26/}

While in many cases there may be only a partial relationship between the dumping margin and the change in price which results from that dumping in the domestic market, in the instant preliminary investigation I have assumed that the LTFV margin in this investigation fairly reflects the degree to which the domestic price of the imported product is lower than it would be in the absence of the alleged dumping. Generally, at least where the dumping margin is based on comparison of actual sales prices, dumping causes a decrease in the price of the dumped product by a fraction of the dumping margin roughly comparable to the share of the sales at issue that are made in the foreign producer's home market. In the present investigation, we do not have a dumping margin based on actual price comparisons. Moreover, Boliden's sales in the United States have been small relative to that firm's sales in its home market. This makes it likely that, had Boliden charged a single price in its home and foreign markets, the price which it charged in the United States would have risen by nearly the full extent of the alleged dumping margin, assuming that alleged margin to be accurate.^{27/}

^{26/} Report at A-1. The constructed home market cost is based on estimated cost of production in July-September 1988 and the average FAS value per net ton of the subject material entering the United States in November 1988, as reported by the Bureau of the Census.

In the absence of persuasive evidence that the alleged dumping margin is obviously unrealistic, it is Commission practice in preliminary investigations to use the dumping margin alleged by petitioner as the basis for its determination, and allow the Department of Commerce to assess the validity of petitioners' allegations.

^{27/} As I have elsewhere suggested, I believe that, in general, Petitioner's allegations concerning the LTFV margins are the best available evidence of the true dumping margin until the Department of Commerce has made a

B. Effects on Domestic Prices and Sales

Substantial alleged margins, while relevant, are not by themselves determinative of the question of whether material injury has been caused to a domestic industry by LTFV imports. In this case, there are several reasons to believe that the dumping alleged to have occurred could not have caused material injury to the domestic industry.

First, the volumes of the subject imports in this case are not substantial, relative to the size of the market as a whole. In 1988, imports of the subject imports constituted approximately [* *] of the domestic alum market. Even under assumptions about the domestic aluminum sulfate market that are most generous to Petitioner, this small sales volume would not have expected any appreciable effect on the price of domestic aluminum sulfate. The market does not appear so highly competitive or so highly responsive to price changes as to admit of a serious price effect from these imports, nor does there appear to be a realistic prospect for Respondent to supply a greatly increased quantity of aluminum sulfate so as to magnify the effects of the small volume of sales. Nor does the evidence of record on price movements provide any basis for a contrary inference.

The only realistic effect of the subject imports would have been through replacement of domestic sales. Yet, even if the subject imports had fully replaced domestic sales and thus resulted in a decline in domestic revenues of [* *], this injury would not rise in the context of this industry to the

determination as to the true margin. New Steel Rails from Canada, *supra* n. 1, at 39. That does not suggest, however, that the Commission necessarily must accept those alleged margins uncritically if there is reason to believe that the allegations are inherently implausible or are contradicted by record evidence.

level the Commission has in the past regarded as "material" within the meaning of the relevant statute.

Moreover, there is little reason to believe that the injury would in fact be even that high. Land transportation costs for dry alum are considerable as a share of the value of the alum itself.^{28/} For that reason, producers generally sell this product only within a limited distance from their plant locations. Imports into the United States do not represent a real competitive threat to domestic plants located very far at all from the imports' point of entry.^{29/} General Chemical, the sole importer of the subject imports, purchased goods that entered the United States at one of two locations: in East St. Louis, Illinois, where General Chemical idled its aluminum sulfate plant in 1987; and in Claymont, Delaware, where General Chemical shut down a dry aluminum sulfate plant in 1985.^{30/} The Illinois imports do not appear to compete seriously with any domestically produced aluminum sulfate. Petitioner operates a single plant in Baltimore, Maryland, within range of competition from imports arriving in Delaware but largely outside the market for imports arriving in Illinois. No other domestic producers have joined the petition. The Commission does not at this time have information as to the share of total Swedish imports which arrive at the East St. Louis site, but given the costs of moving this product, it is improbable that these would be a negligible share of total subject imports. As the imports into East St. Louis are unlikely to play a role in the injury of which petitioner complains, the true extent of the injury is thus likely to

^{28/} Report at A-21.

^{29/} Report at A-4.

^{30/} Report at A-17.

be considerably less than [* *] of revenues that domestic producers otherwise would secure from the domestic market.

Looking beyond the record's information on market conditions, there is even little anecdotal indication from the record that the subject imports were able to preempt General Chemical's competitors from sales they otherwise would have made. The Commission received persuasive testimony from the manager of General Chemical's Water Chemicals Group that General Chemical's contract with Boliden resulted largely from General Chemical's decision to close its plant in Claymont, Delaware for safety reasons. At the same time, the costs of land transportation for dry alum are such that General found it uneconomic to supply its Claymont plant's normal market area with the output of General's other alum plant in Atlanta, Georgia. For that reason, General Chemical chose to import dry alum from Sweden.^{31/} Again because of land transportation costs, neither the output of the Claymont plant nor the Swedish imports imported into Claymont were sold far from that site. It is implausible to assume that no sales would have been made by General had it been supplying the market with its own production; General is, after all, the largest domestic producer of dry aluminum sulfate, supplying nearly [* *] of the domestic market in 1988.^{32/} The relevant question, in that case, is what share of the sales attributable to imports would have been made by General if it had not been able to supply its mid-Atlantic region with imported alum. While that question cannot be answered with certainty, it is likely that it would have supplied domestically at least a substantial portion of those sales. Thus General, which opposes this petition, may be the

^{31/} Transcript of conference at 79-81.

^{32/} Report at A-6.

domestic producer likely to have been most affected by its importation of Swedish aluminum sulfate.

Petitioner Delta Chemical Corp. shows little evidence that its own sales are contracting. In 1986, Delta produced [* *] of dry alum; in 1988 it increased to [* *].^{33/} It is significant that U.S. consumption of dry aluminum sulfate fell by some 5% over the same period.^{34/} The parties to the investigation agree that the market for dry alum is declining, in large part because the cost advantage of liquid alum is so great as to lead consumers to undertake the considerable investment required to make that conversion.^{35/} Petitioner thus is making increased sales in a market that is a state of long-run decline.

C. Effects of Imports on Employment and Investment

Given the extremely small total effect of imports on the domestic industry's prices and sales, it is difficult to see how the imports could have produced material injury to the domestic industry. It is noteworthy that the domestic dry alum industry has, despite the presence of the subject imports, continued to make substantial investments in both physical plant and in research and development. Petitioner has, by its own report, expanded its production capacity by some [* *] between 1986 and 1988, and by [* *] since 1987.^{36/} Both Petitioner and Respondent have continued to make significant capital expenditures for land, buildings, and machinery and equipment for the manufacture of aluminum sulfate, and both have made

^{33/} Report at A-6.

^{34/} Report at A-19.

^{35/} Id.

^{36/} Report at A-8.

substantial investments in research and development over the period of investigation. While the material injury standard is not an absolute, invariant judgement as to the level of lost revenues,^{37/} this surely is not a case in which the industry is in such dire straits that the material injury concept could even arguably be stretched to cover the subject imports' effects.

Conclusion

The evidence is entirely persuasive that, if any injury to the domestic industry producing aluminum sulfate has occurred, that injury is not material within the meaning of Title VII of the Tariff Act. I also join the explanation in the Commission's opinion of the basis for concluding that there is no reasonable indication a threat of material injury to the domestic aluminum sulfate industry exists. For these reasons, I join my colleagues in reaching a negative determination in this preliminary investigation.

^{37/} ee Digital Readout Systems and Subassemblies Thereof from Japan, supra n. 12.

1

INFORMATION OBTAINED IN THE INVESTIGATION

Introduction

On February 13, 1989, a petition was filed with the U.S. International Trade Commission and the U.S. Department of Commerce by Delta Chemical Corp., Baltimore, MD, alleging that dry aluminum sulfate from Sweden is being sold in the United States at less than fair value (LTFV) and that an industry in the United States is materially injured and threatened with material injury by reason of such imports. Accordingly, effective February 13, 1989, the Commission instituted antidumping investigation No. 731-TA-430 (Preliminary) under section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)) to determine whether there is a reasonable indication that 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 such imports.

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register on February 22, 1989 (54 F.R. 7609). 1/ The public conference was held in Washington, DC, on March 6, 1989, 2/ and the vote was held on March 27. Dry aluminum sulfate has not been the subject of any other investigation conducted by the Commission.

Nature and Extent of Alleged Sales at LTFV

There is no information relating to the nature and extent of the alleged LTFV sales other than the allegations of the petitioner. The petitioner identified one producer in Sweden that has exported the subject article to the United States: Boliden Kemi AB, Helsingborg. On the basis of a constructed price for Boliden (based on estimated cost of production) in July-September 1988 and the average FAS value per net ton of the subject material entering the United States in November 1988 (as reported by the Bureau of Census), the petitioner imputes a dumping margin of 60.8 percent.

The Product

Description and uses

The imported article subject to the petitioner's complaint is dry aluminum sulfate--a solid chemical compound used primarily for water purification. It is chiefly characterized by its ability to attract and coagulate certain aquatic contaminants, allowing them to settle and/or be filtered out of the water. Accordingly, it is used in water wherever such treatment is demanded, such as drinking water, municipal and industrial

1/ Copies of the Commission's and Commerce's notices instituting the investigation are shown in app. A.

2/ A list of witnesses appearing at the conference is presented in app. B.

wastewater, and lakes and reservoirs. It is also used as an agent in the production of certain products, such as paper, textiles, food, cosmetics, dyes, leather, and petrochemicals.

To produce dry aluminum sulfate, aluminum ore--usually bauxite, bauxite clays, or alumina hydrate--is mixed with sulfuric acid and water to yield liquid aluminum sulfate, i.e., aluminum sulfate dissolved in water. (There are no by-products or co-products produced in the process). More than 90 percent of the aluminum sulfate sold in the United States is sold in liquid form. The removal of the water by evaporation yields dry aluminum sulfate, which is crushed, ground, and screened for particle size. The resulting solid, whether in powder or a more granular form, is either bagged or left in bulk for shipment. Because of the additional processing, dry aluminum sulfate is sold at a substantial premium--currently, 38 to 64 percent higher than the liquid form. 1/ Dry aluminum sulfate may be reconverted into liquid form by the addition of water, although this is not the usual practice of either producers or users and would require additional handling facilities. All of the product imported from Sweden is dry and imported in bulk.

The decision to buy liquid or dry aluminum sulfate is generally a matter of handling capability--i.e., the facilities the buyer has in place to store and feed aluminum sulfate into its system. Such facilities are designed to handle one or the other form. A user may have both liquid and dry capability by having two sets of handling equipment. Otherwise, to convert a user's facilities from dry to liquid--a potential transition in view of the price differential--would require a capital outlay on the order of \$10,000 to \$1 million or more, depending on the size of the user's system. New user systems, at least in those segments of the market that consume the bulk of aluminum sulfate, are almost invariably designed to handle the liquid form.

Virtually all of the liquid and dry aluminum sulfate produced and imported in the United States falls within three generally recognized grades of purity: "standard", "low iron", and "iron free". 2/ Grade is determined by the amount of aluminum, iron, and insolubles in the aluminum sulfate, the higher the grade the lower the content of these materials. In general the purity of aluminum sulfate is a function of the purity of the raw materials from which it is made. Higher grades are typically manufactured from high-purity alumina hydrates and sulfuric acids; lower grades are normally produced from bauxite and bauxite clays. The efficiency and age of a plant

1/ The petitioner, unlike other producers, operates two relatively independent lines of production--one for liquid aluminum sulfate and another for dry. In lieu of adding the necessary equipment to produce the dry form from its existing liquid plant, and uncertain as to the quality that might result, Delta elected to build the equivalent of an entirely new plant at the same location that would produce the dry form exclusively. The older equipment continues to produce the liquid form. Other producers use a common line of production for both forms, the dry requiring additional processing, as stated previously.

2/ The exact specifications for these grades may vary somewhat from producer to producer. Unlike many other chemicals, there are no standard specifications for grades of aluminum sulfate other than for a general classification of the chemical into "purified" and "non-purified".

can also have a bearing on the purity of the aluminum sulfate it produces. For a few users, particularly those using aluminum sulfate in the production of certain products, a high grade is demanded, sometimes even specified. By the same token, some producers are unwilling or unable to produce high grades of aluminum sulfate. In any case, buyers demanding high grades of purity are a relatively small portion of the market. For the overwhelming majority of users, purity, as long as it qualifies for at least standard grade, is of little or no consequence. All of the product imported from Sweden is manufactured from alumina hydrates and is classified as low iron.

There are a number of chemicals--such as ferric chloride and synthetic polymers--which may achieve results similar to aluminum sulfate in water purification; however, they are generally more expensive and require different handling equipment. A user cannot simply substitute one for the other. There are advantages and disadvantages of each, moreover, depending on the specific use. While, for example, aluminum sulfate tends to be less corrosive than many, it also tends to produce a thicker, less easily filtered coagulant. In addition, there are alternative water-treatment techniques which may dispense with water purification chemicals altogether. Many wastewater treatment plants, for example, have built-in filtration systems which are as effective as aluminum sulfate in removing certain contaminants. If incorporated into the plant during construction, such systems will very often lower overall operation and maintenance costs.

U.S. tariff treatment

Dry aluminum sulfate is provided for in subheading 2833.22.00 of the Harmonized Tariff Schedule of the United States (formerly provided for in item 417.16 of the Tariff Schedules of the United States), a classification which includes all aluminum sulfate, liquid and dry. The column 1 (most-favored-nation) rate of duty for this subheading, applicable to imports from Sweden, is free.

U.S. Market and Channels of Distribution

Most dry aluminum sulfate sold in the United States by U.S. producers is sold either directly to endusers or to chemical distributors, which store the chemical and supply endusers on an as-needed basis. Most sales made directly to endusers are made on the basis of competitive bids for annual contracts. Municipalities constitute a large, if not the largest, segment of this market. Under the usual terms of the contract, winning bidders are to supply the buyer's annual needs at an established price. Chemical distributors are less formal in their purchases, preferring to solicit producers for specific quantities as they need them.

Most, if not all, of the dry aluminum sulfate sold in the United States by the Swedish producer, Boliden, is purchased by a U.S. producer--General Chemical Corp., Parsippany, NJ. The Swedish material supplements General Chemical's own product, which it supplies to the market in the same fashion as do other U.S. producers.

Because of the chemical's bulk, and corresponding high transportation costs, producers are competitively limited to sales within a certain distance of their plant locations. In general, producers' plants are located to minimize the effect of overlapping territories. The two points of supply closest to one another are the petitioner's plant in Baltimore, MD, and General Chemical's shipping point for its Swedish material in Claymont, DE-- the location of a dry aluminum sulfate plant it closed in 1985. The competition for sales of dry aluminum sulfate between these two firms is exacerbated accordingly.

Liquid aluminum sulfate, which is always shipped in bulk form (tank truck and/or railway tank car), has an even more limited range of distribution. Most of its shipments are directly to end users within a 200-mile radius of the point of production. U.S. plants producing liquid aluminum sulfate, however, greatly outnumber those producing the dry form.

U.S. Producers

Currently, there are approximately 25 firms producing liquid aluminum sulfate at 50 to 100 plant locations throughout the United States. Of these firms, 4, in addition to the petitioner, have the additional capacity to produce the dry form: Stauffer Chemical Co.--at 2 plants, in Bastrop, LA, and Houston, TX; General Chemical--at 2 plants, in Atlanta, GA, and Pittsburg, CA; Holland Chemical Co.--at 1 plant in Adams, MA; and Koch Chemical Co.--at 1 plant in Rosemount, MN. ^{1/} The petitioner operates a single plant in Baltimore, MD. All of the above firms produce additional chemicals at the above plant locations, but not with the machinery and equipment used to produce aluminum sulfate. Such equipment is used exclusively for the production of the subject product. None of these firms produce the raw materials from which aluminum sulfate is made.

One dry aluminum sulfate plant has been shut down and one idled since 1986. In early 1986 Stauffer closed a plant in Oakland, CA, and in 1987 General Chemical idled a plant in E. St. Louis, IL.

U.S. Importers

One firm--General Chemical Co., Parsippany, NJ--accounts for virtually all of the subject material imported from Sweden since 1984. General Chemical has imported this material under ***. ***. General Chemical is not related to Boliden or any other Swedish manufacturer of aluminum sulfate, and other than storage, handling, and some packaging, adds no value to the imported product.

^{1/} General Chemical opposes the petition. The remaining producers do not wish to take a position.

Consideration of the Alleged Material Injury

Most of the data in the following sections reflect the operations of dry aluminum sulfate producers only, and, in many cases, only the operations of Delta and General Chemical. Except for basic trade data (capacity, production, and shipments), other dry producers' responses to Commission inquiries were incomplete. Responses of other liquid producers were sporadic and even less complete. 1/ For total aluminum sulfate production and shipments, however, public data are available, and this information has been duly recorded. 2/

The lack of response reflects an almost universal lack of interest in the instant investigation. Unlike Delta, other producers are situated in such a way as to compete only marginally, if at all, with General Chemical in the marketplace--at least for sales of the dry product. The impact of any alleged dumping may be confined to an area served mostly by these two firms. Pursuant to section 771(4)(C) of the Tariff Act of 1930 (19 U.S.C. 1677(4)(C)), the producers in a region of the United States may be treated as a separate industry if: (1) the producers in the region concentrate their shipments within the region; (2) the buyers in the region concentrate their purchases from within the region; and (3) the alleged dumped imports are concentrated in the region. The petitioner has expressed an interest in the Commission considering the application of this provision to the instant case but, for lack of knowledge of the industry, is not able to determine whether such a consideration is appropriate. On the basis of the information gathered by the Commission in this investigation, there does not appear to be a well-defined region which meets the above criteria. Although the product is not a nationally distributed product, in the sense that one plant can serve the entire United States, selling territories are not particularly well delineated, and the imports from Sweden enter into at least two widely separated locations: Claymont, DE, and E. St. Louis, IL.

Under section 771(4)(B) of the statute, producers which are also importers, such as General Chemical, may be excluded from the domestic industry as a related party (19 U.S.C. 1677(4)(B)). Summations of the following data, therefore, are shown with and without the inclusion of General Chemical.

U.S. production, capacity, and capacity utilization

Data on U.S. production and capacity of dry aluminum sulfate are shown in table 1. Capacity remained constant except ***. Accordingly, total capacity increased by 6.7 percent during the period. The capacity shown for General Chemical includes *** pounds of capacity available at its idled

1/ The Commission received marginal responses from 6 liquid-only producers.
2/ General Chemical and Delta, which together represented about *** percent of total U.S. aluminum sulfate production in 1988, reported information on their total aluminum sulfate operations in addition to their dry aluminum sulfate operations. Their data, however, do not appear to be representative of the aluminum sulfate industry as a whole. Whereas, for example, both producers reported ***.

Table 1

Dry aluminum sulfate: U.S. production, average practical capacity, and capacity utilization, by firms, 1986-88

Item and firm	1986	1987	1988
Production (1,000 pounds):			
General Chemical.....	***	***	***
Stauffer <u>1</u> /.....	***	***	***
Delta.....	***	***	***
Holland.....	***	***	***
Koch <u>1</u> /.....	***	***	***
Total.....	170,226	150,606	145,848
Total, excluding General Chemical.....	***	***	***
Average capacity (1,000 pounds):			
General Chemical <u>2</u> /.....	***	***	***
Stauffer <u>3</u> /.....	***	***	***
Delta <u>4</u> /.....	***	***	***
Holland <u>5</u> /.....	***	***	***
Koch.....	***	***	***
Total.....	328,600	339,600	350,600
Total, excluding General Chemical.....	***	***	***
Ratio of production to capacity (percent):			
General Chemical.....	***	***	***
Stauffer.....	***	***	***
Delta.....	***	***	***
Holland.....	***	***	***
Koch.....	***	***	***
Average.....	51.8	44.3	41.6
Average, excluding General Chemical.....	***	***	***

1/ Data shown are company estimates.

2/ The capacity reported includes its idle facility in E. St. Louis, IL (*** pounds annual capacity) and is based on an operating schedule of 160 hours per week, 50 weeks per year.

3/ The capacity reported is based on operating 168 hours per week, 50 weeks per year.

4/ The capacity reported is based on operating 168 hours per week, 52 weeks per year.

5/ The capacity reported is based on operating 40 hours per week, 50 weeks per year.

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

facility in E. St. Louis, IL--idled so that ***. The data do not include the capacity of Stauffer's plant in Oakland, CA--an old plant which the company shut down in early 1986 and ***.

U.S. production of dry aluminum sulfate declined by 14.3 percent from 1986 to 1988. *** of General Chemical's production, however, has been replaced by imports. 1/ Excluding General Chemical, production ***. General Chemical's share of U.S. production *** during the period. None of the producers reported any significant losses in production due to employment-related problems, sourcing problems, transitions, power shortages, natural disasters, or any other unusual circumstances. With or without General Chemical, capacity utilization has declined, as shown in table 1.

In contrast to dry aluminum sulfate, U.S. production of liquid aluminum sulfate has increased. According to official data of the U.S. Department of Commerce, U.S. production of all aluminum sulfate increased from 2,665 million pounds in 1986 to 2,852 million pounds in 1987 and to 2,927 million pounds in 1988, 2/ an overall increase of 9.8 percent. Dry aluminum sulfate, as a share of all aluminum sulfate, fell from 6.4 percent to 5.0 percent during the same period.

U.S. producers' shipments

Nearly all dry aluminum sulfate production in the United States is shipped domestically (table 2). Only a small fraction is exported and none is internally consumed by producers. After falling by 14.8 percent from 171.2 million pounds (valued at \$16.0 million) in 1986 to 145.8 million pounds (valued at \$14.2 million) in 1987, domestic shipments increased by 2.8 percent to 149.9 million pounds (valued at \$15.8 million) in 1988, still well below levels in 1986. Excluding General Chemical, shipments ***.

According to official statistics of the U.S. Department of Commerce, shipments and transfers of all aluminum sulfate produced in the United States rose from 2,563 million pounds, valued at \$133.9 million, in 1986 to 2,724 million pounds, valued at \$149.0 million, in 1987--an increase which is roughly consistent with increases in production during the same period. Shipment data for 1988 are not yet available; however, data received by the Commission from producers representing about 50 percent of total shipments and transfers in 1987 show that such shipments increased in quantity by about 2 percent from 1987 to 1988.

1/ General Chemical admits that some of its production has been displaced by imports. See General Chemical's postconference brief, pp. 26 and 28-29.

2/ Commerce data for 1988 are incomplete. The figure shown is Commerce's official estimate based on the reporting of producers that account for no more than 70 percent of the previous year's production. These producers reported a 2.6-percent growth rate.

Table 2

Dry aluminum sulfate: U.S. producers' domestic shipments and exports, by firms, 1986-88

(Quantity in 1,000 pounds; value in 1,000 dollars)			
Item and firm	1986	1987	1988
	(Quantity)		
Domestic shipments:			
General Chemical.....	***	***	***
Stauffer.....	***	***	***
Delta.....	***	***	***
Holland 1/.....	***	***	***
Koch 1/.....	***	***	***
Total.....	171,176	145,808	149,886
Total, excluding General Chemical.....	***	***	***
Exports:			
* * *	*	*	*
	(Value)		
Domestic shipments:			
General Chemical.....	***	***	***
Stauffer.....	***	***	***
Delta.....	***	***	***
Nolland.....	***	***	***
Koch 2/.....	***	***	***
Total.....	15,985	14,201	15,831
Total, excluding General Chemical.....	***	***	***
Exports:			
* * *	*	*	*

1/ The data are company estimates.

2/ Estimated on the basis of the average unit value for all other producers combined.

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

Inventories

Inventory data on dry aluminum sulfate are only available from General Chemical, Delta, and Holland (table 3). (These three firms represent about *** percent of U.S. production of dry aluminum sulfate). Like much of the data reported throughout these sections, those for inventories show no clear trends. For the 3 companies combined, end-of-period inventories of dry aluminum sulfate were somewhat higher in 1987 than in 1986, but lower in 1988 than either in 1987 or 1986 whether or not General Chemical is excluded. As a percent of total shipments during the previous year, inventories changed similarly. Inventories for all U.S.-produced aluminum sulfate, liquid and dry, are not available.

Table 3

Dry aluminum sulfate: U.S. producers' end-of-period inventories, by firms, 1986-88

Item and firm	1986	1987	1988
Inventories (1,000 pounds):			
General Chemical.....	***	***	***
Delta.....	***	***	***
Holland <u>1/</u>	***	***	***
Total.....	***	***	***
Total, excluding General Chemical.....	***	***	***
Ratio of inventories to total shipments during the preceding period (percent):			
General Chemical.....	***	***	***
Delta.....	***	***	***
Holland.....	***	***	***
Average.....	***	***	***
Average, excluding General Chemical.....	***	***	***

1/ The data are company estimates.

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

Employment

For the aluminum sulfate industry, as for most chemical industries, employment is not a major factor of production. Relatively few employees are actually engaged in the production process, and labor costs typically average from 10 to 15 percent of total costs of goods sold. Basic changes in employment, moreover, usually occur only when new plants are opened or old plants are closed or converted to new methods of production, since a worker's time may be allocated among several different chemicals at a plant.

The Commission received employment data from only 2 producers of aluminum sulfate in the United States--General Chemical and Delta, together representing about *** percent of total U.S. production of dry aluminum sulfate in 1988 (or about *** percent of all aluminum sulfate). The data these firms provided, shown in tables 4 and 5, reflect the proportional amount of workers and time devoted to aluminum sulfate (equivalent to relative tonnages of all chemicals produced). Neither firm, however, could reasonably allocate a proportion of their work force to the dry product. Except for a few direct operators, employees' time cannot be attributable to one or the other form of aluminum sulfate. The *** percent decline in employment shown in table 4 reflects the closing of two of General Chemical's liquid plants in 1986, the idling of its E. St. Louis plant in 1987, and the idling of a liquid plant in Puerto Rico in 1988.

Table 4

Average number of production and related workers producing aluminum sulfate in General Chemical's and Delta's plants, hours worked by such workers, and output per worker, by firms, 1986-88

Item and firm	1986	1987	1988
Average number of production and related workers producing aluminum sulfate:			
General Chemical.....	***	***	***
Delta.....	***	***	***
Total.....	***	***	***
Hours worked by production and related workers producing aluminum sulfate:			
General Chemical.....	***	***	***
Delta.....	***	***	***
Total.....	***	***	***
Output (production) of aluminum sulfate per worker (1,000 pounds):			
General Chemical <u>1</u> /.....	***	***	***
Delta <u>2</u> /.....	***	***	***
Average.....	***	***	***

1/ Total aluminum sulfate production (1,000 pounds): 1986--***; 1987--***; 1988--***.

2/ Total aluminum sulfate production (1,000 pounds): 1986--***; 1987--***; 1988--***.

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

Table 5

Total compensation and average hourly compensation paid to production and related workers producing aluminum sulfate in General Chemical's and Delta's plants, and unit labor cost of such production, by firms, 1986-88

Item and firm	1986	1987	1988
Total compensation paid to production and related workers producing aluminum sulfate (1,000 dollars):			
General Chemical.....	***	***	***
Delta.....	***	***	***
Total.....	***	***	***
Hourly compensation paid to production and related workers producing aluminum sulfate:			
General Chemical.....	***	***	***
Delta.....	***	***	***
Average.....	***	***	***
Unit labor cost of producing aluminum sulfate (per 1,000 pounds):			
General Chemical.....	***	***	***
Delta.....	***	***	***
Average.....	***	***	***

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

Financial experience of U.S. producers

General Chemical and Delta, together representing about *** percent of all aluminum sulfate production in the United States in 1988 (or about *** percent of dry aluminum sulfate production), were the only producers from which the Commission received financial data. Data provided are for the firms' total aluminum sulfate operations, their dry aluminum sulfate operations, and the overall operations of their plants in which aluminum sulfate is produced.

Aluminum sulfate operations.--The income-and-loss data on total aluminum sulfate operations of Delta and General Chemical are presented in table 6. Total net sales of aluminum sulfate produced by these firms decreased by *** percent from *** in 1986 to *** in 1988. Operating income, on the other hand, increased by *** percent from *** in 1986 to *** in 1987, but then decreased by *** percent to *** in 1988. The average operating margin increased from *** percent in 1986 to *** percent in 1987 and decreased to *** percent in 1988.

Table 6
Income-and-loss experience of Delta and General Chemical on their operations producing aluminum sulfate, by firm, accounting years 1986-88

Item	1986	1987	1988
	Value (1,000 dollars)		
*	*	*	*
	Ratio to net sales (percent)		
*	*	*	*

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

Delta reported separately income-and-loss data on aluminum sulfate produced under toll agreements with other producers, i.e., aluminum sulfate produced for other producers using these producers' raw materials. These data are shown in the following tabulation (in thousands of dollars):

	<u>1986</u>	<u>1987</u>	<u>1988</u>
Form of aluminum sulfate.....	***	***	***
Sales.....	***	***	***
Operating income.....	***	***	***
Net income.....	***	***	***

Dry aluminum sulfate operations.--The income-and-loss data on the dry aluminum sulfate operations of Delta and General Chemical (excluding any sales of imports) are presented in table 7. Total net sales of dry aluminum sulfate decreased by *** percent from *** in 1986 to *** in 1987, and then increased by *** percent to *** in 1988. Operating income increased by *** percent from *** in 1986 to *** in 1988.

Overall establishment operations.--The income-and-loss experience of Delta and General Chemical on the overall operations of their establishments in which aluminum sulfate is produced is presented in table 8. These data include sales from imports. Delta, as stated previously, produces aluminum sulfate at 1 facility, in Baltimore, MD. Aluminum sulfate, both liquid and dry, accounts for about *** percent of the plant's net sales. In addition to its 2 plants in Atlanta, GA, and Pittsburg, CA, that produce dry aluminum sulfate, General Chemical operates 25 other plants throughout the United States that produce the liquid form only. Aluminum sulfate accounts for

Table 7

Income-and-loss experience of Delta and General Chemical on their operations producing dry aluminum sulfate, by firm, accounting years 1986-88

Item	1986	1987	1988
	Value (1,000 dollars)		
*	*	*	*
	Ratio to net sales (percent)		
*	*	*	*

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

Table 8

Income-and-loss experience of Delta and General Chemical on the overall operations of their establishments in which aluminum sulfate is produced, by firm, accounting years 1986-88

Item	1986	1987	1988
	Value (1,000 dollars)		
*	*	*	*
	Ratio to net sales (percent)		
*	*	*	*

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

about *** percent of these plants' total net sales. Total net sales of these firms' overall operations remained at about *** throughout the period for which data were collected. Operating income fluctuated from *** in 1986 to *** in 1987, and then to *** in 1988. Correspondingly, the average operating margin increased from *** percent in 1986 to *** percent in 1987 before decreasing to *** percent in 1988.

Capital expenditures.--Delta's and General Chemical's capital expenditures for land, buildings, and machinery and equipment used in the manufacture of all forms of aluminum sulfate are shown in the following tabulation (in thousands of dollars):

<u>Firm</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Delta.....	***	***	***
General Chemical.....	***	***	***
Total.....	***	***	***

Research and development expenses.--Delta's and General Chemical's research and development expenses related to aluminum sulfate production are shown in the following tabulation (in thousands of dollars):

<u>Firm</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Delta.....	***	***	***
General Chemical.....	***	***	***
Total.....	***	***	***

Value of plant, property, and equipment.--Delta's and General Chemical's end-of-period investment in facilities producing all forms of aluminum sulfate are shown in the following tabulation (in thousands of dollars):

<u>Item and firm</u>	<u>1986</u>	<u>1987</u>	<u>1988</u>
Delta:			
Original cost.....	***	***	***
Book value.....	***	***	***
Return on fixed assets <u>1/</u> ..	***	***	***
General Chemical:			
Original cost.....	***	***	***
Book value.....	***	***	***
Return on fixed assets <u>1/</u> ..	***	***	***
Total:			
Original cost.....	***	***	***
Book value.....	***	***	***
Return on fixed assets <u>1/</u> ..	***	***	***

1/ Defined as net income or (loss) divided by book value of fixed assets, expressed as a percent.

Impact of imports on capital and investment.--The Commission requested U.S. producers to describe and explain the actual or anticipated negative effects, if any, of imports of dry aluminum sulfate from Sweden on their firm's growth, development and production efforts, investment, and ability to raise capital. General Chemical reported no negative effects. Delta was the only other producer to respond. Its comments are shown in app. C.

Consideration of the Alleged Threat of Material Injury

Section 771(7)(F)(i) of the Tariff Act of 1930 (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 any merchandise, the Commission shall consider, among other relevant factors 1/--

(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,

(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 736, are also used to produce the merchandise under investigation,

1/ 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."

(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. 1/

Available 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 the Alleged LTFV Imports 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 app. C. Available information on U.S. inventories of the subject product (item (V)); foreign producers' operations, including the potential for "product-shifting" (items (II), (VI), (VIII), and (IX) above); any other threat indicators, if applicable (item (VII) above); and any dumping in third-country markets, follows.

No clear trend is evident for inventories of dry aluminum sulfate from Sweden. As General Chemical's shipments of these imports *** from *** pounds in 1986 to *** pounds in 1987, its end-of-period inventories *** from *** pounds to *** pounds. When shipments *** to *** pounds in 1988, inventories *** to *** pounds. The firm's shipments and inventories reflect a *** level of imports, as shown in the following section.

Nothing is known of the Swedish industry except for Boliden, the only known Swedish exporter of dry aluminum sulfate to the United States. According to information it supplied in response to Commission inquiries, shown in table 9, Boliden's annual capacity remained at *** pounds throughout the period for which data were requested. Production varied from *** percent of capacity in 1986 to *** percent in 1988. As a share of its production, exports were about *** percent throughout the period shown. The United States accounted for a large but declining share of those exports, as shown in table 9. Other foreign markets for Boliden's Swedish material include

1/ 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."

Table 9
 Dry aluminum sulfate: Boliden's capacity, production, and exports, 1986-88

Item	1986	1987	1988
Capacity (1,000 pounds) <u>1</u> /.....	***	***	***
Production (1,000 pounds).....	***	***	***
Capacity utilization (percent)....	***	***	***
Exports to--			
United States (1,000 pounds)....	***	***	***
All other (1,000 pounds).....	***	***	***
Total (1,000 pounds).....	***	***	***
Share of production that was was exported (percent).....	***	***	***
Share of total exports to--			
United States (percent).....	***	***	***
All other (percent).....	***	***	***
Total (percent).....	100.0	100.0	100.0

1/ Capacity based on 168 hours of plant operation per week, 7 weeks per year.

Source: Compiled from data submitted by counsel for Boliden in response to a Commission request.

***. The extent to which Boliden may be dumping in other countries is unknown. Its anticipated production for 1989 is *** pounds, of which ***. Capacity during 1989 ***.

* * * * * * *

* * * * * * *

Consideration of the Causal Relationship Between the Alleged LTFV Imports and the Alleged Material Injury

Imports

Sweden and Canada are by far the largest foreign suppliers of aluminum sulfate to the United States (table 10). Although large in quantity, imports from Sweden show no clear trend and vary from year to year by less than *** percent. As stated previously, virtually all of this material was imported by General Chemical under the terms of ***.

All of the material General Chemical imports from Sweden enters the United States at *** locations ***. ***. According to testimony given at the Commission's conference by Phillip Reilly, Manager of General Chemical's Water Chemicals Group, the decision to begin importing in 1984 and 1985 was in part consequent to its decision to shut down its Claymont, DE, plant which was antiquated and unsafe. To serve the market normally supplied by this

Table 10

Dry and liquid aluminum sulfate: U.S. imports, by principal sources, 1986-88

Source	1986	1987	1988
	<u>Quantity (1,000 pounds dry or equivalent)</u>		
Dry aluminum sulfate:			
Sweden.....	***	***	***
All other.....	2,340	1,998	16,884
Total.....	***	***	***
Liquid aluminum sulfate:			
Canada.....	43,182	41,271	56,464
Total aluminum sulfate.....	***	***	***
	<u>Value, c.i.f. duty-paid (1,000 dollars)</u>		
Dry aluminum sulfate:			
Sweden.....	***	***	***
All other.....	337	228	1,363
Total.....	***	***	***
Liquid aluminum sulfate:			
Canada.....	1,923	1,952	2,264
Total aluminum sulfate.....	***	***	***

Source: Imports from Sweden compiled from data submitted in response to questionnaires of the U.S. International Trade Commission; all other imports compiled from official statistics of the U.S. Department of Commerce.

plant, to avoid the expense of building a new plant, and to avoid having, at least in the short run, to supply the market with additional production at its Atlanta plant, General Chemical chose to import from Sweden. ^{1/} The decision was also an ***.

* * * * *

Other significant sources of dry aluminum sulfate in recent years, particularly 1988, are Jamaica and Venezuela. All of the latter's exports to the United States were imported into Puerto Rico, a situation which General Chemical alleges caused it to idle a liquid aluminum sulfate plant there in August 1988. (Once in Puerto Rico and before delivery to customers, the Venezuelan material is converted from dry to liquid by the addition of water.) Largely due to imports from Venezuela (12.6 million pounds in 1988), total imports of dry aluminum sulfate increased by 25.5 percent from 1987 to 1988 to a level 14.1 percent above that in 1986.

Imports from Canada, in contrast to most of those from other countries, are nearly all liquid in form. Most of this material is imported by Alcan Chemical Co., Cleveland, OH, from its plants in Ontario. The remainder is

^{1/} Transcript of conference, pp. 79-81.

***. ***. Imports of liquid and dry aluminum sulfate combined declined by 7.2 percent from 1986 to 1987 and then increased in 1988 to a level 20.6 percent above that in 1986, as shown in table 10.

U.S. consumption and market penetration

Data on U.S. consumption of dry aluminum sulfate, shown in table 11, show a significant fluctuation from 1986 to 1988. Overall, consumption fell by 5.0 percent during the period. The parties to the investigation agree that the market for dry aluminum sulfate is declining. In view of the significant cost differential, users are increasingly switching to the liquid form. As a share of total aluminum sulfate consumption in the United States, dry aluminum sulfate fell from 8.6 percent in 1986 to 7.4 percent in 1988. Newer users, at least those that purchase large quantities, tend to use either liquid aluminum sulfate or another means altogether for purifying water. Smaller users continue to use the dry form, as it is easier to store and can be readily purchased in less than truckload quantities.

As a share of dry consumption, imports from Sweden fluctuated from *** percent in 1986 to *** percent in 1988, as shown in table 11. As a share of the value of consumption, imports from Sweden fluctuated similarly. Because of the large influx of imports from Jamaica and Venezuela in recent periods, the ratio of total imports to consumption increased by several percentage points--from *** percent in 1986 to *** percent in 1988.

Apparent consumption of all aluminum sulfate, shown in table 12, increased by 10.3 percent from 1986 to 1988. As a share of total aluminum sulfate consumption, imports from Sweden declined from *** percent to *** percent in the same period.

Table 11

Dry aluminum sulfate: Apparent U.S. consumption and ratio of imports to consumption, 1986-88

(Quantity in 1,000 pounds; value in 1,000 dollars)

Period	Apparent U.S. con- sumption 1/	Ratio (percent) of imports to consumption		
		For Sweden	For all other countries	Total
Quantity				
1986.....	***	***	***	***
1987.....	***	***	***	***
1988.....	***	***	***	***
Value				
1986.....	***	***	***	***
1987.....	***	***	***	***
1988.....	***	***	***	***

1/ Domestic shipments plus imports.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 12

Aluminum sulfate: Apparent U.S. consumption and ratio of imports to consumption, 1986-88

In 1,000 pounds dry or equivalent

Period	Apparent U.S. con- sumption 1/	Ratio (percent) of imports to consumption		
		For Sweden	For all other countries	Total
1986.....	***	***	***	***
1987.....	***	***	***	***
1988.....	***	***	***	***

1/ Domestic production plus imports.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Prices

Aluminum sulfate is marketed in both liquid and dry forms, with liquid accounting for approximately 95 percent of shipments during 1988 and dry accounting for the remainder. Although there are several grades, there are no established specifications to easily distinguish between grades. 1/

Demand for aluminum sulfate is directly related to the needs of municipalities for water and waste treatment and the needs of the pulp and paper, dye, pigment, leather, food, and cosmetic industries. Municipalities and chemical distributors are the primary sources of demand for dry aluminum sulfate, while the pulp and paper industry is the primary source of demand for liquid aluminum sulfate. Although dry and liquid are used in many of the same applications, there are capital costs incurred if a user decides to shift from one form of aluminum sulfate to another. 2/ Shifts in demand between dry and liquid aluminum sulfate have occurred as some major municipal accounts have switched from dry to liquid. 3/ In addition to liquid aluminum sulfate, other possible substitutes for dry aluminum sulfate include synthetic polymers and inorganic chemicals such as ferric chloride, aluminum chloride, and poly-aluminum chloride.

Price is the primary criterion used when purchasing aluminum sulfate. Prices of the different varieties of aluminum sulfate vary as a result of a number of factors. Liquid aluminum sulfate is less costly than dry aluminum sulfate. For example, during 1988 the price of standard liquid aluminum sulfate was typically 50 percent or more lower than the price of standard dry aluminum sulfate. 4/ Bulk shipments are less expensive than bag shipments, primarily because of the larger quantities involved along with a lack of packaging. Aluminum sulfate specifications can also affect the price, with iron-free aluminum sulfate commanding a much higher price.

The costs of shipping both liquid and dry aluminum sulfate are considerable. Although it is possible to ship dry aluminum sulfate anywhere in the country, plants close to the shipping point have a significant competitive advantage over more distant plants. For example, ***.

1/ Although Delta Chemical in app. A of its petition provided a table created by General Chemical of aluminum sulfate characteristics, testimony at the conference indicated that no industry standard specifications actually exist.

2/ Capital costs vary depending upon the amount of aluminum sulfate used by an aluminum sulfate purchaser and the amounts kept in inventory. In Annex B of its postconference brief, respondent shows varying conversion costs ranging between *** and ***. Petitioner indicates that conversion costs at the city of Cleveland, OH, were approximately *** for 1 of its 4 plants--see conference transcript, p. 18, and petitioner's postconference brief, p. 6.

Some municipalities that use liquid aluminum sulfate keep some dry aluminum sulfate in inventory for backup purposes. Respondents indicate that Salt Lake City, UT, and York, PA, explicitly state that dry aluminum sulfate is to be used as a backup for liquid--see postconference brief, p. 9, note 9. 3/ Petition, p. 4 and conference transcript, pp. 50-53. Cleveland is an example of a major municipal account that has switched from dry to liquid aluminum sulfate.

4/ Calculated from questionnaire responses.

Transportation costs are even greater for liquid aluminum sulfate than they are for dry aluminum sulfate. Producers are unlikely to transport liquid aluminum sulfate more than 200 miles. In fact, liquid aluminum sulfate plants are often located adjacent to a major purchaser in order to be able to move the liquid aluminum sulfate by pipeline.

Municipality contracts are of key importance to producers and importers of dry aluminum sulfate because these contracts give producers business for a period of a year and sometimes longer. After a municipality has determined the amount and specification of aluminum sulfate needed, it solicits quotes from several aluminum sulfate producers. Contracts are typically for one year.

The quoting process by aluminum sulfate producers for municipal contracts for dry or liquid aluminum sulfate is similar. After reviewing all bid and specification requirements, aluminum sulfate producers estimate the likely production costs for the aluminum sulfate. Bids are closed, but because all information is public, producers know who their competitors were and the amount that each firm bid. Producers review the history of their bids and their competitors' bids for a given account in order to stay competitive.

U.S. producers and importers of aluminum sulfate were requested to provide information on 15 won and 15 lost bids to municipalities for dry and liquid aluminum sulfate scheduled for shipment during the period 1986 through 1988, as well as bids made during 1986-88 for shipments scheduled for 1989. Information was also requested for spot sales to chemical distributors and to industrial users during the period 1986-88. The petitioner, Delta Chemical, and General Chemical (which provided both a producers' and an importers' questionnaire) were the only companies to provide price information. The three other producers listed previously did not supply price information.

Bid competition for sales of aluminum sulfate to municipal accounts 1/. Table 13 summarizes information on contracts provided in the questionnaire responses by Delta Chemical and General Chemical. 2/ Bid competition for contracts to four municipalities is discussed below. The total bid volume reported was 59,726 tons, valued at \$9.8 million. During this 3-year period, Delta Chemical won 31 contracts while General Chemical won 29. 3/ There were 35 bids where information was provided showing competition for contracts between Delta Chemical and General Chemical. Of the 35 bids, Delta Chemical won 19 and General Chemical won 15, while the remaining contract was awarded to another company. All but one of General Chemical's dry aluminum sulfate contracts reported in table 13 involved Swedish dry aluminum sulfate.

1/ Lost sales were alleged based on quotes. Table 12 indicates winners of contracts to supply dry and liquid aluminum sulfate to municipalities.

2/ Although other companies bid on many of the contracts, except for three contracts, bids from the other companies are not provided because only Delta and General provided questionnaire responses.

3/ General Chemical states that when it bids on a contract for dry aluminum sulfate, it bids without knowing whether it will provide Swedish aluminum sulfate or aluminum sulfate it has produced domestically. See conference transcript, pp. 95 and 96.

Table 13
 Aluminum sulfate: Bids to municipalities (delivered prices) for shipments during 1986-89

Municipality	Quotes		Volume bid/awarded	Date awarded	Aluminum sulfate dry or liquid	Total value awarded
	Company bidding	Bid price				
		<u>dollars per ton</u>	<u>tons</u>			<u>1,000 dollars</u>
<u>Balt. MD</u>	*	*	*	*	*	*
<u>Cleveland, OH</u>	*	*	*	*	*	*
<u>Newark, OH</u>	*	*	*	*	*	*
<u>Lancaster, PA</u>	*	*	*	*	*	*
<u>Alliance, OH</u>	*	*	*	*	*	*
<u>Frederick County, MD</u>	*	*	*	*	*	*
<u>Auburn, NY</u>	*	*	*	*	*	*
<u>New York, NY</u>	*	*	*	*	*	*
<u>Conneaut, OH</u>	*	*	*	*	*	*
<u>Havre De Grace, MD</u>	*	*	*	*	*	*
<u>Pitts. PA</u>	*	*	*	*	*	*
<u>Reading, PA</u>	*	*	*	*	*	*
<u>Frederick, MD</u>	*	*	*	*	*	*
<u>Anne Arundel County, MD</u>	*	*	*	*	*	*
<u>Radford, VA</u>	*	*	*	*	*	*
<u>Oneonta, NY</u>	*	*	*	*	*	*
<u>Erie, PA</u>	*	*	*	*	*	*
<u>Ashland, KY</u>	*	*	*	*	*	*

See footnotes at end of table.

Table 13--Continued

Aluminum sulfate: Bids to municipalities (delivered prices) for shipments during 1986-89

Municipality	Quotes		Volume bid/awarded	Date awarded	Aluminum sulfate dry or liquid	Total value awarded
	Company bidding	Bid price				
		<u>dollars per ton</u>	<u>tons</u>			<u>1,000 dollars</u>
<u>Iowa City, IA</u>	*	*	*	*	*	*
<u>Medina, OH</u>	*	*	*	*	*	*
<u>Topeka, KS</u>	*	*	*	*	*	*
<u>Lockport, NY</u>	*	*	*	*	*	*
<u>North Jersey Dist.</u>	*	*	*	*	*	*
<u>Richmond, VA</u>	*	*	*	*	*	*

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

General Chemical has stated that in *** it entered into a *** supply arrangement with Boliden.

*	*	*	*	*	*	*
	<u>Baltimore, MD.--</u>					
*	*	*	*	*	*	*
	<u>Cleveland, OH.--</u>					
*	*	*	*	*	*	*
	<u>Newark, OH.--</u>					
*	*	*	*	*	*	*
	<u>Lancaster, PA.--</u>					
*	*	*	*	*	*	*

Spot sales.--Price data for spot sales of standard-grade and iron-free dry aluminum sulfate to chemical distributors and industrial users are shown in tables 14 and 15. Standard aluminum sulfate, which includes low-iron aluminum sulfate, accounts for close to 99 percent of dry aluminum sulfate production.

Delta's prices of standard aluminum sulfate to chemical distributors, after initially *** by *** percent in 1986 from *** per ton in the first quarter to *** per ton in the third quarter, generally *** thereafter, so that by the end of 1988 prices were *** percent *** than in the initial period. Delta's prices of standard aluminum sulfate to industrial users, after being *** at *** per ton during 1986, fluctuated with a slight *** trend during the remainder of the period of investigation. Delta's prices of iron-free aluminum sulfate to chemical distributors were stable at *** per ton during 1986 and 1987, then *** by *** percent to *** per ton in 1988. Delta's prices of iron-free aluminum sulfate to industrial users showed ***, with prices *** at *** per ton during 1986 before *** less than *** percent to *** for most of the remaining period.

Trends in General's prices of domestically-produced standard aluminum sulfate to chemical distributors were similar to Delta's. After initially *** by *** percent in 1986 from *** per ton in the first quarter to *** per ton in the third quarter, prices generally ***, and by the end of 1988 prices were *** percent *** than in the initial period. General Chemical had *** sales of domestically-produced standard aluminum sulfate to industrial users through ***; thereafter, prices *** by *** percent from *** per ton during the second quarter of 1987 to *** per ton in the second quarter of 1988 before *** to *** per ton in the final two quarters. General did not sell domestically-produced iron-free aluminum sulfate during the period of investigation.

General's prices of Swedish standard aluminum sulfate to chemical distributors *** from the third quarter of 1986 through the first quarter of 1987, *** through the fourth quarter of 1987 then *** during the remainder of the period of investigation. Prices of Swedish standard aluminum sulfate to industrial users *** from *** per ton during the first quarter of 1986 to *** per ton in the third quarter of 1986, then *** for all but one quarter through the first quarter of 1988, at which time prices *** to *** per ton. Prices of Swedish iron-free aluminum sulfate *** throughout the period of investigation for sales to chemical distributors and industrial users, at *** and *** per ton, respectively.

The range of the lowest and highest price charged for standard-grade and iron-free dry aluminum sulfate during January-December 1988, by firm and by quarter, is presented in the following tabulation (in dollars per ton):

* * * * *

Table 14

Dry aluminum sulfate--standard grade: Delta Chemical's prices, and General Chemical's domestic and Swedish prices to chemical distributors and industrial users, by quarters, January 1986-December 1988

Period	<u>Chemical distributors</u>			:	<u>Industrial users</u>		
	<u>General Chemical</u>			:	<u>General Chemical</u>		
	Delta	Sweden	Domestic production	:	Delta	Sweden	Domestic production
	-----Dollars per ton-----			:	-----Dollars per ton-----		
1986:				:			
Jan.-March.....				:			
April-June.....				:			
July-Sept.....				:			
Oct.-Dec.....				:			
1987:				:			
Jan.-March.....				:			
April-June.....	*	*	*	:	*	*	*
July-Sept.....				:			
Oct.-Dec.....				:			
1988:				:			
Jan.-March.....				:			
April-June.....				:			
July-Sept.....				:			
Oct.-Dec.....				:			

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

Table 15

Dry aluminum sulfate--iron free: Delta's prices and Swedish import prices to chemical distributors and industrial users, and margins of under/overselling, by quarters, January 1986-December 1988

Period	Chemical distributors			:	Industrial users		
	Delta	Sweden	Margin	:	Delta	Sweden	Margin
			of under/ (over)- selling	:			of under/ (over)- selling
	---Dollars per ton---		Percent	:	---Dollars per ton---		Percent
1986:				:			
Jan.-March.....				:			
April-June.....				:			
July-Sept.....				:			
Oct.-Dec.....				:			
1987:				:			
Jan.-March.....				:			
April-June.....				:			
July-Sept.....	*	*	*	:	*	*	*
Oct.-Dec.....				:			
1988:				:			
Jan.-March.....				:			
April-June.....				:			
July-Sept.....				:			
Oct.-Dec.....				:			

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

Note.-Percentage margins were calculated from unrounded figures; thus margins cannot always be calculated from the rounded prices in the table.

Price comparisons.--Price comparisons (tables 14 and 15) between Delta's sales and General Chemical's sales of Swedish material to chemical distributors and industrial users during the period January 1986-December 1988 resulted in 36 direct quarterly price comparisons. There were 17 comparisons between General Chemical's sales of U.S.- and Swedish-produced aluminum sulfate. For sales of dry standard aluminum sulfate to chemical distributors, the Swedish material was less expensive than Delta's in 7 of the 10 comparisons and less expensive than General Chemical's domestic aluminum sulfate in 8 of the 10 comparisons. For sales of standard aluminum sulfate to industrial users, the Swedish aluminum sulfate was more expensive than Delta's in all eight comparisons, and less expensive than all seven comparisons with General Chemical's domestic aluminum sulfate. 1/ For sales of dry iron-free aluminum sulfate to chemical distributors, the Swedish material was less expensive than Delta's in 2 of the 6 comparisons by *** percent. For sales of iron-free aluminum sulfate to industrial users, the Swedish aluminum sulfate was less expensive than Delta's in all 12 of the comparisons, with price differences ranging between *** and *** percent. General Chemical reported no sales of domestically-produced iron-free aluminum sulfate.

Exchange rates

Quarterly data reported by the International Monetary Fund indicate that during the period January 1986 through November 1988 the nominal value of the Swedish kronor appreciated by 20.5 percent against the U.S. dollar (table 16). 2/ Adjusted for relative movements in producer price indices, the real value of the kronor appreciated 22.7 percent relative to the U.S. dollar from January-March 1986 through October-November 1988.

Lost sales

Delta identified 17 bids to municipal accounts on which it allegedly lost sales of dry aluminum sulfate to imports from Sweden between November 1986 and December 1988. The quantity involved totaled *** tons, valued at ***. These bids and relevant information pertaining thereto are noted in table 13.

1/ Sales to industrial users might not be comparable because industrial use may have different aluminum sulfate specifications.

2/ International Financial Statistics, November 1988.

Table 16

U.S.-Swedish exchange rates: 1/ Nominal exchange rates of the Swedish kronor in U.S. dollars, real exchange rate equivalents, and producer price indexes in the United States and Sweden, 2/ indexed by quarters, January 1986-December 1988

Period	U.S.	Swedish	Nominal	Real
	Producer Price Index	Producer Price Index	exchange- rate index	exchange- rate index ^{3/}
	---US dollars/kronor---			
1986:				
January-March.....	100.0	100.0	100.0	100.0
April-June.....	98.2	98.0	102.9	102.7
July-September.....	97.7	97.0	106.3	105.6
October-December....	98.1	98.0	107.1	107.0
1987:				
January-March.....	99.2	100.0	113.9	114.8
April-June.....	100.8	100.0	117.6	116.6
July-September.....	101.9	102.0	115.2	115.3
October-December....	102.3	103.0	121.0	121.8
1988:				
January-March.....	102.9	104.0	123.7	125.0
April-June.....	104.8	105.1	124.3	124.7
July-September.....	106.2	107.1	115.5	116.4
October-December ^{4/} .	106.7	108.6	120.5	122.7

1/ Exchange rates expressed in U.S. dollars per unit of kronor.

2/ Producer price indexes--intended to measure final product prices--are based on average quarterly indices presented in line 63 of the International Financial Statistics.

3/ The indexed real exchange rate represents the nominal exchange rate adjusted for relative movements in producer price indices in the United States and Sweden. Producer prices in the United States increased 6.7 percent between January 1986 and November 1988 compared to an 8.6-percent increase in Sweden during the same period.

4/ Data are derived from exchange rate and Producer Price Indices reported for October-November.

Note.--January-March 1986=100.

Source: International Monetary Fund, International Financial Statistics, November 1988.

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APPENDIX A

COMMERCE'S AND COMMISSION'S FEDERAL REGISTER NOTICES

**INTERNATIONAL TRADE
COMMISSION**

[Investigation No. 731-TA-430
(Preliminary)]

Dry Aluminum Sulfate From Sweden

AGENCY: United States International
Trade Commission.

ACTION: Institution of a preliminary
antidumping investigation and
scheduling of a conference to be held in
connection with the investigation.

SUMMARY: The Commission hereby gives notice of the institution of preliminary antidumping investigation No. 731-TA-430 (Preliminary) under section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)) to determine whether there is a reasonable indication that 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 Sweden of dry aluminum sulfate, provided for in subheading 2833.22.00 of the Harmonized Tariff Schedule of the United States (formerly provided for in item 417.16 of the Tariff Schedules of the United States), that are alleged to be sold in the United States at less than fair value. As provided in section 733(a), the Commission must complete preliminary antidumping investigations in 45 days, or in this case by March 30, 1989.

For further information concerning the conduct of this investigation and rules of general application, consult the Commission's Rules of Practice and Procedure, Part 207, subparts A and B (19 CFR Part 207, as amended by 53 FR 33039 (Aug. 29, 1988) and 54 FR 5220 (Feb. 2, 1989)), and part 201, subparts A through E (19 CFR Part 201).

EFFECTIVE DATE: February 13, 1989.

FOR FURTHER INFORMATION CONTACT: Larry Reavis (202-252-1185), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20438. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-252-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-252-1000.

SUPPLEMENTARY INFORMATION:

Background

This investigation is being instituted in response to a petition filed on February 13, 1989 by Delta Chemical Corp. Baltimore, MD.

Participation in the investigation—Persons wishing to participate in this investigation as parties must file a entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules (19 CFR 201.11), not later than seven (7) days after after publication of this notice in the Federal Register. Any entry of appearance filed after this date will be referred to the Chairman, who will determine whether to accept the late entry for good cause shown by the person desiring to file the entry.

Public service list—Pursuant to § 201.11(d) of the Commission's rules (19 CFR 201.11(d)), the Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives who are parties to the investigation upon the expiration of the period for filing entries of appearance. In accordance with §§ 201.16(c) and 207.3 of the rules (19 CFR 201.16(c) and 207.3), each public document filed by a party to the investigation must be served on all other parties to the investigation (as identified by the public service list), and a certificate of service must accompany the document. The Secretary will not accept a document for filing without a certificate of service.

Limited disclosure of business proprietary information under a protective order and business proprietary information service list—Pursuant to § 207.7(a) of the Commission's rules (19 CFR § 207.7(a)), the Secretary will make available business proprietary information gathered in this preliminary investigation to authorized applicants under a protective order, provided that the application be made not later than seven (7) 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 business proprietary information under a protective order. The Secretary will not accept any submission by parties containing business proprietary information without a certificate of service indicating that it has been served on all the parties that are authorized to receive such information under a protective order.

Conference—The Director of Operations of the Commission has scheduled a conference in connection with this investigation for 9:30 a.m. on March 6, 1989 at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Parties wishing to participate in the conference should contact Larry Reavis (202-252-1185) not later than March 2, 1989 to arrange for their appearance. Parties in support of the imposition of antidumping duties in the investigation and parties in opposition to the imposition of such duties will each be collectively allocated one hour within which to make a oral presentation at the conference.

Written submission—Any person may submit to the Commission on or before March 8, 1989 a written brief containing information and arguments pertinent to the subject matter of the investigation, as provided in § 207.15 of the Commission's rules (19 CFR 207.15). A signed original and fourteen (14) copies of each submission must be filed with the Secretary to the Commission in accordance with § 201.8 of the rules (19 CFR 201.8). All written submissions except for business proprietary data will be available for public inspection during regular business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary to the Commission.

Any information for which business proprietary treatment is desired must be submitted separately. The envelope and all pages of such submissions must be clearly labeled "Business Proprietary Information." The cover of the document must list the pages on which business proprietary information is found. The business proprietary information itself must be clearly identified by means of brackets. Business proprietary submissions and requests for business proprietary treatment must conform with the requirements of §§ 201.8 and 207.7 of the Commission's rules (19 CFR §§ 201.8 and 207.7).

Parties which obtain disclosure of business proprietary information pursuant to § 207.7(a) of the Commission's rules (19 CFR 207.7(a)) may comment on such information in their written brief, and may also file additional written comments on such

information no later than March 13, 1989. Such additional comments must be limited to comments on business proprietary information received in or after the written briefs.

Authority: This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.12 of the Commission's rules (19 CFR 207.12).

By order of the Commission.

Issued: February 15, 1989.

Kenneth R. Mason,
Secretary.

[FR Doc. 89-4196 Filed 2-21-89; 8:53 am]

BILLING CODE 7020-02-M

International Trade Administration

[A-401-802]

**Initiation of Antidumping Duty
Investigation; Dry Aluminum Sulfate
from Sweden**

**AGENCY: Import Administration,
International Trade Administration,
Commerce.**

ACTION: Notice.

SUMMARY: On the basis of a petition filed in proper form with the U.S. Department of Commerce, we are initiating an antidumping duty investigation to determine whether imports of dry aluminum sulfate from Sweden are being, or are likely to be, sold in the United States at less than fair value. We are notifying the U.S. International Trade Commission (ITC) of this action so that it may determine whether imports of dry aluminum sulfate materially injure, or threaten material injury to, a U.S. industry. If this investigation proceeds normally, the ITC will make its preliminary determination on or before March 30, 1989. If that determination is affirmative, we will make a preliminary determination on or before July 24, 1989.

EFFECTIVE DATE: March 13, 1989.

FOR FURTHER INFORMATION CONTACT: Jim Terpstra, or Kathleen Doering, Office of Antidumping Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone (202) 377-4103 or (202) 377-8498, respectively.

SUPPLEMENTARY INFORMATION:**The Petition**

On February 13, 1989, we received a petition filed in proper form by the Delta Chemical Corporation on behalf of the domestic dry aluminum sulfate industry. In compliance with the filing requirements of 19 CFR 353.36, petitioner alleges that imports of dry aluminum sulfate from Sweden are being, or are likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports materially injure, or threaten material injury to, a U.S. industry.

If any interested party as described under paragraphs (C), (D), (E), or (F) of section 771(9) of the Act wishes to register support of or opposition to this petition, please file written notification with the Commerce officials cited in the "FOR FURTHER INFORMATION CONTACT" section of this notice.

United States Price and Foreign Market Value

Petitioner's estimate of United States price (USP) is the declared F.A.S value per ton of aluminum sulfate imported from Sweden. This figure is based on IM-145 statistics for November 1988. Petitioner made no adjustments to USP. Petitioner's estimate of foreign market value (FMV) is based on a home market

F.O.B. price quote for November 1988. Petitioner made no adjustments to FMV. Based on a comparison of FMV to the USP, petitioner alleges a dumping margin of 80.80 percent.

Petitioner also alleges that "critical circumstances" exist, within the meaning of section 733(e) of the Act, with respect to imports of dry aluminum sulfate from Sweden.

Initiation of Investigation

Under section 732(c) of the Act, we must determine, within 20 days after a petition is filed, whether it sets forth the allegations necessary for the initiation of an antidumping duty investigation, and whether it contains information reasonably available to the petitioner supporting the allegations.

We examined the petition on dry aluminum sulfate from Sweden and found that it meets requirements of section 732(b) of the Act. Therefore, in accordance with section 732 of the Act, we are initiating an antidumping duty investigation to determine whether imports of dry aluminum sulfate from Sweden are being, or are likely to be, sold in the United States at less than fair value. If our investigation proceeds normally, we will make a preliminary determination by July 24, 1989.

Scope of Investigation

The United States has developed a system of tariff classification based on the international harmonized system of customs nomenclature. On January 1, 1989, the United States fully converted to the *Harmonized Tariff Schedule* (HTS), as provided for in section 1201 *et seq.* of the Omnibus Trade and Competitiveness Act of 1988. All merchandise entered, or withdrawn from warehouse, for consumption on or after that date is now classified solely according to the appropriate HTS item number(s). The product covered by this investigation is dry aluminum sulfate from Sweden, a dry white granular material used in water purification, waste water treatment, and for industrial uses. Petitioner has specifically excluded liquid aluminum sulfate from the scope of the investigation. The dry aluminum sulfate covered by this investigation has a minimum of 17 percent aluminum oxide content, a maximum of 0.2 percent iron, a maximum of 0.5 percent water insolubles, and a range of from 6 to 200 mesh in particle size. Prior to January 1, 1989, such merchandise was classifiable under item 417.1600 of the *Tariff Schedules of the United States Annotated* (TSUSA). This merchandise is currently classifiable under HTS item 2833.22.00. The HTS item numbers are

provided for convenience and Customs purposes. The written description remains dispositive.

Notification of ITC

Section 732(d) of the Act requires us to notify the ITC of this action and to provide it with the information we used to arrive at this determination. We will notify the ITC and make available to it all nonprivileged and nonproprietary information. We will allow the ITC access to all privileged and business proprietary information in our files, provided it confirms in writing that it will not disclose such information either publicly or under administrative protective order without the written consent of the Assistant Secretary for Import Administration.

Preliminary Determination by ITC

The ITC will determine by March 30, 1989, whether there is a reasonable indication that imports of dry aluminum sulfate from Sweden materially injure, or threaten material injury to, a U.S. industry. If its determination is negative, the investigation will terminate; otherwise, it will proceed according to the statutory and regulatory procedures.

This notice is published pursuant to section 732(c)(2) of the Act.

March 6, 1989.

Jan W. Mares,
Assistant Secretary for Import
Administration.

[FR Doc. 89-5722 Filed 3-10-89; 8:45 am]

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APPENDIX B

LIST OF WITNESSES AT THE COMMISSION'S CONFERENCE

CALENDAR OF PUBLIC CONFERENCE

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

Subject: Dry Aluminum Sulfate from Sweden

Inv. No. 731-TA-430 (Preliminary)

Date and time: March 6, 1989 - 9:30 a.m.

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

In support of the imposition of antidumping duties

Smith, Somerville & Case--Counsel
Baltimore, MD
on behalf of

Delta Chemical Corp.

Robert E. Farmer, President

Donald J. McCartney)--OF COUNSEL

In opposition to the imposition of antidumping duties

Wilmer, Cutler & Pickering--Counsel
Washington, DC
on behalf of

General Chemical Corp.

Phillip B. Reilly, Director of Marketing

Boliden Kemi AB

John D. Greenwald)--OF COUNSEL
Leonard M. Shambon)--OF COUNSEL

APPENDIX C

COMMENTS RECEIVED FROM DELTA ON THE IMPACT OF IMPORTS FROM SWEDEN
ON ITS GROWTH, DEVELOPMENT AND PRODUCTION EFFORTS,
INVESTMENT, AND ABILITY TO RAISE CAPITAL

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